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A-Designs Hammer
£1859**pros**

- Simple to operate.
- Smooth, musical sound.

cons

- A bit pricey.

summary

Part of me thinks the HM2EQ Hammer is a touch expensive (based on its design and components), but you have to judge the audio quality, not just what's in the box — and though this valve EQ is not fully parametric, the excellent musical results speak for themselves.

information

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A-Designs Hammer

Dual Three-band Equaliser

Reviews : Processor

Published in SOS September 2008

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If you want 'that' analogue sound, sometimes real analogue gear is the only way you can get it - and that's what this valve EQ is all about...

Paul White

There's no arguing that the world of digital plug-ins has a lot to offer, but an emulation of a well-designed piece of analogue gear is never going to be quite as good as the real thing, especially where the device in question is based on tube circuitry — because, even at its best, modelling only captures an approximation of what makes tubes sound so special.

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If I Had A Hammer

California-based A-Designs build high-end analogue outboard equipment, and their HM2 Hammer equaliser that's reviewed here is a solid-state/tube hybrid, two-channel EQ. It comes in a 2U rackmount case and offers three bands of cut/boost EQ on each channel. Rather than going down the full parametric route, this device is based around switchable-frequency filters, each of which has up to 12dB of boost or cut available (with six frequency settings per filter). The filter bandwidth can't be adjusted but uses what the designers call a floating-Q system, which suggests that the Q varies depending on how much cut or boost is applied. Additionally there are switchable high- and low-cut filters and individual channel bypass, both of which are controlled via miniature toggle switches.

Because the circuitry is based on tubes, the manufacturers recommend a warm-up time of at least 20 minutes to get the best sound quality, and when mounted in a rack, space should be left above the unit for ventilation. Because tubes are inherently microphonic to a greater or lesser degree, shock-mounting is also recommended in high-SPL environments.

Little detail is given regarding the circuit design, so I removed the cover to check for myself. Each channel has a single 12AT7 dual-triode tube in the signal path, and the filter circuits are constructed around ICs. There are no audio transformers in the signal path. Power comes from a conventional analogue power supply centred around a toroidal mains transformer, and all the PSU circuitry, the two tube stages and the ICs associated with the balanced inputs and outputs are mounted on a double-sided circuit board parallel to the rear panel. The switches, pots and related filter circuitry are mounted behind the front panel on a separate circuit board. A couple of ribbon cables join the two boards, and the majority of the case is kept clear to allow good ventilation.

Overall, the construction is neat and economical in a conventional steel rack case and only balanced XLRs are fitted for the inputs and outputs (there are no TRS jack alternatives, which I think would be helpful in a home studio setup — I'd like to see more professional products offering these alongside XLRs). A milled aluminium face plate lends a slightly more exotic look to the front of the unit, as does the choice of solid aluminium knobs and a retro blue/green 'jewel' power light. There are no status LEDs or other frills. In many ways the engineering approach reminds me of the UK's TL Audio — but of course the sound will be different, as that's all down to the circuitry.

A quick check with a voltmeter showed that the tubes are being run at a sensibly high voltage, though not quite as high as you might find in (for example) a guitar amp. This means that you're getting a true tube characteristic and not a 'starved plate' approximation, as you get with some budget valve products.

Taking a tour of the front panel, there are two identical and independent channels (no stereo link switch), each having mini toggle switches for bypass, high-cut (8kHz) and low-cut (84Hz) filters. Three continuously variable pots look after the cut or boost (there are no centre detents) with the six-position, switched filter frequency knobs directly below them. The three filters offer a sensible amount of overlap, with the following frequency values: 30, 50, 100, 200, 300 or 400Hz for the low-frequency band; 250, 500, 1200, 1600 or 200Hz for the mid; and 2.5, 3.5, 5, 7.5, 10 or 15kHz for the high. Overall, the frequency response is quoted as 5Hz to 40kHz (-3dB), but given that tube circuits are generally designed to add a little harmonic flavouring, the distortion figures don't really mean a lot.

The literature that accompanies the Hammer claims that this design includes a novel filtering system that 'allows the even harmonics to flow through the 12AT7 tubes while filtering out unwanted noise'. Clearly the result of this can only be judged subjectively — so perhaps now's the time to plug it in...

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Hammer Test

Once I'd dug out the necessary cables to hook up the unit, operation was both simple and effective. One of the most critical EQ applications is in processing an entire mix or submix, so it was in those areas that I did most of my testing. While mixing in the box is certainly convenient, I often find it hard to maintain brightness without the sound getting gritty or confused, especially in a busy mix. But when you pass the DAW mix through a nice piece of analogue gear (not necessarily a mixer) it can improve the subjective sound quite significantly.

In this case, the Hammer EQ brought about an immediate improvement when I added just a dB or two of adjustment, especially at the low end. Two or three dB of boost at 100Hz really rounded out the bottom end of the mix I was working on, but without compromising clarity or making things sound mushy; it also seemed to make the bass end more even, with better definition between bass guitar and kick drum. Just one dB of 10kHz added some 'breath' to the top end, and all the instruments seemed to come into better focus without suffering the gritty harshness that 'in the box' plug-in processing sometimes brings out. I thought I'd miss not having a Q control, but for general shaping, as opposed to surgical correcting, the Hammer behaves very predictably and seems to know exactly what you want it to do. Having separate switchable high- and low-cut filters also adds a lot to the flexibility, as you don't have to waste a valuable EQ band to handle each of these routine jobs.

I attempted to duplicate the Hammer settings using various EQ plug-ins I had available, with the UAD Precision Equaliser perhaps coming closest of the ones I tried, but the analogue magic still sounded a hint more musically pleasing to my ears. It's hard to describe the effect but sometimes I feel with all-digital systems that I'm hearing the outline of the sound but without the substance being properly filled in. As soon as you add a high-quality piece of analogue equipment like this to the chain, the whole picture becomes more stable, less harsh sounding and better integrated, even when very little processing is being applied. Don't ask me why!

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Conclusions?

The HM2 Hammer is a very musical-sounding EQ, and there's a very positive vibe surrounding it, especially in the US. Of course, it is by no means the *only* outboard equaliser that can add 'that analogue magic', but as every equaliser circuit sounds a little different, you can't really compare the performance of this EQ against any of the competing products in an unambiguous way... some things you simply have to judge for yourself. If you're thinking of spending



Photos: Mike Cameron



The Hammer EQ comes in a robust 2U rackmount chassis, with the inputs and outputs provided on XLR connectors.

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this kind of money it might also be worth checking out some of the competition, such as the marginally less expensive Drawmer 1961 (which, to my ear, sounds every bit as sweet and has rather more tube circuitry in the signal path), or the various TL Audio models (which employ a similar approach and cost rather less).

That said, you really shouldn't let the cost, the fact that there are only two tubes in the box, or that you can't vary the Q, put you off auditioning the Hammer, because not only is it a very capable equaliser, it is also simplicity itself to use. Equalisation is, and always will be, an area where the subjective result far outweighs what is written on the spec sheet — and in the case of the Hammer, I really like what I hear! [SOS](#)

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If you're planning to audition the Hammer EQ and want some points of comparison, you could look at the Drawmer 1961 and models by TL Audio, including the TLA EQ2.

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