

Warm Audio EQP-WA



ALAN TUBBS

The EQP-WA is a 19-inch 2U rackmount device that's styled very much like the venerable 3U Pultec EQP-1A that inspired it, even down to the colour — a change from Warm Audio's usual orange/black livery. The first thing that is obviously very different is the price: while a used EQP-1A (if you can find one) might fetch £3500-£5000, and high-quality clones can cost well over £2000, Warm Audio's offering can be yours for a relatively modest £569, which is less than many solid-state EQs. Warm Audio kindly sent me one of the first available units for evaluation, and I was keen to find out both how it compared with a real Pultec unit and, more generally, what quality of EQ you get for this apparently bargain price.

Overview

Around the back, the analogue inputs and outputs are presented both as balanced XLR and quarter-inch TRS connections, along with a helpful reminder not to use both outputs simultaneously if you want to retain the best signal quality

Alternatives

Vintage **Pultec EQP-1As** cost in the region of £3500 to £5000 each. New Pultecs, which are about as close to the original design as it's possible to get, are available from **Pulse Techniques**, and **Cartec Audio** also make a fine recreation, as do the likes of **Summit**, **Amtec** and **Manley**. However, all of those units cost £2000 or more. Warm Audio are the first company to bring the Pultec price quite this far down to earth, and in this price bracket there's really no competition — unless you count the seemingly endless modelled plug-in versions.

Valve Equaliser

No-one has come near to producing a convincing copy of a Pultec EQP-1A at a wallet-friendly price. Until now...

(it would act as a passive splitter). The mains plug takes a standard IEC power cord, along with a separate ground connection (original Pultecs used two-prong plugs). The power supply itself is internal, and a rear-panel recessed switch is used to configure it for 115 or 230 V mains. This is a more professional option than external wall-wart PSUs — or the in-line lump used in the company's WA-76 FET compressor — and means the EQP-WA feels reassuringly solid and substantial.

Around the front, nods in the direction of the EQP-1A can be seen everywhere. There's a flip-switch in front of the power supply, and another on the left to switch the EQ in or out of the signal path. The low-frequency boost and cut controls share a single frequency, while the top end gets treated to separate boost and cut, as well as a bandwidth control. While this is how the original Pultec is laid out, Warm Audio have added frequencies to each band. Added to the 20, 30, 60 and 100 Hz low-frequency options of the original are 200, 400 and 800 Hz. The seven high-end boost frequencies of the old model (3, 4, 5, 8, 10, 12 and 16 kHz) are retained, while additional cut choices of 3 and 4 kHz expand on the original's 5, 10 and 20 kHz. It's a nice touch that the pots are notched, as this makes it easier to match two units or repeat settings (to which end the online

manual thoughtfully includes traditional recall sheets).

As on the rest of Warm Audio's gear, Cinemag transformers are used, and everything inside the unit is neat, clean and ordered. The power supply is well shielded and there's no buzzing (the unit is acoustically extremely quiet), and the internal wiring is nicely draped and out of the way. Another plus is that the pots are all attached separately to the front panel and wired from there, rather than mounted to a single board (as in a lot

Warm Audio EQP-WA £569

PROS

- Sounds great.
- Exceptionally keenly priced — no other tube Pultec clone comes close.
- Build quality is good, with plenty of professional touches.
- More frequency options than the original.

CONS

- Filter curves didn't match those of a 50-year-old Pultec EQP-1A precisely.

SUMMARY

A great-sounding EQ, whether you're looking at it as a Pultec clone or just a basic EQ. The EQP-WA offers the mojo of tubes and transformers at a lower price than most comparable-quality solid-state outboard EQs.



of cost-conscious designs), so if a single pot goes bad you'll be able to replace it individually and quickly. Such little details speak volumes for the thought that goes into making a unit like this reliable and repairable, as a genuinely professional device should be. Finally, the EQP-WA employs two vacuum tubes, a 12AX7 and 12AU7, both made by Tung-Sol. These are of good quality, but no doubt the tube-switchers among us will have lots of fun experimenting with other brands.

The Real Thing?

The EQP-WA looks and feels the part, then, but the important thing is how it sounds. I had the good fortune to be able to visit Wire Recording in Austin, Texas, a studio with a vintage Pultec EQP-1A Program Equalizer fitted with NOS (new old stock) Telefunken tubes. It's a unit that sees use every day and

The Pultec EQP-1A

As Hugh Robjohns described in his Cartec EQP-1A review (<http://sosm.ag/cartec-eqp1a>), Pultec company founder Eugene Shenk and Ollie Summerland based their EQP-1A on a 1940s passive filter design licensed from Western Electric (WE). The WE device was designed to compensate for the rolling off of the low and high frequencies that was inherent when analogue telephone lines were used to transfer high-quality sound between radio stations and their radio transmitter devices. The original WE design was entirely passive and inevitably attenuated the overall signal level by perhaps 20dB or so, although in the intended application that probably didn't really matter too much because the typical level sent down American analogue line circuits at that time was often +8dBu or even +16dBu!

Although a passive EQ, the EQP-1 was able to offer relative LF and HF

boosts thanks to two frequency-selective circuit paths that allowed these elements of the spectrum essentially to bypass the rest of the filter circuitry, and thus appear at a higher level at the output than the attenuated mid-range components.

However, as the music industry started to become more sophisticated and demanding, it became desirable to have signal processing equipment that maintained a nominal unity-gain signal path when set 'flat'. To achieve that with the EQP-1 required an external preamp stage that was, at the time, a precious studio resource. Consequently, Shenk and Summerland redesigned their Pultec equaliser to include its own internal tube gain stage, transformer-coupled in and out after the standard passive EQ circuitry. That model became the EQP-1A we know and love today.

is serviced frequently. At the studio, the engineers and I carved out some time to see how the Warm Audio unit performed in a side-by-side comparison with the original.

One of the first Pultec 'tricks' is simply to patch it into the signal path, as even with the EQ switched off the signal still passes through the circuitry, and is treated to some euphonic coloration. This manifests itself as a little sparkle in the highs and a generally more defined, 'muscular' sound; it sounds more like an analogue recording without the engineer touching a thing! To our ears, the EQP-WA did this job pretty well.

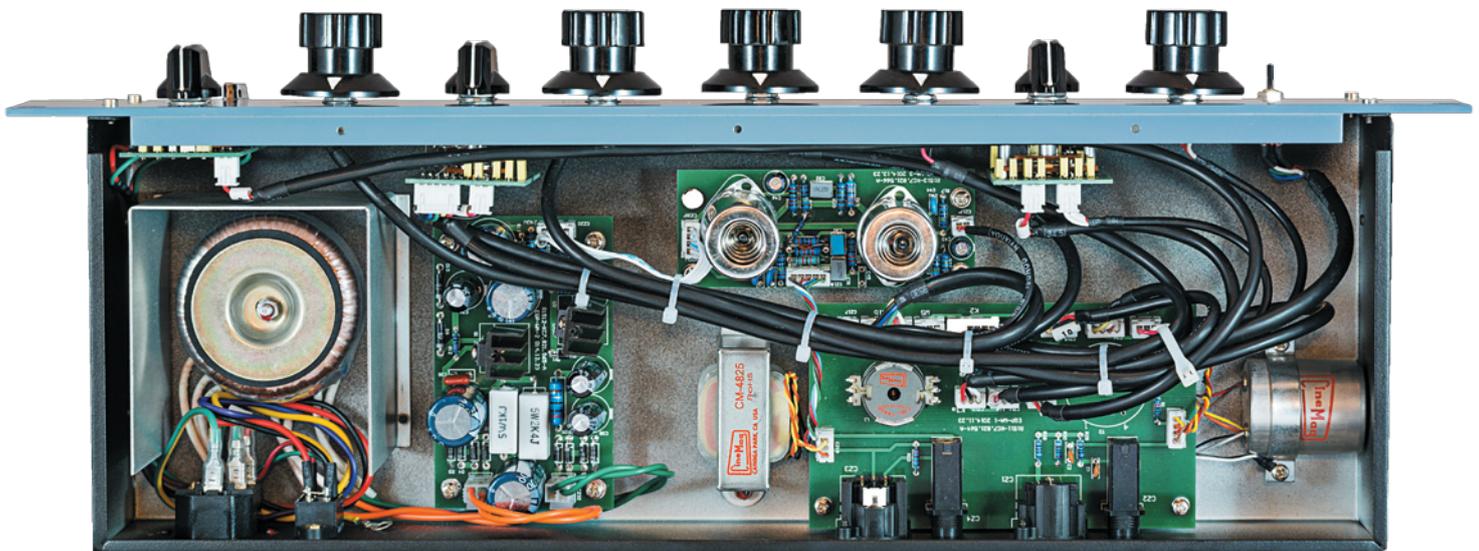
Moving up through the frequency options, we sent the same bass, vocals, drum overheads and violins takes out

through both units, and the consensus was that Warm Audio's unit sounded really sweet on the low end — equal to the original, in fact. Everyone in the control room was amazed by just how close the EQP-WA tracked to the original unit, especially given the keen price.

We all heard some differences worth noting, though. The high boost on the original unit sounded a hair smoother, for example, but if anything, the EQP-WA actually seemed a bit tighter in the lows. The largest difference seemed to be in some of the filter curves and the perceived 'width' (this is a mono unit, remember) in the highs.

The other key trick of the EQP-1A is the use of overlapping cut and boost bands to shape the sound, especially in

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The EQP-WA features Cinemag transformers (centre and right), as on other Warm devices, and ships as standard with Tung-Sol valves (top middle).

» the low register, where the same centre frequency is shared by both functions. Some call the resulting plots a ‘butterfly’ pattern, but it would be a seriously asymmetric butterfly! The general effect, if done right, is a more focused and thus louder-sounding signal that isn’t actually louder: switching the EQ out reveals the original signal to be louder, but muddier; there’s more fluff and less punch. This is one reason the Pultec’s name includes the words ‘Program Equalizer’ — it’s a particularly useful facility when working with complex material.

The low end on EQP-1A-style equalisers can be used with quite radical cuts and boosts to dramatic effect, and the new frequency options made this even more versatile. We found that the 400Hz setting on the Warm unit was perfect for bringing out snares, for instance, as we could hear quite clearly when processing the overhead take. The 800Hz setting similarly gets into the ‘meat’ of voices and other instruments of a similar character. Still, the string quartet was a bit smoother using the original Pultec in the high end. That unit seemed to use a gentler, wider curve, which might account for some of that perception.

“In the head-to-head comparison [the EQP-WA] performed excellently, and is much cheaper than keeping a vintage Pultec in fighting trim.”

unit was certainly very capable and we remained impressed throughout.

Soft Machine

Given the price, I thought it might be interesting to compare the EQP-WA with a couple of software models of the EQP-1A that I have — the Nomad Factory and Bomb Factory versions, as well as Cakewalk Sonar’s Pro Channel EQ. They all surprised me, sounding much closer to the hardware than I’d imagined they would. The Nomad Blue Tubes version is older, and doesn’t respond as dynamically to the input as modern software, providing more of a steady-state analogue sheen to the sound. Bomb Factory’s was better, even though we couldn’t exactly match the front settings of the EQP-WA. It was also louder than the hardware when putting the same signal through both, and that’s something to watch out for if making comparisons of your own, as it will skew your perception in favour of the plug-in.

aren’t as perfect as a ‘save’, and I know a few mix engineers who have sold their hardware for just those reasons. But now, some of those people are buying it back, because they feel that they can justify the decision on both sonic and cost grounds. The EQP-WA is such a unit — the software is getting scarily good at mimicking what this unit imitates in the analogue domain, but the hardware still offers just a little something extra.

Keep It In The Family

Once again Warm Audio have hit a sweet spot with their take on a classic design, and I don’t just mean the cost, but also the sound. In the head-to-head comparison with the real thing it performed excellently, and is much cheaper than keeping a vintage Pultec in fighting trim, never mind acquiring it in the first place. Under the microscope it was not an exact replica sound-wise, but then neither are any two vintage units.



Both jack and XLR I/O are included to make connection to your studio easy.

You have to bear in mind that when making such subjective comparisons the two units are not identical — the different tubes alone might account for some of the difference, for example — and remember that many vintage Pultecs, even those in tip-top condition, may have been modified or had non-original components swapped in over the years, or original ones may have aged differently. No two will sound exactly alike. However, it’s also worth stressing that all of the differences we heard were very small and were heard while listening to ‘naked’ takes, without the context of a full mix. In short, despite the tiny differences, the Warm Audio

One of my favourite EQ tricks on high voices is a cut around 6kHz while shelf-boosting above this to emphasise the ‘air’. This way, during mixdown, you can use more assertive compression without increasing sibilance or making the vocal too ‘hard’, while leaving the air. So I tried recording female backing vocals, with similar settings going in through the EQP-WA, using the 5kHz cut. That allowed me to ‘squeeze’ the chorus quite hard with compression while mixing. You can’t really use plug-ins in quite the same way when recording — although you could of course use them while mixing, placed pre-compressor.

The software obviously has the advantage of perfect save and recall: as retro chic as recall sheets are, they

I didn’t have access to other hardware clones to see if their filter curves and width tracked the original any better than the EQP-WA, but I’ve never heard anyone combine a clone and original as a stereo pair, either. But no doubt a brace of new Warm Audio EQP-WAs would track well enough together as a stereo pair (unfortunately I didn’t get the chance to check this) — if you have the £3500 plus to acquire a Pultec, perhaps it’s worth thinking how many EQP-WAs you could afford! **////**

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