Warm Audio WA76

Mono FET Compressor

This is far from being the first clone of a UREI 1176 FET compressor, but it's probably the cheapest to have hit the production lines. Is any of the classic sound sacrificed in Warm's cost-cutting quest?

ALAN TUBBS

It really is the best of times for the music engineer: most home-recording equipment is good enough to capture a clean, modern sound, and those who crave a more vintage tone have ever more options available. Plenty of original outboard remains available on the second-hand market, of course, and some of the manufacturers still make up-to-spec recreations of those originals. There are also many 'boutique' manufacturers coming up with their own subtly different takes on classic designs.

Unfortunately, such authenticity doesn't usually come particularly cheap, which is one reason why a palette of alternative, more cost-effective options seems to be growing. Seemingly countless software companies now offer their own virtual take on classic hardware, of course, with many mimicking the faceplate's appearance as well as the sound. But a handful of hardware manufacturers are now creating less-expensive devices based on studio staples, like the Urei 1176 FET compressor-limiter.

One such device is the recently released WA76, made by Warm Audio, a young company who've already released a couple of well-received preamps: the WA12, reviewed in *SOS* February 2013 (http://sosm.ag/feb13-warm-audio-wa12) and the TB12 Tone Beast, reviewed in November 2013 (http://sosm.ag/nov13-warmaudio-tb12). Having conquered input amplifiers, Warm have moved on down the signal chain to compressors — and more specifically to the 1176 Revision D.

Revisionist History

The original Universal Recording Electronics Industries (UREI) 1176 Peak Limiting Amplifier was born back in the Summer of Love, or '1967' to those too young to know about these things. It was at this time that Bill Putnam redesigned his 175 and 176 variable-mu tube compressors to take advantage of the recently invented Field Effect Transistor (FET), which could replace the vacuum tubes in those models. The result was the rather different-sounding solid-state 1176. UREI, and later Universal Audio (UA), continued to refine and produce the 1176 — with several new 'revisions' appearing — well into the 1970s, as well as a couple more in recent years (for more details go to www.uaudio.com/blog/1176-la2a-hardware-revision-history).

Most of the early models were produced in small runs, but the revision C model added new circuitry which made the device less noisy — hence the Low Noise designation (1176LN). The revision D incorporated the LN circuitry on the main board, and over 1000 were produced. Thousands of later revisions were sold, and it wasn't long until every proper studio needed to own at least one 1176 to be considered a 'proper' recording facility.

Many of the now-vintage units are still in use but most have, out of necessity, been repaired or modified during their 40-50 years of service. Perhaps this is one reason why no two people reviewing software emulations can seem to agree

A peep inside the box reveals the CineMag audio transformers, which are made to the same spec as the 1176's original Reichenbach models.

on what a 'real 1176' sounds like! Nonetheless, the whole 1176 range offers a similar compression behaviour, and most revisions impart a similar sonic character, the biggest differences often being down to audio transformers (or lack thereof). The FET compression employed in the 1176 allows for very fast attack times, an input- and ratio-driven threshold and program-dependent release. UA still employ a variation on the original circuitry in their current 1176LN and the 6176 preamp/compressor combo, but several other companies have exploited the basic design.

Overview

The WA76 is a 2U rackmountable device with a black anodised faceplate, in slightly muted contrast to the screaming orange of the rest of the existing Warm range. The logo, though, is the familiar Warm Audio orange, so the WA76 still stands out nicely in a typical black- and silver-filled rack. Around the back, the balanced XLR audio ins and outs are duplicated on TRS jacks — a nice touch that makes incorporation into any studio that bit more convenient. Next to these is a pad that can be used to lower the incoming signal by 23dB. That means that if, for example, your mic preamp doesn't have an output attenuator, you can still 'drive' it for coloration, while still presenting an appropriate level to the WA76's compression circuitry.

The last item on the back is the power inlet. Unlike the UREI/UA models, the WA76 design employs an external power transformer — one of those 'in-line lumps'. This is better than a wall-wart, in my view, and no doubt it saves on build costs (not only because such PSUs are mass-manufactured and therefore inexpensive, but as there's no high-voltage mains inside the box there's less need for internal screening, and it's one less thing that needs to pass stringent EU standards tests, for example). On the downside, though, I'm starting to accumulate quite a tangle of such 'warts'!

Something I noticed because I didn't rack the review unit is that it's much lighter than it looks without the internal power transformer: the front buttons of the review model being a little stiff, switching them became a two-hand operation if I wanted to keep the device from »

Warm Audio WA76 £549

PROS

- The price is very right.
- Classic 1176-style FET compression.
- Decent build quality.
- Two-rack unit so there is plenty of room for adjusting parameters.
- Dual XLR and TRS I/O.

CONS

- No frills.
- Lump-in-line power transformer won't be to everyone's taste.
- Lacks markings on the input pad.

SUMMARY

This FET compressor-limiter offers both the simplicity and the sound of the original UREI 1176 units, but does so at a uniquely low price point.

» sliding around the desk. That shouldn't really be a problem for most people, as it's designed to be firmly bolted into a rack; just don't place the thing on a slick surface and expect it to stay put!

The front-panel of the WA76 shares the appearance of the 1176 that inspired it, except for that orange lettering. The large input knob is finely stepped, whereas the output is smooth. The smaller Attack/Release knobs are centre-detented and leave plenty of room for even the fattest of fingers. All of the legending is large and white and, against the black faceplate, very easy to read.

Four buttons sit either side of the generously proportioned meter. To the left are the expected compression ratios of 4, 8, 12 and 20, the last two of which can be considered limiting, but there's also the 'nuke' option — the famous 1176 'all buttons in' mode. You can also choose to apply no compression at all by ensuring all the buttons are out, which is trickier than you might think, since you have to half-depress adjacent buttons before letting them both out. Why use the WA76 if you're not compressing or limiting? Because the signal still flows through the transformers and all the lovely circuitry in between that gives it that nice analogue flavour. While I'm on the subject of transformers, the 1176 used Reichenbach transformers, whereas the WA76 uses CineMag ones — so perhaps it's worth me explaining that CineMag bought Reichenbach, and I'm told that CineMag manufacture these transformers to match the specification of those used in the 1176.

To the right are buttons to select what the meter displays, with Gain Reduction at the top, the output level referenced to either +8 or +4 dBm when the meter reads 0, and Off. Note that Off turns the entire unit off, though, not just the meter. You should always use your ears to judge the impact of a processor like this, but having a big, bold, brightly lit analogue meter bouncing to your signal does complete the 'classic' experience.

There are both XLR and TRS jack I/O sockets, while power comes via an external transformer.

What's In The Box?

So the WA76 looks the part, but does it *sound* the part? When I first set up the WA76 I began comparing it with the nearest equivalent plug-ins I own. I couldn't for the life of me match the sound with the front panel settings between them until I flipped the unmarked pad switch: *voilá*. The WA76 sounded good compared with all of my plug-ins when both software and hardware were being driven hard, with high input signals, but it was a much closer test with the pad engaged.

A/B comparison revealed some seriously unsubtle differences. When 'pushed' with hot input levels, the software seemed to sound somehow smaller. The WA76 also sounded — how shall I put this — slightly 'brighter'? At least, that's the closest word I can think of; I don't mean it as if there were an EQ boost applied, but rather that the sound was more sparkly, or more 'present'. Somewhat like a very subtle version of what an Aural Exciter does, but subtle enough that even after stacking a few tracks it never got annoying or tiring like such psycho-acoustical effects do.

The reason I hadn't racked the WA76 was that I wanted to haul it around to other studios, so I could compare with other processors, including other 1176-inspired software. All software exhibited the same tendency in comparison with the WA76. The difference wasn't always night and day (there are some very nice plug-ins out there), but more a matter of degree rather than kind. However, it was there and recognisable. Of course, no-one wanted to trade their software for racks and racks of WA76s, but that was a matter of cost and convenience, not sound. Tracking sources via the WA76, applying subtle compression, meant we got all the enhancement we could wring out of each instrument, and then the software equivalents could more easily do their thing during mixing. Applying more gentle compression with the plug-ins during mixing meant the tracks didn't suffer from that 'shrinking' sound effect or lose their high end. In other words, we all agreed that this approach gave us the best of both worlds.

"Tracking sources via the WA76 ... meant we got all the enhancement we could wring out of each instrument, and then the software equivalents could more easily do their thing during mixing."

I also compared the WA76 with some hardware. I found it hard to tell any difference between it and a Purple Audio 1176-inspired compressor. Both had that forward, defined sound I've described already, but the WA76 seemed to have a slightly thicker, more vintage tone going on somewhere in the lower frequencies — perhaps due to those CineMag transformers, or maybe the tantalum capacitors? Bryce Young, the man behind Warm Audio, liked those caps in his WA12 and you can switch them in and out of his Tone Beast. Tantalum was used in some of the older Neve hardware, according to Bryce, and on complex signals you can better hear them working.

The best trial came against UA's

Alternatives

Vintage **UREI 1176**'s can go for several thousand dollars, and the modern **Universal Audio** units are not that much less expensive. **Purple Audio**'s **MC77**, and **Daking**'s take on the same classic unit are worth consideration. Some units, such as **Lindell**'s **17x**, add useful features such as side-chain filters and wet/dry blend. The WA76 aside, the most affordably priced clone of the original designs is probably the **Wes Audio Beta 76**. **Lindell** also offer the **17xs**, a more affordable take on the 17x. Yet, all of the above are more expensive than the WA76. In fact, as far as I am aware, the only things that come close in price — if you discount your own time, that is — are the **Hairball Audio** FET compressor DIY kits. Also **Purple Audio**'s **Action FET** for the 500-series rack is just priced a little higher, but includes both a side-chain and stereo link.

own 6176, which combines a UA 610 tube preamp with the solid-state 1176 compression circuitry. It's something of a modern classic and is often described by bassists as a 'set and forget' channel. To make the comparison fair, we inserted the WA76 after the preamp, spanked the bass with the compressor and fiddled with knobs until it just sounded right — forward yet controlled, bright but not harsh, and full. The bassist thought it was perfect and had to take some time to match the sound after we patched back to the UA compressor. It was only then that he asked how much the WA76 costs!

In between all this travel and comparing, I managed to spend some quality time with the WA76. In one session, I used it to DI a guitarist, who started strumming and picking basic blues-rock progressions while I set levels and began twisting knobs — and I had a sonic epiphany. There, in my humble little home studio was *that* sound, the sound I'd heard on countless songs: a tight, grab-your-collar punchiness, yet with depth and definition, every fingerpick clearly articulated and each strum nicely focused. And once I'd latched onto the sound, I was quick to find it again when we miked the amplified guitar. With a female vocalist later that night, I found it easy to get good, classy-sounding results. It's not a magic box for everything, just like the 1176, but on the right instrument playing the right kind of tune the WA76 does sound nice and 'finished' — like an 1176 in fact.

Bottom Line

Universal Audio still make the 1176, there are thousands of original 1176s still working, and there are plenty of other recreations available too. What sets the WA76 apart is not the sound, which it has in spades, nor the build quality, which again is good, but not more so than others of this ilk. Rather, what sets Warm's WA76 apart, as with all their other products, is the price.

You will find 500-series rack units or build-your-own 1176 kits for around $600 here in the States, but all the 2U rackmount units I'm familiar with cost much more. OK, some aren't straight clones and offer useful facilities like side-chaining or parallel-compression blend knobs, or stereo-linking options. If that stuff is important to your workflow, then perhaps you should look elsewhere (although I'm told that the Warm distributors are investigating stereo-link mods as a cost option). And while software comes cheaper and you can use it on as many tracks as needed or until your CPU melts, for the most part you can't play through it, and therefore to it, which for me is part of analogue's charm. If you're in the market for such charm, specifically a compressor, and more specifically 1176-style FET compression, then don't be deceived by the bargain price: Warm Audio's WA76 should be very high on your audition list.

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