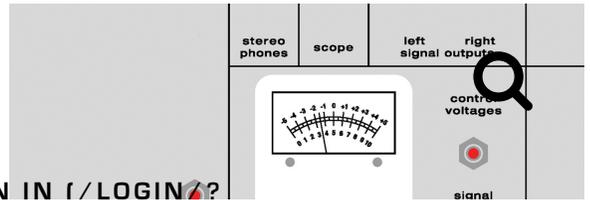




TAPE OP

(/)



SIGN IN (/ LOGIN?)

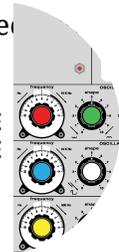
(/EQS (/REVIEWS/CATEGORY/EQS)

ISSUE #110

Program Equalizer EQP-WA

.p://tapeop

BROWSE ISSUE



BY WARM AUDIO ([HTTP://WWW.WARMAUDIO.COM/](http://www.warmaudio.com/)) | REVIEWED BY ANDY HONG ([/REVIEWS/BY/ANDY-HONG](/reviews/by/andy-hong/)), ADAM KAGAN ([/REVIEWS/BY/ADAM-KAGAN](/reviews/by/adam-kagan/)), ALAN TUBBS ([/REVIEWS/BY/ALAN-TUBBS](/reviews/by/alan-tubbs/))

NOV/DEC 2015



Even before the Warm Audio EQP-WA was first shown at the NAMM Show in January 2015, I had multiple reviewers giving me a holler asking to review it. Warm Audio's take on the revered Pultec EQP-1A was creating an internet buzz, months before its official unveiling. Warm Audio's target price of \$699 was especially enticing. Two veteran reviewers, Adam Kagan and Alan Tubbs, were each able to procure a pair of EQP-WA production units, and their opinions and usage notes follow. -AH

Adam Kagan: Everyone seems to have a soft spot for the Pultec EQ. Do you even know what a Pultec does, besides "make everything better"? Well, the Pultec EQ family is best known for the EQP-1A, which is a low and high-frequency equalizer, using an inductor-based, passive EQ circuit followed by a tube make-up gain section. These days, we have become accustomed to using active equalizers, which may be very good, and some

are downright musical. But modern active EQs typically rely on many op-amps, which can add unpleasant distortion or a transistor edginess that makes some sources sound thin, no matter how much body we try to add with the EQ. Classic inductor-based equalizers basically use a passive circuit made up of a capacitor and an inductor. Simply put, an inductor is a loop of wire, somewhat like a transformer, whose impedance changes with frequency. Incidentally, the change in impedance-versus-frequency of an inductor works opposite of that of a capacitor, so they tend to harmonically complement each other. Additionally, there are pleasant-sounding nonlinearities and saturation effects that occur in inductors, again, similar to transformers, especially in the low frequencies. In plain English, all this means to us is that inductor-based EQs provide harmonic coloration in addition to silky-smooth frequency equalization. In the case of the Pultec-style EQ, things get even more interesting because the EQ circuit feeds into a tube-based make-up gain amplifier, while input and output transformers surround the entire device, and further color the sound.

The EQP-1A and its variants twist the standard equalizer paradigm even further by providing cut and boost at the same low-frequency point and the same high-frequency point. The boosts provide bell-shaped curves while the cuts are shelf filters with very gradual slopes. Playing one curve against the other can result in a resonant boost at the chosen frequency and then a roll-off below (low-frequency section) or above (high-frequency section) the boost frequency. The bandwidth of the high-frequency bell may be adjusted from narrow to wide. This type of EQ works well on full mixes, vocals, and low-frequency heavy instruments, like kick drum, bass guitar, and TR-808-style bass drums.

With the *EQP-WA*, Warm Audio has taken on the Pultec EQP-1A and re-imagined the circuit using custom-wound Cinemag inductors and transformers, and a dual-tube make-up gain section. Warm Audio added additional frequency choices to the *EQP-WA*, but maintained the look and feel of the original. The dual-tube amplifier section and transformers remain in the audio path even with the EQ circuit bypassed, so that the *EQP-WA* may impart some characteristic "iron" tone and tube saturation, which often helps instruments sit better in a mix and may help add some "glue" to a full mix. The *EQP-WA* thoughtfully provides both XLR and 1/4" TRS input and output connections, which may be run balanced or unbalanced.

While I find that analog compressors usually beat out their software counterparts, plug-ins have generally taken over my equalization processing. The exceptions would be a GML 8200 or Manley Massive-Passive, which both impart a special sweetness to almost any source. I happily found that the *Warm Audio EQP-WA* provided some sweet saturation and harmonic depth that none of my various Pultec-style plug-ins ever impart.

Here are some typical Pultec-style settings which yield excellent results from the *EQP-WA*. On kick drum: low frequency set to 30 Hz or 60 Hz, boost and attenuation set to 7; high frequency set to 4 kHz or 5 kHz, boost to taste. Similar settings work on electric guitar, sometimes with more boost in the high frequencies. On full mixes or a vocal bus: boost and cut at 100 Hz or 200 Hz; boost of 2 at 10 kHz, and bandwidth at 7. Lead vocal is similar, with high frequency dropped to 4 kHz, with a boost of 3 or 4, and a cut of 2. Obviously these need to be dialed in to the specific source, but these settings provide good starting points. For kick drum and bass, I feel the inductor seems to compress or saturate at the boost frequency and creates some "bloom" at that frequency.

Over the years, I have gone back and forth on my own need for a pair of Pultec-style EQs for buses and low-frequency instruments, and at the street price of \$699, the *Warm Audio EQP-WA* is a must-have. These EQs will last a lifetime, and their character and smoothness beats out any plug-in emulation that I have heard.

Adam Kagan is at adamkagan.ninja (<http://adamkagan.ninja>)

Alan Tubbs: Warm Audio continues to do yeoman work with its line of products — high-quality hardware at great prices. The Warm Audio site provides explanations for how the company keeps its prices low, but price doesn't matter squat, if the product doesn't sound good. And Bryce Young, the man behind Warm, has a good ear. I say that not just because we exchanged notes on different op-amps for the TB12 Tone Beast [*Tape Op* #97] and heard the same sonic differences. No, that just shows the man has obvious taste and decorum. But even with more exoteric hardware I'm not intimately familiar with, such as inductor EQs, he manages to capture the essence of the original. And at about a tenth of the price of a going, vintage Pultec EQP-1A.

Of course, everyone and their hairdresser wants to know how the *Warm Audio EQP-WA* matches up against other Pultec-style EQs, especially vintage originals. I had a chance to listen, *mano a mano*, between the challenger and the real thing. And guess what? In a great pro room on great pro speakers, even I could hear differences between the *EQP-WA* and the original. The EQP-1A was a tad smoother in the high end. NOS tubes in the Pultec instead of Tung Sols in the Warm provide some difference, no doubt, but there was also a subtle width to the slope in the high-filter

boost/cut on the original. However, bass settings on the Warm sounded just as good as on the Pultec, maybe even a shade tighter. Still, any difference between the two units was small. Maybe not inconsequential — we are all sound people here, after all — but as a practical matter, there wasn't much difference between the two. They both did that Pultec thing with cut and boost around the same frequency, so you can actually thin out a bass sound on the meters yet still have it sound louder. Or coax the sibilance out of a singer and still have the high end shine. And both units sound great on just about every instrument you care to pass through them, but I found the traditional method of using your precious Pultecs on lead instruments, so they stick out, works best with the *EQP-WA* - because leads are supposed to stick out. Ain't that the point? And Pultecs are called "Program Equalizers" since they work better the more complex the material they have to push against — like entire mixes, thick electric guitars, and creamy vocals.

As to all the virtual Pultecs out there, I've tried a lot of them and several against the *EQP-WA*. It is easy to forget how good virtual effects are, and they can sound remarkably similar to the hardware (even if the faceplate settings never seem to match). Still, there is something to tracking with tactile hardware that can't be approximated after the fact. Because we are sound people, we like to have the sound nigh on perfect going to "tape." That makes mixing easy. And once you understand how you want an instrument to sound, recording through a Pultec gives you a head start that most software just can't. Even during mixing, there is something about twisting big old knobs rather than mousing around a screen. I don't find virtual feedback as fun and immediate, even if the sound gets close enough. However good virtual sex becomes, I don't think it will replace the emotional texture of "date night" with your significant other. I know

where I come down on that argument, and I'll stick with flesh and blood. Especially if it is as good and affordable as Warm stuff. Warm Audio makes it too easy to justify, even if I add in dinner and a movie with the wife, too.



Alan Tubbs is at www.bnoir-film.com (<http://www.bnoir-film.com>)

\$699 street; www.warmaudio.com (<http://www.warmaudio.com>)

Tape Op is a bi-monthly magazine devoted to the art of record making.

SUBSCRIBE FOR FREE HERE ([/SUBSCRIBE/](#))

OR LEARN MORE ([/EXPLAINED/](#))

***MORE GEAR
REVIEWS***

EQS ([/REVIEWS/CATEGORY/EQS](#)), PLUG-INS

[/REVIEWS/CATEGORY/PLUG-INS] | NO. 51
[HTTP://TAPEOP.COM/ISSUES/51/]

Q-Clone Plug-In (/Reviews/Gear/51/Q-Clone-Plug-In/)

BY JOHN BACCIGALUPPI [/REVIEWS/BY/JOHN-BACCIGALUPPI]

Q-Clone was the single most impressive thing I saw at the 2005 NAMM show last January. There's rarely any truly new technology at the audio trade shows, but mostly refinements of existing technology...

COMPUTERS [/REVIEWS/CATEGORY/COMPUTERS], EQS
[/REVIEWS/CATEGORY/EQS], SOFTWARE
[/REVIEWS/CATEGORY/SOFTWARE] | NO. 55
[HTTP://TAPEOP.COM/ISSUES/55/]

Neon HR Linear-Phase EQ Plug-In (/Reviews/Gear/55/Neon-Hr-Linear-Phase-Eq-Plug-In/)

BY GARRETT HAINES [/REVIEWS/BY/GARRETT-HAINES]

PSP recently released a truly mastering-grade linear-phase EQ plug-in called Neon. Two versions are on the market, Neon and Neon HR (high resolution). The HR version offers the following enhancements...

EQS [/REVIEWS/CATEGORY/EQS], SIGNAL PROCESSORS
[/REVIEWS/CATEGORY/SIGNAL-PROCESSORS] | NO. 71
[HTTP://TAPEOP.COM/ISSUES/71/]

REQ-2.2 Resonance Equalizer (/Reviews/Gear/71/Req-22-Resonance-Equalizer/)

BY LARRY DEVIVO [/REVIEWS/BY/LARRY-DEVIVO]

I recently sold my beloved solid-state Pultec EQP-1A3 equalizers, so I was in the market for a new unit to fill the empty void left in my mastering rig. Unlike my old Pultec program equalizers, this...

EQS [/REVIEWS/CATEGORY/EQS] | NO. 106
{ HTTP://TAPEOP.COM/ISSUES/106/ }

W2395c 500-Series EQ (/Reviews/Gear/106/W2395c-500- Series-Eq/)

BY

The W2395c is Roger Schult's second foray into the world of 500-series equalizer modules. His first design, the W2377, was essentially a repackaging of his mastering EQ, but in an unsurprising turn of...

CONSOLES/SUMMING
(/REVIEWS/CATEGORY/CONSOLESSUMMING), CONVERTERS
(/REVIEWS/CATEGORY/CONVERTERS), EQS
(/REVIEWS/CATEGORY/EQS), MIC PREAMPS
(/REVIEWS/CATEGORY/MIC-PREAMPS) | NO. 54
{ HTTP://TAPEOP.COM/ISSUES/54/ }

TG Channel MKII (/Reviews/Gear/54/Tg-Channel- Mkii/)

BY MIKE CAFFREY [/REVIEWS/BY/MIKE-CAFFREY]

The original TG Channel (Tape Op #43) was a TG2 preamp (Tape Op #39) combined with a 3-band EQ. The TG Channel MKII Abbey Road Special Edition incorporates a number of enhancements. In a way, cosmetic...

EQS [/REVIEWS/CATEGORY/EQS] | NO. 78
{ HTTP://TAPEOP.COM/ISSUES/78/ }

Model One B Equalizer (/Reviews/Gear/78/Model-One-B- Equalizer/)

BY MARC ALAN GOODMAN [/REVIEWS/BY/MARC-ALAN-GOODMAN]

I first set eyes on the Model One B about three years ago. I was working at Studio G in Brooklyn and a mysterious package arrived. It turned out to be an equalizer designed and built by a member of...

EQS (/REVIEWS/CATEGORY/EQS), SIGNAL PROCESSORS
(/REVIEWS/CATEGORY/SIGNAL-PROCESSORS) | NO. 58
(HTTP://TAPEOP.COM/ISSUES/58/)

LinearPhase PEQ Red (/Reviews/Gear/58/Linearphase-Peq-Red/)

BY GARRETT HAINES (/REVIEWS/BY/GARRETT-HAINES)

German-based Algorithmix has released three killer EQ plug-ins, LinearPhase PEQ Red, LinearPhase PEQ Orange, and the classic PEQ Blue. Each title deserves separate consideration, so I will limit this...

DYNAMICS (/REVIEWS/CATEGORY/DYNAMICS), EQS
(/REVIEWS/CATEGORY/EQS), MIC PREAMPS
(/REVIEWS/CATEGORY/MIC-PREAMPS) | NO. 40
(HTTP://TAPEOP.COM/ISSUES/40/)

ATC-2 Dual Channel Compressor, EQ And Preamp (/Reviews/Gear/40/Atc-2-Dual-Channel-Compressor-Eq-And-Preamp/)

BY TONY VISCONTI (/REVIEWS/BY/TONY-VISCONTI)

I was looking around for a decent stereo equalizer to combine with my stereo compressor across the mix bus. I found quite a few choices that would serve my purposes, mostly in the \$2000 to \$4000...

DYNAMICS (/REVIEWS/CATEGORY/DYNAMICS), EQS
(/REVIEWS/CATEGORY/EQS) | NO. 49
(HTTP://TAPEOP.COM/ISSUES/49/)

EQ-P Tube Program Equalizer, EQ-H Tube Program Equalizer, M72s Microphone Amplifier, M76m Microphone Amplifier, Mercury 66 Limiting Amplifier (/Reviews/Gear/49/Eq-P-Tube-Program-Equalizer/)

BY PETE WEISS (/REVIEWS/BY/PETE-WEISS)

For years, David Marquette cultivated a reputation for elegantly racking and powering Neve, Telefunken, and other desirable vintage modules. He eventually decided to branch out and produce his own...

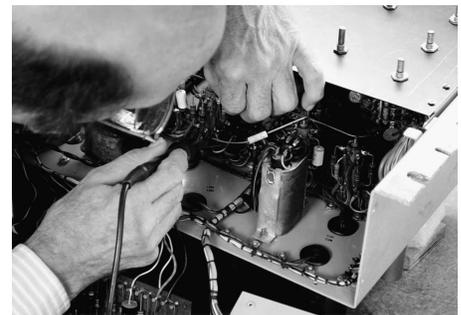
BEHIND THE GEAR

BEHIND THE GEAR (/COLLECTIONS/BEHIND-THE-GEAR/)

Restoring The "Holy Grail Of Compressors": Behind The Scenes At The Vintage King Tech Shop (/Tutorials/Bonus/Vintage-King-Restoration-Series-Part-1-Outboard/)

BY

Vintage King co-founder Michael Nehra shares some of his love, knowledge, and practical advice for diving into the world of vintage audio gear, and then takes us behind the scenes for a walk through...



BEHIND THE GEAR (/COLLECTIONS/BEHIND-THE-GEAR/)

Jim Williams: Behind The Gear With Audio Upgrades (/Interviews/Btg/90/Jim-Williams/)

BY MIKE JASPER (/ARTICLES/BY/MIKE-JASPER)

Jim Williams has spent much of his 56 years working with some of the biggest names in the music business, including Frank Zappa, John McLaughlin and Stevie Wonder. He's the owner of Audio Upgrades,...

BEHIND THE GEAR (/COLLECTIONS/BEHIND-THE-GEAR/)

From WWII Planes To Stax Consoles: Behind The Gear With Bill Cheney & The History Of Spectra Sonics (/Interviews/Btg/102/Bill-Cheney/)

BY JOHN BACCIGALUPPI (/ARTICLES/BY/JOHN-BACCIGALUPPI),
LARRY CRANE (/ARTICLES/BY/LARRY-CRANE)



Bill Cheney and Jim Romney are the men responsible for keeping the amazing legacy of Spectra Sonics, a legendary, if criminally unheralded, pro-audio company alive.

BEHIND THE GEAR (/COLLECTIONS/BEHIND-THE-GEAR/)

Rich Williams: Behind The Gear With Burl Audio (/Interviews/Btg/105/Rich-Williams/)

BY LARRY CRANE (/ARTICLES/BY/LARRY-CRANE)



Burl Audio, under the direction of owner/designer Rich Williams, has developed some of the best new recording equipment over the last eight years. Their mic preamps, summing amps, and control room...



 (/ig/)  (/youtube/)

 (/plus/)

ABOUT TAPE OP (/EXPLAINED/) | ADVERTISE (/ADVERTISE/) | SUBSCRIBE (/SUBSCRIBE/) |
STORE (/SHOP/) | PRIVACY (/PRIVACY/) | FEEDBACK (/FEEDBACK/) | F.A.Q. (/FAQ/) |
CONTACT US (/CONTACT/)