

DIY PRO AUDIO

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Caution: These are not DIY projects for beginners. High voltages are involved that can kill you. Do not attempt to build these (or any other similar high-voltage) circuits if you don't know what you're doing. This site is not a how-to guide for newbies, but rather a resource for experienced electronics hobbyists.

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RecPro Audio Pultec EQP-1a Kits



DIY Pulse Technologies Pultec EQP-1 A Program Equalizer

★ Update 03/27/2011:

I've just completed this matched pair of EQP-1As for a client in Texas and have made available a zip file containing 85 new photos below. Feel free to [contact me](#) if you're interested in completed, point-to-point hand-wired EQs as shown here. \$2545 each.

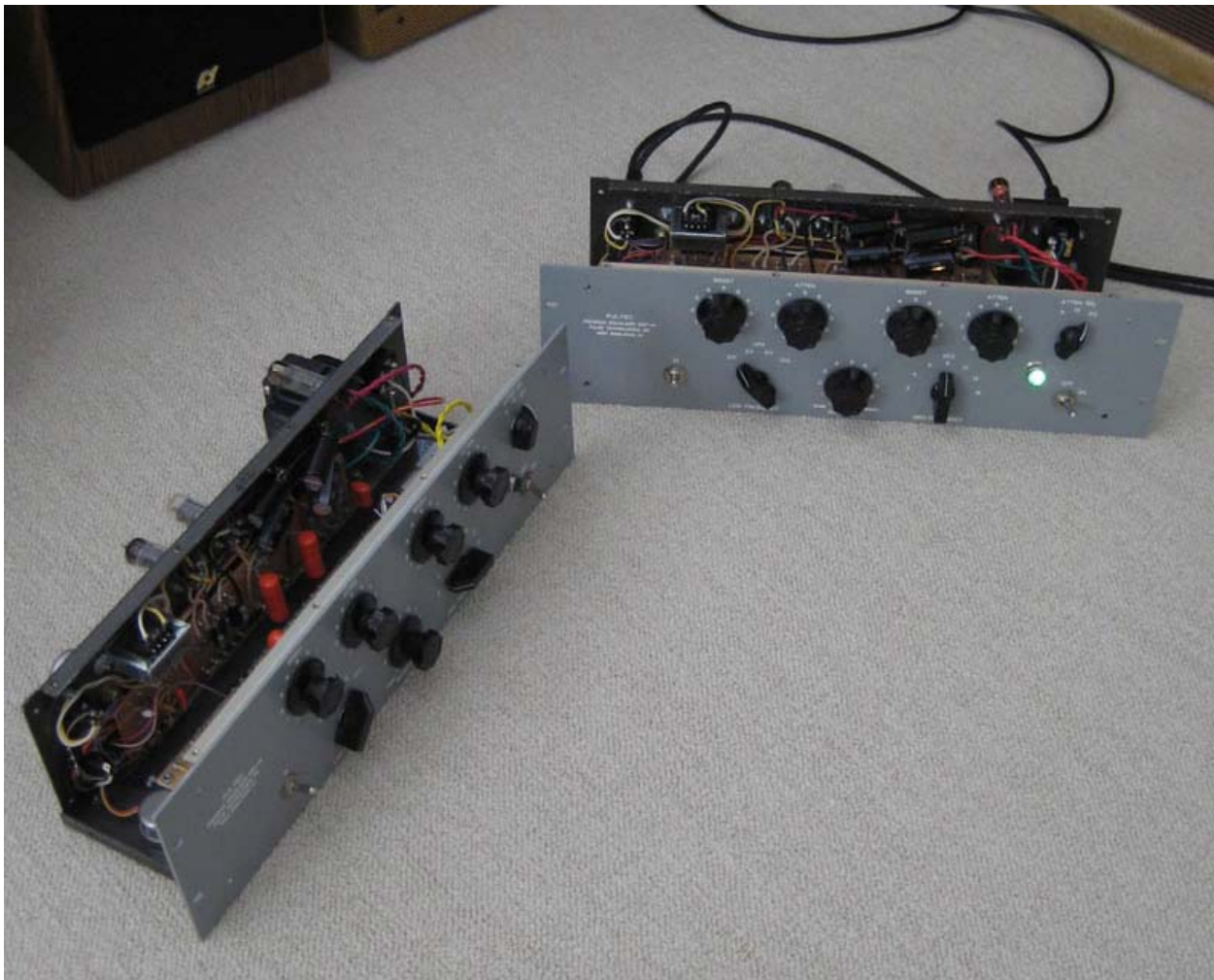


3/27/2011 Demos:

[Matched Pair Demo](#) - National Tri-Cone. AKG TLII->Redd.47->EQP-1A (20cps -4, 10-12k+7/Broad).

[Wichita](#) - Martin OM-28MQ. AKG TLII->Redd.47->EQP-1A (30cps -4, 8k+6/Broad).

[Confessor](#) - National Tri-Cone. AKG TLII->Redd.47->EQP-1A (100cps -3, 10k+10/Broad). Ambience Reverb.



Pultec EQP-1a Documents:

[DIY Pultec EQP-1a Layout](#) | [DIY Pultec EQP-1a Schematic](#) | [EQP-1a Filter Schematic](#) | [Parts List \(XLS\)](#) (Updated 8/2011) | [Pultec Manual \(PDF\)](#)

Pultec EQ DIY Photos:

New 3/27/11: Donate \$10 via PayPal and receive 85 in-depth photos of my recent build of a matched pair of Pultec EQs. Photo set includes component installation, amplifier assembly, completed interior, completed exterior, testing and burn-in. Photo link is emailed upon receipt within 1 business day - [contact me](#) with your email address.

[Donate](#)

Original Photos from 2004:

[Inside Amp Section](#) | [Inside Filter Section](#) | [Inside Front Panel](#) | [Rear](#) | [Fired Up](#) | [Painted and Racked](#) | [Rack](#) | [Rack Rear](#)



Pultec Audio:

[MP3 Rhythm Tracks](#) | [MP3 Clips](#)

Pultec EQP-1a DIY Notes:

[A Few Words About "Duplicating" the Pultec EQ](#)

[Point to Point vs. PCB](#)

This is about as close as you can get to a real vintage Pultec EQP-1a. Built from the original Pulse Technologies [Pultec schematic](#) with the [layout](#) designed around modern replacement parts (filter caps and trannys); and utilizing best practices regarding lead dress and component placement. Parts cost is around \$1100 USD.

The Pultec's original Triad HS-56, HS-29 and Peerless S-217-D transformers would have been great, but sourcing them all is very difficult, primarily because of the rarity of the Peerless S-217-D output tranny. As the Peerless is so exotic, I didn't really care about sourcing the input and interstage trannys because without the S-217-D, the point seemed moot. On the plus side, modern EQP-1a equivalents from [Sowter](#) have a much smaller footprint which facilitates a 2u rack chassis if desired - and the quality is artisan. For those inclined, the original Chicago PCC-55 power tranny does appear on eBay with some frequency and modest pricing. For the inductor, I chose Cinemag's Pultec replacement CML-150T.

Power Transformer Update: Hammond 370BX: Universal primary, 55VA, 275-0-275 @ DC ma 50, 5VCT @ 2A, 6.3VCT @ 2A.

Build notes: I separated the EQP-1a's amplifier section from the [Pultec passive](#)



filter circuit by way of two separate turret boards. The amp section is on the rear panel. This provided a nice way to route the filament wires in the upper corner of the rear of the chassis to keep things quiet as well as keeping the HT stuff away from the passive.

One particularly interesting thing is that the 6x4 rectifier runs off the same 6.3V filament as the 12ax7 and 12au7 tubes, and the power transformer rectifier 5V winding only powers the lamp.

I ended up moving the interstage and input transformers to the left of the bottom turret board and the inductor to the right side. I think there are 3 grounds points: One at the OT lug. One at the input XLR, and one at the power tranny.

The Pultec works great and is very quiet. I ran several sweeps and it's perfectly flat with the eq in and set flat. The eq curves look very accurate as well in all configurations, including gain.

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[Pultec EQP-1a Equalizers and Kits](#)

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