
Subject: A 11 year long quest
Posted by [gofar99](#) on Thu, 30 Sep 2021 02:51:28 GMT
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Hi Everyone, Ever since the first tube based phono preamp I have wanted them to be quieter. I'll admit that the first few were nice sounding, but hummy and noisy. Later ones were really quiet but I felt that S/N of -75dbv was not the limit. Gradual improvements along the way brought it close to -80. So now I revised the design and completely over hauled the power supply as it seemed to be the thing holding me back. It was. Now with a different transformer, a medical grade SMPS for the heaters (neither over \$20US, final three stages of filtering with poly caps and a capacitive multiplier in place of the regulators it is really, really quiet. I have reached the level where the tubes themselves are the biggest source of noise. They are selected EH7025s. With the better pair I show on the scope -93dbv, the worse pair -90. (see the image). The peak in the image is an artifact of the scope. Response is within +0.5db/-0.5db from 20HZ to 20K. The preamp has the same lovely sound as all the previous ones as that part is not changed. I'll post a schematic and photo of the guts in a day or so. In my system the listening level (on the preamps digital display) is right at -40db. When I increase it to 00 I need to have my ear within 6 inches of the speakers to hear anything. 40dbv is a ratio of 100 to 1. That is a lot of headroom!

File Attachments

1) [Better channel noise2.png](#), downloaded 68 times

Subject: Re: A 11 year long quest
Posted by [Wayne Parham](#) on Thu, 30 Sep 2021 14:30:05 GMT
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Very nice!

That's so important with high-efficiency speakers. You can hear any hint of noise on an efficient speaker, so to have that dead-quiet in between passages is really hard to find and is only realized in the best amplifiers.

Subject: Re: A 11 year long quest
Posted by [Rusty](#) on Fri, 01 Oct 2021 16:24:13 GMT
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I've come to realize that too. My new tubed line preamp with phono I hooked up to my old Hafler DH220 amp. And I can hear it's slight hum on the phono end. But using my tubed amplifiers it's smooth as baby's feet. Pi speakers let it all through. Like a spaghetti western know as The good, bad and ugly. The good is most music recorded, the bad is some and the ugly, is just that.
