Subject: to RIAA or not
Posted by gofar99 on Thu, 08 Aug 2024 02:41:55 GMT
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Hi everyone. This has likely been covered somewhere in the past but as gear and software improved I figured I would inquire again. Most newer ADCs seem to have a huge S/N ratio. Usually a noise floor better than -100db and likely a headroom of at least 20db. So if the slope of the RIAA curve is about 40db it would seem reasonable to expect that the output from a phono cartridge would fit with room to spare. From my readings etc it appears that the absolute max dynamic range of an LP is about 75 db and most are far less it might seem reasonable to do the RIAA conversion in a PC. Any thoughts?

Subject: Re: to RIAA or not
Posted by Wayne Parham on Thu, 08 Aug 2024 13:43:45 GMT
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I think you're proposing to create an RIAA curve using a digital filter. Is that what you're saying? If so, I agree. That would be easy to do.

But I can already hear screams of horror from the analog enthusiasts. :lol:

Subject: Re: to RIAA or not
Posted by Rusty on Thu, 08 Aug 2024 16:00:39 GMT
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Is the Parks DSP phono preamp along those lines?
https://positive-feedback.com/reviews/hardware-reviews/the-parks-audio-puffin-phono-stage-etc-etc-etc-etc-etc/

Subject: Re: to RIAA or not
Posted by gofar99 on Fri, 09 Aug 2024 02:25:36 GMT
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Hi, I suspect it does that. I have a number of ADCs and DACs plus lots of software to fool around with. A quick check of Audacity indicated it was easy to create a RIAA eq. I intend to try feeding directly from a cartridge into a SIIG ADC and then save as a wave file at 34/96. Using that in Audacity apply the eq and adjust the level as needed. It would seem to be a way to do it. Dynamic range on the SIIG is 108 so it should be adequate. More to follow....

Subject: Re: to RIAA or not

Posted by Rusty on Fri, 09 Aug 2024 14:32:05 GMT
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GoFar you're like Chuck Berry's song Nadine. Always up to something new.

Subject: Re: to RIAA or not
Posted by gofar99 on Sat, 10 Aug 2024 02:14:26 GMT
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Hi, I have been called a number of less flattering things. You should see some of the things I tried that didn't work. I figure if I have the idea and the parts to try it why not. It is how I learn new things. :d

Subject: Re: to RIAA or not
Posted by Strum Drum on Mon, 10 Mar 2025 21:40:16 GMT
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Am I the only one who opened this thread believing it to be a discussion about pirating? I was ready to share my tips with gofar99, with a caveat that I haven't pirated since my teens, so my info might not be up to par. I figured you had gotten a threatening letter from the RIAA.

Subject: Re: to RIAA or not
Posted by gofar99 on Tue, 11 Mar 2025 15:22:25 GMT
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Hi, Not pirating...but trying to find the best way to play LPs. Basically is a digital filter as good as or better than an analog one.

I have never heard of anyone getting a letter from the RIAA. I haven't even heard of the issue for over 30 years possibly 40. The most current issue similar is capturing HI-rez stuff from the web.

Subject: Re: to RIAA or not
Posted by positron on Tue, 01 Apr 2025 02:49:39 GMT
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A quick question Go. With your software, how accurate can you get following the RIAA via digital?

Thanks and cheers

pos

Subject: Re: to RIAA or not
Posted by gofar99 on Wed, 02 Apr 2025 01:33:30 GMT
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Hi Pos, A good question. I really don't know. I suspect that the accuracy is going to be a function of the sample and bit rate. When I do lp to digits I usually use 24/96 or 24/192. The files are stored as wavs. I have used a Moon LP3 phono preamp to enter the audio for encoding and on other occasions gone direct and used the filter in Audacity to "play" them back. It is actually hard to tell the difference. I would assume there is some but more ears are no longer that "golden". Considering that the best S/N from a really clean LP and good cartridge is in the 75dbv range. I suspect that the difference in way the music is processed is kind of a moot point. If anyone out there has done some definitive testing on this I would like to hear about the results.

Subject: Re: to RIAA or not
Posted by positron on Wed, 02 Apr 2025 03:43:54 GMT
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gofar99 wrote on Tue, 01 April 2025 20:33Hi Pos, A good question. I really don't know. I suspect that the accuracy is going to be a function of the sample and bit rate. When I do lp to digits I usually use 24/96 or 24/192. The files are stored as wavs. I have used a Moon LP3 phono preamp to enter the audio for encoding and on other occasions gone direct and used the filter in Audacity to "play" them back. It is actually hard to tell the difference. I would assume there is some but more ears are no longer that "golden". Considering that the best S/N from a really clean LP and good cartridge is in the 75dbv range. I suspect that the difference in way the music is processed is kind of a moot point. If anyone out there has done some definitive testing on this I would like to hear about the results.

I found an article but it does not state how many +/- db from an accurate RIAA curve. I assume close though. A couple of points if I may.

http://waynestegall.com/audio/riaaiir.htm

1. It appears according to the article that 96khz is the best If an additional pole is created approximately (~) 50khz, give or take. That is because the recording audio circuitry generally has a 50khz bandwidth from what I have read. Stanley Lipschitz has an AES article concerning RIAA and 50khz pole if I remember correctly.

To help newbies.

I have found that, from my own lab experiments, that altering my test preamplifier's response (decades ago) from -1db at 200khz to -1db at 150khz was quite perceivable in my lab listening tests.

So this 50khz pole could impact one's listening experience. This is not necessarily a fixed frequency, so I would suggest one should adjust to one's

particular audio system.

2. I think it good to consider the extra Analog stage in the ADC as well as in the DAC. Manufacturer's similar specs mean very little as to sound quality as, example, when we consider purchasing equipment we often check for sonic differences between brand, model components. Will be interesting to see GoFar's personal results.

As some might know, I try to avoid SS parts/components whenever possible but it is virtually impossible with DACs since the DA converter chip produces an analog output. With that said, DACs are really getting good, plus the variety of musical selections on YouTube, and other sources is just too much to resist. LPs are also so expensive.

I can't wait to hear of your final results of your experiment Gofar.

cheers and good luck

pos