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Subject: Re: Wide Spread RIAA Phono Stage Inaccuracies by Manufacturers  
Posted by [gofar99](#) on Mon, 24 Jan 2022 02:21:15 GMT

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Hi, I have found the various sets of formulas to be more or less close. They don't tell the whole story as the compliance with RIAA requires the output of the preamp to be right, not necessarily any individual stage. I use a 1% accurate inverse network with a very accurate signal generator. Then measure the output as a Bode plot on a calibrated scope with a suitable load. Doing it this way compensates for changes the actual circuit (not the EQ) usually causes. A qualifier is that with tube gear (all mine is) the brand, lot number and individual tubes will vary. It is unpredictable. When I hand select the tubes (same lot etc) it is possible to get matching within 0.5db when first installed. After 6 months or so the matching is not likely to be quite that good. I only use passive eq and no NFB in designs, if you use NFB you can get a slightly better long term result. IMO is that NFB is a double edged sword. Yes the numbers can be better, but I always hear some subtle changes in the presentation. Possibly it is just me, but I avoid NFB when ever I can.

Anyhow the site for calculations is a good one and I have used some calculations they had for speaker crossovers and box volumes.

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