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Subject: Linear measurements in audio gear

Posted by [gofar99](#) on Fri, 30 May 2025 03:17:27 GMT

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Hi Everyone, In my addled mind today I wondered if there was a good or easy (or both) way to measure how linear the gain is in an amplifier. Not the frequency response as I can do that easily on one of my PC scopes (Bode plots are great). But more like if you put in one unit of voltage and get out say 3, will you get 6 out if you put in 2. That is simplistic as a scope trace over a good percentage of the ability of the amplifier is what I would like to see. Related is what effect would phase shifts have on the linearity. It would seem like some sort of saw tooth signal of the right magnitude and frequency might work. Something that the ramp would seem like a signal to the amp and if it started at essentially zero and went to something that would drive the amp to nearly full power and was of a frequency (think low) that the ramp would be treated not as DC but a slow raising AC voltage and the duration of the ramp would be suitable for a scope to display. Something like a saw tooth wave. The straightness of the ramp would indicate how linear the amp was. SS gear might not have an issue with this but tube gear might. Any thoughts?

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