Subject: Re: Stylus Inspection
Posted by Wayne Parham on Mon, 17 Dec 2018 19:16:16 GMT
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I would expect that a person could measure many of the same things that are measured for amplifiers and loudspeakers - at least the two-dimensional ones - like frequency response (amplitude and time), harmonic and intermodulation distortion, etc.

I assume there are more audible differences between cartridges than styli. But I guess I don't know that for sure. And especially since the stylus contains "half of the equation" - either the moving magnet or the moving coil - my assumption could be quite invalid. I suppose most replaceable styli are moving magnet, so I guess magnet strength could be a big factor.

Magnet strength is a huge factor in loudspeakers. Changing magnet strength changes the tonal balance of the driver. Of course, the driver is used in a tuned cavity, so that's a part of it. The interaction between the tuning of the driver and the tuning of the cabinet is important - they have to be "tuned together."

That same sort of thing may not be (as much of) an issue in cartridges. But the mass/spring system formed by the cantilever/magnets and the "suspension" at its pivot point are one tuned system and the coils and the preamp's reactive load are another. The manufacturer specifies the reactive load required by the cartridge, and they design the stylus specifically for use with their cartridge, so that's how they control those variables.

My assumption is that I can trust the manufacturer's published specifications. And hopefully, third-party manufacturers of replacement styli are also diligent and produce products that maintain manufacturer's standards. But these are the things I do not really know, so thinking out-loud, I wondered about testing with a vibrating machine or test record and analysis software.