Subject: Re: To measure or not to measure (and what good is it anyway?)
Posted by gofar99 on Sun, 17 Jul 2011 02:04:36 GMT
View Forum Message <> Reply to Message

Hi Everyone, I just saw this thread and thought I would add some thoughts to it. I see two separate concepts, one regarding testing and measurements and the other subjective quality of the end result. I feel both are needed. I have seen and heard numerous pieces of gear that measure well and sound like last Christmas's fruit cake. I have also seen and heard stuff that doesn't measure well and sounds fine. In a perfect world we ought to be able to get both. The issue of testing and measuring is quite valid to what I like to do - design valve audio equipment. I fortunately have a well equipped shop with now three digital storage scopes, two signal generators, a HP distortion analyzer and more meters than I can count. Still the process of testing a piece of equipment can be problematic. Often the results are ambiguous. Is the measured signal to noise that of the unit under test, the generator, the AC mains, stray EMI or what? How do you measure things like distortion, there are no hard and fast rules? I think in some ways I am particularly fortunate in that numerous diyers have built some of my projects (and there are many of the commercial kits out there as well) and I get lots of feedback on the good, and occasionally not so good aspects. This helps solidify the test and measurement process to validate the things that others want to hear. If for example I get a negative comment on distortion in a piece of gear when it is connected to some other piece of equipment - like a particular type of speaker on an amplifier, I can test for that problem and if valid come up with an improved design, or at least warn others not to do that. Another related issue is simulation of designs. This was mentioned in one of the early posts. I use some simulations in the early stages of design. I find they are at best only approximations of how valve gear will actually work. There are too many inexact parameters (tube variations between brands, and even ones of the same brand, component tolerances and such) to accurately do a final design on paper. This is where the art of design takes over. Also goes back to the measuring process.

Sorry for being so long winded , but the issues here are fundamental to audio performance. I like this thread as it has potential applications to anyone in the diy community.