Subject: Re: Viewpoints: To measure or not...
Posted by Wayne Parham on Sat, 13 Dec 2003 19:17:49 GMT
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I thought the precision quotes in that article were funny too. It certainly doesn't make any sense to discuss loudspeakers specifications with resolution finer than 1Hz. The tolerances are just not that tight and things shift more than that. Sometimes this kind of resolution is used when doing something like added-mass T/S measurements, but even then, accuracy is limited by conditions, and it is unlikely that 1Hz accuracy should be expected by hobbyists making measurements with hand-held meters, signal generators and a postal scale for weight measurement. And that's an electro-mechanical measurement - not an acoustic measurement. I can't think of any time it makes sense to talk about an acoustic measurement of a sound prouction system with resolution finer than 1Hz or voltage ratios less than 1%, which is about 0.1dB.I appreciate measurements, as any engineer must. They are important to confirm mathematical models and designs. Any new effort should be rigorously tested. So measurements are extremely important, but I agree with the writer in that the only useful test is one that considers the validity, calibration and therefore the degree of accuracy and confidence in the test. That's where most DIY builders and even many small shops go horribly wrong, in my opinion.For small shops, testing is always good to gain a picture and to test ideas. But one must be very careful when taking measurements, because they're the easiest thing to screw up, and then the results are no good at all - Possibly sending a person in the wrong direction. And when you see a small shop promoting a device using their own measurements, you shouldn't necessarily believe them. You can just about make the charts say anything you want. Seems like the harder a small shop tries to convince you that their measurements are accurate, the less you should trust them. And if they start in on that pseudo-conspiratorial mantra that larger corporate shops lie and that "they alone" promote an accurate representation of their data - Run.