Subject: Re: SPL meter confusion (long)
Posted by Adrian Mack on Fri, 26 Dec 2003 08:11:23 GMT
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Hi there,You need to take it outdoors and do measurements. Indoors, reflections and stuff are completely wrecking your measurements. Move the microphone even half an inch in another direction, and you could get a completely different freqeucny response. Take 'em all outdoors and do measurements there, and make sure its far away from any surrounding walls to avoid reflections which will ruin your measurements. Instead of using test tones and them measuring the SPL, a much more accurate way I'd reccomend to measure the frequency response of your system is to use a computer based program. Speakerworkshop is a program which runs on the computer and takes a number of various acoustical measurements including the freq response which you want to do. You can use your RS meter with speakerworkshop, just hook it up with the loop back cable to your sound card. Make sure your sound card supports the full functions in Speakerworkshop though, theres a test option in the program to test your sound card for compatibility. www.speakerworkshop.comA large rolloff above 8KHz isn't "normal". It means theres a huge lack of the very highest frequencies, like cymbols and stuff. It should be very noticable when you listen to a system with the major HF rolloff and then one which doesn't. What sort of speakers are you using? Have you also upgraded the mic in the RS meter to one which is flat? The mic in the RS meter actually has a huge rolloff above the same frequency which you noticed the big rolloff. Get the Panasonic WM-60AY from Digikey. Its about 2 bucks + shipping and linear right throughout the entire audio spectrum. I'd also reccomend putting the mic on the end of an external rod, so you can move the microphone around while having the meter seperate from it, as having your body near it introduces reflections too. It also makes it easier to use, so you can have the microphone placed way away and hold the meter in your hand and read it easily. See http://www.gti.net/wallin/audio/rsmeter/33-2050/33-2050.html for this microphone modification. Adrian