Subject: Re: Smoothing in Frequency response graphs
Posted by Keith Larson on Thu, 06 Mar 2008 03:28:12 GMT
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Hi Wayne,If you want to get into the math behind a line source its not realy all that bad. The trick is knowing that you need to sum pressure (volts) and not power (watts). The 'power' of a point source does indeed fall 1/R^2, but the pressure is 1/R. That is, power is propertional to V^2. I learned this back in 1985 when I was in college and built my first line source system. Even though I dont think he really knew what I was up to, it was my DSP professors that helped me figure out the 1/R issue. When I mentioned the 1/R^2 power relationship he quickly picked up on the fact that you don sum power, you sum volts.The model I have predicts many of these effects quite nicely, but it lacks floor and boundary conditions. This would not be hard to add, but for best results reflectivity and absorption would need to be known. Or, you measure and then make the appropriate corrections.Hope this helps,Keith Larson