Subject: Re: GPAF 2006
Posted by Jim Griffin on Wed, 10 May 2006 01:48:20 GMT
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Bill, I'm glad that you enjoyed the line arrays. Regarding their output levels and such: I think that a lot of your comments likely was due to program material. I don't recall that we played much material all weekend that was heavy into the bass area. I'm at home now listening to a few tunes from Richard Thompson and there is plenty of bass for me without a sub but I guess that one can never have too much bass. These arrays were designed with sealed boxes and 4.5" drivers so the absolute lowest bass octave was not a major priority. The goal was to achieve snappy (dare I say fast) response with these small cones (each has 4.6 g moving mass and 6 mm Xmax) and facilitate a smooth transition to the ribbons. Thus any time delay (energy storage or group delay) was minimized in this design with the intent to better integrate with the very low moving mass of the ribbons. While I could have used larger woofers in the array, the tradeoff is that you need a much larger box, more moving mass, and would likely might have to resort to a ported configuration to push more output on the low end of the band. Others who have used ported drivers in their arrays and perhaps peaking of the bass area. On first listening you might think that you have what is perceived as more bass. But upon more listening time, you realize that the price to pay is overly bloated (slow) bass performance. Bottom line is that real bass needs to a system that is optimized for the listening room and for larger rooms you'll need a subwoofer or multiple subs with these arrays and most others as well.For the GPAF the room size was only 10 by 12 feet so I felt that a subwoofer was not needed. I have integrated these arrays with subs and have achieved very good results but I based the sub needs on whether the room size necessitated any augmentation. In the hotel room at Tulsa I first measured the room response of the system and equalized the lowest room mode. Next an area of peaking in the 100-200 Hz range was removed. I then added 6 dB gain below 30 Hz to increase the bass response of the arrays so that they were down 3 dB at 20 Hz. With these corrections the bass was essentially flat down to near 20 Hz. Overall conclusion is that any speaker is a tradeoff betwen lowest bass and optimized mids/highs. Adding a sub would have perhaps addressed your concern of any bass shyness. Jim