Subject: 100dB/watt at 20 Hz is overkill.
Posted by Bill Fitzmaurice on Mon, 15 Mar 2004 18:59:00 GMT
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I personally would recommend against trying for max SPL from a horn-loaded sub to 20 Hz, assuming that means you want to get at least 100dB/watt at 20 Hz, simply because there isn't enough program power down there to justify it. In my 'Tuba 24' article you can read how I did a series of RTAs at a 6,500 seat concert venue featuring over 30 top acts of various genres from C&W to Metal, and consistently the highest power requirements were from 60 to 100 Hz, with levels at even 40 Hz down 25dB from those at 60 Hz. This was not a product of the sound systems being used, usually at least a dozen 18 subs. In terms of what is actually required for live pro-sound a better way to go is a stepped response curve, with maximum SPL from 60 to 100Hz, where it's needed, and a more modest output capability below that where it isn't, and that's where my designs for live-sound subs are heading. On the other hand, for HT a lower Fc is required, but at far lower levels, so my HT designs are aiming for just that, a lower Fc along with lower SPL to keep cabinet size within reason.