Subject: Re: First-order tweeter crossovers
Posted by Wayne Parham on Fri, 16 Apr 2004 05:31:08 GMT
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Well, sure, cutting power by 10x gives you that much more ability to handle input power. But the sound output ability remains the same, it just shifts the power point where maximum safe output occurs. You're still talking the same max SPL.Consider that a first-order crossover with 10dB padding is -16dB an octave below crossover. The same thing but with a third-order filter is -28dB one octave below. The tweeter with the third-order filter is receiving less energy one octave below crossover (-18dB) than the first-order filter (-6dB), even if the first-order solution is padded 10x (-16dB).It's not that the first-order solution is without merit. It's just that you can't hit the dynamic range peaks with a compression tweeter using a first-order crossover as you can with a higher-order slope.