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Subject: Re: Phase, delays and offset baffle spacing  
Posted by [Farb Sklarb](#) on Mon, 05 Aug 2002 15:09:38 GMT  
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Thanks for the reply. I agree with what you're saying, but let me clarify my point as well. Consider two filters, one a first-order low-pass at 1600Hz, and the other a 156.25uS pure delay with a 3dB pad on the output. Drive both with a continuous sine wave at 1600Hz and compare the outputs. They will be the same, -3dB and -45 degree phase (assuming I didn't screw up my math!). Now, change the input signal to a 1600Hz toneburst. Whereas the output of the low-pass filter will begin to change just as soon as the leading edge of the toneburst arrives (ignoring propagation delay, i.e., the speed of light), absolutely nothing will come out of the second filter until 156.25uS have passed. So, while both filters have a delay, in some qualifiable way, the nature of the delays is different. I suppose you could say,  $sT$  compared to  $1 / (1 + sT)$ . Anyway, I guess I'm getting a bit too esoteric. It's just something I started thinking about after reading your article. Again, sorry if this is inappropriate material for the forum.

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