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Subject: Re: Phase Delay and Group Delay

Posted by [Wayne Parham](#) on Fri, 09 Aug 2002 02:27:26 GMT

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Higher order crossovers shift phase more than low order crossovers do. But then again, attenuation occurs much more rapidly, so by the time phase difference between adjacent subsystems is climbing much beyond low order levels, one of the two subsystems in overlap is sufficiently attenuated so as to not cause incoherent summing and ultimately destructive interference. The overlap band is reduced, and the amplitude of out-of-band signals is also reduced. There are a couple of things that contribute to destructive interference: One is physical distance between sources and the second thing is phase from the electrical filters. This is discussed in a little more detail in the post called "Biamping-xovers-12, 18, or 24db/oct".

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