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Subject: Re: 4 pi speakers + 3 pi subwoofers, pics & measurements

Posted by [Wayne Parham](#) on Thu, 04 Jun 2015 15:19:04 GMT

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You're right, there's more mutual inductance when they're positioned that way, close together and in the same plane. They are coupled together, and act sort of like a transformer. This causes the HF crossover to shift some, and even causes some of the energy from the woofer circuit to bleed into the tweeter circuit, and vice versa. But this would be most evident in the crossover range, and even worst case, it's a fairly small effect. I wouldn't say it's trivial, but the coupling isn't so strong that it could create a 10dB boost or drop.

What we're seeing is HF rolloff, and by a pretty significant amount. I think it's probably the measurement system, and that the charts aren't giving an accurate picture. If they are, if there is something wrong with the crossover or drivers, then the HF is so low that these speakers would sound very dull, almost like no tweeter is connected at all.