

---

Subject: Re: Flanking subs and phase

Posted by [Wayne Parham](#) on Mon, 06 Jan 2014 18:42:04 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

It certainly cannot hurt to adjust for flattest response. That is the whole purpose of the flanking sub configuration - To provide smooth response by mitigating anomalies created by interference from the nearest boundaries, namely the wall behind the speakers and the floor.

However, I will say that you will probably find delay/phase adjustment unnecessary. The physical offset in all three dimensions provides the delay that does the work.

What we're doing is to use the flanking sub as an element of a truncated array formed by the woofer in the mains and the helper woofer in the flanking sub. The difference in distance between each woofer and the boundaries causes the flight time to be different for each, making the self-interference notch for each occur at a different frequency.

So essentially, where one source has a deep notch from self-interference, the other one doesn't and vice versa. This makes what would have been a 10-20dB notch from a single woofer become a ~6dB notch from the pair. It's most effective in the frequency range approximately 100-200Hz, which is too high for more distant distributed subs but still low enough that boundaries cause response anomalies.