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Subject: Re: 7Pi questions and plan

Posted by [Wayne Parham](#) on Tue, 04 Jun 2024 14:54:12 GMT

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You've got mail!

I sent plans to your email address. We do have midhorn flatpacks available, but we do not have flatpacks for the bass bin or the midhorn cabinet. Just the midhorn flare. To tell the truth, the rest of the build is pretty easy.

Crossovers come fully assembled. Or you can build your own from the schematic. We have both assembled crossovers and the raw unpopulated PCB available for sale online.

Having constant directivity cornerhorns along the 10-foot wall will make your best listening area be from around 6 feet back to around 12 feet back. That's a really nice room layout 'cause it will can potentially keep listeners away from the wall behind them. That will help with the slap-echo problem you mentioned.

I expect that once the room is filled with furniture, the slap-echo will be attenuated somewhat. And using constant directivity cornerhorns will help too, because they tend to direct energy into the room rather than at sidewalls and ceiling. But it almost never hurts to add damping material, especially to the wall behind the speakers. Again, having the listeners a few feet away from the wall behind them really helps too, because it ensures the direct sound is much louder than the reflection from behind them.

I always measure impulse response during development, but mostly "just for fun." I like to see the spike followed by the ramp rather than the LF bulge first followed by the HF spike or even the HF spike followed much later by an LF hump. When I see the spike followed immediately by a ramp, it tells me we're in the ballpark.

But what really directs me is the polars - the location of the lobes punctuated by nulls. And that's what I publish. I always design with purpose to set the vertical nulls symmetrically above and below the centerline about 20 degrees. And when you see that - it's really the same time-related information but shown in the frequency domain - when you see that, you're ensured that the forward lobe is summing properly and is clean.

One last thing. You'll notice that the cornerhorns rolloff down low and could use subs. It's perfect to use a multisub approach so that the energy distribution down low in the modal region is as uniform as it is in the reverberant field. So consider adding subs in whichever multisub configuration works best for your room layout.