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Posted by [Wayne Parham](#) on Fri, 22 Jan 2010 02:08:59 GMT

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sort of a budget hybrid model that also provides uniform directivity, something like a cross between the cornerhorns and the matched-directivity two-ways. Each of these models provides uniform directivity, which gives good seat to seat coverage with excellent imaging for each listener in a relatively large area or "sweet spot". More about the technologies incorporated in these speakers can be found in the links below:

[Pi horn design philosophies](#)

[Phase angles, crossovers and baffle spacing](#)

[Baffle spacing, phase angles and time alignment, revisited](#)

[Matching directivity in the vertical and the horizontal planes](#)

[DI-matched two-way loudspeakers](#)

[Crossover optimization for DI-matched two-way speakers](#)

[My personal opinions of various design philosophies](#)

[Room gain, pressure region, modal region and reverberent region](#)

[Baffle Step](#)

[Imaging, placement and orientation](#)

[Corner Horn positioning "Sweet Spot" for listening](#)

[Making speakers "disappear"](#)

[Recommended toe in](#) Whether you choose a constant directivity cornerhorn or a matched-directivity two-way speaker, I suggest augmenting them with two to four subs in a Multisub configuration. This not only increases bass end extension but also smoothes room modes.

bookshelf speaker is needed and high efficiency is desired or required. Naturally, being high efficiency speakers in a relatively small box, they don't offer deep bass and that's why they're really best as surrounds. But they can be run as mains with subs, perhaps as a secondary or

couldn't be used, because they generate deep full bass all by themselves.

I personally own every model of my loudspeakers, and listen to them all pretty often (even the

and shows. I also rotate between main models sometimes, but really only because I do shows. Otherwise, I'd make a pair of speakers and live with them for years, even decades. That's how I

On the subject of amplifiers, I tend to prefer the little single ended tube amps these days, but have used everything from those to huge prosound arc welder amps. To me, the speaker is the biggest deal because it's where most of the acoustics problems are created or solved. Ironically, it's the

simplest machine in the sound system but it is also the only component that actually creates sound, so is arguably the most important. For a lot of technical reasons, I think it's where you stand to gain or lose the most in sound quality. Still, for amps, in my personal systems, I have a 10 watt SET amp in my office driving the cornerhorns, a 12 watt SET amp driving the mains in my living room and a 50 watt single ended FET amp driving the subs. The surrounds are actually driven by a (wireless) digital amp, but are only running when movies are viewed. The bedroom system uses a 10 watt ultra-linear tube amp, which is a type of push-pull amp. I still use the big Crown arc welders to drive the hornsubs.

real cool. (If you don't know what I mean, I'll show you some pics real soon but 'til then, you'll just have to be in suspense.) We've had a bunch of very talented woodworkers frequent this forum over the years, guys like Epstein, Martinelli and several others, too many to mention or even for me to remember, and I've definitely borrowed finishing ideas from some of them. These latest speakers have been influenced a little bit from each of them.

Martinelli always used real cool looking exotic woods and he also turned me on to hand rubbed tung oil. Epstein clued me in on dozens of tips and tricks (search the forum and you'll see what I mean) and his latest one is nitrocellulose lacquer, which is being applied to my new speakers as we speak. Garland did this cool curved grille back in 2001, I think, something like that. I always loved that look and asked him if I could borrow that style on some of my own speakers sometime. I'm just now getting around to building them, and they're smoking hot two-tone wood with bubinga burl and a brown grille covering ash partial front baffles. You can just see the hint of those AE pole plugs through the grille, or take them off to see all their beauty. Sweet.