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Subject: Re: Favorite flavors

Posted by [Wayne Parham](#) on Wed, 23 Feb 2005 20:57:16 GMT

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Very good points. Good points indeed. But I will be very honest. I think the attraction of some of the round horn designs of the last ten years or so is mainly hype. I think some of them are attractive in an eclectic way, sort of retro looking and cool. But I don't really like the way they sound. They're just not for me. Don't get me wrong - I don't dislike them either, any more than I dislike a nice pair of planars with good amplification or any other system that is done with care. Each technology has something to offer. If you are right in one spot on-axis and the room cooperates, they can sound very good. But when you move around the room, they fall apart. They just don't sound good except in a very tight area. And even when sitting perfectly on-axis, since the reverberent field is non-uniform, room reflections send energies back to the listener that are unnatural. So I just don't like the way they sound. About equalization, it is important to realize that it's the compression drivers that need EQ, not the horns. Horn shapes that provide collapsing directivity provide equalization acoustically rather than electrically, that's all. Basshorns are a different matter. Even though they're physically large, they're usually undersized compared to wavelength. Because of that, they need EQ to smooth response peaks and augment the deepest bass. In this case, equalization is needed for the horn and not because of the driver. A horn with collapsing directivity provides equalization just as surely as an electrical circuit does. But a speaker that uses horns with acoustic EQ doesn't account for the power response and only compensates for response on-axis. It's not too bad if DI is matched at the crossover point, but if it isn't, it really messes up the tonal balance of the reverberent field. So whatever energy is reflected from the room back to the listener is wrong, tonally unbalanced and very unnatural sounding to me. This isn't a prosound issue. Certainly pattern and coverage are important in prosound, but I would argue that it is just as important in the home. Maybe even more so. Large sound reinforcement installations with lots of speakers have special needs that make pattern and coverage very important. But most prosound setups have less than a dozen speakers in a fairly large environment. That makes coverage pretty easy, really. In that kind of an environment, you can pretty much just point your speakers where you want. Sure, there are a few things to avoid, but the typical installation is pretty easy. Home systems are usually in rooms that are smaller and where the room really becomes part of the sound system. You can treat the room all you want, but the fact is that the directionality of the speaker becomes just as much a part of its sound character as does any of its other attributes. Room reflections sort of voice the speaker, so the speaker's directional characteristics are a big deal. Some like a lot of ambience, some prefer more of a headphone sound. So preference is a factor too. But no matter how you look at it, the directionality and the quality of the reverberent field are a big part of the sound character, especially in a relatively small room. There is also the matter of appearance. You didn't mention it, and it has nothing to do with sound. But I think appearance is important. While some designs using round horns make an art form of the shapes, some are not so attractive. I've seen some really cool looking speakers based on round horns, but some of the others look awkward, even ugly. I just can't get excited about those. That's my take on it. I like the sound and appearance of other loudspeaker systems much better than those containing round horns. I've seen and heard some that were very good, but I can show you some that I think blow them away both in terms of sound quality and appearance. I'm sometimes blessed with a lot of free time to enjoy listening to music and sometimes not. This month, I haven't had much free time. It's a sad fact that the few times I've had free, I've mostly watched movies, and I seem to nod off even during those. But the

audio system where I'm watching is pretty good, and sometimes the soundtrack really knocks me over. That's pretty cool too. Sometimes I am able to listen a lot, usually during the day while working. I am blessed to be able to play nice music while working, and sometimes find myself distracted enough by it to take a break and pay attention. If I have to concentrate, I better turn it down because it will grab me and take me away. I have a couple of critical listening modes in addition to just background listening. One critical listening mode is when I'm listening to the equipment. The other is when I am listening to the music. When listening to the equipment, what I mean is that I am evaluating the performance of a system. It's usually after a prototype is built. After all the design and measurements are done, I will just listen to key passages that I use to compare with. Sometimes I will put a known system side-by-side with a new prototype. Sometimes I will have two exact same systems side-by-side but with different drivers. So when I am listening to the equipment, I am not hearing the music so much as I am listening for sound quality, artifacts and other anomalies. The other critical listening mode is when I am just listening to a performance for the music's sake. That's the normal mode for me. When a system is done and in use on a regular basis, it disappears for me. I give it no more thought. Some of my loudspeaker designs have been around for years, decades even. With them, I haven't "listened to the box" for years. I just listen to the music. So when I purchase a new record or CD and listen, I am hearing only the performance. This is the most enjoyable thing for me. I like to put the design away in my mind forever, and just listen to the music.

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