tonally balanced and sound good as long as you're listening to them somewhere in the pattern.

That said, there are some placements that are better than others. One important thing is to reduce early reflections and another is to match channels. One way to do both simultaneously is to position the speakers symmetrically and to position them so their forward axis cross in front of the listening position. This gives the best illusion of stereo imaging.

I learned this placement trick quite by accident probably 25 years ago, but it took me a while to realize why it sounded so good. It is the combination of three things that makes it work, reduced early reflections, uniform directivity and channel matching. Knowing how it works makes it possible to take advantage of this placement technique with any loudspeaker that provides

toe-in. This sets two parts of the equation, reducing early reflections and uniform directivity, because of the nature of the horns used and their pattern and orientation. It makes the spectral balance very uniform throughout the room. Above the modal range, the sound field is practically the same everywhere.

Even with a uniform sound field, the speakers almost always sounded better when placed at each end of a short wall in a rectangular room. This was the case in nearly every installation, and it made me wonder why. I thought perhaps part of it was a near field / far field thing, but that wasn't it. The tonal balance didn't change, rather the improvement was in stereo balance and the illusion of imaging. It didn't take long to realize the issue had more to do with the amplitude balance between channels.

If you are listening at the point where the speaker axis cross, then the only place where the two speakers provide the same amplitude is when you are directly between them. The further left or right of center, the more difference in level between the two speakers. If you're forward of the axis-crossing point, the difference is even greater. But if you are behind the axis-crossing point, then movement away from a speaker brings you more directly in line with its forward axis, and moves you further from the forward axis of the other speaker. This has a balancing effect on the amplitudes arriving from each channel, and makes the area where channels are balanced much wider.

45° toe-in. In some cases, it may not be appropriate, but in many cases, it is. Every room is different. But in general, it's best to place the speakers where their forward axis crosses just in front of the listening position, aimed away from the nearest side wall, ideally, outside the horizontal pattern. Also, sit away from the rear wall, if possible, and make it absorbent or diffuse. Bookshelves often work well.

I would always make it a goal to set the speakers where they meet each of the goals of reducing early reflections and providing channel balance over a wide area. This generally means pointing them away from the nearest wall with some toe-in, and crossing their forward axis in front of the listening area. This will give the largest "sweet spot" and the best illusion of stereo imaging. Making speakers "disappear"
