

Proper speaker toe-in can't be overemphasized:

How to get everything suddenly falling into place.

When it comes to speaker toe-in, it turns out getting it close to right is not even close. It must be absolutely perfect.

Having dealt with speaker set ups of nearly every kind ranging from small to large Wilsons, Genesis, Infinity, Sonus fabers, various Magneplanars, Martin Logans, Nolas and Apogeos to Avant Gardes and Quads, both at work and in homes over many decades, this aspect of fine tuning a system is somewhat overlooked and elusive but it needn't be.

Once your speakers are located in the sweet spot along with sufficient acoustic treatment to minimize room interaction, precise toe-in remains the most critical and final step to snapping a musical event into proper timing and focus. Similarly, taking a great photo requires perfect focus to capture all the depth of field, detail, clarity and shading in the subject your lens has captured. Dialing in the magic zone, if you will.

Let's start backwards from the sound of speakers whose toe-in is just not quite perfect, according to your highly perceptive ear/brain mechanism:



Female vocal sibilants sound a bit smeared, tear the air on “s” sounds, and consonants are a slightly harsh. A bit messy - like singers trying to enunciate with toothpaste in their mouths. Sound familiar? People assume that's as good as their tweeters are going to get and stop short of reaching their speakers' full potential. Or maybe a center-mic'd vocal image is not as palpable as life – you can't feel the mouth, throat and chest components of a singer quite coalesce into a coherent, believable whole, with the tonal balance, focus, scale and dynamic intensity all snapping into place and sounding absolutely, seamlessly, spooky real.

Your speakers may just need a bit of patient coaxing into place by mere fractions ($1/32$ down to $1/64$) of an inch. First, be sure they are both exactly the same measured distance from their front baffles to your ear at the center prime listening seat. Then, each needs to be toed in or out very slowly with the smallest of nudges until you achieve believably tight focus of the singer's mouth, avoiding any sense of the dreaded big clown mouth syndrome. The ultimate target here is perfect speaker symmetry: getting the desired degree of toe-in to be exactly the same angle between the left and right channels.

Note these incremental movements in amalgamating the projection of each speaker's image to be fully in sync with the other channel are somewhat interactive. You will know when you have nailed it when the speakers simultaneously disappear as the apparent source of the sound, becoming micro-dynamically much more alive. The vocal scale, tone, tightness and purity of sibilants propel with surprising suddenness and immediacy from a much freer, boundless sound stage. A more intelligible, unblurred event should naturally unfold before you because you have increased your speakers' organizational skills in defining micro timing and spatial relationships. Each musical mini event consisting of attack, sustain and decay occurs in the right order, making more sense to your brain allowing you to relax and enjoy music on a deeper level.

Don't be afraid to spend a little time experimenting with this. Once you get there, there is no going back.

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