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Subject: Re: Three 4Pi's in Basic Black for Home Theater Build Thread

Posted by [Wayne Parham](#) on Wed, 08 Sep 2010 19:46:44 GMT

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I would agree generally, that to match surrounds and mains at least in terms of spectral balance is important. In fact, there was a time that I recommended all five speakers in a five channel system should be the same. However, I have backed off this, because my opinion has changed. I now think the fronts should be the same, but that surrounds need not be.

In fact, I think it is probably better that the surrounds not be the same as the mains, at least in terms of directivity. I prefer the fronts to be somewhat directional but the surrounds to have a wider pattern. They are primarily for ambiance. Even though sound effects in the surrounds are occasionally "given focus", it is rare and only for an instant, a transition to the front or as a quick movement away. Their main purpose is ambiance.

I don't think the surrounds should be radically different than the mains though. The spectral balance should be pretty similar. This is important for the times when a particular sound pans from fronts to surrounds or vice versa, like you said, as a fly-by or an approach or something. But even then, we're talking about a sound coming into focus or going out of focus, so a sonic transition is made, just as the visual transition is made. The effect is realistic, provided the speakers are not completely different.

I did some little subjective experiments before coming to this conclusion. I tried various speakers, even including some that were considerably different than the mains. I used bookshelf speakers, unbaffled speakers, car speakers and even some with tweeters removed to see what sonic significance there was in surrounds. I could tell when surrounds lacked a major portion of the spectrum, like if the treble was completely gone. Or if a speaker couldn't "keep up" dynamically, bottomed out or broke up at loud passages, obviously, I could hear that. But as long as the spectral balance was similar and there was sufficient dynamic range, the illusion of realism was

dynamic range.