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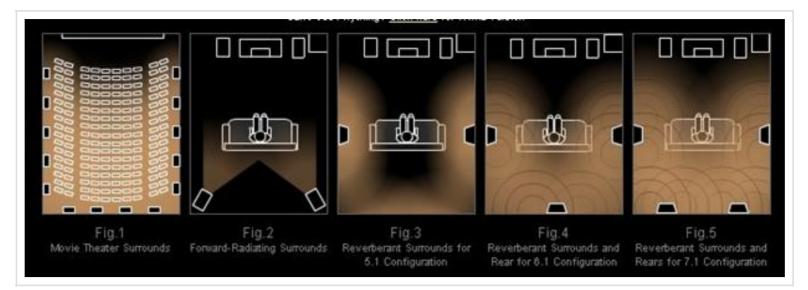
Posted on February 19, 2009 by Brendan

About

Why Dipole Rear Speakers are **Better**

Compare the rear sound field in **ILLUSTRATION A** fig 2 (directional speakers) to fig 3 using 2 dipole speakers and fig 4 using 3 dipoles and fig 5 using 5 dipoles. It can be clearly seen that the rear sound field are much better produced by dipoles. If this is not practical in a room the alternative is to go for an extra center speaker (or two!) at the rear (See **ILLUSTRATION B**) the so called 6.1 and 7.1 speakers' setups.

ILLUSTRATION A



Movie theaters use multiple arrays of surround speakers to keep viewers from being distracted by the sound of any single one (Fig. 1).

Conventional forward-radiating speakers cannot reproduce movie theater surround sound in your home. If they are loud enough for their sound to blend with the front speakers they draw attention to themselves. Turn them down so they don't distract you and they won't blend with the fronts so they are generally not suitable for surround speakers. They tend to give you the discreet "ping'"- " pong " effect (see shaded area in fig 2) instead of "filling" the surround like dipole speakers (see the shaded area in Fig. 3). The more dipole surrounds you add the better the filling of the surround field. (Figs 4 & 5). Like movie theater surround speakers, dipole surround speakers envelop you in sound without drawing your attention away from the movie you're watching. They add size and dimension to the sound stage and ensure a seamless transition when sound and effects move from the front and center to side and rear speakers.

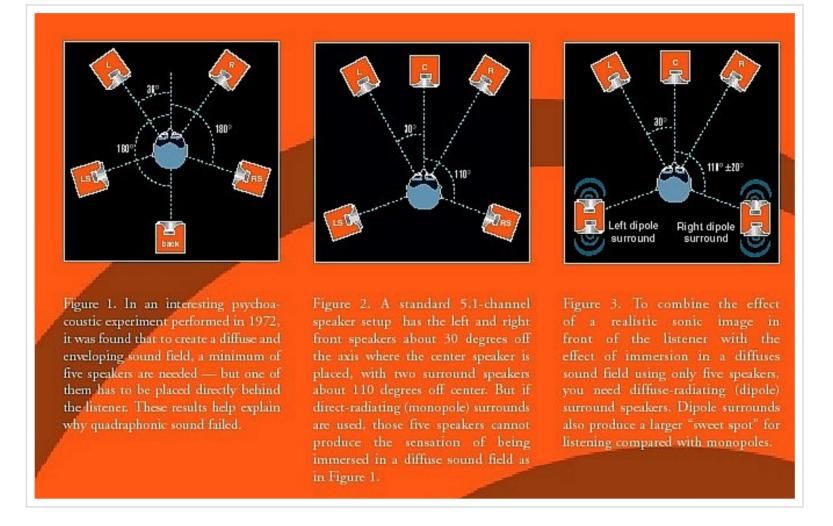




They're just as important for life recorded on stage (multichannel music). Because of their ability to create a large non-localized sound field, they contribute multidimensional realism to the reproduction of the original recording's acoustic space.

The diffuse sound of dipole surround speakers turns your listening into a magical experience-they put the "theater" in home theater and make music sound "live"!

ILLUSTRATION B

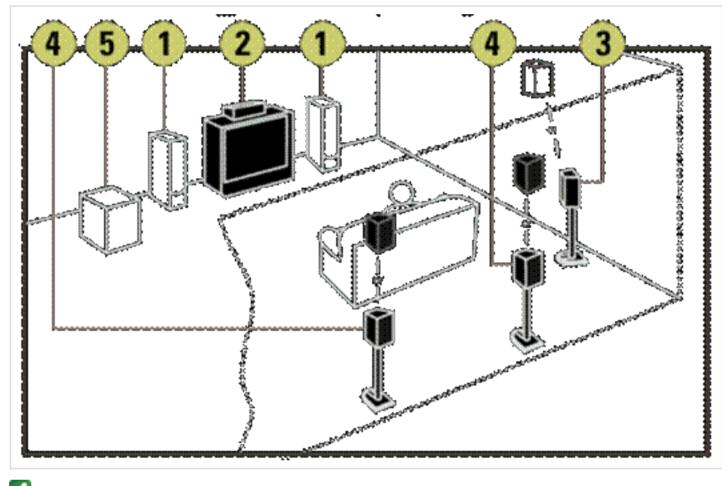


If dipole surrounds are not practical in your room (for instance a window is in the way) then the alternative is to go for an extra center speaker (or two!) at the rear (the so called 6.1 and 7.1 speakers setup). See illustration B fig 1.

The minimum requirement is 5 speakers as shown in illustration B fig 2. but sadly this is not enough. This is still the most popular way but saving cost must be your only reason. My minimum suggestion (if cost and room layout is an issue) is to go for a 5.1 system but with two rear dipoles even if you have to put them closer to the rear walls. (See illustration B fig 3).

POSITIONING

Dipole speakers need to be placed at least a meter above your head and in line with your sitting position for optimum effect. Alternatively on the back wall but ideally high up (1 m above your listening position. See fig below:



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2 THOUGHTS ON "WHY DIPOLE REAR SPEAKERS ARE BETTER"

Frasier on May 20, 2011 at 12:56 pm said:

Dipole speakers have their advantages, but none of your reasoning holds up to logic. The reason movie theaters use so many speakers is to cover a much larger seating area. In a properly configured home surround sound system, the surround speakers do blend in with the fronts without drawing attention to themselves, and the surround field is "filled in" by phantom imaging the same way the stereo field is "filled in" in two-channel systems. The way the soundtrack is mixed determines how discreet the surround effects are. Which brings me to another point: Any given movie or music studio most likely uses direct-radiating speakers when mixing and mastering their content-the more similar your system is to theirs, the closer you'll be to hearing it how it was made to be heard. The reason dipole speakers sound more "live" is because you're getting more reflected sound and less directly from the speakers-The sound is more immersive, but less precise (which is why dipoles are popular for surrounds but not for the front stage), and it tends to be more colored by the room.

Brendan on May 20, 2011 at 5:04 pm said:

Hi Frasier, thanks for your comments. In my experience the last part of what you said is exactly why I like dipoles "The reason dipole speakers sound more "live" is because you're getting more reflected sound and less directly from the speakers-The sound is more immersive, but less precise"

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