Subject: Loudspeaker directivity, room coverage and imaging
Posted by Wayne Parham on Thu, 14 Jan 2010 15:03:17 GMT
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I don't know that particular model of speaker but the right and left designations could be related to directivity. All speakers generate a sound field that has different spectral balance depending on the listeners position.

Most speakers are made to be balanced directly in front, and usually less so above and below and to each side. They're almost always worse in the vertical, but since listeners rarely move up and down (except for sitting verses standing), as long as the pattern is good through a 40° vertical arc, the pattern is useful and coverage is good. In fact, you don't want much sound at large vertical angles, particulatrly at higher frequencies, because they only serve to create unnatural ceiling reflections.

Some speakers are designed to create a uniform sound field over a specific coverage angle. Prosound speakers usually are intended to focus the sound more in a smaller arc, often 40° to 60°. This allows them to be placed to cover a specific area. Home hifi and theater speakers are usually made to cover a wider horizontal arc, often 90° and sometimes even 120° (usually for theaters and other large, wide rooms). In most cases, the arc is symmetrical about the baffle normal, meaning it spreads as wide to the left as it does to the right.

Some speakers are designed to create a pattern that goes further one direction than the other relative to the baffle normal (straightforward). The idea is to face the speakers such that the pattern is directed inward, away from the nearest sidewall. These kinds of speakers are definitely labeled "left" and "right" because they generate a pattern suitable for that placement. Usually, speakers like this are faced forward, letting the directivity of the speaker point the pattern inward. More traditional speakers are usually toed in to produce the same coverage pattern.

Imaging, placement and orientation