Subject: High-Fidelity Uniform-Directivity Loudspeakers Whitepaper
Posted by Wayne Parham on Wed, 29 Dec 2010 22:56:22 GMT
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I've written a whitepaper on waveguides and constant directivity loudspeakers available at the link below. Seems like I've often gotten the same questions and comments over the years, and I've tended to reply with a list of links to documents and messageboard threads. There were about a dozen posts that sort of covered the main concepts, so I usually referenced them. Basically, this whitepaper is a compilation of each of those in one document.
High-Fidelity Uniform-Directivity LoudspeakersTopics discussed:
History of horns, constant-directivity and waveguides
Evolution of directivity control features
Introduction of the matched-directivity two-way loudspeaker and the constant-directivity cornerhorn
Crossover considerations for constant directivity: top-octave compensation, bottom-shelf damping and SPL matching
Reasons for needing top-octave compensation, and the reasons for differences in specific implementations
Matching the horizontal coverage patterns and using the crossover and driver positions to shape the forward lobe
Horn throat diffraction, mouth diffraction and cabinet edge diffraction
Baffle influence on directivity, aka baffle step
Room modes and floor bounce
Multisubs