Subject: Cornerhorn Answers
Posted by Wayne Parham on Fri, 18 Apr 2003 17:28:43 GMT
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You can simply point the bass bins into the corners and expect the same results. The whole deal with these things is that as long as the source is close enough to the corner's apex, it is effectively coupled to the apex. A good rule of thumb is that the sound source is coupled to the apex as long as it is 1/4 wavelength or closer. Above this point, the speaker begins to act more like it is in freespace with the walls being reflectors instead of flare walls. So the closer it is, the higher you can expect to be coupled.You can manipulate the spacing to change the point where you have this transition if you wish, and you can also put a constriction ring on the woofer to increase compression ratio above 1:1. These are some simple changes that have been done by lots of people on this forum. I prefer to have position, angle and 1-to-1 compression be permanently set, but that's just my personal preference.About the angle - If you crossover low, the angle is unimportant. But if you allow the LF section to generate output up high, then the walls act as reflectors and the orientation angle becomes important. At frequencies above that where the distance between the radiator and the walls is one wavelength, the walls begin to act as reflectors.Any high frequency output from the cone that is radiated at an angle greater than a few degrees off-axis is directed out because of the angle of the walls. This angle is the same on both sides, and it amounts to a few degrees on each side. By changing the angle, you'll also be changing the proportion of horizontal axis that is promoted on each side. So this angle will change the character of the LF subsystem at high frequencies, above the point where the distance between the radiator and the walls is around one wavelength.By leaving off the portion of the cabinet that fixes the position in the corners, you can move the speakers around to set the freespace transition point. You can pretty much put any radiator in a corner and tailor position and angle to suit your needs and/or tastes. Your room boundaries form the flare of a large conical horn, and the position, orientation and compression of the diaphragm are things you are able to easily set with your loudspeaker cabinet.