Subject: Re: Request...plans
Posted by Wayne Parham on Sat, 12 Feb 2011 00:33:07 GMT
View Forum Message <> Reply to Message

Yes, the midhorn does control the pattern from the crossover point down. It is required when using midwoofers smaller than 12" because otherwise, the midwoofer pattern is wide up to a higher frequency, too wide, in my opinion. So the midhorn limits the coverage angle up to the crossover point.

However, it is important to realize that even direct radiating drivers become directional at high frequencies. A 12" midwoofer presents as narrow a beamwidth as the midhorn does at about 1.2kHz and a 15" midwoofer is as narrow by about 1.0kHz. This makes them blend real nicely with the tweeter in this region, and is the basis of the matched-directory loudspeaker design philosophy.

On the other hand, the midhorn does one thing the direct radiator cannot do, which is to maintain constant directivity below the crossover point. The pattern of direct radiators widens as frequency drops, whereas the midhorn pattern remains constant. However, it really needs "reinforcement" from corner placement to maintain pattern control all the way down through its passband. If it is placed in freespace, it can only maintain pattern control for about an octave below crossover.

frequencies, then as the horn gains pattern control it narrows, approximating the flare angle. If

corner setting the pattern down low. It is sort of like an entry-level cornerhorn model, but can be used outside of corners too.