
Subject: Re: Widerange midwoofers, specs, and x-o pts...
Posted by [selahaudio](#) on Wed, 23 Sep 2009 00:37:22 GMT
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darkmoebius2 wrote on Mon, 21 September 2009 21:17I just wanted to open a general discussion about widerange mid drivers(3" & 4") and the most desired aspects from a specs POV.

In a perfect world, we could easily find an affordable driver capable of 80-6,500Hz FR with a nice, smooth, curve and rolloff at both ends of the spectrum. But, this isn't a perfect world.

Seeing how, in most cases, one has to crossover to both the LF and HF drivers at 1/2 to a full octave before the actual crossover point, one likely has to trade off one end of the FR against the other.

So, let me ask which is a better trait in a world of compromises (assuming one starts an array from the mids out) - extension below 120Hz or smooth highs above 3.5kHz? taking into account that comb filtering effects likely kick in above that point?

Is this a too simplistic view?

Comb filtering doesn't remove everything so you still have to pay attention to the transfer function of your filter. There may still be peaks and dips along the line depending on where you place your crossover and how steep the slope is.

Depending on the location and bandwidth of your subwoofer you may want to go lower than 120hz. A steeper crossover slope on the sub will also allow you more flexibility. There are more choices at say 80hz for subs but also Dayton RS / Seas 10"-12" that will easily handle a 120hz crossover point. The really long excursion drivers (15mm+ xmax) tend to be more limited because of their inductive voicecoils.
