Subject: Re: Constant Directivity Speakers Using DSP
Posted by AudioFred on Wed, 02 Nov 2011 01:48:51 GMT
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The final verdict is that the speakers sound better using the active crossover. Getting it right took quite a bit of experimenting, but this is much easier with a fully adjustable active crossover than it would have been substituting parts in a passive crossover. The dbx component has a graphic equalizer ahead of the crossovers and your choice of up to three parametric equalizers for each of the woofer and tweeter crossovers, and the graphic eq can be used for room effect adjustment. I found a bell shaped PEQ centered at 16khz can be adjusted perfectly (gain and Q value) to do the job that the 0.47uF cap does in the passive crossover. The biggest difference I hear is much greater treble detail and clarity, including some subtle percussive sounds that weren't audible with the passive crossover.

I finally solved the tweeter hiss problem by using a Harrison 12dB attenuator for each amp's tweeter channel. This provides exactly the attenuation needed, so the amps' volume controls can be turned all the way up and the woofer and tweeter level adjusstments can be set to 0dB.
http://www.parts-express.com/pe/showdetl.cfm?Partnumber=266-244