Subject: Re: Active Crossover - 4Pi Tower?
Posted by Paul C. on Sat, 24 Jun 2006 22:00:09 GMT
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I had thought about this myself... but the Pi crossovers do more than just crossover from woofer to tweeter. They flatten the response of the tweeter in a way that you can't duplicate in an active crossover. The PSD2002 horn driver used in many of the Pi speakers is remarkable in that it comes all the way down to 1600 hz (or lower!), allowing many of the Pi's to be only two way designs with large woofers ("We don' need no stinkin' subwoofers!"). But this one horn driver covers the entire upper end of the audio range. Still, it tends to fall off in the top octave.The Pi crossover fixes that with a neat solution. It takes advantage of the fact that HF horn drivers generally have much higher SPL than most woofers. The horn driver must be padded (resistors added) to match the woofer. There is a bypass capacitor around the padding resistors that lifts that top end and flattens the response. There is very little power requirement in that top octave, so this really does not put much addtional load on the HF driver even at high volume levels.You can't do that with a active crossover.