Subject: Re: 4Pi measurements
Posted by Wayne Parham on Wed, 24 Oct 2012 05:33:00 GMT
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Your measurements look right except for two things:

1. The first speaker does have more peaking around 1.6kHz than it should. Could be the crossover, or it could be the midwoofer cone. Is it a new woofer? If not, you might measure it by itself and see if there is excessive cone breakup. Also, check your crossover and make sure you have the Zobel connected. A missing Zobel will do that. And check all the other values too, especially the capacitors in the woofer circuit and the coil in the tweeter circuit.

2. There is more rolloff up high than I would expect. They don't falloff this much in the top decade. I'm guessing it's something in the measurement system. It has what appears to be a first-order rolloff above about 2kHz. I don't really think your speakers are doing that, partly because it is consistent across multiple speakers, and partly because this is a fairly common measurement problem. I see it happen pretty often, people produce a curve that looks a lot like mass rolloff even on speakers that couldn't possibly produce that kind of response.

Other than those two things, your measurements look right. I think if you were to conjugate that abnormal first-order filter above 2kHz, your response curves would be exactly right.

You've done a very good job, and I'll bet they sound great.