Subject: ART Array Test Results
Posted by FredT on Tue, 28 Nov 2006 10:03:51 GMT
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Wayne was busy over the Thanksgiving weekend auditioning the ART arrays and testing them with a couple of different crossover variations. He sent me an email with the test results for the 2nd order woofer/1st order tweeter crossover I had sent with the prototypes, and also for a 1st order woofer/1st order tweeter crossover, along with these words "I only measured the array with your crossover and with a 1st/1st, using the cap and resistor on the tweeter but removing the second order cap and Zobel from the woofer array, leaving just the coil in series. I wanted to test 4th/4th and maybe play with some asymmetrical slopes too. But to tell the truth, after seeing the data on the 1st/1st and 2nd/1st, I don't think it was necessary to go further anyway. The speakers sound great". The test results for the 1st/1st crossover are linked below.When I first viewed the test graph I was surprised, and my reaction was "If this is good I would hate to see what bad looks like". The graph looks very ragged to me, but on closer inspection it isn't as bad as it looks. Using 87dB as a reference level the response is +/- 3dB from 42hz to over 20khz, with the exception of a broad peak between 400hz and 1.2khz that exceeds the + 3dB. This peak is centered at 670hz, where the response is +7dB. To my ears the peak is audible but not objectionable.I had enjoyed the ART Arrays so much that I built a second pair after sending Wayne the prototypes. My pair had the 2nd order woofer crossover, so I quickly disconnected the shunt cap an the zoebel and listened with the 1st order version that Wayne prefers. The second order woofer xover results in a 6dB null centered at 2.5khz, an area where the 1st order response is flat on. Much to my surprise, I prefer the 2nd order woofer crossover. To my ears the 2nd order, with its "BBC dip" centered at 2.5khz sounds smoother, with massed strings sounding less aggressive, bad recordings less fatiguing, and female voices less forward. True, with the 1st order Norah Jones is actually whispering "come away with me" directly into my ear, but I already have a wife to do that with far fewer complictions. To each his own :)
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