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Subject: Re: Equalization in Arrays

Posted by [Anonymous](#) on Tue, 26 Jul 2005 15:32:52 GMT

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Yes. For the NSB/PT2 array {4" midwoofers w/planer tweeters) I'm using an active setup with the Behringer DCX2496. The first thing I do is tune everything by ear using common sense. I sweep the active crossover range and listen to the music to find the sweet spot I like. I also do individual driver tests where I only listen to tweeters and then only listen to the midrange so see if I can hear problems in this range of frequencies that I selected to make sure there is nothing bad. After doing all these listening tests, I preferred a PT2 crossover frequency between 1.5kHz - 2kHz using the 48dB slope. The steeper slope filters out midrange crud and improves the image. For the NSB high pass I found that 65Hz using the 48dB slope worked nice. I just swept the range and listened to the bass and noted cone excursion at high power to make sure I'm within safety range of the drivers. I set the EQ depending on mood, genre of music, and per individual CD as bad recordings need to be fixed. I'll use a simple example. For jazz/vocals, I cut the ~150Hz region on the midrange output ~6dB as ported NSB's are giving me crazy midbass where things fall off the TV. The Radio Shack meter peaked at 126dB on a bass guitar listening test. The tweeter output I boost 6dB @ 8kHz shelving high pass. This gives me that crispy top end I like when listening to cymbals. To smooth out the midrange sound, I use an input EQ using a Q of 1 and cut the 1kHz band about 4.5 to 6dB. 32 midrange drivers is a lot of midrange sound and the room is small so I need to tame this down a little. Next, I adjust the output levels because I'm using two different amplifiers, one a home amp, the other a pro amp so I need to adjust the midrange level in relation to the tweeter level. In my case I need to adjust the midrange level -6dB to match the PT2. Last, I added delay to one channel, about 15mS to add 'concert hall' effect which gives the music depth. Some genres of music do better with no more than 25mS delay. For death metal music where headbanging is required, I set the EQ closer to 'zero'. I turn off the midbass EQ, turn off the tweeter EQ, adjust the input EQ to -3dB cut, adjust the midrange level anywhere from zero to -3dB. The midbass boom is appreciated in this genre of music.

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