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Subject: Re: That line array sound

Posted by [Anonymous](#) on Wed, 15 Jun 2005 16:12:11 GMT

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>>Cone weight is lighter and the mass of air directly in front of the>>cone is much lighter. Hence faster? Isn't that punch? There is a lot of myth and voodoo in audio. I don't buy into the smaller drivers have better attack, punch, etc. I don't think the lighter cone plays a big role either. I think Adire had a white paper on this? Based on my listening experience what gives me punch is SPL and amplifier headroom. I think it's that simple. I can drive my 8" midrange rated for 100db sensitivity with a 600 watt bridged amp (160v headroom) and I have amazing punch and the crack from the snare drum is ear shattering on transients. People using horn speakers say the same thing about punch, well they get a lot of SPL from horns and if your amp has a lot of headroom the transients will have less distortion. I have an NSB array and the speaker cones are treated with 6 coats of lacquer and there is just as much punch as without the mod, the only difference is a slight loss of sensitivity by doing this mod but the sound is superior to the untreated speaker. The loss of sensitivity does get interpreted as not playing as loud as unmodded but to offset this I just turn up the amp a few notches. Recently I did an interesting NSB array test to see how much punch I can get from the NSB array. The system is full active with two amplifiers and 'digital' crossover. The NSB's are wired for 2 ohms per channel and a QSC RMX 2450 drives them. The amp is rated for about 1200w/ch @ 2 ohm. The NSB's are rated for 5 watts rms and I've clipped the amp on occasion and there is no burning smell from the speakers so the array is handling that power playing music which has a much lower duty cycle than playing sine waves in which case I probably would be smoking the NSB's -> {which I have done on my test bench prior to building the array}. The punch is pretty good as the amplifier has 110v rails so the clipping headroom is about 110v. The latest test I did was to bridge the QSC for 220v of headroom and test one tower. The problem is. The amp is not rated for 2 ohms in bridged mode but because the NSB's are not going to draw tons of power I figured it would work and it did. Having that extra power/headroom was noted, but I felt that it was too much for the poor ole NSB to handle as I didn't want to push it to 100% continuously, I did clip the amp to test the sound and it was pretty intense. I played music at 75% from clipping and I had the perception of more punch just because I increased the power/headroom. I also had an uncanny sense of more depth to the sound but I can't form a final conclusion doing an audition in mono, I need another amp to do the test in stereo. Who knows, I had to do it. /lolll may do the long overdue ferrofluid mod to the NSB in which case the power handling gets a huge boost but I don't know the long term {years} effects of having coolant inside the drivers because of the materials used to create the driver. Since these are 49 cent speakers I probably will mod another 32 of them {I have 288 more in stock} with the coolant and get another amp to show people what a 49 cent driver can do mated with 5kw of power. /evil/fun stuff

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