Subject: Wayne, you are the man!!
Posted by Jerry Parker on Thu, 08 Aug 2002 03:43:26 GMT
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We finished tonight at 9:30pm! We took them into the backyard and placed them against the side of the house, and hooked them up to the reciever. A couple of days ago Mitch and I decided that the first song to play through the 4pis was to be "Eulogy" by Tool. You know the song, right Wayne? It starts out with the little horn sounding thing really quiet, and builds up to a crushing guitar solo. Anyways, it was incredibly loud - yet accurate sounding as well!Our neighboor came outside and turned his lights on and Mitch thought he told us to turn it down! So we took the stuff into my living room, and have been playing music until about 1am. I am impressed at how loud they get. I could only get them to register a 114dB on the RadioShack SPL meter I have. Which is kind of surprising. Shouldnt the speakers as a pair be able to reach 127dB with 200w of input power? Here is my reasoning. The speakers sensitivity is 101dB 1w/1m. The reciever is rated at 100w x 2 channels. At 100w one speaker should be able to do 121dB at 1m. But, with two should it not be an extra 6dB, one for a 3dB power increase, and another 3dB increase for doubling the cone radiating area?I also noticed that their seemed to be a peak in the midrange, I cant really say the frequency. Are there supposed to be any peaks like this? I am worried that we did something wrong.As for the sound quality, I like it, a lot! Mitch is simply amazed by the speakers too, he is EXTREMELY happy with purchasing them. Other than the small peaking that I think I hear, they sound perfect. The only other problem with them is their bass response, but that is probably because they were outside, and they were not using a subwoofer. When we moved them inside and hooked up a sub, it sounded wonderful. And on a lot of songs, that dont extend very low, a sub isnt needed either. I bet if we moved the speakers right up to the wall like 5" away, the subwoofer would be less needed.I'll get more pictures up tommorow, we were too excited to take any more tonight.Thanks again Wayne!

Subject: DON'T CLIP THAT AMP!!!(long ramble)
Posted by Sam P. on Thu, 08 Aug 2002 10:40:50 GMT
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When "putting the loud pedal to the metal" I would advise using a much larger amp. You are risking overdriving the amp, and causing damage to the speakers. Several of my power amps have lights that are supposed to indicate when THD is at 1%. Rest assured that at 100watts, the 4 Pi's will be hitting about 120dB on a ratmeter. Voice coil heating will start to reduce the output be several dB's at max input levels, so striving for those last couple of dB's above 120 will take things into the "blow up and suddenly silence reigns" territory if all you have on tap is a 100 watt amp. This is like running a motorcycle engine at 9,000 rpm, sure, it is designed to turn that fast...but don't claim to be "surprised" when a valve stem separates and drops the head of a valve down into the cylinder. The dB's from two separate sources will not add up and give you the whole theoretical 6dB gain, that would depend upon how well the two drivers are working in concert, the gain is in practice somewhat less. During ANY high SPL exposure, your ears have muscles that will tighten up as a protective reaction. Takes a LONG while for them to "normalize". Never make subjective audio decisions after running power tools, concerts, etc...your ears will be

"out of calibration" causing things to sound "wrong". How do the new Pi's sound first thing in the mornings, at 75dB listening levels? Are the interiors finshed, all fiberglass in place, etc? All those braces shown made me think that it would be good to attach some glass "out in the middle" away from the walls where it is more effective. I guess I won't say to "wait till they are broken in", obviously by now they are:) I was going to write a post extolling the virtues of LOWER powered amps, like the Vintage Pioneers I've been playing with lately...never mind. Jerry, you need to start looking for a 200wpc sand amp, and put a candy dish full of foam ear plugs by your front door:) Sounds like you guys know how to party...sometimes I think about holding a Rave in my LR, just need the mirror ball and strobe lights,and... "threw the carseat into the dumpster and headed off into the night" Steve Earle Yeah, the wife might not dig all those "young twinkies" dancing the night away while I spin some tunes:(Youth is wasted on the young. Sam

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Subject: Compression horns
Posted by Wayne Parham on Thu, 08 Aug 2002 15:43:50 GMT
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rising response through the midrange. They're very efficient full range speakers and their bass response is nice, but in large rooms or outdoors they could definitely benefit from a sub. They're best if you put them in corners or against a wall. Also, the compression driver is attenuated 10dB, but if your room is very reflective, you might use one of the compensation cable assemblies that provides more attenuation, like the 12dB or 14dB version.

Subject: Re: They sound better outside!
Posted by Jerry Parker on Fri, 09 Aug 2002 11:16:11 GMT
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Thanks Wayne, perhaps we should try the 14dB attenuation sometime? Anyways, we brought them into the backyard yesterday to do some SERIOUS listening (like 3hrs). Anyways, they sound SO MUCH BETTER outside than they did in my living room! The bass was MUCH better, and that peak dissapeared. They were 5inches away from the side of my house though. I would say that outside, a subwoofer wouldnt even be needed in my opinion. I think the problem we had with them in the house was that they were not up against the wall or in a corner. We moved them to Mitches house yesterday and we are going to set them up in his room tonight. This time I will make SURE they are up against the wall.

Subject: Re: DON'T CLIP THAT AMP!!!(long ramble)
Posted by Jerry Parker on Fri, 09 Aug 2002 11:30:18 GMT
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Yeah, we were probably clipping them a little bit. What I dont get is this. Since the amplifier is rated at 100x2, the maximum power output possible is 200x2 assuming a full square wave with the same peak voltage as maximum sine wave output. Wouldnt that be a correct assumption? Now, the LF motor is rated at 300w. So, technically it shouldnt blow up, but we all know how that goes... As for the compression driver, it is rated at 80w, so perhaps we could blow it, but it has that steep 3rd order highpass and also that protection lamp. I realize this is all "theoretical" and the real world things happen differently. Also, we have not reached the mechanical power handling of either driver AFAIK. The woofer does not need to excur very much to produce impressive bass (probably a result of the EBS cabinet). I suppose that the tweeter could face overpowering on a mechanical level, but with such a steep highpass filter and a 2" radiating surface, I doubt that. So now we have to worry about the thermal power handling. The woofer should be able to handle that kind of power levels for a few minutes shouldnt it? What about the tweeter? The passive filter should protect teh driver from the amplifier's clipping. How long do you think would be a safe level to play them at really loud levels? Thanks.