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Subject: Re: Horn loaded Corona Build

Posted by [dawiipgh](#) on Fri, 16 Sep 2022 15:13:14 GMT

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Hey guys! I just wanted to weigh in on how impressed and happy I am with the 4 Pi speakers. I started with them in a small room of an open plan house. Wow. Even with a 50 WPC PS Audio Sprout amplifier, these pressurize the room. At reasonable listening volumes, everything is balanced and really feels like a live performance. I enjoy concerts (small venues and bars as well as large pavilions and arenas). During quarantine, that was missing.

I have since moved them down to the basement and they really shine in a larger room. It was interesting, since the drivers were so large, you could actually hear separation of the highs mids and low (port) because the speakers were too near field in my upstairs room. In the basement, you can experience the constant directivity. It's like you can walk around and the sweet spot is very large compared to typical dome tweeters.

4 pi's are really well balanced and the mid range is extremely lifelike. What it doesn't have is a strong low end <40 Hz. You will hear rock music bass guitar and full range of drums, low strings, and piano, but where it lacks is explosions in movies and synth bass / drum machines in EDM, House, Rap, etc. I actually messed around playing test tones (you can find them on spotify) to see where the speakers rolled off. I'm sure a calibrated mic will be in my future soon.

I had an Aperion Audio 10" subwoofer with 2 passive radiators and a 500 watt amp. It held up pretty well. But from what I've read hear and other forums / books / articles that multiple subs are the way to go. Walking around the room, you can hear noticeable volume differences in the bass response.

So since I have a 15" midwoofer, I can't reasonably be OK with a single 10" sub. so I'm back to the shop to build two 15" ported subwoofers.

It's roughly based on the 4 pi design but uses the Dayton Audio 15" subwoofer RSS390HO-4 instead of the Lab12c. Dimensions are 20" x 20" x 20" but instead of a single 4" port, I am considering two 3" flared ports from precision port 17" long each. I played around with WinISD looking at several drivers, and tons of box volumes, port arrangements and even passive radiator designs. This hit the sweet spot compromise of low end extension, port velocity, excursion, SPL and box size.

The amplifier that I bought used is a Crown Amplifier XTI 2002 to power both subs.

Admittedly, I currently do have the 4Pis hooked up to the crown and holy bananas, it's powerful. You can't beat the efficiency of these drivers. When these hit down around 50Hz it can literally pull the air out of your lungs.

So long story short, I'm really happy with my build and thanks to all in the forum for the support.

David

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