
Subject: Re: 237 & 238??

Posted by [FredT](#) on Tue, 09 May 2006 21:40:07 GMT

[View Forum Message](#) <> [Reply to Message](#)

They're almost a Studio One Pi "tower" except for this pair I combined the Alpha 8 woofer with the GR Research T6 tweeter. It's a 6 ohm driver with an advertised sensitivity of 96dB. Like the Vifa DX25 I used in a previous incarnation of this speaker, the GRT6 has a low resonant frequency and good power handling capacity. The 96dB sensitivity makes the sound a bit brighter than it would with the Vifa tweeter. The enclosure is 9.75" wide, 12.75" deep, and 36" tall. The 9.75" width is about the narrowest I could go with the 8" woofer. The 12.75" depth is determined by the 11.25" standard width of 12" mdf boards plus the 1.5" thickness of the combined front and back panels. The 36" height is what's needed to get the tweeter to ear level. These dimensions yield a 1.8 cu ft volume, which is a bit too much for the Alpha 8, so I implemented a separate 6" high chamber in the bottom which could house the crossover or, as I implemented here, it can be filled with sand or shot. The volume is 1.5 cu ft, and it's tuned to 54hz with a 4" port. The crossover is 1st order using a 0.47mH Jantzen 15 ga air core inductor in series with the woofer and a 6.0uF Northcreek Zen cap in series with the tweeter. There's also a 2 ohm resistor in the tweeter signal path that's bypassed by a switch on the speaker terminals, and a 16 ohm resistor across the tweeter terminals. The objective of this design was to build a speaker that's inexpensive (about \$100 per plus enclosure materials cost), efficient (95dB), has an acceptable WAF, and of course, sounds good too. The WAF drove the decision to use a narrow enclosure. Asking the builder whether his speaker sounds good is like asking a mom whether her baby is pretty, or a cable maker whether cables make a big difference, but I'm more than pleased with the sound. I told Wayne he should offer a narrow tower enclosure as an option with the Studio One Pi. The Two Pi tower is a better speaker, but not everyone has a wife who would permit such a large speaker in her house. The One Pi tower, as I said, has a much higher WAF.

The "FredAudio" F8 Tower