
Subject: Next Steps

Posted by [FredT](#) on Wed, 01 Nov 2006 14:34:55 GMT

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The prototype enclosures are completed and the speakers are playing with a crossover I improvised using X-ove 3 Pro as a guide. The next steps are for me to document everything you'll need to know to build your own pair, and to get them to Wayne so he can design and test a proper crossover. Since I completed them a couple of days ago I've listened to them with a variety of amps including the solid state Monarchy SM-70 Pros, a 2A3 SET amp, a 300B SET amp, and an EI34 push pull amp. The 300B's eight watts seems to be the minimum for coaxing out their full potential, and they will do everything they're capable of doing with the 40 watt EL34 amp. I'm more than pleased with the way these speakers sound. I've used the Vifa DX25 tweeter before, but I had some reservations about the Dayton midwoofers. Specifically, I was concerned about the quality of the bass and midrange from a \$14 driver. No problems! I don't have accurate measurement equipment, but I used my Radio Shack sound meter with a Stereophile test CD to get an approximation of their in room response. Between 500hz and 8khz, the range where the meter is accurate and room resonances aren't too strong, they are within +/- 2dB except for a very smooth sounding 3dB "BBC dip" at the crossover point (2.5khz). At high volume settings with dynamic music you get that unmistakable line array "you are there" impression. Difficult transients like the hard strike of a full piano chord are clear up to much higher volume levels than with any of my point source speakers. The only downside I can hear is the expected rolloff below 400hz for speakers that have no baffle step compensation, but the low bass is good down to 40hz. They don't sound wimpy in the bass, but nobody is going to say "Wow, listen to that bass!" either. I built the enclosures with Baltic birch veneer plywood because it's lighter and easier to finish than mdf, but for anybody who's building them with a hand saw instead of a highly accurate table saw and a router I recommend using 3/4" mdf. I recommend this because the seams will not fit perfectly, and the easiest way to finish them is to smooth over the rough edges with wood filler, then paint or veneer them. Another suggestion for builders without commercial equipment: I cut 10" wider panels for the front and back, and 13.5" panels for the sides to achieve an attractive width to depth ratio with a relatively narrow profile. Lumber sources often carry mdf in 12" boards (they're really 11-1/4" wide). It will be much easier to use these boards without alteration because you can count on their being perfectly cut. Things will fit together much better than cutting each board with a hand saw, and this will give you a 11-1/4 wide by 12-3/4 deep enclosure. The interior volume will be almost identical to the ones I built. I'll post another message when I complete the documentation.
