
Subject: Re: Dayton Audio/Eminence Full Range Single Driver

Posted by [AudioFred](#) on Tue, 19 Feb 2013 21:14:49 GMT

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I've decided to try something different, and so far I like what I'm hearing. These speakers sound very good using the DEQX for equalization and crossover, but realistically how many people have that kind of equipment? If I can make them sound good with no digital equalization and a couple of subwoofer plate amps on the subs, then they become a very affordable alternative for somebody wanting to try an open back full range single driver speaker that has impressive bass.

While there's no way to achieve the flat response in the second graph above, anything that can be done to reduce the level of that broad peak centered about 3.6kHz will make them less in-your-face bright, and far more listenable. Many single driver builders incorporate a bsc circuit to balance the bass with the upper midrange and treble, but this has the unfortunate effect of reducing the speaker's sensitivity by several dB, not a good option if you're planning to use them with a flea power tube amp. With these speakers the bass is handled by the subwoofers, so there's less need for baffle step correction, and a simple notch filter can be incorporated into the full range driver's signal path to reduce the unwanted peak. This I did, using a 6.8uF cap, a 0.2mH air core inductor, and a 12.5 ohm resistor, all wired in parallel, and inserted into the positive lead to the full range driver. Works like a charm.

For subwoofer amplification I used a couple of buyout 100W amps that Madisound was selling for \$25/ea a few years ago. I bought four and still had two stashed away in the man cave. One hundred watts (70W into the Eminence's 8 ohm impedance) doesn't sound like much power, but this isn't a speaker you would build to listen to Metallica or Mahler, and it works fine.

I'll post some measurements plus some listening impressions after I've had a few days with them.
