Subject: Re: (Now they're REALLY) Finished Pi 4 with photos
Posted by Wayne Parham on Sat, 11 Jul 2009 15:24:54 GMT
View Forum Message <> Reply to Message

I think you probably noticed, but it doesn't hurt to mention in this thread to be sure. I did a little tutorial on how to setup the crossover and what to watch for in the thread below:
Crossover optimization for DI-matched two-way speakersI find that some woofers and horns/drivers can be interchanged using the same crossover, but many can't. The crossover usually has to be optimized for the drivers and horns used.

I'm not talking about whether or not a driver needs mass-rolloff compensation or some kind of notch filters or voicing. Most DIYers would sort of intuitively know those kinds of things need to be looked at when designing the crossover or changing drivers. What some might not think about is the off-axis response, and how the position of the forward lobe and the off-axis nulls are set.

Some drivers can be interchanged and the verticals stay pretty much the same, but some can't. This isn't just true of the tweeter horn (and to a lesser extent, its compression driver), although that's the most obvious situation. It is also true of the woofer. Different woofers have different upper response curves and rolloff slopes. That changes the acoustic phase (adding to the electrical phase of the crossover) which has a major impact on summing and off-axis performance.