Subject: Re: Request for pi3 & pi4 plans and driver question
Posted by Wayne Parham on Wed, 01 Dec 2010 04:44:08 GMT
View Forum Message <> Reply to Message

Plans are on the way. As for upgrade options, see the post below:
UpgradesIn my opinion, the biggest improvement is heard when upgrading the midwoofer, second when upgrading the tweeter, and finally, the "Nth degree" subtle improvements come when upgrading the crossovers.

I like active crossovers, but the problem is if you don't configure them specifically for the loudspeaker, then they are compromised and the fully optimized passive solution will outperform them.

You can do it, some of the DIYers on my forum have done it and I even provided values for the Steve Bench 6DJ8 crossover that would get you in the ballpark. But the crossover does more than just split the frequencies to woofer and tweeter, it also sets system phase and this controls the position of the forward lobe and vertical nulls.

The passive crossover is designed precisely for the loudspeaker, taking into account its drivers and their positions. It takes an exact match to work right. You basically have to implement the same crossover actively that is done passively by the internal crossover, and most of the off-the-shelf active crossovers can't do it. So while in theory active crossovers can provide benefits, unless you go through a proper design/test development cycle, you will most likely lose more than you gain.

If you want to try your hand at it, the link below describes the way I suggest optimizing the crossover for the loudspeaker. You'll have a good starting point since the passive unit is known.
Crossover optimization for DI-matched two-way speakers