

---

Subject: Re: Thinking of using electronic crossover - what should I know?

Posted by [Wayne Parham](#) on Sat, 06 Feb 2010 04:29:27 GMT

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

---

I like that little Bench crossover. I did a version of it for my speakers and found it to be very tailorable.

6DJ8 Tube CrossoverActive crossovers are similar to passive crossovers in some respect. One that's most important is the phase matters as much or more than the crossover point, as it is all inter-related : electro-mechanico-acoustic phase and physical position. The motor, diaphragm, loading (cabinet and/or horn) and crossover all contribute to the blending through the crossover region, which in turn sets the response both on-axis and off-axis.

I'd probably do some preliminary configuration using Spice and pen-and-paper math. My goals would be to make sure no driver got signals that exceeded their limits, to match directivity in the crossover region and to make sure the vertical nulls were widely spaced, at least far enough apart to make a useful forward lobe. You sure don't want anyone sitting in a null. Then after I had a crossover that looked good on paper, I'd build it and make some measurements, modifying the values to get everything perfect.

Whether active or passive, I'd use the process described in the link below to design the crossover:

Crossover optimization for DI-matched two-way speakers

---