

---

Subject: Re: crossover electronics

Posted by [GarMan](#) on Wed, 03 Nov 2004 13:40:24 GMT

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

---

Tony, What you're seeing on page 14 is not an example of an actual PI network, but rather an example of what not to do. Wayne tends to like to play tourguide by taking his audience on a step-by-step journey, rather jumping directly to the final destination. It's a better way to learn. To answer your question on transfer functions, a Transfer Function describes how a network changes a signal, and that network can include the crossover component and the driver itself. The Transfer Function graphs in Wayne's document describe the resulting voltage across the woofer if 1V is applied at the input. A Response Chart is the SPL (sound pressure level) that the driver gives out when it experiences voltage across its terminals. Two types of Response to consider though. Raw driver response where voltage is applied directly to the driver, and network response where voltage is applied to the driver through a crossover network. IF (BIG IF) raw driver response is perfectly flat across the entire audio spectrum, then network response would mirror the Transfer Function. However, actual response of most real world drivers is anything but flat and in those cases, you need to send a "bumpy" signal to the driver to compensate. An example is a driver that exhibits a peak in the middle of its bandwidth. In that case, you need a "notch filter" with a transfer function that produces a valley in the same area. The resulting signal with a valley going into a driver with a peak will give you a flat response. Gar.

---