
Subject: Been learnin' about crossovers

Posted by [Bill Epstein](#) on Mon, 05 Sep 2011 22:34:58 GMT

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Still in search of a way to improve the imaging of the Utahs, I came across this fairly easy paper by Rane that defies the Linkwitz-Riley:
<http://www.rane.com/note160.html>

Further reading led me that way as well:

<http://faculty.spokanefalls.edu/InetShare/AutoWebs/pamelam/crossover%20filters%20amundson.pdf>

The cascaded Butterworths appear to my Freshman eyes to make sense and there's no doubt the conventional 24dB slope will help protect the tweeter crossed at just twice it's Fs. My Googling also turned up the Marchand site and his well-known SS and tube crossovers that employ only the L-R crossover in a choice of 24 or 48dB cut.

I even have a better understanding of why Wayne uses a 3rd Order Butterworth on the Pi horns so even if the Utahs still suck (!), at least I learned a little something about lobes and phase angles, etc.

That Marchand X-9 looks kinda tempting at \$599 when you see all the caps it's gonna take to build my 24dB passive. Here's a mock-up on a piece of notebook paper that pretty nearly emptied my parts box!

I had to order a .33mH coil, the one value I was missing so I drew a circle that reads .33 inside if you can see it LOL

File Attachments

1) [IMG_2225_1.jpg](#), downloaded 5423 times
