Subject: Re: The Bumma (tentative title)
Posted by badman on Fri, 18 Jun 2010 15:27:55 GMT
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Wayne, thanks for the comments. Yes, the simple cap XO on the horn is insufficient, fortunately the response is already rolling off a full octave above where the horn unloads, so at normal home levels I'm not too worried. The current thinking I have is to use an overdamped 2nd order alignment to keep the phase wrap away from the passband. Something like 1.5mH with the coil models well. I'm definitely trying to stay on the simple side- the "natural" crossover point of the 2226h makes sense to work with as it allows me a fairly simple XO and the initial 24dB drop I get (modeled, but it should hold up) with a 5uF .47mH notch in place of the lowpass is very nice. The controlled breakup between 1-1.6k is damped slightly then the response plummets, the notch being well-tuned to the breakup at 3k. This all depends on that zoebel being there, without it, there's not nearly the beautiful transfer function I model with. We'll see how it holds up in the real world, probably this weekend.

The tweeter I'm still working on, we'll see what I get, but I'd very much like to utilize the 2226h and the above filter, as it's not often you get 4 parts to make a 4th order acoustic filter without much phase wrap.