Subject: Super-tweeter, super-image, super-sound
Posted by Bill Epstein on Sun, 29 Jan 2006 00:52:09 GMT
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I'm sure Bowers and Wilkinson can feel my hot breath on their neck with my design:I call it "NAUTILUS Pi"By combining the tweeter baffle with the crossover I can swap resistors and caps with 'gator clips to find the best combination right at the source. Right now I'm digging 16 ohms across and 4.3 uF. That could change tomorrowWhat won't change is the heretofore unheard with horns imaging I'm getting with this mount.

Subject: Re: Super-tweeter, super-image, super-sound
Posted by Shane on Sun, 29 Jan 2006 03:18:03 GMT
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I can't believe it's not stained. And is that Royal Cable I see? I like the open baffle tweeter project, especially being able to change compnents at will.

Subject: Re: Super-tweeter, super-image, super-sound
Posted by Wayne Parham on Sun, 29 Jan 2006 03:53:31 GMT
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Is that a DX25 on top? Or did you use one of the other models? I think Akhilesh uses an MG27 or another one like that. Some of the models are medium to high efficiency, others are lower.I guess you must be padding down the compression horn, leaving the woofer and tweeter running full tilt. Is that pretty much how you have everything hooked up?

Subject: Re: Super-tweeter, super-image, super-sound
Posted by Bill Epstein on Sun, 29 Jan 2006 10:48:22 GMT
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That's the DX-25 from a 2Pi kit I had on the shelf. I see there's a PL-27 that goes to 25,000 and costs a few bucks more.And you're exactly right about the horn and woofer. 1.5 coil on the 2226 and .33uF/16ohms on the 902 horn.There's a tendency for the 902 to get strident at higher levels that is partially masked by the Vifa. Ron suggested removing the cap and using more resistance. I'll try that but I also know the room is part of it.Still, with this review sample CD player, which was the catalyst for the tweeter mod, I'm enjoying the best over-all sound ever.

Subject: Re: Super-tweeter, super-image, super-sound
Posted by Wayne Parham on Sun, 29 Jan 2006 20:32:12 GMT
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What a neat deal. Vifa makes a tweeter, part number MG27, but I think Parts Express stopped carrying it. Seems like they stocked it before the DX25. If memory serves, it's pretty similar but doesn't have as wide a surround.

Subject: Re: Full Vifa line-up at Madisound
Posted by Bill Epstein on Mon, 30 Jan 2006 00:45:50 GMT
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Looks like PE smartened up and dumped the 80% of inventory that only accounted for 20% of sales.Especially with Ohio's Personal Property tax on business inventories.I sure wish they'd clearance some Morel's; I really want to try the horn loaded tweet but not at $60 per.Neither Madisound or Vifa have heard of this "iron law of retailing". I'm scratching my head over the differences between 4 MG series tweeters besides a couple of cycles Fs.

Subject: Re: Full Vifa line-up at Madisound
Posted by Wayne Parham on Mon, 30 Jan 2006 15:11:42 GMT
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Gotcha, you're probably right.

Subject: Thanks For The Idea
Posted by FredT on Tue, 31 Jan 2006 21:39:06 GMT
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Thanks for the idea. I tried it with two tweeters I had on the shelf, a cheap dome and a better quality ribbon. The cheap dome is a $14, 96dB, MCM #53-325 titanium dome. That's the one used in the Bottlehead Straight 8. It has a nasty peak at 3khz, but for this purpose I crossed it over above 10khz, 2nd order, using a 1uF cap with a 0.15mH shunt inductor. Not bad - it adds back just a touch of sizzle I'm accustomed to hearing with domes that aren't horn loaded, but not enough to cause excess siblance or to make the sound too tizzy. The ribbon is the $88, 95dB, Fountek 3.0. This one is really nice. It provides the sparkle I like to hear without a hint of tizz. A good test disk is Patricia Barber's Modern Cool. Early in track 8 there's a brush on a ride cymbal, first in the right channel then in the left - the supertweeter brings this out nicely without any

apparent changes below about 10khz.

Subject: Supertweeter Picture
Posted by FredT on Fri, 03 Feb 2006 17:43:24 GMT
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I shamelessly stole Bill's idea and built baffles for the Fountek ribbons. Here's one, still unfinished, sitting atop the main enclosure. The present crossover is a 1uF Solen cap with a 0.15mH shunt inductor, but some 1uF Audiocap Theta film & foil caps are on the way to replace the Solen. I plan to spray the baffle Claret Red to match the main baffle.
3 PI Theater With Fountek Ribbon Supertweeter

Posted by Wayne Parham on Fri, 03 Feb 2006 18:35:12 GMT
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Man, that looks great!I love what you did with your color scheme. Reminds me of Garland's

little more air in the top octave.

Subject: Re: Supertweeter Picture
Posted by j.luis cruz . on Fri, 03 Feb 2006 19:59:27 GMT
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Hy Fred .. what do you think of use the eminence ASD 1001 instead of the PSD 2002 .Wayne say that the 1001 could play havoc with its systems but so that I can get the 1001 very cheap *the wayne prices are good good indeed but I buy from the importer direct . So Im going to give it a try ,Fred look in the eminence web page and compare the output of the 1001 .In my humble oppinion the 1001 look more Hi-Fi that its big brother 2002 counterpart.

Posted by FredT on Fri, 03 Feb 2006 20:11:30 GMT
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I'll be taking these to the GPAF. No line arrays this time.

Subject: Eminence ASD 1001
Posted by FredT on Fri, 03 Feb 2006 20:22:14 GMT
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I hesitate to comment since I have never heard it, but its frequency response curve reminds me of the $30 Selenium DH200E, which I once compared directly to the Eminence PSD 2002 sitting atop the 3 Pi's. Using the standard 3 Pi crossover I found the treble response dropped very sharply with increasing frequency, so much so that it sounded like there was no "presence" with the Selenium. I notice the Eminence 1001 has the same kind of drop between 3.5 and 10khz. The 2002 is a bit pricey in comparison (all good compression drivers are), but it carries all the information above 1,500khz in the 3 Pi, and I would be concerned it might not sound very good.Compare the freq response graphs on the mfg spec sheets for the 1001 and the 2002. The 2002 has a dip too, but the capacitor that parallels the series resistor in the L pad does a reasonably good job of compensating. I doubt it would for the 1001.
Eminence ASD 1001 Specs

Subject: Re: Supertweeter Picture
Posted by FredT on Fri, 03 Feb 2006 20:28:35 GMT
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I also noticed the recommended minumum crossover with an 18dB/octave network is 2.5khz. This is too high for use with a 12" or 15" woofer, which would be beaming pretty bad at the crossover frequency. The 2002 is crossed over at 1.5khz in the 3 Pi Theater.

Posted by Wayne Parham on Fri, 03 Feb 2006 20:43:51 GMT
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Beautiful, I'm very pleased. Kinda proud really, that you would choose to bring those beauties.
Looking forward to it; See you there.

Subject: Re: Eminence ASD 1001

Posted by j.luis cruz . on Sat, 04 Feb 2006 01:01:03 GMT
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hy .I would like to implement the 1001 in a 3 way box with a electronic crossover with 18 db of slope .thanks for yours inputs Fred.

Subject: Final Picture
Posted by FredT on Mon, 06 Feb 2006 17:48:10 GMT
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I prettied it up over the weekend, and there's a link to a picture of the final product below. I can see where it would be easy to get carried away with the added sparkle and cross it over too low or make it too loud. With it crossed at about 12khz you aren't aware there's a supertweeter in the speaker unless the program material has lots of very high harmonic content, and even there the difference is subtle. Getting it right is much like integrating a subwoofer - if you're aware of its presence it's not well integrated and needs further adjustment.
Theater 3 Pi with Fountek supertweeter

Subject: Re: Final Picture
Posted by Wayne Parham on Mon, 06 Feb 2006 21:09:09 GMT
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Looks excellent, Fred. Just awesome!

Subject: Re: Final Picture
Posted by Bill Epstein on Tue, 14 Feb 2006 11:19:02 GMT
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Just saw this post; nice job on the baffle. You have a much steadier hand with the sabre saw. I had the Vifa up at 12000 and it "wasn't there" like you suggest, but didn't add anything to the extension of the 902's so I brought it way down. If anything, the Vifa is now the main tweeter above 6000 and the 902's the augmentation.One-of-these-days I'll get some ribbons and try your way.