
Subject: 3Pi at AKFest in Detroit area this weekend
Posted by [krikor](#) on Thu, 29 Apr 2010 15:26:48 GMT
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If anyone is in the Detroit area this weekend, my 3Pi speakers will be one of the listening options in the SMAC (Southeast Michigan Audio Club) room at the AKFest in Novi.

Subject: 3Pi at LSAF
Posted by [Wayne Parham](#) on Thu, 29 Apr 2010 16:29:11 GMT
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Good to know, thanks for the mention here. What driver options are in your speakers?

15th and 16th. Mine have TD12S woofers and DE250 tweeters.

Subject: Re: 3Pi at AKFest in Detroit area this weekend
Posted by [krikor](#) on Thu, 29 Apr 2010 17:17:36 GMT
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Wayne Parham wrote on Thu, 29 April 2010 11:29
Good to know, thanks for the mention here. What driver options are in your speakers?

They are factory-built boxes (at least that's what the seller said and they appear to be well made) around 5 or more years old. Woofers are the original Eminence Delta 12LF.

I've recently updated the tweeter to the DE250 along with the latest xover design using Dayton caps, Janzen 18gauge inductors, Mills resistors in the signal path (still using Dayton resistors in parallel with the tweeter), and the zobel network. Still using the stock H290 horn, though I've added some rope caulk on the back side.

Gotta say, I was happy after doing the tweeter/xover upgrade, but not blown away compared to the original design with the Eminence PSD2002 and PXB2-based xover. Improvements, yes, but not astounding. And I was getting a troubling thickness/forwardness on male vocals that gave them a slight raspy quality that stood out from the rest of the presentation.

Then somewhere in the 50-100 hr. range everything came together. It was like a switch was thrown. I've never put that much stock in "burn in" periods, but either that's what happened or I adjusted to the sound, because everything suddenly smoothed out and became much more coherent.

In fact, I've been enjoying them so much I drove 1.5 hours each way last Sunday to buy a pair of JBL 2226 drivers (got a great deal on them). The 3Pi are soon to become a top-notch pair of 4Pi speakers in my (hopefully) near future.

Subject: Versions and Upgrades

Posted by [Wayne Parham](#) on Thu, 29 Apr 2010 19:13:41 GMT

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I agree with your assessment of the crossover. The new version (2007) is an incremental improvement over the original, not a night-and-day paradigm shift by any means. The basic design hasn't changed in many years. But having the latest version of the crossover is good, I think, and the changes were small enough that updating is little trouble. The most recent crossover sets the position of the forward lobe more precisely than the original version did. It was a subtle but worthwhile improvement, especially when going to upgraded drivers, looking for the best performance possible.

I think you will notice a larger difference when upgrading the midwoofer. The woofer in a DI-matched two-way loudspeaker like this is very important to the sound quality and overall character of the loudspeaker. It provides not only the bass but also the midrange, truly the body of the sound.

My loudspeaker designs tend to rolloff on the bottom end gradually, which helps prevent them from becoming boomy even in small and otherwise difficult rooms. They also blend well with subwoofers, making them ideal for use with multisubs. I suggest using no high-pass on the mains, so their bass output blends with the subs to provide multiple distributed bass sound sources.

I've noticed a tendency for some DIY'ers to try and push the midwoofer to provide deeper bass output. I can understand the temptation, but I think it is best to relax the bass extension requirement, if high sound quality is the goal. The midwoofer is doing double duty in a speaker like this, providing midrange and bass. Pressing the midwoofer to provide subwoofer frequencies will ultimately impact midrange quality.

Deep bass from a two-way is probably a reasonable goal for a secondary bedroom system, but when going for higher sound quality, I think it makes more sense to align the mains for gradual rolloff and employ a multisub arrangement to simultaneously provide the deep bass extension and smooth room modes. To that aim, most of my loudspeakers have bass response that is slightly overdamped, vented to reduce excursion but with a gradual rolloff something like a sealed box.

Subject: Re: Versions and Upgrades

Posted by [tom-m](#) on Fri, 30 Apr 2010 01:19:45 GMT

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Wayne Parham wrote on Thu, 29 April 2010 14:13

Deep bass from a two-way is probably a reasonable goal for a secondary bedroom system, but when going for higher sound quality, I think it makes more sense to align the mains for gradual rolloff and employ a multisub arrangement to simultaneously provide the deep bass extension and smooth room modes. To that aim, most of my loudspeakers have bass response that is slightly overdamped, vented to reduce excursion but with a gradual rolloff something like a sealed box.

So how do you get gradual roll off like a sealed box, but using a ported box? It is just over damped? Is this a low "Q"?

Thanks.

Tom

(I will see you in Dallas)

Subject: Cabinet alignments and response curves

Posted by [Wayne Parham](#) on Fri, 30 Apr 2010 04:48:23 GMT

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You can make a variety of alignments and their associated response curves with vented boxes, just like you can with sealed. In fact, you have more choices when vented. You can get more extension and lower excursion from the same size box, and still have a slow, gradual rolloff simply by tuning it low. Try a few T/S models and see.

Response curves of closed vs. vented systems

Electrical filters and Acoustic Filters

Room gain, pressure region, modal region and reverberent region

Subject: SMAC room with 3Pi speakers at AKFest

Posted by [krikor](#) on Sun, 02 May 2010 12:39:05 GMT

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Other rooms here: <http://www.flickr.com/photos/audiosnoop/sets/72157623972231686/>

Subject: Re: SMAC room with 3Pi speakers at AKFest

Posted by [Wayne Parham](#) on Sun, 02 May 2010 14:46:18 GMT

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Looks like a nice little setup. I like your layout. What gear do you have for amps and source?
Any subs? How does it sound in that room?

Subject: Re: SMAC room with 3Pi speakers at AKFest
Posted by [krikor](#) on Mon, 03 May 2010 19:33:56 GMT
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Equipment I know of included the following which was swapped in/out at various times, as provided by different members of SMAC. There was an iMac with a Cambridge DAC Magic, but I'm not sure any music was ever played through this (I never heard it running).

AMPS:

AES Superamp

Renovated HK Citation II

6b4g SET amp based on PCB from Get*Set*Go (diytube.com)

PREAMP

Rogue Audio Metis Magnum

SOURCES

Marantz SACD/CD

Jolida phonostage (JD9?)

Thorens turltable

No subwoofers were used... just the 3Pi. Heard several positive comments about the room. Unfortunately I only had intermittent and brief listening sessions given all the other rooms and having to keep an eye on a table in the swap room.

A few more pics:

Subject: Re: SMAC room with 3Pi speakers at AKFest
Posted by [Wayne Parham](#) on Mon, 03 May 2010 20:01:26 GMT
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Very nice. I love the looks of those amps. Thanks for the mini-review!
