
Subject: Just scored a pair of 3pi speakers!
Posted by [krikor](#) on Fri, 05 Mar 2010 17:59:32 GMT

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Can't wait to try them out. I've been lurking on this forum for a long time, but never got around to giving them a whirl. But a pair just came up for sale locally and I jumped on them. This will be a very different animal for me given that I've been using Magneplans for more than decade.

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [Wayne Parham](#) on Fri, 05 Mar 2010 19:22:26 GMT

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That's great! What woofers are used? Tweeters? What crossover?

Depending on the installed options, you might want to upgrade some components. At the very least, make sure the crossover is updated to the latest version.

Congratulations on your find and welcome here on the forum!

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [krikor](#) on Fri, 05 Mar 2010 19:38:53 GMT

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Have not picked them up just yet. According to the seller, they are factory built with Eminence drivers. Based on pictures they seem to be in very good condition. Remains to be seen exactly which drivers (unless there haven't been any changes to those) and which crossover. Hope to get them tonight or tomorrow.

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [tom-m](#) on Mon, 08 Mar 2010 02:45:37 GMT

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Hi krikor,
I think I saw these on eBay. If correct, they did look very nice. After you listen to them a few days, I would be curious to hear you thoughts on the sound.

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [krikor](#) on Mon, 08 Mar 2010 18:30:16 GMT

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tom-m wrote on Sun, 07 March 2010 20:45Hi krikor,
I think I saw these on eBay. If correct, they did look very nice. After you listen to them a few days, I would be curious to hear you thoughts on the sound.

Yep... found them on eBay. I always keep an eye out for local listings as I don't trust shippers for most items, and these are way too big/heavy to ship economically. Picked them up last night and put them in my main room replacing the Magnepan 1.6s (Squeezebox>Cary 306/200>PS Audio GCC-100 integrated). They are an older pair and the cabinets are not perfect, but very presentable as long as you don't look too close.

Got to say that right off the bat I was a bit perplexed by their sound. Huge, open, spacious, but the bass was lacking and vocals had a strange "in-your-head" feel... kind of like headphones or if you cup your ears towards the speakers... a sound I usually associate with a phase problem. Vocals especially seemed completely out of place in the soundstage and much too forward. To be honest, I was quite disappointed given the following and reputation of Pi Speakers. How could a speaker so highly lauded seem so out of whack to my ears?

I thought it might just be the way the xover is designed, or a characteristic of horns which I have really no experience with, being a planar and open baffle fan. Perhaps this is that "honky horniness" I've heard described regarding other horn speakers. I also thought it might be interactions with the room, so I started moving the speakers around, trying different positions, extreme toe-in, no toe-in, and running through again and again (much to the chagrin of my wife, dog and cats) the various reference recordings I use to dial in my system.

Overall I was liking the tone, openness and dynamics (esp. vs. Magnepans!) of these speakers, and I was able to address the issues a bit through placement. But this "phasing" on vocals and a lack of bass extension continued to bother me and I knew I would not be able to live with these conditions. I also noticed that I could reduce the effects by moving to one side of the sweet spot (closer to one speaker than the other). Plus, on recordings that I know make use of out-of-phase L/R balance to add ambience at the expense of image specificity (in particular the California Guitar Trio), these suddenly seemed to be flatter in soundstage depth albeit with clearer placement of the musicians.

I took a break for dinner and watch some of the pre-Oscar coverage with my wife, but couldn't get it out of my head that something was amiss with these speakers. Buyer's remorse was setting in big time as I watched the inane fashion commentary from the red carpet. I got up, grabbed a screwdriver and removed the bass drivers (Eminence Deltas). Sure enough, one of the woofers was wired out of phase! I checked all the connections between the xover, binding posts and tweeters, put them back together and fired them up again.

BINGO! Singers snapped into focus, properly positioned in the soundstage, and the bass improved.

Unfortunately it was almost midnight at this point. I can't wait to spend some more time listening this week to get a real handle on what Pi Speakers are all about... first impressions with the woofers in-phase are very positive.

Being a factory-built pair, I wonder if that woofer has always been out-of-phase and the original owner never noticed or never cared. The guy I bought them from only used them briefly in essentially a nearfield position in a very small room at low volumes, so did not recognize this issue. I think he mentioned that the original owner had tried to sell them once, but were returned because that buyer couldn't stand the sound... this would explain it!

WAYNE... any chance I could get a copy of the original xover schematic as well as your current xover design? I want to make sure I've got everything right and may pursue an upgrade after I listen a bit more. Still need to pull out the tweeters and see which ones they are (Eminence PSD2002 I assume), and perhaps clean the tweeter screens up... they looked quite dirty and partially blocked.

Thanks.

File Attachments

1) [3PI.jpg](#), downloaded 5557 times

Subject: Re: Just scored a pair of 3pi speakers!

Posted by [Wayne Parham](#) on Mon, 08 Mar 2010 19:08:19 GMT

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I'll send plans, at least for the current version. I don't have the old plans handy, but you'll want to update the crossovers anyway.

Glad you found the mis-connected woofer. I'm surprised I never heard about that from the original owner. I don't know if they were kits that were assembled wrong or not, but whatever the case, those speakers should sound extremely coherent, not only on-axis but over a wide arc of positions, pretty much throughout the room. That's one of the main things they excel at.

Bass isn't extremely extended, none of them are tuned to be subs, they're tuned to be midwoofers. Since you need the woofer to be used as a midrange, you don't really want it pumping sound at 20Hz. I suggest adding subs, because then you gain extension and smooth room modes at the same time.

Subject: Re: Just scored a pair of 3pi speakers!

Posted by [krikor](#) on Mon, 08 Mar 2010 19:23:27 GMT

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Wayne Parham wrote on Mon, 08 March 2010 13:08

I suggest adding subs, because then you gain extension and smooth room modes at the same

time.

Yes, I have a couple of ACI Force subs that I will be using, just don't have them setup for the 3Pi speakers yet. I wasn't expecting sub-woofer like extension, but until the woofer was wired properly I think it was cancelling some of the output with the other speaker. Bass definitely improved after I got them working correct.

Man, I'd like to be home listening to them right now rather than at work!

Do have plans available for you 3pi subwoofer as well?

thanks.

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [Wayne Parham](#) on Mon, 08 Mar 2010 22:07:46 GMT
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You might also be interested in the threads contained in the link below. They describe more about my loudspeaker design philosophy and suggested setup. I hope this collection of posts is helpful to you.

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [krikor](#) on Tue, 09 Mar 2010 18:28:00 GMT
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Wayne Parham wrote on Mon, 08 March 2010 16:07
You might also be interested in the threads contained in the link below. They describe more about my loudspeaker design philosophy and suggested setup. I hope this collection of posts is helpful to you.

Wayne - thanks for plans and links... though some of those discussions definitely make my hair curl as I try to follow along!

One more question. What is the impedance of the 3pi? Do you have a graph? I don't think I've seen that listed for any of the pi speakers.

Thanks again.

BTW - I think I'll be giving the new xover design a try. Initial listening to the 3pi has been so

positive that I may pursue a long-term relationship. Replace my Maggies? That remains to be seen, and I need to make some grill covers before my wife will let them stay. Exposed drivers don't mesh with her tastes.

Subject: Re: Just scored a pair of 3pi speakers!

Posted by [Wayne Parham](#) on Tue, 09 Mar 2010 19:06:57 GMT

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I do have an impedance chart, unfortunately, for some reason I never got around to uploading it. It's nice and smooth though, like my other models, very tube friendly. When I get back to Tulsa, I'll upload the chart from my measurement system.

By the way, one of the links contained in my last post is called "Crossover Optimization for DI-matched two-way loudspeakers." That thread is a general purpose explanation of design

measurements I made in the first post of that thread too.

Subject: Re: Just scored a pair of 3pi speakers!

Posted by [tom-m](#) on Thu, 11 Mar 2010 05:02:02 GMT

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Thanks krikor for the write up on your listening experience. I like hearing other's opinions. If you have any more comments after spending more time with your new speakers, I'm interested.

Subject: Re: Just scored a pair of 3pi speakers!

Posted by [krikor](#) on Thu, 11 Mar 2010 15:31:42 GMT

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Wayne - thanks for charts.

Tom-m - I have now had a chance to get the 3pis better positioned and spent a little more time with them the past couple nights.

First off, I am very impressed... it is a rare occurrence when I drop a new speaker into the room and I'm not immediately missing my Magnepons. Once I had the woofer connected in phase, the 3Pis had me hooked and started to reel me in fast. I was almost giddy with how good they sounded just plunked down with no real attention to position (they now have the recommended toe-in crossing in front of the listening position, but I think I still need to play with the width between speakers and distance from back wall).

Let me mention a few things I like about the Maggies:

- They throw a huge image portrayal (especially in height) of the musicians... some may argue that it is artificially large, but I've always liked the sense that the performer is standing right there (I think you also adjust to the portrayal over time)
- They are very coherent from top to bottom, using a single planar membrane for both the tweeter and woofer with a very simple low-order crossover that has a lot of overlap
- They disappear in the room, surprising for what looks like a big door panel, and load the room in a way that envelops you in the music yet sounds very natural and do a great job of imaging... IF you are in the sweet spot
- Though they may not be the best when it comes to dynamics, details and low-level listening, the dipole radiation creates a deep and wide sense of the recording environment that seems to extend well beyond the edges of the speakers (ambience?) which again some may say is very artificial and can cause room interaction problems

Pi Speakers seem to be almost the antithesis of Magneplans - big ported boxes, high-efficiency, pro drivers, easy-to-drive impedance, higher max SPL, seemingly more complex xover, monopole radiation, etc. I think that's why I was so surprised that do many of those things of love about Maggies so well (yes, it was likely an "audiophile" bias against simply monkey-coffins and pro drivers)

What I've noticed about the 3Pis:

- They are remarkably coherent with no discrepancy in the xover between the tweeter and woofer that I can detect... this was a big issue I had with another well-regarded speaker featuring Eminence compression tweeter/woofer combination
- They portray a large, life-like image (read tall like the Maggies, not shrunk down on the floor) ... perhaps due to the vertical dispersion of the constant directivity?
- They create very solid images of the performers and have fantastic detail... I find it easier to separate instruments, follow vocals and pickup on ambient cues, but the detail is not etched or overdone (I've heard excessively detailed speakers that emphasize or call attention to smaller sounds in a way that is annoying)
- They sound fantastic at low levels (I always have to tweak the volume up to get the Maggies sounding their best) and utterly effortless at higher volumes... DYNAMICS! My Magneplans seem to have a much narrower volume window within which they sound their best
- They have tremendous TONE... I love how they sound with guitar and vocals

I do have a couple of quibbles, but I need to listen further before deciding as whether or not they are real, positioning related or perception related as I adjust to the new speakers both from an auditory and visual perspective. Also, this is an older pair of 3Pi with the original crossover, not the latest design.

By the way... no fooling around when it comes to a bigger sweet spot! It's great not having to lock my head in vice while I listen.

Subject: Re: Just scored a pair of 3pi speakers!

Posted by [NWCgrad](#) on Tue, 16 Mar 2010 18:29:19 GMT

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krikor, Are you still happy with your 3pi speakers? I am getting set to build 4pi's (primarily for HT) that will also serve in place of my maggie MMGs for two channel duty.

Thanks for the great review!

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [krikor](#) on Tue, 16 Mar 2010 19:14:00 GMT
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NWCgrad wrote on Tue, 16 March 2010 13:29krikor, Are you still happy with your 3pi speakers? I am getting set to build 4pi's (primarily for HT) that will also serve in place of my maggie MMGs for two channel duty.

Thanks for the great review!

Since last Thursday? Still VERY happy. I put the MG1.6s back in the mix on Sunday and was surprised when I found myself itching to get back to the 3Pi. The Maggies strike me as having a more extended and clearer top end, and definitely more oomph down low (I've been listening without my subs) with that great planar dipole bass.

However, I don't know if it's because of the Pi's constant directivity that lets me place the speakers wider apart without creating a hole in the middle, the wider sweet spot, reductions in room interactions or what... but I just had to get the 3pis back in place. They've got a naturalness, solid imaging and ease (effortlessness?) that is enticing.

There is a bit of roughness/grittiness to the top end of my 3pis... sizzle rather than a clear shimmer, if that makes sense... and a thickness or congestion in the upper midrange that calls attention to itself on vocals. But bear in mind these are older 3Pi with the PSD2002 tweeter and no zobel compensation network on the woofer.

I'm hoping that the crossover and tweeter DE250 tweeter upgrade I'm doing will help give me that final push over the edge that makes me relinquish the Maggies... not that I want them to go (though the room does look bigger without those big monoliths), but if the Pis give me more of the sound I'm looking for and enjoy, so be it.

If it all works out, I'll be building a pair of 4Pi in the near future.

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [krikor](#) on Sat, 03 Apr 2010 21:30:04 GMT
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Update on my 3pi speakers.

I was enjoying these speakers so much I decided to place an order for various xover components and new DE250 tweeters to see if I could push their performance further. That was a couple weeks ago, and although I got the speakers updated with the latest xover design and added the DE250s, things have conspired to prevent any real listening (bad cold which messed with my ears, wife decided to clean the rugs which still are not back over the hardwood floors, business travel last week and now house guests this weekend... whew!).

That said, I've been initially very impressed by the DE250 tweeters. They are noticeably smoother and more open on top, of course that could also stem from the updated xovers as well. They are pretty much the stock design with Dayton caps and Janzen 18 gauge coils, but I used Mills resistors in series with the tweeters. Also added some deadening on the horn.

More to come if I ever get to do more serious listening, but as of now my Maggies continue to pout in the corner.

Face off over the new 3Pi speakers!

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [Wayne Parham](#) on Sun, 04 Apr 2010 00:53:04 GMT
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Good work! Thanks for the update. That DE250 is nice, isn't it?

Did you use the latest crossover schematic? There should be a Zobel on the woofer, is the resistor underneath the insulation?

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [krikor](#) on Sun, 04 Apr 2010 01:06:58 GMT
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I used the current schematic. Zobel cap is on the xover board, the resistor you can just see a corner of above the board in that photo.

Subject: Re: Just scored a pair of 3pi speakers!
Posted by [Wayne Parham](#) on Sun, 04 Apr 2010 03:31:16 GMT

Groovy cool. Let us know how it sounds to you when you've had time to live with 'em for a while.
