
Subject: Just Loaded in 4 Pis

Posted by [skywave-rider](#) on Wed, 16 Sep 2009 14:51:55 GMT

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Just loaded in 4Pis last night. This is a recording control room at a Uni. Only had a chance to listen for a few minutes. But impression is that these will work extremely well. Good looking speakers, too. Thanks, Wayne.

File Attachments

1) [IMG_3658_EDIT.jpg](#), downloaded 16709 times

Subject: Re: Just Loaded in 4 Pis

Posted by [cookietruck](#) on Wed, 16 Sep 2009 20:49:42 GMT

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those look great.

Subject: Re: Just Loaded in 4 Pis

Posted by [Wayne Parham](#) on Thu, 17 Sep 2009 02:30:15 GMT

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I'm glad to see you have those speakers installed and running. Glad to hear your initial impressions are favorable. I'd love to read a more detailed review, if you wouldn't mind, when you've had a chance to live with them a while. I know how I feel about mine, but I also like hearing from others.

Nice looking studio, by the way. Thanks for posting the photo!

Subject: Re: Just Loaded in 4 Pis

Posted by [Psychoacoustic](#) on Thu, 17 Sep 2009 11:42:59 GMT

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Skywave Rider- that veneer looks sensational! That's one set up I'd like to hear as the centre speaker HF is Econo-Wave-correct? Selenium driver or DE-250? Would be fascinating to hear 4 Pi and the E/W-2226 side by side. Well done and congratulations on your project.

Subject: Re: Just Loaded in 4 Pis

Posted by [skywave-rider](#) on Thu, 17 Sep 2009 17:52:28 GMT

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Psychoacoustic,

Now wait a minute...what you see pictured are 4Pis ordered from and built by Pi Speakers, employing the JBL 2226H and DE250; and high quality crossover part options. I wish I could take credit for the build. Yes the wood looks great, it is birch.

You may be referring to the previous monitors I had installed in that location...that was temporary until the 4Pis were acquired. Those were developed from my original Econowaves and I am now stripping out the drivers for my home EWAVE setup.

The 4Pi speakers work extremely well as real recording studio control room main monitors. I have heard and used them all. The 4Pis are frankly an incredible bargain for their capability, capacity and compact size.

They are running off of a Bryston 4B and with a Genelec 7070A sub.

The center channel is waiting for an amp.

The room is designed by WSDG.

When I have had time to live with them, and hopefully do a project with them, I'll comment more.

EDIT: I just reread your comment...sorry, the center is 4Pi, but a custom version which I will let Wayne expand upon.

Subject: Re: Just Loaded in 4 Pis

Posted by [Psychoacoustic](#) on Thu, 17 Sep 2009 23:33:43 GMT

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Ah, yes. I can see the Eminence horn's six mounting holes now on the higher resolution monitor at work. The JBL/Pyle has eight, if I remember. The horn just looked a bit smaller, but I see that is due to it being set back a little.

Now even more intrigued- what does the centre channel do and why the different design... Look forward to reading your impressions, SkyWave.

Ant

Subject: Re: Just Loaded in 4 Pis

Posted by [skywave-rider](#) on Fri, 18 Sep 2009 00:09:21 GMT

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Ant,

The center is a sealed box version, no port, so the horn can be centered in the baffle, since it is a center speaker. The trade-off is that the low frequency rolloff begins sooner and will require some EQ to compensate. The response from the rolloff up should be identical to the standard L & R 4Pis.

Subject: Re: Just Loaded in 4 Pis
Posted by [Wayne-o](#) on Fri, 18 Sep 2009 00:50:23 GMT
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Nice finish on the cabinets !!!

Subject: Re: Just Loaded in 4 Pis
Posted by [Matts](#) on Fri, 18 Sep 2009 01:37:18 GMT
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Excellent looking setup! I'd like to hear it, too- the speakers look great mounted up in the walls. I'm also interested in hearing more about the center channel... I've got the same model 4's and couldn't be happier with them!

Subject: Re: Just Loaded in 4 Pis
Posted by [Wayne Parham](#) on Fri, 18 Sep 2009 01:55:18 GMT
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The reason we made the middle speaker sealed for the university studio was that, as a center channel, purely for aesthetics, it simply looked better to have the tweeter centered. I think sometimes psychoacoustics are as important to listening impressions as anything else.

We rarely make custom speakers (no need, I feel we have something for every application) but in this case, a slight modification was done for aesthetics. I don't normally do mods because it really requires a design/test cycle to make sure there are no unintended consequences but in this case, I felt there was little potential for side effects. The specific design considerations are described below.

aesthetic thing what side you put them on. You could use either one as a center and be just fine. But it did seem to me that the middle speaker would look better with the horn centered.

The thing is, you can't physically fit the port on the baffle if the horn is centered. I suppose you could probably put it on the back or use a handful of smaller ports in the corners or something but like I said above, that would require a whole new design/test cycle to find out what the effect of

relocating the port would be. In a cabinet this size, standing waves are starting to fall into the Helmholtz frequency region and port position becomes important.

Removing the port entirely is a different matter because the back wave is absorbed. It's a simpler system that limits the chances of unintended consequences. The woofer's electro-mechanical parameters allow it to be put in a sealed cabinet this size without becoming underdamped, so it was a viable solution. I think it is even a slight benefit because it staggers bass tuning between speakers, which helps distribute bass sound (modal) sources better. They're using a sub in this studio, so that brings the count of bass sound sources to four, which should provide a nice smooth sound field in the modal region.

Here's some information that may be interesting for the perfectionists and audio snobs out there. I've mentioned this before, but maybe to glazed eyes. Or maybe I didn't mention it here, might have been in the Ewave thread on AK or the Horn/Waveguide thread on DIYaudio. Either way, I'll mention it again.

detail that has an offset tweeter) is that the nulls are diagonal rather than directly above and below the speaker. Naturally, you might say, those of you who have studied and understand crossovers and the acoustics of multiple sound sources might expect this. But what you probably wouldn't have known (I certainly didn't until I moved the microphone around in about a thousand different XYZ positions) is that the nulls are thrown to the side, the maxima is not directly on the line drawn between driver centers. I wouldn't have expected this.

The nulls that form directly above and below the speaker are mild. When you rotate the speaker so the tweeter is directly above the woofer, the nulls forming directly above and below that axis are still mild. The maxima forms about ten degrees past that. So with the speakers positioned on each side and toed-in as they usually are, the null maxima can be pointed further outside the target listening area. The upper null is roughly in line with the edge of the upper corner outside. The lower null is down towards the logo.

Now then, the nulls are so far outside the pattern it really doesn't matter. You can't hear a difference, no matter what side the speaker is placed. So you really can place them as you think they look best. But even still, I know where the nulls are from measurement, so I try and direct them where they are the least objectionable. The lower null is down on the floor and directed towards the opposite speaker. The upper null is over everyone's head and directed at the ceiling outside the pattern, both vertically and horizontally.

Subject: Re: Just Loaded in 4 Pis
Posted by [skywave-rider](#) on Sat, 14 Nov 2009 19:44:54 GMT
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I still have not had the time to work on a project, but students are using the 4Pis on a daily basis. I wanted to report back that I am very happy with the performance.

During an in-class VO session, I snapped this pic. The speakers are in the control room through the glass at the left. From the first pic you can see that the studio the VO artist is in is to the right of the engineer-position in the control room. (Could not get it all in focus.)

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File Attachments

1) [studio-vo-2.jpg](#), downloaded 8509 times

Subject: Re: Just Loaded in 4 Pis

Posted by [Wayne Parham](#) on Sat, 14 Nov 2009 21:00:55 GMT

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That's excellent, thanks for reporting back!

Subject: Re: Just Loaded in 4 Pis

Posted by [skywave-rider](#) on Thu, 25 Mar 2010 18:18:01 GMT

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Got a few more shots in session.

File Attachments

1) [P2240013.JPG](#), downloaded 21545 times

2) [P2240063.JPG](#), downloaded 8125 times

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Subject: Re: Just Loaded in 4 Pis

Posted by [Wayne Parham](#) on Thu, 25 Mar 2010 18:46:38 GMT

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Very cool. You guys did a great job with your sound room!

Subject: Re: Just Loaded in 4 Pis
Posted by [skywave-rider](#) on Mon, 31 Dec 2012 23:31:25 GMT
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It's the end of the semester!
Happy New Year!

File Attachments

- 1) [NJCU_20121231_01.jpg](#), downloaded 5593 times
 - 2) [NJCU_20121231_02.jpg](#), downloaded 5648 times
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Subject: Re: Just Loaded in 4 Pis
Posted by [Wayne Parham](#) on Tue, 01 Jan 2013 22:32:53 GMT
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Wow, very cool pic! Thanks for posting it here, Vin! Happy New Years!

Subject: Re: Just Loaded in 4 Pis
Posted by [jshupe](#) on Thu, 20 Mar 2014 19:22:54 GMT
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Just curious: what signal are you giving the center and what amp did you end up using?

Subject: Re: Just Loaded in 4 Pis
Posted by [skywave-rider](#) on Fri, 19 Sep 2014 05:48:27 GMT
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That's a Crown D75 strapped to mono. When the control room is set up for 2 channel, the Crown powers NS10 near-fields. The changeover requires some manual recabling in the raceway behind the console. It is not a flip-switch change. However, Post Production and Music Recording classes do not run concurrently in a given semester. So it's not an issue. We have the newer C24 console now.

Sorry for the late reply.

Subject: Re: Just Loaded in 4 Pis
Posted by [Wayne Parham](#) on Fri, 19 Sep 2014 16:13:58 GMT
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Wow, Vincent, holy smoke! Long time no see! How have you been?

Subject: Re: Just Loaded in 4 Pis
Posted by [skywave-rider](#) on Sat, 20 Sep 2014 03:00:32 GMT
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It's been too long Wayne! I hope all is well. Just lots of stuff going on. We'll chat. I read somewhere in a post you were in the process of moving. I completely understand that hell.

Subject: Re: Just Loaded in 4 Pis
Posted by [Wayne Parham](#) on Mon, 22 Sep 2014 19:39:48 GMT
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Yes, Vincent, I did move. Still in the process, to tell the truth. Paying for two homes, living in one, but straddling a little bit and still setting up. Not just trying to setup the home, but also the business, build new relationships with cabinet shops and machine shops, etc.

But I can't complain. My new home is in Bella Vista, Arkansas, which is just two hours from Tulsa. So I am able to maintain old relationships while building new ones. And family and friends are just a quick drive away. Plus, now I'm living in the Ozarks, which is incredibly beautiful. I'm living in a beautiful, scenic landscape and I literally have a waterfall in my backyard.

Are you still living in Japan?

Subject: Re: Just Loaded in 4 Pis
Posted by [skywave-rider](#) on Thu, 25 Sep 2014 04:16:41 GMT
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Congratulations on the move, your new locale sounds very beautiful! I know you'll iron out the cabinet shop et. al. wrinkles. First things first.

Yes, I am currently in Tokyo.

There are still a lot of hi fi shops in Japan and many seem like vintage speaker museums focusing

on horns. Of course new stuff is here as well. Speaker geek paradise.

While I was preparing to vacate my NY apt. -- it was so tumultuous -- I am not sure if we spoke, my father passed away. A tough period. I am lucky to have three amazing brothers and we were all able to help my father in the last few months leading up to his death. I am grateful for that.

I have not thought much about speakers since that time, except when using them for work. But no DIY nor browsing forums. It's only in the past week that I had some time to look at this forum and AK (I even forgot my passwords,) and saw all the great activity. The Pi forum is loaded with some amazing projects, dedicated, creative sound people here.

Unfortunately, browsing isn't always a satisfying experience. I happily missed out on most of the controversy regarding the AE TD12S woofers. However today, some old bookmarks took me to a thread wherein negative stuff was said about me, though my username was not mentioned. But that's what happens on the net. Some people are emboldened to say what they wouldn't in-person.

Lately I have been thinking about 6 or 7 Pi speakers, Definimax woofers, wooden hf horn. That's not a near term project as I don't have the right corners in the home presently. You know, there are still hi fi cafes here. Those speakers would be an awesome, elegant focal point in a venue like that.

Subject: Re: Just Loaded in 4 Pis
Posted by [NWCgrad](#) on Thu, 25 Sep 2014 15:20:02 GMT
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Welcome back! I agree with you about some of the negative comments that people so freely put out when hiding anonymously behind a keyboard.

Subject: Re: Just Loaded in 4 Pis
Posted by [Wayne Parham](#) on Thu, 25 Sep 2014 15:52:32 GMT
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I am so sorry to hear about your father passing. It definitely brings things into perspective, but I hate that kind of perspective. I was still in that "eternal youth" mindset until my dad died, even though I was nearly fifty then. But after he died, ever since then, I've been keenly focused on my own mortality and that of all those close to me. Now it's all about "life's too short."

Which is the perfect segue to the topic of the TD12S woofers. Don't sweat it. What we saw there was a small shop that really can't afford QC so stuff slips. But they can't let that show, so they reacted poorly. They've always had trouble with schedules and consistency. That's probably the curse of any job shop.

We don't use those drivers anymore as a result. The good ones are great, but we don't want to

risk the disappointments people (like you) feel when they've waited for a pair of drivers for a year and they come out defective. Don't want the drama either. Life's too short.

Subject: Re: Just Loaded in 4 Pis

Posted by [skywave-rider](#) on Fri, 25 Sep 2015 03:47:42 GMT

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This photo just came my way, thankfully not featuring my faccia brutta, but one of my former students using the speakers we all know and love. I am retired from that job now, but those monitors helped make my life easy teaching students music and post production sound. They provide accuracy in frequency response and dynamics and no fatiguing distortion, nor coloration. Critical when you are working long hours in a studio. Reliably judging EQ and mix levels is made easy. It's good when you forget the speakers are there. We used nearfield so called "sanity check" monitors very little. The WSDG room did not hurt of course. Great rooms and great monitors go together.

[L-R powered by Bryston 4B, Center by a Crown D75 strapped to mono.]

File Attachments

1) [image.jpg](#), downloaded 2488 times

Subject: Re: Just Loaded in 4 Pis

Posted by [Wayne Parham](#) on Fri, 25 Sep 2015 14:13:17 GMT

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Thanks for the photo! Glad to see those speakers are still in the sound lab at the university.
