
Subject: Help w/New Project

Posted by [SteveBrown](#) on Wed, 26 Oct 2005 22:14:35 GMT

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I've not been to this site before, but looks like lots of knowledgeable folks from other parts of the www hang out here, so here goes with my quest...I see posts all the time asking "What should I do for low cost", "What should I do for computer speakers", "What should I do for HT speaks?" ... but what if what I want is a new reference level design? My audio brothers and sisters, my audio spirit is striving for a new project, a reference level, "I listen to it every day", kind of project. The problem is, I'm not that great at crossovers and all that math stuff. I can build any enclosure you can show me, and cost isn't a big problem (well, let's stay in the under \$1000 range for a DIY project). What can I build that is high efficiency and, hopefully reaches a new level of audio high. My taste in music is jazz, classical, chamber, vintage rock. I'd prefer small to large designs and don't mind adding a sub if needed. My room is larger, probably 16 x 20 x 8. My audio trek has already taken me to Fostex land, where I've been happy, but wished for better low-mid weight and less "paper" sound. My quest has also taken me to a nice slice of pi called the Thermionic 3pi, but the WAF wasn't great, and I'd like more precise imaging. My quest has also run into open baffles of various sizes shapes and configurations. Right now, believe it or not, I'm listening to the guts of a Dynaco A-25 (improved tweeter and crossover) mounted in an OB, with a sub filling in below 150hz (but not high eff). This is to say, there is no particular design I'm partial to or hold sacred, but I generally feel that simple is better. And I like triodes, and low power amps and I love dynamics, so high eff is the way to go. Recently I've found myself aimlessly buying drivers on ebay, and have four Electro Voice vintage 12", high Qt drivers coming my way (Sp12b), and I've ordered some Arum 2Gsi tweeters, but frankly, don't have a good idea what to do with all of them. The single driver site seemed to suggest BR, but the box would be very big. Okay, ramble is over. What should I build? I've got on hand FE167's, FE166's, FF85k's, a couple of vintage Utah 12's (high eff, low Qt, but cab needed), I have coming the speakers above (EV's and tweeters). I've got guts for 4 Dynaco A-25's... but I'm willing to buy what I need. What ideas can I get from the collective wisdom of this group? Again, if a crossover is needed, I'll need help. I'm okay in the woodworking department. What should I do?

Subject: Re: Help w/New Project

Posted by [Manualblock](#) on Thu, 27 Oct 2005 20:47:23 GMT

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Why are you restricted to those drivers you mention? If you can alter that combination there are good examples of the audio arts available. Before the deluge of opinions arrives and confuses the issue beyond restoration you might want to consider this. There are really only a small number of types of speaker designs and with your preference for low power you are even more limited. The Pi Threes would seem to be the best choice but you already x-ed that out so this leaves not a lot of wiggle room especially if you must stick to those drivers you mention. Single Driver speakers don't sound good on most music. So; have you thought about a compound driver like the P-audio series? Smaller box and pin-point imaging. You can get much better sound by choosing good used speakers than by building your own for the same money if good sound is what you are after.

Subject: Re: Help w/New Project
Posted by [SteveBrown](#) on Thu, 27 Oct 2005 22:15:29 GMT
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Thanks for the response. I didn't mean to say I only wanted to use those driver, I meant to say that if I could use one or more that would be nice (less \$\$). Really, I'm very open to ideas. I did like the pi's from an efficiency standpoint, also for dynamics, but the size was pretty darn big and the imaging wasn't what I wanted. One alternative I've considered, and played with, it using a sub on the music below, say, 60hz.

Subject: Re: Help w/New Project
Posted by [SteveBrown](#) on Thu, 27 Oct 2005 22:17:32 GMT
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Just as an aside, I've been thinking about the Supravox 215 bicone for an OB speaker, but that's just one thought, open to all ideas for a reference level speaker.

Subject: Re: Help w/New Project
Posted by [Manualblock](#) on Thu, 27 Oct 2005 23:38:12 GMT
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Well; when you say reference that takes in a lot of territory. My very humble opinion. If imaging is the thing you are after you need a smaller woofer two way. It seems to me that as you get higher up in size you gain prescence and lose image. I prefer prescence but that is just me; I can see your point also. The best sounding audio speaker I have ever heard is a di-pole; something like what you did with your Dyna A25's by opening the box. Why not look at Seigfrieds site and see what you think. Since you are O'Kay with using a subwoofer than that might be ticket for you. But you must use very high quality drivers to get the real benefit; and they are expensive.

Subject: Re: Sorry; the url didn't take/Linkwitzlab.com thats the site.
Posted by [Manualblock](#) on Thu, 27 Oct 2005 23:39:45 GMT
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Subject: Re: Help w/New Project
Posted by [Wayne Parham](#) on Fri, 28 Oct 2005 08:49:16 GMT
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John gave some great suggestions. Another option: Might try adding a midhorn and running three-way. It's an easy retrofit, you don't lose or waste anything except the Zobel. Just add the mid and a few components. Later, you can maybe go with a different woofer. Lots of good choices, perhaps an Omega or Magnum.

Subject: Re: Help w/New Project
Posted by [Manualblock](#) on Fri, 28 Oct 2005 10:39:18 GMT
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Yeah I would have thought the Pi Theater Threes would satisfy but he says they are too big for his room. That is the premise of his question.

Subject: Re: Help w/New Project
Posted by [SteveBrown](#) on Fri, 28 Oct 2005 11:40:18 GMT
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Actually, I had the Thermionic, not Theater. At any rate, they are now in my son's apartment, and he is 2,000 miles away so no chance I'm getting them back. However, just imagine what fun a 20-year-old college student can have with those things! I would not be opposed to trying the Pi idea again, maybe I should have started with a higher-end model? What in the pi line represents the smallest footprint without sacrificing too much in terms of music? Which one offers the best imaging and soundstage? I had actually thought about the 2-pi tower with my Arurm Cantus tweeters instead of the stock units. Again, always open to new ideas...

Subject: Re: Help w/New Project
Posted by [SteveBrown](#) on Fri, 28 Oct 2005 11:46:49 GMT
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The Orion's sound like an outstanding speaker, I've only seen a few marginal reviews (something about too heavy bass in some locations). But to be honest, my one reservation here is that I love to build, and mostly build amps of the tube variety. Orion takes away that fun by inserting a ton of SS filters and utilizing dedicated SS amps. But reading about Seigfried's work is what inspired me to try OB in the first place. I have gotten really nice results so I'm not convinced that, if drivers are

used within their limits, we really need all that EQ in the signal path. The Basszilla is another variation that I've looked at - no EQ, but supposed to sound very nice. I've tried a similar arrangement with a Fostex FE167 OB on top of a bass bin, but could not get them integrated well (back to my comment about not being good with crossovers). I also found the Fostex to sound a bit thin even if they were working entirely in their comfortable range. That may be the wizzer artifacts, or it may just be the construction of the speaker, I don't know.

Subject: Re: Help w/New Project

Posted by [Manualblock](#) on Fri, 28 Oct 2005 12:13:56 GMT

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As far as changes to Wayne's designs you would need to discuss that with him. The new Two Pi's use the Vifa 25 tweeter which is a nice smooth tweeter. Not a huge amount of definition but eminently listenable. However you did specify reference quality in your original post. That's a whole new ball of wax. If you liked the Thermionic Pi's then you will like the Pi 2's and they are efficient and have a much narrower footprint but they are pretty tall. My take on Pi's is that they are the best bargain in audio; but reference quality means something else to me; something that you won't get for the asking price of a Pi speaker. You will get 90% of it though for next to nothing. Considering that Spendor SP 100's cost 4500\$ or Maybe the Pi top of the line would do but they are up there also.

Subject: Re: Help w/New Project

Posted by [akhilesh](#) on Fri, 28 Oct 2005 13:33:08 GMT

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Hi Steve, I just finished an Altec based project. I have a large living room too. My wife actually likes the system, and it has a large sound stage, good imaging, and great eff. I used an Altec 511b horn with 808a alnico drivers from 1500 Hz up Altec 515B driver (15" alnico) in a designed bass reflex box (yes, I had to get rid of the A7 horn/bass reflex enclosure, and build a pure BR) from 90 HZ upto 1500 HZ and a single Hsu VTF 3 sub from 25-90 HZ. The whole thing is actively crossed, and I am also using parametric EQ. My amplification is Luxman 4 channel solid state for the mids and highs (25 watt per channel). The overall sound is super clean and detailed, very satisfying. The cost of this is around \$2k-\$3k, depending on your ability to scrounge parts, etc. But it's worth it! I can't imagine a commercial system that sounds anything like it. For a large room, it's a good match. Added bonus, movies sound AWESOME on it, not surprising since it's the guts of a VOTT system!-akhilesh

Subject: Re: Help w/New Project

Posted by [SteveBrown](#) on Fri, 28 Oct 2005 14:01:37 GMT

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Akhilesh, thanks for the note. I'm not sure where I'd source the Altec parts, are they currently made? I can find JBL okay, but not Altec.

Subject: Re: Help w/New Project

Posted by [akhilesh](#) on Fri, 28 Oct 2005 14:51:57 GMT

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Try Great plains audio, located on Oklahoma City. They make new versions of the altec drivers (maybe not alnico but sound probably smoother, though "purists" may say less natural than alnico). Or try ebay, if you are feeling brave. OR simply, go with a similar config with JBL. Try their new horns and drivers. They should be pretty good too. The point is, it's hard to beat (in my opinion) a 3 way set up, where you have a good sub like the hsu vtf3 going upto 80-90 HZ, then an 8-15 incher doing the 90-1500 Hz, and then a horn. Even a bass horn will usually only do 40-50 HZ, and for home rooms, a good sub like the Hsu will do the 20's which makes a hell of a difference (one octave's worth). I was lucky, I found a mint set of altec drivers & horns in Tulsa itself, certified by the master himself: David Miller! Thanks again Angel! You need to come hear my set up. -akhilesh

Subject: Re: Help w/New Project

Posted by [akhilesh](#) on Fri, 28 Oct 2005 16:14:39 GMT

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From what I've read, it IS outstanding. Except it is not highly sensitive at all, and hence may not be suitable for this forum. -akhilesh

Subject: Re: Help w/New Project

Posted by [SteveBrown](#) on Fri, 28 Oct 2005 22:14:13 GMT

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I'd love to hear your setup - I don't supposed you're anywhere near Columbus, OH?

Subject: Re: Help w/New Project
Posted by [akhilesh](#) on Sat, 29 Oct 2005 12:27:41 GMT
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I'm in Tulsa. IF you come here, yu can hear quite a lot of good horn setups. Wayne Parham sells Pi speaker kits that are horn based, and you can check out his JBL based kits. He is also extremely knowledgeable, and an allround very friendly guy. -akhilesh
