
Subject: Building 2pi Towers - COMPLETE!
Posted by [Fresno](#) on Thu, 17 Oct 2002 10:59:46 GMT
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Whew! They are done except for some minor touch-ups. I hooked them up and I could tell they were out of phase, fortunately it was not wired wrong internally, so I just corrected the left speaker and it was fixed. A snag I ran into was that the wiring that goes from the binding posts to the driver was not long enough for where I put the binding posts. I had to extend the wires by 23" to make them reach the drivers. That's what really scared me about them being out of phase. I didn't want to have to take them apart to find out I wired them wrong. I guess the wiring included in the kit assumes that the binding posts will be about two feet off the ground. I wanted them at the bottom, it looks better to me. So how do they sound? They sound very nice, I was expecting more volume since they are more sensitive than the speakers they are replacing but there is an improvement there. I am trying to see if I can get away with having no pre-amp, just a volume control on a tube amp. I'll have to put the pre-amp back into the mix until I build a more powerful amp. There is far more detail in the sound, I played quite a few favorite tracks and I was picking up a lot more detail in the music that I never heard. The 'reality' of the sound is impressive, the instruments sound much richer and, well, real. The bass was sorely lacking, not sure if this will come with break-in time or if it has something to do with my amp, it is a 6BQ5/6CG7 PP amp. The imaging was not as 'crisp' as I was hoping, this may be due to finding the right speaker placement through experimentation. Overall I am happy with the results, break-in/speaker placement/amp changes should cause even greater happiness. So what is the final tally for labor and parts? It cost a total of \$210 for the kits, shipping and materials. It took a total of 26 hours to build them. I spent \$130 on tools but that is 'off budget'.

Kit+shipping	120.00
MDF.....	33.00
Glue.....	8.00
Primer.....	7.00
Insulation.	9.00
Screws.....	5.00
Paint.....	17.00
Sandpaper..	8.00
Braces.....	3.50
TOTAL.....	210.50

Labor - Speaker Box 1 - 16.5 hours
Labor - Speaker Box 2 - 9.5 hours
Tools: Saber Saw.... 40.00
Circular Saw. 50.00
Carbon Blade. 40.00
TOOLS TOTAL.. 130.00

Subject: Break-in
Posted by [JLapaire](#) on Thu, 17 Oct 2002 13:42:43 GMT
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Congratulations on getting them finished! I built a slightly larger version of the Studio, not as large as the Tower, but noticed an improvement in bass after they ran in for a couple of days. I usually hook new speakers to a car stereo out in the greenhouse and let them shout for a couple of days before giving them a critical listen. Since I sold my mains, the "Studio" 2s got hooked right up in the house and the first impression was very bass-light. They got much better after a week or so of intermittent use. If you can pump some power into them they'll wake up faster. John

Subject: Re: Building 2pi Towers - COMPLETE!
Posted by [Matts](#) on Thu, 17 Oct 2002 15:14:34 GMT
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Congratulations on finishing! I'm sure you'll get bass either through break-in or placement- it's there. One thing if you didn't add the inductors, by reducing the mids a touch, they make the bass sound a little increased (even tho it's not). Might try that if you didn't already. I have mine in a room with hardwood floors over a basement and real plaster walls, and get lots of bass with the regular Two pi's.

Subject: Re: Building 2pi Towers - COMPLETE!
Posted by [Wayne Parham](#) on Thu, 17 Oct 2002 16:45:29 GMT
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Glad you finally got your speakers together! Lots of work on those! Sorry about the wiring - You bookshelf version kits are shorter. There is no difference in the components in the two kits, but there is a little difference in the wiring harness and the ports. The bookshelf version has shorter wires so that there isn't a bunch of wire in the cabinet just looped around inside. The towers need 5 foot length, so the cable assembly is longer. I also include a strain relief in the tower kits since longer wires will be supported. But the tower kits do not include port material since none is needed, and the bookshelf version includes a duct. About the bass, double check everything - The wiring, phasing, connection to the amp, etc. I've never heard anyone comment that the towers lacked bass; The comments are always quite the opposite. So I think there may be something wrong, and more than could be explained by break-in. I suspect phase might be the culprit, so reverse the wires on one speaker and see if the bass is increased. If that's the problem, you'll notice a significant difference after reversing the wires.

Subject: Re: Break-in

Posted by [Fresno](#) on Thu, 17 Oct 2002 16:49:43 GMT

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>>Congratulations on getting them finished!Thanks. My wife is happy she has the porch back.>>I usually hook new speakers to a car stereo out in the greenhouse>>and let them shout for a couple of days before giving them a>>critical listen.She might go for the greenhouse but that will need to wait till spring. ;)>>If you can pump some power into them they'll wake up faster.I can hook them up to the sand amp for a bit and crank out some tunes!

Subject: Re: Building 2pi Towers - COMPLETE!

Posted by [Fresno](#) on Thu, 17 Oct 2002 16:53:35 GMT

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I'm debating the inductors. The lack of bass may really be an excess of mids. I was concerned about the reduction of sensitivity but I don't imagine it will affect it that much.

Subject: Re: Building 2pi Towers - COMPLETE!

Posted by [Fresno](#) on Thu, 17 Oct 2002 17:20:52 GMT

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Yup, I did originally order the regulars, after I rec'd them I decided to go with towers. I tell ya Wayne, wire doesn't stretch very much!I improvised converting them to towers, If I screwed up the phasing anywhere it would be in there.When I first hooked them up I could hear the tweeters were out of phase (unfocussed image), so I went around back and fixed it. I'll have to see if when I switch them back the bass gets boosted, if so, then I'll need to open hopefully only one them up and check/fix.Thanks for the input

Subject: Re: Building 2pi Towers - COMPLETE!
Posted by [Fresno](#) on Thu, 17 Oct 2002 22:24:45 GMT
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Wayne,I reversed the cables on one of the speakers and the bass dropped to nothing and the mids and highs went out of focus. It is not the phase.We'll have to see how it sounds when the preamp is hooked back up and the speakers are broken in.

Subject: Re: Building 2pi Towers - COMPLETE!
Posted by [Wayne Parham](#) on Fri, 18 Oct 2002 03:35:04 GMT
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Good. OK, that tells us that the woofers are in phase with one another, so that's one thing out of the way. But I can't help but think something is going on here. Do you have a raised hardwood floor, on a second floor or are you on a concrete slab? Do you have anything else you can compare with - A different amp, for example? Same question on the speakers, are they bass-shy on the same amp, different amps and/or in different rooms?I ask all these things because I think something is missing that break-in doesn't explain.

Subject: Re: Building 2pi Towers - COMPLETE!
Posted by [Fresno](#) on Fri, 18 Oct 2002 11:48:31 GMT
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>>Do you have a raised hardwood floor, on a second floor or are you>>on a concrete slab?I am in a finished basement with a w/w rug on the concrete. 26' x 19'. The front and back walls are panelling an ich or two away from concrete. The side walls are panelling with rooms on the other side.>>Do you have anything else you can compare with - A different amp,>>for example?I hooked them up to my sand amp, SONY STR-DE935, the bass is a bit better. Being able to crank them up louder, I noticed that there was very 'excursion' of the woofer until very high loadness. By excursion I am referring to being able to see the cone move enough to move in and out at the ripples on the outer edge of the cones.>>Same question on the speakers, are they bass-shy on the same amp,>>different amps and/or in different rooms?Not able to test this out yet, won't be able to test different rooms.Would you like to swing by this weekend and check things out? ;)

Subject: Re: Building 2pi Towers - COMPLETE!

Posted by [Wayne Parham](#) on Fri, 18 Oct 2002 18:19:53 GMT

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Room modes in the basement are probably the culprit, actually. Try your system upstairs in the living room and you'll probably find that it sounds much different. Basements have rigid walls, and that make room modes strong and well-defined. It's almost impossible to get smooth bass in a room like that. My suggestion is to add false walls with framed drywall panels having insulation inside them. The bass will vibrate the panels, so they absorb energy which damps the room modes. Basement walls are usually highly reflective at MF/HF frequencies too, so sound is sometimes too sibilant, even harsh. You may want to add absorbent wedges on the damper panels to reduce MF/HF reflections. Most North American homes have framed drywall construction which actually goes a long way towards damping room modes. As a result, the acoustics in most rooms aren't terrible, with a couple of exceptions - basements and rooms with raised hardwood floors. As I said above, basements usually have strong room modes that are poorly damped. The other culprit is raised hardwood floors with a crawlspace underneath for access to pipes and what not. The crawlspace acts as a resonator and often causes response anomalies worse than the room modes. In essence, it creates two sets of room modes that are tightly coupled, and the modes in the crawlspace are severe because it is rigid and poorly damped.

Subject: Bass Bonanza

Posted by [Fresno](#) on Sun, 20 Oct 2002 12:20:13 GMT

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I put my pre-amp back in and the bass rocked! Thanks for your help troubleshooting but I was pretty sure the missing pre-amp was the culprit, I was loading 1 experiment (no pre-amp) on top of an other change (new speakers). I took pictures of the speakers ('cause I'm pretty proud of how they look) and I'll post them here soon.
