Subject: Hacking the One Pi- suggestions?
Posted by sansbury on Wed, 02 May 2007 20:53:31 GMT
View Forum Message <> Reply to Message

A little over a month ago I started making noise with a pair of One Pi's and a new gainclone. The speakers were built to stock specs with 3/4" MDF. The Gainclone was a stock config Chipamp.com stereo kit. The whole rig has maybe 20-30 hours of operation on it now, mostly at lower listening levels.As usual, no sooner am I happy to prove that the project works than I start finding things that need to be improved upon and I wanted to pick the group's collective intelligence for suggestions...1. I think want to rebuild the cabinets in Baltic ply- the high end is almost painfully bright.2. The bass response falls off precipitously below 100Hz or so--I haven't had time to prepare and calibrate a real measuring system yet so this is being "earballed." My old PC satellite system with a 6.5" powered sub had more "thud" to it (it specs response down to 40Hz, and I believe it).3. The mid-range feels just a tiny bit closed in--a musician friend of mine aptly described it as "you're standing just in front of symphony hall, the orchestra is playing, and you hear it through an open door." So, my questions are, where do I go from here? I'm considering the following options:1. Upgrade to the 2Pi tower and give the 1's to my father as payment for building the cabinets.2. Stick with the 1Pi guts but build them in a tower configuration.3. Build the 1Pi tower with the 2-woofer option as discussed here:http://www.audioroundtable.com/PiSpeakers/messages/20770.html4. Get a different amp--maybe it's more of a problem than the speakers? Unfortunately I don't have anything I can hook it up to to verify that.Right now I'm leaning most strongly towards #3, but that's due in part to my unjustified prejudice about a single main driver being enough, and that the bookshelf-sized cabinets are a limiting factor. I also like the idea of being able to recycle all of the original parts.Open to suggestions....

Subject: Re: Hacking the One Pi- suggestions?
Posted by Matts on Wed, 02 May 2007 23:40:17 GMT
View Forum Message <> Reply to Message

sounds to me like you weren't aware of what a one pi is beforehand- it does have a rolloff in the bass as you describe, and it is a small, very inexpensive speaker that performs extremely well for what it is. I'm not sure "thud" has a place in a good speaker... what kind of music do you listen to? how loud? I would take what the musician friend said as a major compliment to a speaker.Maybe you need to move up to a Pi Four or three with the 12LF to satisfy your needs...or maybe the 2 Tower or a double driver Pi One would do it...personally, I wish you'd try them all and report back so we can all learn!!

Subject: Re: Hacking the One Pi- suggestions?
Posted by sansbury on Thu, 03 May 2007 00:22:20 GMT
View Forum Message <> Reply to Message

Don't get me wrong- I'm not complaining, I'm looking for paths to optimize. I agree that the 1Pi has many virtues, and I picked it partly because it was my first DIY speaker and I wanted something small and inexpensive to start with.Music I listen to is very wide-ranging--from some opera and classical, to plenty of rock, some electronica, and a sprinkling of everything else. When I say "thud" I could have been more specific--I meant that it (the small cambridge soundworks satellite system) was capable of producing bass response well below 100Hz. Frankly, better than I've gotten out of my system so far. The 1Pis are superior in just about every other area.I think anything larger than a 2Pi is out of scope for me- small apartment plus neighbors. If I lived in a house out in the country I would have built something much larger first time 'round--this was my first DIY speaker so I figured I'd start small and work my way up. My questions have to do with how much mileage I might be able to expect out of various options--I just don't have enough experience to know whether, for instance, building it into a tower would give a teensy little more bass, a LOT more, or something in between. I realize the subjectivity in the question, and don't expect magical answers, just opinions.Regarding my musician friend's observation, he was complimentary of some things--he felt there was some nice detail along with the brightness--but the observation about standing outside the door was meant to convey some sense of a muffling that could be picked up in voices and in some other things in the midrange. I'm wondering whether cabinet volume or the addition of a second 8" driver would have any effect on that as well as the bass.

Subject: Re: Hacking the One Pi- suggestions?
Posted by Matts on Thu, 03 May 2007 04:01:45 GMT
View Forum Message <> Reply to Message

sounds to me like you've got a handle on the possibilities.... question of whether they satisy you or not is another one. You've read the posts about the double woofer variant and towers- I haven't tried them, but was very interested in the dble woofer type. Another possibility is to buy an Auricap or even something pricier for the cap, and maybe get a fancy, custom wound inductor if you have one of those in. The cost/benefit ratio goes haywire, but I've done that- if you're looking for the last bit of clarity those would help. Keep us posted. We're all experimenting!

Subject: Give it time, then tweak
Posted by Kim Schultz on Thu, 03 May 2007 06:36:51 GMT
View Forum Message <> Reply to Message

First off I´m a true believer in break-in of both speakers and amps.1. If the high end is your problem, it has to do with the tweeter, and that will need some break-in before that sounds its best.2. The bass drivers need some exercise to loosen up their suspension, then you should gain a bit more low end extension.3. How did you dampen and brace the speakers, maybe try to remove a bit of damping to see if that clears up the midrange.I have build many gainclones, and

they all sound great, but again they need some break-in.Do you know the value of the input capacitor on the amp, is it 47uF ?If it is you should be alright.My suggestion is this: wire one speaker in reverse phase, and put them pretty close together, face to face, cover them with a blanket to minimize the sound comming from them.Then play pink noise or just some rock music through them for a day or so, then they should start opening up.You should play it pretty loud so you can see the bassdriver moving, but not bottoming out.

Subject: Re: Hacking the One Pi- suggestions?
Posted by Skip_Pack on Thu, 03 May 2007 12:49:36 GMT
View Forum Message <> Reply to Message

I have gotten significant improvements in One Pi and Two Pi speakers by going to slightly higher values in the coil (from .5 to .6 or .7 mh) and more importantly going to a higher gauge coil. In my case I got14 gauge coils, though close is probably good enough. Parts express handles them. I also am using some motor-run caps on the vifa tweeters.You can get them on ebay for not too much and they are very smooth. You won't get a lot more low bass, but the mid-bass and lower midrange open up and the highs are smoother.Skip

---

Subject: Re: Hacking the One Pi- suggestions?
Posted by colinhester on Thu, 03 May 2007 14:03:34 GMT
View Forum Message <> Reply to Message

Just finished my One Pis. I left the Xo external (and put the tweeter and woofer in seperate boxes) so I can swap quickly. I really like the idea of using motor run caps - very inexpensive C
