Subject: Open Baffle Speakers

Posted by gofar99 on Sun, 02 Jun 2013 02:30:03 GMT

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Hi Everyone, Anyone out there doing simple open baffle speakers? As in simple crossovers and not so monstrous baffle sizes. I have been playing around with a winged baffle about 30 inches wide and 26 tall with a two way speaker system that lets the woofer roll off naturally and a single capacitor to the tweeter. Lots of fun and pretty cheap.

File Attachments

1) OB Cherry in room.jpg, downloaded 9327 times

Subject: Re: Open Baffle Speakers

Posted by Wayne Parham on Sun, 02 Jun 2013 05:47:33 GMT

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Looks pretty cool. How does it sound?

Subject: Re: Open Baffle Speakers

Posted by gofar99 on Mon. 03 Jun 2013 23:22:04 GMT

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Hi Wayne, Actually they sound pretty good. Some refinements are in order though. For one I am going to enlarge the baffles to the more common size of 36 wide and 31 tall (now are 29 wide and 25 tall). This will increase the bass response with the speaker I'm now using by about 3 db all the way down to 40HZ and not mess up the lower mids in the range up to about 500HZ. Modeling indicates a response from 40 to 500 as +/- 2.5 db and a lot flatter above that. Right now I'm using a GRS car audio woofer (high Q and low cost - about \$15 each from Parts Express) and a Goldwood GT25 tweeter from Madisound (\$4 each)with a 2.7uf PIO crossover and a -3 db network on the tweeter. The original plans call for use of a Zenith 12 inch woofer (lots on Ebay) with the GT25 on the small baffle. If found that combination lacking in bass and it had a significant bump at about 200HZ that colored the sound. Cheap though. The GRS woofer is even cheaper and seems a better match. I tried a few other things.... 15 inch infinite baffle sub from PE (good on bass, bad in mid range without a choke to hold it to under 1K), a pair of vintage Lafayette radio tri ways, 15 inch as well (OK, but just didn't do what I thought they should), a Fostex FE126E for the upper end (too forward), some B&G Neo 3 planers on the top end (OK but perhaps too bright).

The idea is to come up with a cheap easy to do speaker system that has good performance. Hopefully with a cost of under \$50 per channel. With the GRS woofer and GT25 tweeter it is

close.

More to follow as I tinker.

Subject: Re: Open Baffle Speakers

Posted by Kingfish on Wed, 05 Jun 2013 10:46:01 GMT

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You're an animal, you know that? Keep tinkering, people can learn a lot from what you do. They look good and I'm sure they sound good. When I retire this is a hobby I want to spend more time on.

Subject: Re: Open Baffle Speakers

Posted by hurdy_gurdyman on Sat, 15 Jun 2013 14:19:32 GMT

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Those baffles look a lot like my first baffles back around 2003. Mine sounded good enough to convince me this was the way to go. Now I have tall thin baffle with 10" mid-woofer, 6 x 12 horn from 1100 Hz up, and 15" bass driver. The possibilities are endless! The common factor is that natural midrange (voices are superb!), and ultra clean bass.

They look good. Keep experimenting, there is more...

Dave

Subject: Re: Open Baffle Speakers

Posted by gofar99 on Sat, 15 Jun 2013 20:22:22 GMT

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Hi, I have made a number of changes since the first posting. The baffles are now about 6 inches wider and 6 inches taller (see photo). They still use a GRS 12PF-8 driver but include a pair of Goldwood GT25 tweeters one of which faces rearward. I am putting together a write up on them as they are a great sounding diy project. Cheap - all electronics for a pair can be obtained from Parts Express for under \$100. All else needed is a sheet of plywood, some glue and misc fasteners. Great sound, solid bottom end to about 40 HZ, high sensitivity, really nice sound stage and of course....the fun factor of turning a chunk of wood into a set of speakers. It will probably take about a week to do the write up and plans.

File Attachments

1) IMG_0555e.jpg, downloaded 8517 times

Subject: Re: Open Baffle Speakers

Posted by hurdy_gurdyman on Sat, 15 Jun 2013 21:32:52 GMT

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Do you have a link to the electronics projects? I wouldn't mind tackling some under \$100 amp/preamp projects. Would like to find a really cheap SE amp project and/or a preamp (preferably with phono stage). I need to get back into this hobby after a couple years hiatus with something to hold my attention. I'm happy with my speakers and source, so electronics win by default.

Dave

Subject: Re: Open Baffle Speakers

Posted by gofar99 on Sun, 16 Jun 2013 03:37:08 GMT

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Hi, I'm afraid you lost me on the question. Which projects? If you were thinking of some that I posted (as well as numerous ones from other folks) then they are on the diyaudioprojects.com site. I use the same user name (gofar99) there as here. As this is getting a bit OT...if you want some of my thoughts on simple projects just PM me.

Subject: Re: Open Baffle Speakers

Posted by Wayne Parham on Sun, 16 Jun 2013 15:53:40 GMT

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Sorry for another off-topic but I just noticed your select-A-tenna in your first post. What stations do you listen to that are so far away you need that? Or is your area just kind of dead for AM radio?

Subject: Re: Open Baffle Speakers

Posted by gofar99 on Sun, 16 Jun 2013 21:07:54 GMT

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Hi Wayne, I don't use it any longer as there are no worthwhile stations within range that I could find. Yes it does work well though. Mine is a thrift shop find (\$5) a few years back and is in perfect shape. It an original from the mid 70'S.

Subject: Re: Open Baffle Speakers Posted by Wayne Parham on Mon, 17 Jun 2013 03:25:24 GMT

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I haven't used mine in a while either. But back in the 1990s, I wanted to listen to a program that wasn't available in my area. The nearest 50kW boomer station was WOAI in San Antonio. I can catch that station in Tulsa on most decent radios, but it is intermittent, depending on time of day and atmospheric conditions. So to prevent dropouts, I bought a Select-A-tenna. It's just a loop antenna with a variable tuner, you know. Works so well - when I dial it in to WOAI, I get it like it was a local station any time of day. But then a few years later, one of the local Tulsa stations started brodcasting the the program I wanted to hear, so I haven't used that Select-A-tenna since.

I might blow the dust off and take it with me to my commute gig though. During the week, I am in a part of Northwestern Arkansas - right on the edge of the Ozarks - and it's like a black hole here. No radio. I can stream stuff on the internet, of course, but I kind of like using my old analog radios. So I may bring that Select-A-Tenna to the Arkansas Apartment.

Anyway, sorry for the off-topic chatter. Carry on!

Subject: Re: Open Baffle Speakers

Posted by hurdy_gurdyman on Mon, 17 Jun 2013 18:52:56 GMT

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gofar99,

I misunderstood something I read in your post, so ignore my last post.

Dave

Subject: Re: Open Baffle Speakers

Posted by gofar99 on Wed, 26 Jun 2013 21:43:14 GMT

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My Open Baffle write up is 95% done...so Wayne how do I post it as the file with photos is kind of large?

Subject: Re: Open Baffle Speakers

Posted by Wayne Parham on Wed, 26 Jun 2013 22:53:32 GMT

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Just attach the photos and the forum software will adjust the size to fit on the page. Or if it is a single document file, just attach it. If the document file is too large, let me know and we'll figure it out.

Subject: Re: Open Baffle Speakers

Posted by gofar99 on Thu, 27 Jun 2013 01:59:05 GMT

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Hi Everyone, With luck here is the project. A fun and cheap build of some pretty good sounding speakers.

File Attachments

1) OPEN BAFFLE SPEAKER SYSTEM3.doc, downloaded 442 times

Subject: Re: Open Baffle Speakers

Posted by Wayne Parham on Sat, 29 Jun 2013 15:15:21 GMT

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Dude, that's really cool! Thanks for making such a thorough write-up and posting it here. For anyone wanting to try an open-baffle design, this is a simple and inexpensive one. It's not just drivers on a panel either - You've done your homework. Nice job!