Subject: Stacked "Mini Planers"
Posted by Ro_Blower on Sun, 13 Feb 2005 03:51:24 GMT
View Forum Message <> Reply to Message

Hey All,I started this post over on the Decware forum:http://www.decware.com/cgi-bin/yabb/YaBB.cgi?board=diy&action=display&num=1108179856I have been listening to the Mini's exclusively for several week now and they have become very addictive. I had to temporarily move the Imperials out of the rotation due to some construction going on in the music room (relocated a stairway and "planted" 6 full size ,80 year old pine trees).The Imperials are now in the kitchen and I plan on moving them down stairs to the (someday) Theatre room, after Jerry gets to hear them. The T.A.O. speakers got moved upstairs to the second floor TV area. This has left me with the smallest and least expensive set of speakers as my only ones in the music room. It has taken this long to get used to not having sub 50hz bass playing, and I miss my bass horns! I have come up with several sub designs(Z-baffel ob sub) that I plan on using with the Mini's and am just waiting on parts now for that project. On the drawing board now is a stacked version of the Mini's that I wanted to share with you here. I took two of the baffel boards that I use for the current version of the Mini Planers(approx. 24" x34") and arranged them on a stand that places one atop the other in an adjustible frame work of sorts.This frame alows me to tilt the lower baffel back 10 deg. and tilt the upper downward 10 deg. Between the two baffels is a cross brace 1x4 that I mount the supertweeter. This gives me a MTM type driver arrangment all on an adjustible OB. Approx. dimensions will be 34 X 60 X 8.I will use the same drivers as the Mini Planers but will run the two 15" 8 ohms wired in parallel, full range .(now a Zen friendly 4 ohms).We should pick up an additional 3db sen. and with an effective baffle size increase to 34x60, I hope to get the roll off on the low end down from the 55hz on the original Mini's to hopefuly high to mid 40's. My inspriration of course was the stacked Quads of yesteryear. Both in looks and performance. This will be called the Midi Planer... Darrel

Subject: Re: Stacked "Mini Planers"
Posted by Wayne Parham on Sun, 13 Feb 2005 05:41:11 GMT
View Forum Message <> Reply to Message

Something like this, huh?Have you started working on these? You might post on the planar and array forums too, because you might get some input from folks like Jim Griffin there.

Subject: Re: Stacked "Mini Planers"
Posted by Ro_Blower on Sun, 13 Feb 2005 12:11:57 GMT
View Forum Message <> Reply to Message

Hey Wayne,Thanks for looking in on this post!Yes, from a visual perspective. I have done some mockups of the baffle arrangements so that I could play around with this tilt/angle Idea a bit. I built

a chival (sp.)style floor mirror a long time agoand was thinking about how an adjustible tilt back for a mirror wouldbe a welcome addition to my Mini"s. I could have more flexibilty in listener location this way. Tilt back more/listen more near field without a sonic shortining of the imagined soundstage?Well It sort of led me to the Idea of two tilting baffels that could focus the phantom Image of the two woofers atop the center mounted supertweeter. Psudeo point source or MTM alignment sort of thing only on an adjustible Ob. I know crazy Idea....The mockups proved that this May be worth persuing.The Mini's used rather inexpensive drivers and I was always wondering what an up graded (quality) driver would sound like. I also want as much sen. as possible and 4 ohms for my Decware buddies little Zen amps.would also me welcome. This may never see the light of day,other than in my own music room, but I feel like I will if nothing else learn something more from the trials. Thanks again WayneDarrel

---

Subject: Re: Stacked "Mini Planers"
Posted by Wayne Parham on Sun, 13 Feb 2005 20:30:10 GMT
View Forum Message <> Reply to Message

Planars on a Zen? Am I understanding you? It's going to be hard to get the efficiency high enough to hear, I think. Please keep us posted.

Subject: Re: Stacked "Mini Planers"
Posted by Ro_Blower on Sun, 13 Feb 2005 22:25:35 GMT
View Forum Message <> Reply to Message

Hey Wayne,Yes on the "mini Planers" being sen. enough for the little ZensI run Steve's Se34I which has a wopping 7 watts of power!The Mini's are about 98db/w/m 8ohms in stock form and I am looking at about 101db/w/m 4ohms or 16 ohms for the stacked version. I do not factor any gain from the OB, but it does seem to contribute about an additional 3db.The little Zen's are about 2.5 watts and actualy "Like" 4ohms(even 2ohms).Darrel

---

Subject: Re: Stacked "Mini Planers"
Posted by Wayne Parham on Sun, 13 Feb 2005 22:47:31 GMT
View Forum Message <> Reply to Message

Oh, yeah, 98dB sensitivity is plenty for Zen's. I was thinking the planars would be around 85dB.

Subject: Re: Stacked "Mini Planers"
Posted by Ro_Blower on Sun, 13 Feb 2005 22:55:36 GMT
View Forum Message <> Reply to Message

Hey Wayne,Tech. question for you.Do you figure any gain from using the output from the back of the Ob?I have speculated that it adds some ,but I have no reference for this other than my ears.Some other guess it to be in the neighborhood of about 3db but are not sure? Any idea how much if any extra sen. we are looking at here?Thanks Darrel

Subject: Re: Stacked "Mini Planers"
Posted by Wayne Parham on Mon, 14 Feb 2005 02:16:15 GMT
View Forum Message <> Reply to Message

The way energy combines from the front and back of a dipole is not really something you can describe without talking about directionality, frequency and the size of the radiator and baffle. The environment it is placed in has an effect too. This is what dipole energy distributon looks like in free space with the dipole facing left and right:In general, there will be less energy at the sides and more energy front and back. Then, when in a room, reflections off the rear will combine with the front wave to form a complex pattern, some places and frequencies adding together and others canceling out. If the rear wave is completely open to free air or absorbed completely, then the front wave should be the same intensity as a monopole.

Subject: Re: Stacked "Mini Planers"
Posted by Ro_Blower on Mon, 14 Feb 2005 02:44:40 GMT
View Forum Message <> Reply to Message

Thanks Wayne, this is very helpfull. Hard to stop watching the grafic- but very helpfull!Darrel

Subject: Re: Stacked "Mini Planers"
Posted by Floyd Andrews on Tue, 15 Feb 2005 00:35:29 GMT
View Forum Message <> Reply to Message

Did I miss an earlier post? What are "mini planers"?

Subject: Mini Planers
Posted by hurdy_gurdyman on Tue, 15 Feb 2005 03:42:27 GMT
View Forum Message <> Reply to Message

Just a reminder of what "Mini Planers"
are.http://pg.photos.yahoo.com/ph/the_hurdy_gurdyman/album?.dir=e491&.src=ph&store=&prodid=&.done=http%3a//pg.photos.yahoo.com/ph/the_hurdy_gurdyman/my_photosDave
Mini Planers

Subject: more info
Posted by hurdy_gurdyman on Tue, 15 Feb 2005 03:45:03 GMT
View Forum Message <> Reply to Message

http://www.audioroundtable.com/HighEfficiencySpeakers/messages/1601.html
http://www.audioroundtable.com/HighEfficiencySpeakers/messages/1601.html

Subject: Re: more info
Posted by Wayne Parham on Tue, 15 Feb 2005 04:56:22 GMT
View Forum Message <> Reply to Message

Oh, yeah. I remember that thread now. When Darrel mentioned this day before yesterday, I was thinking we were talking about something like Magnepan's, not a dipole made from a cone driven speaker. I was wondering how he was getting efficiency in the 90's. Now I'm with you.

Subject: Re: more info
Posted by Ro_Blower on Tue, 15 Feb 2005 20:37:49 GMT
View Forum Message <> Reply to Message

Hey Wayne, Sorry for the confusion and a big thankyou to Dave for getting us on the same page. I realy wanted to also thank you Wayne for that Wave propogation graphic! Is this Graphic something that you created or did you find it elsewhere? Got any more like it. It sometimes helps me to understand some of this ,if I can see a visual portrayal of it!Thanks guys!Darrel

Subject: Re: more info

Posted by Wayne Parham on Tue, 15 Feb 2005 21:49:19 GMT
View Forum Message <> Reply to Message

That animation is on Daniel Russell's website:www.kettering.edu/~drussellHe also has a good document about transmissions lines:Acoustic High-Pass, Low-Pass, and Band-Stop FiltersHere's an excellent write-up on how to measure polar response of loudspeakers:Measuring the Directivity Patterns of a Loudspeaker with and without a BaffleAnd several other good lab excercises:Acoustics, Noise, and Vibration Lab excercises

Subject: Re: more info
Posted by Ro_Blower on Tue, 15 Feb 2005 22:05:31 GMT
View Forum Message <> Reply to Message

Wow,Just what I was looking for!I know what I will be doing for the next few weeks.Thanks alot Wayne!Regards,Darrel