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Subject: Digging out the old (?) ART array - some questions

Posted by [Rolf](#) on Mon, 30 Nov 2015 17:04:06 GMT

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Dear all,

greetings to all of you from Kenya.

I just registered to find out more about the 2009 ART array speaker.

...the ones explained in detail here:

<http://audioundtable.com/GroupBuild/Projects/>

...and with nice photos here: <https://fredt300b.smugmug.com/Hobbies/The-ART-Arrays/i-Hhp7hL9>

I actually think I read quite a bit about it, including the long debate at

<http://techtalk.parts-express.com/showthread.php?209376-ART-com-line-array>

AND, most importantly, I already bought the 16 Dayton DC130BS-8

Rather than building/using passive crossovers, I am planning to use - for the time being - an active solution. I own a nanoAVR-HD from miniDSP, which should do the trick.

Before starting to build the speakers, I would however like to clarify a few issues, hoping that some of you were involved in the making and still remember these details - maybe Scott Placke is still around?

First of all, the arrangement of the woofers on the baffle. I assume they were deliberately moved slightly to one side, to minimize baffle-step issues. But were these really serious?

If not, then I would prefer centering the speakers vertically.

Secondly, the dimensions of the port tubes: these ought to be 4" diameter and 4-3/8" length resulting in a 49 Hz tuning frequency. Typing these dimensions and the enclosure volume (~14.5 liters per woofer) into a standard tuning frequency calculator (I am using the German program Boxsim), results in a much higher tuning frequency, namely something around 70 Hz.

Anything that I am overlooking here?

I would appreciate very much hearing back from you.

Best regards,

Rolf

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Subject: Re: Digging out the old (?) ART array - some questions

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Posted by [Rolf](#) on Wed, 02 Dec 2015 15:48:42 GMT

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Nobody with any idea?

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Subject: Re: Digging out the old (?) ART array - some questions

Posted by [Wayne Parham](#) on Wed, 02 Dec 2015 21:31:07 GMT

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I didn't mean to ignore you but I've already given my input on this matter. Not sure anyone else has any other thoughts, but if so, I'm sure they'll chime in.

In my opinion, it's a great speaker, built as Fred designed.

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Subject: Re: Digging out the old (?) ART array - some questions

Posted by [Rolf](#) on Thu, 03 Dec 2015 16:06:16 GMT

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Thank you, Wayne.

I will do.

In the meantime I have figured out my mistake when calculating the resonance frequency of the port tube.

One needs to use the entire chamber volume (not dividing this by four, as I earlier did) and the equivalent volume ( $V_{as}$ ) equal four times the single  $V_{as}$ .

Then the calculation matches that published by the builders of this speaker.

Once ready, I will post some photos.

Best regards,  
Rolf

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