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Subject: PROJECT: 200 to 900 Hz -- a successful solution

Posted by [noviygera](#) on Wed, 25 Nov 2009 01:14:51 GMT

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I wanted to share my project with those here. Attached is a copy of my email to Funktion One.

After working on different 200 to 900Hz midrange projects to match my midhigh horn, I made one that sound really good.

5/8 aluminum plate to hold three 8" mids.

Three 8" mids on open baffle, 18" wide.

Funktion One horns, 8" mids, 18" subs

"...I too, have found out that midbass is difficult to get right, to have a performance worthy of the 1.5 SH mid-high horn. I am so satisfied with the result that I wanted to share it with you. I can assure you that between 200Hz and 900Hz this design outperforms 10", 12", 15" or 18" drivers in sound quality.

The SOLUTION is three 8" mids below the 1.5 SH. However here is the catch:

Both bottom 8" drivers are wired in series, while the top 8" is wired in parallel. This gives the top 8" 3db more output than each of the bottom 8"s, making it a "truer" point source with the 1.5SH, at the same, having additional output from bottom 8"s. I used 4ohm drivers and total impedance of three drivers was around 3ohms. I guess it would be possible to use three 10" in the same configuration for more output.

This solution is an incredible match with the 1.5SH. I have tried wiring each of the 8"s traditionally -- in series or parallel and the result was disappointing -- loss of clarity, definition, imaging and gain in harshness. So, make sure the top 8" is louder than other two.

So, finally, I have been able to get a good match for the 1.5SH. I have tried various crossover points, slopes. The best result (in terms of most natural sound and least noticeable transition between mids and 1.5SH) was a simple, first order, 6db slopes, at 800 Hz. 24db slopes just did not sound as good, believe me I have tried. That is what made 8" mids so nice -- they still sound good at 1kHz, so you can cross higher and use 6db slopes.

One problem: I do not see my 8" mids work well below 200hz.

-Best regards,  
Herman Chigrin

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### File Attachments

1) [DSCF61941.JPG](#), downloaded 3124 times

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- 2) [DSCF6208.jpg](#), downloaded 3130 times
  - 3) [DSCF62231.JPG](#), downloaded 3212 times
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Subject: Re: PROJECT: 200 to 900 Hz -- a successful solution  
Posted by [Wayne Parham](#) on Wed, 25 Nov 2009 01:17:46 GMT  
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That's a very interesting configuration. Thanks for sharing it with us here!

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Subject: Re: PROJECT: 200 to 900 Hz -- a successful solution  
Posted by [noviygera](#) on Wed, 25 Nov 2009 01:22:27 GMT  
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Wayne Parham wrote on Tue, 24 November 2009 19:17  
That's a very interesting configuration. Thanks for sharing it with us here!

I'm glad I can finally contribute. Main thing here is to have THREE drivers.  
top driver, the one closest to the tweeter will play louder  
bottom drivers will play quieter and provide additional power handling.

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