Subject: Woofers and models
Posted by johnnycamp5 on Thu, 31 Mar 2016 22:30:21 GMT
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I have a general question about the JBL 2226H mid woofer.

I see in a post above, the comment on the behavior of this woofer having a sort of "reverse Fletcher Munson curve", where low end response seems to fall off at lower volumes.

I have noticed this trait as well, but I usually listen at more than very low volume levels.

Could this trait be due to the flux stabilization ring in the magnet structure, or is it just a 2226 thing?

In other words, does the Definimax 4012HO woofer have this same trait?

Regards!

Subject: Re: Woofers and models
Posted by Wayne Parham on Fri, 01 Apr 2016 15:19:52 GMT
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The Definimax has it too, but much less. It's a suspension thing. You can actually measure it in the 2226. The electro-mechanical parameters shift a great deal by ten watts. It's much different at very low power levels. All woofers do this, but it's more pronounced in the 2226.

Subject: Re: Woofers and models
Posted by johnnycamp5 on Fri, 01 Apr 2016 18:38:08 GMT
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I see.

Of course, by the time the shift occurs (assuming you mean 10 watts per woofer)
my 300B SET amp is all out of steam at the rated 8 watts per channel .

I am pondering building some corner horns for my basement (just about finished)
as I have three good corners (accross the narrow wall, or the longer wall).

I am considering either using my existing 4pi's woofers and comp. drivers (currently in the living room) to help make 7pi's for the basement, or just making all new corner horns for the basement.

If I start all over, I was considering the 6pi's instead of the 7pi's.

Am I wrong in assuming the 6pi's would result in the bass extension reaching a half octave lower compared to the 7pi's (without subs of course)?

My assumption is only by looking at the graph comparison of the 3pi vs. the 4pi, which may not be an accurate comparison of the 6 and 7 corner horns, as I cannot find sweep graphs for those.

Does my thinking have merit here, or perhaps I just need to learn how to read a graph ?

Regards!

Subject: Re: Woofers and models
Posted by Wayne Parham on Sun, 03 Apr 2016 22:51:54 GMT
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driven with 300B SET amps. You'll be please with either one.

Constant directivity cornerhorns don't need flanking subs. But you still can't go wrong with one or two subs driven as distributed multisubs. If you have two, put them in opposite corners. They'll smooth lower frequency room modes while adding extension.

But you don't need subs to be satisfied with either model of constant directivity cornerhorn. Both sound great, even when driven by flea power amps.

Subject: Re: Woofers and models
Posted by johnnycamp5 on Wed, 06 Apr 2016 19:24:02 GMT
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Wayne Parham wrote on Sun, 03 April 2016 18:51

driven with 300B SET amps. You'll be please with either one.

Constant directivity cornerhorns don't need flanking subs. But you still can't go wrong with one or two subs driven as distributed multisubs. If you have two, put them in opposite corners. They'll smooth lower frequency room modes while adding extension.

But you don't need subs to be satisfied with either model of constant directivity cornerhorn. Both sound great, even when driven by flea power amps.

Thanks Wayne.

Your response confirms my thinking. No use getting wrapped up in a 6pi vs. 7pi comparison.
I'll likely convert my 4pi's to 7pi's, just have to build the cabinets first.
Is it feasable that I could convert my crossovers to 7pi crossovers, or is it a different pcb?

Subject: Re: Woofers and models
Posted by Wayne Parham on Wed, 06 Apr 2016 21:14:32 GMT
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It's the same PCB, and many of the same components. So you can modify it, if you wish.

Subject: Re: Woofers and models
Posted by johnnycamp5 on Thu, 07 Apr 2016 20:32:37 GMT
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Wayne Parham wrote on Wed, 06 April 2016 17:14
It's the same PCB, and many of the same components. So you can modify it, if you wish.

Thats good.

Also wondering, is it possible to bi-amp the 7pi's?
They seem a great candidate for using a ss amp for the bottom woofer, while using a set amp for the mid horn and CD horn.

Is this doable, or would it mangle the original crossover design and/or screw with the speakers sensitivity?

I did a search for this and rolled craps

Subject: Re: Woofers and models
Posted by Wayne Parham on Thu, 07 Apr 2016 23:03:27 GMT
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Sure, you could run 'em that way. The woofer rolloff is a simple first-order function, so that's cake. The hard part is getting the transfer function right on the top end.

I use Spice models to design with, and my test equipment essentially creates a digital filter that emulates a passive network. You could do the same sort of thing with DSP.
