
Subject: Linear distortion info.(comments welcomed)

Posted by [Joe c](#) on Sat, 07 Apr 2001 17:23:43 GMT

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Hi Here is some interesting info.opened for discussion what is your thoughts.

[http://forsman.no/referans.htm#John Watkinson](http://forsman.no/referans.htm#John%20Watkinson) Joe

Subject: Re: Linear distortion info.(comments welcomed)Try this

Posted by [Joe c](#) on Sat, 07 Apr 2001 17:25:17 GMT

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Link

[http://www.forsman.no/referans.htm#John Watkinson](http://www.forsman.no/referans.htm#John%20Watkinson)

Subject: Summed signals - phasing

Posted by [Wayne_Parham](#) on Sat, 07 Apr 2001 21:17:29 GMT

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I couldn't take time to read the document on the link you posted - I've gotta run. But I'm writing to let you know I'll read it as soon as I get back to the office.

Subject: Re: Summed signals - phasing (Cool) nt..

Posted by [Joe c](#) on Sun, 08 Apr 2001 00:01:08 GMT

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nt

Subject: Acoustic Suspension vs. Bass Reflex

Posted by [Wayne_Parham](#) on Sun, 08 Apr 2001 06:33:39 GMT

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I don't agree with the idea that sealed or open baffle cabinets are somehow immune to resonant behaviour. All speakers shift phase as they pass through their resonant regions, whether they are sealed, open, ported, labyrinth, transmission line or horn. No speaker is immune. All speakers have a resonant frequency and therefore can be excited into resonance at that frequency. A pulse sent to them will tend to cause overring, and the alignment will determine the amount of damping. This is what determines the amount of a "ringing" artifact is produced - Not whether it is sealed or ported, but rather the Q of the particular alignment. The speaker diaphragm and suspension is a spring/mass system which is mechanically reactive. There's no way around it. A sealed cabinet will offer damping - like that of a shock absorber - but it is helpless to remove the "spring" action in this system from the diaphragm mass and suspension. So a sealed cabinet can assist the motor by damping it, but it cannot remove the reactive nature of the mass/spring action of the motor. You will see a similar sort of "ringing" at resonance in a sealed cabinet as you will in a bass reflex cabinet. The more damped a system is, the less it will ring. But this is determined by alignment, and not by whether a cabinet is ported or not. As we examine this a little further, we actually find that a sealed box is incapable of providing as much damping as an optimally tuned bass reflex box, at least in the resonance region between fb and fh.

Subject: Re: Acoustic Suspension vs. Bass Reflex
Posted by [jlharden](#) on Sun, 08 Apr 2001 11:55:01 GMT
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Hi Wayne! That's pretty deep for almost 3 a.m., I've been awake since not much later than. I'm going to have to go drink my Wheaties, eat my coffee and then reread it! :) Jerrod

Subject: Re: Acoustic Suspension vs. Bass Reflex
Posted by [Wayne_Parham](#) on Sun, 08 Apr 2001 20:58:37 GMT
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My point can actually be summed up in one sentence: All speaker systems resonate. That includes sealed boxes and open baffle designs. So all speakers have a tendency to lack control at their resonant frequency which causes them to continue to produce sound after a signal is removed. What's more important is the amount of damping. If damping is sufficient, then the duration of output is short - maybe only an attenuated half cycle. But for systems that are poorly damped, the overring can be several cycles. Well damped speakers are able to generate a very short staccato bass note, like a bass drum impact, but poorly damped speakers cannot - Instead you hear a note of much longer duration. One would expect a quick "whap" and instead, you hear "whoooooom." Sorry for the onomatopoeic words - "whap" and "whoooooom" - but I can't find a way to describe the sounds any better. I've always been particular about this characteristic of speakers. I love deep and powerful bass, but I also want it to be clean. I expect bass drum

strikes to have quick impact along with that thump in my chest. I want to hear the roar of a low frequency bass organ, but I want these to be two different and clearly distinguishable sounds. Systems that have great low frequency resonance and well damped resonance can provide this, but poorly damped systems cannot. One of my first, and easiest listening tests was to listen to the song "All good people" from the 70's British art rock band, "Yes." There are two bass notes that are repeatedly played as 16th notes, in rapid succession. If I can't hear two distinguishable notes in this song, then I think the speaker sucks. But it's truly amazing how many "reproduce" this passage as single bass tone. Elephant farts. What's happening on such a system is that the speaker is continuing to "ring" at this frequency so long that it "fills in" the cycles between the two bursts. What should have been two short bursts are made into one long one. And this is just as common on acoustic suspension speakers as it is on bass reflex. It's a symptom of an out of control woofer at resonance, and a cabinet that cannot effectively damp it.

Subject: Re: Plain old fashioned distortion
Posted by [Tom Brennan](#) on Tue, 10 Apr 2001 02:18:49 GMT
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The vented box has less diaphragm travel for a given driver size near f_3 and thus lower distortion. Seems to me these audiophiles ought'a solve the BASIC problems before they worry about "time" and "phase" and whatever else the current catchphrases are.

Subject: Amen, brother!
Posted by [Wayne_Parham](#) on Tue, 10 Apr 2001 04:09:07 GMT
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Subject: Re: Acoustic enhancement
Posted by [Dr. Acoustics](#) on Wed, 11 Apr 2001 01:43:06 GMT
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We introduce an acoustic enhancement product that can solve the problems you are discussing here. Artist owned and operated. A simple way to cut back on distortion while still absorbing the right amount of energy. Please review and share your knowledge, Friends of the bass waves. Surf on. Luke Johnson A lover of cleanbasscleanbass2@home.com www.basslinear.com

BassLine a new acoustic enhancement product

Subject: Improved acoustic insulation product

Posted by [Wayne_Parham](#) on Wed, 11 Apr 2001 04:43:49 GMT

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Thanks for the link to your new product's website. Your product appears to be foam insulation shaped as an egg carton, is that right?

Subject: Re:More dirty marketing

Posted by [Art J.](#) on Wed, 11 Apr 2001 21:11:24 GMT

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I backed up to that link also. They are trying to sell speakers based on the flaws of other designs. They should at least get their flaws right.

Subject: Re: Improved acoustic insulation product

Posted by [cosmic10](#) on Mon, 14 May 2001 21:28:38 GMT

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Hi Wayne Thank you for posting your response to my employees introduction to BassLine speaker panels. If you would like to try out BassLine we will supply some product and you could do a review and put it in your site. Since inventing BassLine I have been dedicated to enhancing sound globally. Cleaner sound Cleaner World.RegardsCarl BillingtonCEO / InventorEagle's Talon Productions Inc.

BassLine a new acoustic sound invention!!!!!!
