Subject: Interesting quote
Posted by Manualblock on Thu, 12 Jan 2006 22:22:25 GMT
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The link you posted Wayne concerning violins has an interesting quote attached to it;"The ear is a supreme detection device and the brain is a far more sophisticated analyser of complex sounds than any system yet developed to asses musical quality."It goes on to explain other aspects of testing and hearing but I'll leave that to those who are interested enough to read it. Thanks; great link.

Subject: Re: Interesting quote
Posted by Wayne Parham on Fri, 13 Jan 2006 15:34:06 GMT
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Our bodies are interesting machines. We can gather an incredible amount of information, see a huge amount of detail. But we cannot look at something and tell precisely how large it is or what frequency the light reflected from it is. We can build a machine that does this easily, but it cannot tell a beautiful woman from an ugly one. Well, some machines are getting close, by measuring the ratios between features, etc. But still, you see what I mean. We look at things holistically, and don't have the "hardware" to see them reductionistically. Machines are generally programmed to "see" things reductionistically, to analyze something specific. Next step is learning what of each of those things really matter to each of us.

Subject: Re: Interesting quote
Posted by Manualblock on Fri, 13 Jan 2006 17:26:08 GMT
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I agree. It's like the old story about five guys describing an elephant to a blind man. Each guy describes one parameter and at the end it looks like a giant guppy.Thats the thing that seems so obvious to me ; that no device can tell what something really is by describing it's statistics.The fact that people cannot trust their senses if a machine tells them something different is odd to me.I mean if you want the molecular weight of a substance you use a scale; but that scale can't tell you if that substance smells good or bad. Yet guys will defy their own perception if a device disputes that sense.Science marches on and changes but people always believe that their era holds the truth. Yet there have always been music critics who can tell exactly what sounds correct and what doesn't. So which do you trust? Hold on; I have to go get my skull measured for my phrenology report.

Subject: Re: Interesting quote
Posted by Wayne Parham on Fri, 13 Jan 2006 19:49:26 GMT
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There are some things we can hear pretty well, other things we can't. Here's one of the hot-button topics I've noticed pops up every few years, usually when some marketer has a new widget they want to sell:
Audibility of absolute phase

Subject: Re: Interesting quote
Posted by Manualblock on Fri, 13 Jan 2006 21:01:31 GMT
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Let me ask you; if the phase is reversed somewhere in the signal chain does the motion of the cone change from the original signals compression to rarefaction? Does that happen?

Subject: Re: Interesting quote
Posted by Wayne Parham on Fri, 13 Jan 2006 22:39:20 GMT
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Yes, exactly.

Subject: Re: Interesting quote
Posted by Manualblock on Fri, 13 Jan 2006 22:45:47 GMT
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So this can occur if anyone of the links in the chain have a phase reversal; and if it reverses twice in the chain it is then restored to original?

Subject: Re: Interesting quote
Posted by Wayne Parham on Fri, 13 Jan 2006 23:18:30 GMT
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That's right again.

Subject: Re: Interesting quote
Posted by Manualblock on Sat, 14 Jan 2006 01:38:11 GMT
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Thanks. So what effect do we get if the drivers are compressing instead of refracting?Strictly curiosity.

Subject: Re: Interesting quote
Posted by Wayne Parham on Sat, 14 Jan 2006 16:45:04 GMT
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Sound is made by tiny (much less than one lb/in2) vibrations of pressure, alternating from compression to rarefaction.

Subject: Re: Interesting quote
Posted by Manualblock on Sat, 14 Jan 2006 18:19:28 GMT
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Not sure I follow that. I know about vibration and sound I was wondering how reversing that would change things in any way. I mean there must be a way you can tell if the phase is opposite what the signal intended. But what would show that to be true and how would you know.

Subject: Re: Interesting quote
Posted by Wayne Parham on Sat, 14 Jan 2006 22:50:02 GMT
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You could measure the signal and tell whether phase was 180° out with respect to the original. But it wouldn't matter 'cause you can't hear the difference.

Subject: Re: Interesting quote
Posted by Manualblock on Sat, 14 Jan 2006 23:20:37 GMT
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Thats exactly the confusing part. That makes it sound to me as if phase integrity has no effect on sound.But the question I had was really this simple and it is what I don't get. If the driver is moving in when it should be moving out then what happens when it is not the same as the original? Nothing?Thats what I don't understand. Something has to be noticeable when that happens; whether you can hear it or not isn't the problem I am having. It is how do you recognise it when it happens? It must be of concern to proffessionals in the field.No big deal; just curious.

Subject: Re: Interesting quote
Posted by Wayne Parham on Sun, 15 Jan 2006 01:48:36 GMT
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You should try it out for yourself. Listen to your speakers and then reverse the leads on both. Don't do it on one, 'cause then you'll cause cancellation. That will make response anomalies, which you can hear. So reverse leads on both speakers and see how it sounds to have 180° shift in absolute phase.

Subject: Re: Interesting quote
Posted by Manualblock on Sun, 15 Jan 2006 13:48:50 GMT
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I do that occasionally when ever something doesn't seem right. Maybe it's my imagination, but I don't actively think about it, I just sort of realise there is something off at some point in my listening so I try swapping. Doesn't happen often and it doesn't always work out but sometimes it does. Enough to make me get my lazy butt off the couch and do it.

Subject: Re: Interesting quote
Posted by akhilesh on Wed, 18 Jan 2006 16:32:21 GMT
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"Not sure I follow that. I know about vibration and sound I was wondering how reversing that would change things in any way."IF a single note from a trumpet (say) is played, it will cause first, say, a compression, then a rarefaction, and so on. IF a speaker were reproducing that sound, in phase, it would first move forward, and then back. Out of phase, it would first move back, then

forward. Given the phase anomalies that exist in most real world environments, and the fact theat most PM is highly complex, abs phase has not been shown to be audible at all. Richard Greiner did do some studies that showed that i9n some very simple tiones, with a very clean environment, it si audible. However, that does not extend to real world listening of real world PM. -akhilesh

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Subject: Re: Interesting quote
Posted by Wayne Parham on Wed, 18 Jan 2006 18:36:59 GMT
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Absolute phase cannot be heard when a single frequency tone is generated. In a very real sense, "phase" has no meaning unless two tones are referenced, because phase is a description of the difference in time between two cyclic events.When two tones are generated, their phase relationship with one another matters because of their interaction with one another. If they are out of phase, they will cancel each other out and the sound will drop off. If phase moves in and out of destructive and constructive interference, then there can be rhythmic throbbing of cancellation and reinforcement. But if the movement in phase is such that no destructive interference results, then phase is imperceptible. The bottom line is that if you can hear something as a result of phase changes, then what is heard is cancellations that cause frequency anomalies - not the phase.

Subject: Re: Interesting quote
Posted by akhilesh on Wed, 18 Jan 2006 21:52:04 GMT
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Makes sense, buddy. Here ia a link on absolute phase that pretty much agrees with what we have been saying. http://sound.westhost.com/ptd.htm-akhilesh
Look for Absolute Phase on this page

Subject: Re: Interesting quote
Posted by Wayne Parham on Thu, 19 Jan 2006 00:04:48 GMT
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Hey, whatcha bringing to GPAF? I'm starting to really get excited about it.

Subject: Re: Interesting quote
Posted by akhilesh on Thu, 19 Jan 2006 15:21:25 GMT

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HI Wayne,Depending on my Wife's mood, I'll either float around with some amps, or actually get a room, and set up my trusonic 3 way setup. Not sure yet. My guess is i'll just get an amp or two, and float around with it. Let's see. BTW, I just purchased an amp from Jef Larson, whoch is really cool. It uses the same output trannys he had at the last GPAF, but uses a 12b4 tube singleended, driven by a 12ax7. THe sound is super clear. It's only 1 watt, but my Khorns seem to like it.
-akhilesh

Subject: Re: Interesting quote
Posted by Wayne Parham on Thu, 19 Jan 2006 18:41:22 GMT
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Jef is a great guy, and he and his wife are already planning to be at GPAF. Looking forward to it!