Subject: What if the "live cabinet" Co's. like Audio Note are right?
Posted by BillEpstein on Sun, 14 Aug 2005 15:30:52 GMT
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One of my best friends is a published theologian. Ask him if there are still moral absolutes in modern life and he'll grin and say "absolutely".If there can be any absolutes in Audio, (begging the objective vs. subjective question) shouldn't one of them involve cabinet construction? Afterall, whether a "live" or "dead" hall can best be portrayed by it's opposite or twin is a question which should be easily answered.But no one asks.Everyone has an opinion about the advantages and faults of the two main protagonists, MDF and plywood. Some have even listened to them and a very few have conducted scientific tests. It occurs to me that the speaker box plays a similar role to the hall, studio or stadium. It is the vessel in which the sound exists as well as a key determiner of the overall sound of a performance.The Scholatics among us will endlessly debate whether any but an acoustically inert cabinet can accurately portray the actual performance.I say let's do a Roger Bacon and go around to the Stables and count the teeth.....All we must do is build, say, 2 Pi's. Four pairs. One of MDF with standard bracing, one of high quality plywood with the same bracing, another of plywood with 1/2 the usual bracing like the Audio Note's and a fourth, with no bracing at all.Then listen to "live" performance recordings of a venue we are familiar with.Does that sound anything like rigorous scientific method?Or what the hell, do what I'm about to do, just build a pair in plywood and see how they sound against some ornery absolute

Subject: Re: What if the "live cabinet" Co's. like Audio Note are right?
Posted by wunhuanglo on Sun, 14 Aug 2005 17:41:22 GMT
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I'm not sure you can learn anything if you rely on "sounds like" because we can all fool ourselves to an almost unbelievable extent concerning what we hear.I think you'd have to rely on measurements of some sort - maybe SPL levels 1 foot from the side of the cabinet - because I think you want your information radiated from the primary surface (the cone) and not some reverberant stuff "unrelated" to the recorded sound. So the issue might be that the stuff radiating from the sides of the cabinet are, say, -30dB from the level measured at the cone and essentially don't affect the overall presentation.Maybe you could build a box with 1/2" MDF, then in succesive measurements you could laminate outer layers to thicken the walls. I'm betting with no bracing at all the cabinet will be pretty stiff after a few layers, and you avoid the differences in internal volume as well as the work in constructing multiple speakers.

Subject: Try it and see
Posted by Wayne Parham on Mon, 15 Aug 2005 03:08:53 GMT
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Of course, you could certainly do it, let the panel flex make the midbass bloom. Bring up the lower vocal range with panel resonance. I've just never heard a speaker that used this kind of tuning method (on purpose or accident) that I thought sounded good. The bass is too bloated and the vocals too throaty. It just sounds unnatural to me, and since I can hear the effect, I know what kind of ragged response there must be. Small peaks aren't immediately obvious, so when I hear a speaker that is noticeably boxy sounding, I know that the response peaks are pretty big. It might sound interesting at first, but it really gets on your nerves after a short while.But I suppose it isn't out of the question that a loudspeaker be built that uses resonant panels that are precisely tuned and damped. It would be like a sounding board on a piano but with one important distinction. The piano is made to be an intrument on its own, so unique resonance is just a characteristic of the instrument, and not necessarily a bad thing. If the loudspeaker resonance colors the sound though, it becomes unnnatural sounding so it has to be more controlled.Just like trying to tame cone flex resonances for well behaved breakup modes in a full range speaker, the builder of a speaker with panel resonance would have to do the same. Quality control becomes impossibly difficult. Each cabinet has to be built and then tested, because wood panels aren't uniform. I imagine if they were really interested in trying to do this, the reject rate would have to be pretty high, else they'd be passing a lot of dissimilar samples.I don't know if you've ever listened to any of your speakers before finishing them, before bracing. If so, you know what I mean. Especially big boxes, those can be really nasty sounding before bracing is installed. I guess you can try and fine tune the panel resonance, to get it to do exactly what you want. But if you ask me, it's like trying to make a square cut on a long board with a pocket knife. You can do it, but it's probably better to use a table saw.

Subject: Bill's speakers and the Holy Grail.
Posted by GrantMarshall on Mon, 15 Aug 2005 14:44:58 GMT
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Hi Bill.It has become obvious to me that you are on a quest. When you get to the part with the virgins that want to be punished, email me. I'll help you out. As sure as you try your test someone will suggest that you use amplifier X there is a completely different sound which negates your first test. It's what you like that counts. That's an absolute.Grant.non-published, non-theologian

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Subject: Re: What if the "live cabinet" Co's. like Audio Note are right?
Posted by GarMan on Mon, 15 Aug 2005 17:14:21 GMT
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I'd love to do something like this. If you keep it simple like the Studio 1 or 2 PI (bookshelf), it shouldn't be that difficult or expensive as long as you don't care how they look.I bet you can built two pairs of MDF and two pairs of birch ply for just over $150 in material. In one day too if you have enough clamps.What's stopping me isn't so much cost or time, but explaining to my wife why

there are now four more pairs of speaker cabinets in the house. I already have 3 pairs of unused DIY cabinets sitting (or taking up space) in my basement.Gar.

Subject: Re:This is epistemology, let's take it a step further:
Posted by Bill Epstein on Mon, 15 Aug 2005 20:06:14 GMT
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Are you familiar with John Elison on the Vinyl Asylum recording various cartridges playing vinyl onto CD? S'posed to be an accurate enough re-creation to make a judgement about the cartridge by hearing only the CD.So you have a recording of musicians in a hall; DAT, CD-R, whatever. What you want to hear is the hall."Live At Blues Alley" would be good. Take the speakers to Blues Alley and A/B the speakers and hall. Which speaker more accurately replicates the sound? Or which speaker as a vessel for the sound is more like the vessel which is the hall?To say that only a dead neutral speaker can accurately re-create the live experience is too facile. Too many "slips 'twixt lip and cup" in the chain of reproduction. Why can't we posit that something needs to be "added back" to compensate for what the recording "left out".

Subject: Re:This is epistemology, let's take it a step further:
Posted by GrantMarshall on Mon, 15 Aug 2005 22:18:45 GMT
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The question is "why do you want to listen to the exact sounds created"?Most live performances are sent out through inadequate sound systems anyways. I prefer the sound I have at home to a lot of the live performances I've been to.Grant.

Subject: Re:Ouch!
Posted by Bill Epstein on Mon, 15 Aug 2005 23:05:29 GMT
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An often heard complaint. And one I find odious.It kinda begs the question, "if you've never heard 'live' music well-presented, how could you possibly judge the merits of reproduction?"Oh, you can enjoy it. Grain free, distortion free dynamics with lots of ambient cues is wonderful Hi-Fi. But it's no basis for judging the 'quality' of the sound compared to the real thing. Lot's of folks have a plastic or other synthetic Pieta in their home but only the actual sculpture evokes the feelings that Michaelangelo intended.

Subject: Re:Ouch!
Posted by GrantMarshall on Mon, 15 Aug 2005 23:33:46 GMT
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I've been to enough live concerts to have an opinion.There was the Eagles concert where they pointed the speakers at the grandstand. What a suprise. It produced an echo. Got to listen to all the songs twice, about 3 seconds apart.A concert is much more than sound. It's the friends girlfriend looking at the blown up rubbers and saying "Oh, look at the clear balloons". It's the smell in the air (not at all concerts), the pleasure of seeing something done where there are no second takes. Concerts often involve friends, food, and music. Not a bad time at all but not an experience a sound system alone will ever reproduce.I don't think baltic birch or MDF makes or breaks a speaker. Give me an artist singing music that suits my mood and it's already better than music I don't feel like listening to on a "superior" system. I hear you on the distortion free, good dyanmics, etc. Bill. It's an interesting thing though. I talked to a guy at a local speaker shop who told me the people that enjoy their systems most tend to have mid-range systems. The people with high-end systems always think that something should be better.And on those words....have a good night Bill.Grant.

Subject: Re:This is epistemology, let's take it a step further:
Posted by wunhuanglo on Tue, 16 Aug 2005 04:23:01 GMT
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I'll grant your premise that there's stuff "missing" but I think you're left with what exactly do you want to add back?Bosendorfer make a speaker and though I haven't heard it I'll bet its just hunky-dory playing solo piano - I'd be less confident that it reproduces solo voice or brass well.If you attempt to add some artifact through cabinet resonance you're going to add it to everything, whether appropriate or not. It may be spot on for one recording but it's going to detract from all others, no?

Subject: Measurement
Posted by Mike.e on Tue, 16 Aug 2005 20:13:46 GMT
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If it sounds better to you,then thats what matters. Some would argue that,thats the only important issue. In 'high performance loudspeakers' edited by Martin Colloms,there is a section devoted to panel resonance and measurement. An enclosure is arranged so that only the panel resonances are 'heard' while the driver output is trapped in a chamber. The frequency response of the box is then plotted. Suprisingly, a 'reasonably well built' enclosures output was only -12dB lower than the driver output at certain frequencies(near 100hz from memory),and gradually reduced with increasing frequency. To me,your loudspeakers simply cant be coloured in anyway unless you want it to be a musical instrument.Linkwitz has gone without the box really,open baffle as have

many.

Subject: Re:This is epistemology, let's take it a step further:
Posted by GarMan on Wed, 17 Aug 2005 14:45:04 GMT
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This reminds me of an article I read in Audioxpress late last year or early this year. The author argued that the natural and delicate 2nd harmonics that gives instruments and voice their tonal richness may have a hard time surviving the long and complicated recording, mixing and writing process. The use of SET amps with high(er) levels of 2nd harmonic distortion adds the richness back.Gar.
