Subject: Prosound Shootout
Posted by Wayne Parham on Sat, 12 Aug 2006 03:59:17 GMT
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What do you guys think about having another Prosound Shootout this year? I'm getting some E-mails and seeing forum traffic about it, and it is getting close to time. Who's interested?

Subject: I'll be back
Posted by Leland Crooks on Sat, 12 Aug 2006 13:35:59 GMT
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Should be with new cabs, if I can get done in time. If not, with heatsink loaded tubas, which we will proceed to pummel thouroughly with thermometers in place.

Subject: Re: I'll be back
Posted by Wayne Parham on Sat, 12 Aug 2006 20:56:13 GMT
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Very good. I'll contact David Lee and see if he wants to brings something from BASSMAXX again this year. I'm sure he'll want to come back. They made some improvements since last year's model, so he'll probably bring the latest and greatest. Maybe you can pass the word on the Fitzmaurice forum and see if some other guys want to get involved.I'll call the race track this week and set a date.

Subject: LABhorn wager
Posted by Wayne Parham on Mon, 14 Aug 2006 05:53:04 GMT
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The ProSoundWeb.com website has several discussion forums, one of which is described as being a general subwoofer discussion forum. Their stated purpose is to encourage general discussions of subwoofer designs. They did a group build sort of thing a couple years ago and came up with a basshorn which they called the LABhorn. I made a device that serves to reduce motor temperatures and thermal stress, so power handling is improved. I've included this in my

would be useful for them. But the chief designer of the LABhorn seems to have a "not invented here" hangup, and has consistently put down the cooling plug, even when faced with evidence that it worked and testimony from several people that they experienced performance gains from

theirs. In fact, the moderator of that forum even resorted to deleting posts from people that use cooling plugs and reported them as being effective. So I challenged them to a wager.I am willing

are pretty simple, really. I will bet $1000.00 that it takes less power to blow a stock LABhorn than

this already, but there are a few vocal critics that I have extended this wager for. The two basshorns use the same woofers, so there is no driver advantage either way. It's all about design and execution. I'll even give a handicap to benefit the LABhorn - It can have dry ice or any other

blocked, covered so no airflow is possible across them. The challenger is free to choose the program material or test signal. The signal shall be run at 800 watts RMS for 15 minutes or until one of the loudspeakers fails. Power shall be increased 10% and run for 1 minute, then increased 10% more and run for another minute and so on until one of the speakers fails. The loser pays the winner $1000.00 and the results will be published here. If there is a challenger willing to take this bet, we'll do it at the Prosound Shootout.For those of you that own LABhorns, please do not feel attacked or intimidated by this challenge. Most of you already know that cooling plugs give you an extra edge. They were designed with you in mind, and that's why they were made compatible with the LABhorn. They're a bolt-on add-on part for LABhorns that you can easily buy or build yourself. So feel free to bring your LABhorns, with or without cooling plugs. We would love to have you there. The wager is only for those who might want to prove something, and for those stupid enough to take this bet.

Subject: Did you say Shootout?
Posted by David Lee on Mon, 14 Aug 2006 08:25:01 GMT
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BASSMAXX will be there. This year, as you said, I'll bring the latest and greatest. (Ever seen that show 'Pinks' on SpeedTV?) Yes, we did make some pretty big improvements on the Z-5 since we brought out that prototype last time. And this time I won't make the same mistake I did last year, I'll bring more than one matching cabinet. I'll bring enough so you can at least hear/see them do what they do when they are used the way they are intended to be used: More than one at a time. Do you think you should officially invite EAW, Funktion 1, Turbosound, Danley, Nexo, Adamson, EV, Dynacord, L'Acoustics, Phazon, JBL, Martin Audio, Meyer Sound and anyone else making well reputed subwoofers to attend this event and bring their best offering? BASSMAXX will be there because we don't back down from a challenge, no matter who its from, but I wonder if any other manufacturers will have the mettle to show up...?I'm ready to have some fun! David Lee

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Subject: Re: Did you say Shootout?
Posted by Wayne Parham on Mon, 14 Aug 2006 13:41:08 GMT
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Consider the other manufacturers officially invited. We'll take photos and measurements of their gear, and do a nice tasteful little write-up of each product, just like last year. Would you be willing to act as liason and contact each of them for us?

Subject: Re: LABhorn wager
Posted by Manualblock on Mon, 14 Aug 2006 19:44:35 GMT
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Offer the cash to charity; VFW or something. That ought to generate some publicity and do a good deed at the same time. If you don't mind my big nose sticking in here. Everyone likes to contribute and feel good about it and rightfully so.Tax deductible.

Subject: Re: LABhorn wager
Posted by Wayne Parham on Mon, 14 Aug 2006 20:05:42 GMT
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Great idea. It's a done deal, we'll donate the proceeds from the wagers to charity. Step right up folks, place your bets.

Subject: Re: LABhorn wager
Posted by Craig Leerman on Mon, 14 Aug 2006 22:42:51 GMT
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I told you many times why the posts on PSW were deleted Wayne. Real names are required on PSW so if someone posts as sammy43 or bassfreak7 we delete them. If you notice, we welcome people to post on all topics as long as they follow the rules there, which require real names, polite behavior, no spam, manufacturers not advertising products, etc. I have even mentioned your product by name as being welcome on the forum (as long as the rules are followed).Please stop implying why any posts were deleted. As I have stated, and many others have seen, posts on ALL TOPICS will get deleted or locked if the posters do not follow the rules. You are even welcome to post the results of any shootout that you might have, as long as you follow the rules there.Craig Leerman

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Subject: Re: LABhorn wager
Posted by Manualblock on Mon, 14 Aug 2006 23:50:50 GMT

Good; it's been my experience that guys find it easier to accept losing if they can say it is for a good cause rather than for someones pocket.Good Luck. I hope it works out.

Subject: Re: LABhorn wager
Posted by Wayne Parham on Tue, 15 Aug 2006 00:37:55 GMT

First things first, how about the wager? Before we change the subject, lets talk about it. If you're confident in your arguments, you should have no trouble placing this bet. Put your money where your mouth is, why don't you?
Second, to address your comments about the deleted posts on PSW: How in the world could your rules have been broken in any of the posts you deleted? What specific rules were broken? There were at least a dozen posts you deleted showing photos of cooling plugs that people had either bought or made, and each of those posts was made by someone using their full name. So to say those posts were deleted because rules were broken is nothing but a cover up.You have stated that you don't believe the cooling plugs work. It is purely speculative on your part, but you have been quite vocal. So I'm inviting you now to show your confidence in the things you assert so loudly by making this $1000.00 wager with me. Are you willing to do that?You know, the LAB

forum, or the Fitzmaurice forum. It is bad taste to go into a company support forum and toot your own horn, so to speak. Hobbyists and end-users might discuss tweaks or tuning tricks, but competitors and their representatives probably have no business making posts in company sponsored forums. But the LAB subwoofer forum gives an impression that it is an open

have I advertised there. Before working on the design, I sometimes started threads about the possibility of making an improved driver, about the push-pull configuration, and other technical

PSW after the design was finished.Quite the contrary - When developing it, I discussed some of the features of the design and you invited me to post measurements when I was finished building

basshorn became a finalized product, I never started a thread about it again on PSW. I respected the rules about commercialism on PSW, just like I would expect people to do here on ART.

is the same thing as company representative talking about one of their proprietary designs. But

commercial product and respect rules about commercial posts. That's the way you treat the LABhorn design too, so I think you must understand.The thing I have the most trouble with is your attitude about the cooling plug. I made a special effort to make it compatible with the LABhorn so that owners of existing horns could take advantage of it. It was a contribution to your forum. I could see during initial testing that the cooling plug made a very significant improvement, and I wanted LABhorn owners to be able to benefit from it.Having aluminum access panels on a

LABhorn is pointless if cooling plugs aren't used because there is no heat conduction path. The panels might as well be made of wood, because without cooling plugs, the aluminum plates do nothing to cool the motors. But after cooling plugs are installed, the access panels become very effective heat sinks. So when people learn this, they can easily make or buy a couple of plugs and greatly improve the performance of their LABhorns. They're very easy to add on.But you have done everything possible to silence this. I really never understood why, and can only assume it is out of some sort of "not invented here" hangup. Your actions have harmed your own forum, because you are making it difficult for your readers to find and digest the information about the cooling plug, something that would make their LABhorns be better LABhorns with very little cost or effort.You have presented speculative arguments as though they were legitimate, but you have not consulted anyone having a mechanical engineeing degree that might be qualified to do a proper analysis. Even when presented with test data, empirical evidence and third-party testimonials, you still stand by your speculative arguments. If that weren't irresponsible enough, you later began to delete posts that people had made showing photos of their cooling plugs and examples of the experiences they had with them. You proceded to try to make it look like the only cooling plugs in existence were the ones I had made. This is deceptive and irresponsible.So I'm calling you to task, Mr. Leerman. I'd like for you to put your money where your mouth is. If you're so confident, I expect you'll be willing to make this wager with me. Anything else is just talk.

Subject: Re: Prosound Shootout
Posted by Bill Wassilak on Tue, 15 Aug 2006 16:46:22 GMT
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I'll be there for sure, let me know if you need any help with anything.Bill W.

Subject: Re: Prosound Shootout
Posted by Wayne Parham on Tue, 15 Aug 2006 17:54:56 GMT
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Very good, thanks. You and I and the rest of us from Tulsa should try to show up early and help people load and unload. I appreciate your help, Bill, as always.

Subject: Re: Prosound Shootout - Discussion and Test Results from the 2005 Shootout
Posted by Wayne Parham on Fri, 25 Aug 2006 03:26:18 GMT
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For future reference, here's a link to last year's Prosound Shootout discussion and test results:

Subject: Test Plan
Posted by Wayne Parham on Fri, 25 Aug 2006 03:30:36 GMT
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We'll use the same test plan and setup procedure as last year:
Test Plan

Subject: Date Set - October 13, 2006
Posted by Wayne Parham on Fri, 25 Aug 2006 03:34:50 GMT
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The date is set: October 13th, 2006. Friday the 13th
Prosound Shootout

Subject: Weather Forecast
Posted by Wayne Parham on Tue, 10 Oct 2006 14:03:14 GMT
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We're getting rain in this part of the country from Tulsa down to Austin, so I checked the weather forecast for Friday. If need be, we have a rain day scheduled the following Friday, but it is best to call it in advance to give people a chance to make plans. But NOAA is forecasting 68° and sunny skies. Looks like we're set!
NOAA weather forecast for Tulsa

Subject: Prosound Shootout 2006 Photos
Posted by Wayne Parham on Sun, 15 Oct 2006 04:45:04 GMT
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Photos have been uploaded. Test results will be posted shortly.
Prosound Shootout 2006 Photos

Subject: Re: Prosound Shootout 2006 Measurements
Posted by Wayne Parham on Tue, 17 Oct 2006 01:21:18 GMT
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I've started uploading measurement dataset files from the Prosound Shootout. As soon as I've compiled them all, I'll make posts with specifications of each model. For now, the raw files are available in the directory below:
Prosound Shootout 2006 Measurements

Subject: Re: Prosound Shootout 2006 Measurements
Posted by josh on Tue, 17 Oct 2006 09:46:39 GMT
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Should I EQ The 12pi? There is a substantial drop there at like 62 hz or so?What were the MAX SPL Stats? I would love to see graphs like the last one. I'm especially interested in how the JBL & CV Did in comparrison

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Subject: Attn:BillW
Posted by Leland Crooks on Tue, 17 Oct 2006 10:46:48 GMT
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BillW wrote I'll have them loaded with EVM15B's since that's all I have, the only difference is the xmax is a lot less, so less overall SPl'sI pulled that quote from bill's forum. It appears they do make a big difference. What width are your t36's? From looking at the charts I'd say you should change the drivers. You're not getting what you should. I wish I'd been there, got usurped by another more pressing project. The new bassmax appears pretty sweet. I'll be looking forward to the completed postings.

Subject: Re: Prosound Shootout 2006 Measurements
Posted by Wayne Parham on Tue, 17 Oct 2006 13:52:12 GMT
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I would have loved to see the distortion and max SPL of the JBL and Soundbridge subs. They did very well in terms of response. You can see the distortion measurements of the Fitzmaurice,

SPL or distortion this year. The LMS system wasn't available, so Praxis was used instead.

I wrote the test plan and performed the measurements last year with LMS. The test plan was really written for LMS, and Praxis is a little different both in the way it works and the way you use it. So the test plan may not have been useful for Praxis. David Lee did the measurements, so perhaps he will chime in. I pretty much left the test setup and operation to him, since he had experience with Praxis.

What we do have are frequency response at 10 meters, which is 20dB down from the 1 meter figure. So add 20dB to the scale of the charts for 1m levels. We measured individual speakers and pairs, and in the case of the Tuba 36, we also measured a group of four.

slightly different motor chamber. We made it different for manufacturing reasons, and you can tell the difference in the response chart. The production version has a little more ripple than the prototype, but it's still very good at only about 2dB.

Subject: SPL
Posted by Wayne Parham on Tue, 17 Oct 2006 14:03:18 GMT
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I think Bill's speakers did pretty well. The response charts shown were measured at 10 meters, so add 20dB for the equivalent at 1 meter. Average sensitivity was over 100dB, and when four were used, it was over 110dB. Output was highest between 100Hz and 200Hz, but they had good strong output down to 60Hz or so. I know that's not exactly subwoofer territory, but I think (realtively) small basshorns like the Cerwin Vega L36 and the Tuba 24 and 36 tend to have response like this. We didn't press the speakers hard, so Xmax was never an issue.

Subject: Re: Attn:BillW
Posted by Bill Wassilak on Tue, 17 Oct 2006 16:10:08 GMT
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Leland,Looks like I'm going to have to change drivers. My cabinets are 36x36x20" wide, which is the narrowest Bill F. recomends and because of transportation reasons. What gets me is how the EV's drop like a rock below 60Hz just like they do in a reflex cabinet. Even though there not true subwoofer drivers.Bill W.

Subject: Re: Attn:BillW
Posted by lelandcrooks on Tue, 17 Oct 2006 19:10:13 GMT
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Yea, that's what I was looking at also. It seems to me it's got to be driver related. Even the narrow box shouldn't drop that fast, especially when you started running mulitples and the mouth area expands. They've got to be unloading at that point, which with the narrow box makes sense,

and the ev's don't have the guts to go into dr mode and pickup the difference.

Subject: Re: Prosound Shootout 2006 Measurements
Posted by josh on Tue, 17 Oct 2006 21:02:12 GMT
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The Tuba 36 didn't do too well, but these sound bridge guys look like the winner of this party. I've never even heard of them but their cabinet seems to do some great things + the Pi as always is gonna be a good one. So this was all just sensitivity and frequency response?I would of loved to see you guys burn up the drivers of every speaker finding out what the boxes can ACTUALLY do.-Josh Billings

Subject: Re: SPL
Posted by Brady on Tue, 17 Oct 2006 21:18:57 GMT
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It may have done okay, but not compared to what most of us Tuba owners are used to seeing. I do not doubt for a minute that my smaller Tuba 30 slim, at 24" wide, and about the same mouth area as those Tuba 36 slims, 20" wide, but loaded with Definimax 4012's would put those Tuba 36's to shame. Now when Bill W gets those reloaded with proper drivers, as I hear he plans to, that should change things quite a bit Bill W, Go get those new drivers, it'll put a big smile on your face Now don't mis understand my boosting...LOL.. I wouldn't have expected the T36 20" wide to steal the show by any stretch, but I believe they would have had a better showing, particularly in the low frequency range.If you ever have a shootout in Utah or South Eastern Idaho, let me know...hehe. I'd love to go to one of these things, but being the poor guy I am, my wife would strangle me if I tried to budget out a long trip like that just to check out some subwoofers...LOL. Wayne, those 12Pi subs of yours look pretty awesome!

Subject: Re: Prosound Shootout 2006 Measurements
Posted by Sean on Tue, 17 Oct 2006 21:25:31 GMT
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So how does everyone think the JBL SRX728s did compaired to the rest? I wish there was more than one box represented. How do you all think they would have done with 2 to 4 cabinets tested?

Subject: Re: Prosound Shootout 2006 Measurements
Posted by Wayne Parham on Wed, 18 Oct 2006 01:12:39 GMT
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I agree with you about the Soundbridge, it was nice. But one thing that you should know is that we tested a pair of cabinets as a single system. We treated it as though it were a single quad-18. The JBL was a dual-18, so it might have made sense to run two of them for comparison's sake. That would raise output 6dB, making it have higher output than the Soundbridge system. All the horns have more output when the same number of drivers are used, but that's not really comparing apples to apples either.

Subject: Re: Prosound Shootout 2006 Measurements
Posted by Wayne Parham on Wed, 18 Oct 2006 01:17:40 GMT
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I really like JBL gear, and the SRX728S is a very good system. It is a dual-18, so a pair of JBL sub cabinets would be comparible to the Soundbridge we tested. If we had two SRX728S subs, response would be the same but output would increase 6dB.

Subject: Tuba 36
Posted by Wayne Parham on Wed, 18 Oct 2006 14:59:44 GMT
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Four Tuba 36 Basshorn Subwoofers

Two Tuba 36 Basshorn Subwoofers, ready for testing

Tuba 36 Impedance

Tuba 36 Response (Single)(SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

Tuba 36 Response (Dual)(SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

Tuba 36 Response (Quad)(SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

Subject: Cerwin Vega L36
Posted by Wayne Parham on Wed, 18 Oct 2006 15:04:12 GMT
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Cerwin Vega L36

Cerwin Vega L36 Impedance

Cerwin Vega L36 Frequency Response (SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

Subject: JBL SRX728S
Posted by Wayne Parham on Wed, 18 Oct 2006 15:09:14 GMT
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JBL SRX728S

JBL SRX728S Impedance

JBL SRX728S Frequency Response (SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

Subject: Soundbridge 7218S
Posted by Wayne Parham on Wed, 18 Oct 2006 15:15:11 GMT
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Soundbridge 7218S Subwoofers

Soundbridge 7218S Subwoofers, ready to test

Soundbridge 7218S Impedance

Soundbridge 7218S Frequency Response (SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

Posted by Wayne Parham on Wed, 18 Oct 2006 15:31:36 GMT
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Subject: BASSMAXX Tripp
Posted by Wayne Parham on Wed, 18 Oct 2006 15:35:21 GMT
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BASSMAXX Tripp Basshorn Subwoofers

BASSMAXX Tripp Basshorn Subwoofer, ready to test

BASSMAXX Tripp Impedance

BASSMAXX Tripp Frequency Response (Single)(SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

BASSMAXX Tripp Frequency Response (Dual)(SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

Subject: Comparison of systems
Posted by Wayne Parham on Wed, 18 Oct 2006 16:01:37 GMT
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Lineup of subwoofers at the 2006 Prosound Shootout

Left to right, the systems tested shown above are one JBL SRX728S, four Tuba 36 basshorns,

BASSMAXX Tripp basshorns.

Response graphs are shown below. One shows a comparison of single cabinets, and the other shows duals. A couple things should be mentioned that are not completely obvious when looking at the response graphs. First, the data is normalized to 2v. Voltage is constant, not power, so systems with lower impedance will develop more power. See the individual impedance charts. Also, the measurements were taken at 10 meters, so add 20dB to know the 1 meter level. Second, the numbers of drivers and cabinets is not uniform. For example, the Soundbridge 7218S is designed to be used in pairs of cabinets, effectively making it a quad-18. For that reason, it is included in both the single and dual cabinet comparison charts. The JBL SRX728S

but the Cerwin Vega and Tuba 36 each contain only one driver. Again, the impedance charts for each might be compared when doing SPL comparisons. The Tuba 36 was measured as a single cabinet, a pair and quad. The legend at the bottom of each chart identifies the traces with the systems tested.

Frequency Response Comparison (Single Cabinets)(SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

Frequency Response Comparison (Dual Cabinets)(SPL at 10m with 2v input. Add 23dB to normalize to 2.83v/M)

Subject: Re: Soundbridge 7218S
Posted by Bubblersound on Wed, 18 Oct 2006 21:09:14 GMT
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Since the Soundbridge speakers were used in pairs of cabs, are the impedance and response charts on this page of quad 18's or dual 18's?

Subject: Re: Comparison of systems
Posted by Bubblersound on Wed, 18 Oct 2006 21:17:03 GMT
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If the impedances were doubled, would this mean -3db in output? Can this method be used for a better comparison of the response charts?

Subject: Re: Soundbridge 7218S
Posted by Wayne Parham on Wed, 18 Oct 2006 22:19:50 GMT
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Impedance measured of the Soundbridge sub was of a single cabinet. The frequency response measurement was of a pair.

Subject: Re: Comparison of systems
Posted by Wayne Parham on Wed, 18 Oct 2006 22:36:54 GMT
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Doubling impedance cuts current in half, which is equivalent to a 3dB reduction in power. However, impedance of loudspeakers is complex, in that it isn't a flat value like a resistor. What we did last year was to use the minimum impedance to calculate the voltage level that would be needed to produce the desired power level. So we tested last year using fixed power levels rather than fixed voltage levels. The 100 watt power level at 10 meters corresponds exactly to the 1W/1M SPL level. Last year we also measured response at one fixed voltage level, 28.3v, which then gave the 2.83v/1M SPL value since we measured at 10 meters distance.
2005 Prosound Shootout Test Results

Subject: Power / Voltage / Decibel Conversion Charts

Posted by Wayne Parham on Thu, 19 Oct 2006 00:57:03 GMT
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The measurement datasets are all referenced to 2.0v levels. So the conversion chart below is useful for calculating SPL in terms of power and comparing with other levels. The chart is referenced to 1 watt.

Voltage Load Impedance Power dB
==========

==========

Subject: Distortion Measurements
Posted by Wayne Parham on Fri, 20 Oct 2006 18:28:35 GMT
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Many thanks to David Lee for making the Praxis measurements at this year's Prosound Shootout. He did a great job. We were able to gather valuable data on several subwoofers, and can compare response of each of them, seeing how they all perform outdoors, with no room interactions or boundary reinforcement.

We didn't perform distortion measurements at the 2006 Prosound Shootout, but we did in 2005. We measured response and distortion (THD+N) at 28.3v, 100 watts, 200 watts, 400 watts, 800 watts, and so on up to 2400 watts or the maximum allowed by the owner of the cabinet.

Prosound Shooutout 2005 - RESULTSYou can easily read the LMS charts from the 2005 Prosound Shootout. The amplitude response (SPL) is shown as a blue line, with the distortion shown as a violet line. To know the amount of distortion present, simply subtract the distortion from the SPL to read a decibel value, -35dB, for example.

Then to convert to a percentage, use the following conversion chart:

-60dB = 0.1%
-55dB = 0.2%
-50dB = 0.3%
-45dB = 0.5%
-40dB = 1%
-35dB = 2%
-30dB = 3%
-25dB = 5%
-20dB = 10%
-15dB = 15%
-10dB = 30%
-5dB = 55%

If the distortion level falls below the line shown in the noise floor measurement, then distortion is unknown. One can only know it is below the noise floor. The noise floor was 65-70dB up to 50Hz and fell to 50-55dB above 50Hz. Typical amplitude response ranged from 105dB to 120dB, so the average dynamic range was approximately 40dB. That means distortion below about 1% was too low to measure in that setup. To get more resolution, we could have moved the microphone closer but since we were primarily concerned with high power levels, 1% resolution was sufficient.

I wish we had done distortion measurements this year too, so we could obtain that figure for all the systems tested. I'd also like to have measurements of the LABhorn and some other subwoofers that weren't represented at either the 2005 or 2006 events. Hopefully we will have samples of these other subwoofer systems next year. The only charts I've seen of the LABhorn were done indoors, and I'm not sure what power levels were used. This is significant for both response and distortion datasets. It would be nice to have all of the systems compared using the same measurement system and test plan, and performed in the same environment, preferably outdoors in a wide open space like we have had at the Prosound Shootout. So we'll continue to gather information about more systems as time goes by at subsequent Prosound Shootouts, and we'll archive the data here.

Subject: Re: JBL SRX728S
Posted by Pascal Pincosy on Sat, 21 Oct 2006 02:47:07 GMT
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JBL's specs state that the sensitivity of this box is 98dB. The measurements here are showing a max sensitivity of 104dB. Any ideas?

Subject: Re: JBL SRX728S
Posted by Wayne Parham on Sat, 21 Oct 2006 05:38:24 GMT
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The response curve published by JBL looks very close to the one we made at the Prosound Shootout. But JBL doesn't include response above 200Hz, probably because the intended use is below 100Hz. You'll notice that response is rough above 200Hz and the speaker shouldn't be used that high. Peak output is about 106dB at 500Hz, and there's a peak to 104dB at 220Hz. But there's also a 10dB dip at 200Hz and a 20dB dip at 450Hz.I'm very pleased with the quality of measurement data we've obtained at the last two Prosound Shootouts. I don't know of any other similar events that have been done outdoors with equipment like this, so I'm glad we've taken the opportunity to take these measurements. I'm looking forward to obtaining more measurements of other systems as time goes by.
JBL SRX728S Specification Sheet

Subject: Re: JBL SRX728S
Posted by Tom Danley on Wed, 01 Nov 2006 20:36:52 GMT
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Hi WaynePascal may have caught something worth checking out, perhaps there is a mic cal issue or something.Compare the measured response on the JBL web site for that sub. Your measurement is consistently higher.Compare your 100W 10M measured response for the 12 pi from last year VS this year, it is also higher.This may be from something as simple as a mic cal issue (needing a new reference Voltage setting).Tom

Subject: Re: JBL SRX728S
Posted by Wayne Parham on Thu, 02 Nov 2006 03:09:26 GMT
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Did you pay attention to the reference level? We measured at 10 meters with the drive signal normalized to 2v. The response we measured is very close to that shown by JBL, within 1dB.

Subject: Re: JBL SRX728S
Posted by Tom Danley on Thu, 02 Nov 2006 12:55:21 GMT
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Hi Wayne

If you were going to normalize the curves, why not do them so that they are comparable to the

ones last year, that is to reflect a 1W 1M equivalent as opposed to something one has to re-calculated for each curve.

Also, if you check those boxes here on the comparison page, and account for the 28.3V drive into a 4 Ohm load, these are still too high in comparison to last year and JBL's published data.

http://www.audioroundtable.com/ProSpeakers/messages/373.html

Tom

Subject: Re: JBL SRX728S
Posted by Wayne Parham on Thu, 02 Nov 2006 20:44:06 GMT
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Each of those charts was done with a 2v signal. Since the distance was 10 meters, add 20dB for the 1m value. Add another 3dB if you want to normalize to 2.83v. The JBL SRX728S response chart shows about 98dB/2v/1M at 100Hz, 97dB at 70Hz and a smidge under 96dB at 50Hz. Peak output is about 106dB at 500Hz, and there's a peak to 104dB at 220Hz. There's a 10dB dip at 200Hz and a 20dB dip at 450Hz.I think what may be causing some confusion is the way Praxis works. The data captured hasn't been post-processed or anything like that. There is a sense line that reads amplifier voltage and presents the data normalized to a reference level. In each of the datasets captured at this year's Prosound Shootout, the reference level was 2v. This is comparable to last year's 28.3v measurement, but offset by 23dB. There is also a decibel/voltage/power conversion chart posted so that people can compare SPL between systems having different impedance.

Subject: Re: Prosound Shootout 2006 Measurements
Posted by mikebake on Thu, 02 Nov 2006 21:37:13 GMT
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Is there a synopsis showing who won and some subjective comments about the entrants?

Subject: Re: Prosound Shootout 2006 Measurements
Posted by Wayne Parham on Thu, 02 Nov 2006 21:55:05 GMT
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The event was really for the purpose of gaining hard data. We call it a "Prosound Shootout," but it's really a fact-finding mission. I was impressed with each of the systems tested for one reason or another.

Subject: Re: JBL SRX728S
Posted by Tom Danley on Thu, 02 Nov 2006 22:00:31 GMT
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Hi WayneIf you can, try to normalize the curves so that they represent the 1 Watt 1 Meter equivalent like you did last year.Tom

Subject: Re: JBL SRX728S
Posted by Wayne Parham on Thu, 02 Nov 2006 22:14:05 GMT
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All measurements taken this year were with a 2v reference. We won't post-process them or normalize them, but you can easily calculate to find offsets normalized to common values like 2.83v or 1w. We've provided a handy decibel/voltage/power conversion chart to make this easier.To tell the truth, I had hoped to gather datasets at various power levels just like last year. I also wanted distortion measurements. But I didn't perform the measurements this year and actually it was kind of nice not having to "drive".Next year, we'll be sure to get response curves at higher power levels like we did last year. We'll also get distortion measurements again. We may make it a two day event, if we need the extra time. Hope to see you there.

Subject: Re: Tuba 36 - Attn: EV drivers were used in this build
Posted by Wayne Parham on Wed, 10 Oct 2007 17:52:29 GMT
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See: Attn:BillW

Subject: Re: JBL SRX728S
Posted by Ivo Liepins on Fri, 01 May 2009 21:14:01 GMT
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JBL SRX728S sensitivity in specification are showed in "full-space" conditions!

Subject: Re: JBL SRX728S
Posted by Wayne Parham on Sat, 02 May 2009 01:05:29 GMT
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I don't see any mention of freespace specifically shown on the spec sheet, but I suppose you may be right. I would have expected halfspace, but the chart and other specs may reflect freespace measurements.JBL SRX728S Spec SheetAll the data we gathered at the Prosound Shootouts were done with ground plane measurements. In 2006 we did all speakers at a constant voltage. In 2005 and 2007 we did all speakers at 28.3v, 100w, 200w, 400w and so on.