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Subject: Loudspeaker Challenge  
Posted by [wunhuanglo](#) on Sun, 10 Sep 2006 03:39:59 GMT  
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Click on the link below. Look only at the picture. DON'T READ THE WORDS! What size are the woofers?  
Take the Loudspeaker Challenge

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Subject: Re: Loudspeaker Challenge  
Posted by [Bill Martinelli](#) on Sun, 10 Sep 2006 15:34:02 GMT  
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Westlake makes some fabulous speakers. I'd like to hear a pair some day. It's pretty impressive for that speaker to be getting down 20hz at 101db sensitivity at only -3db.

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Subject: Re: Loudspeaker Challenge  
Posted by [Duke](#) on Sun, 10 Sep 2006 23:33:50 GMT  
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That's a very, very large enclosure - which makes high efficiency ultradeep bass possible. I'd guess the total internal volume is in the ballpark of 30 to 35 cubic feet. Also, note that what's specified is "sensitivity", which would be relative to a 2.83 volt input. The speaker has a 2 ohm minimum impedance, and 2.83 volts into 2 ohms is 4 watts. I presume that's in the bass region - if so, then the speaker's actual 1-watt/1-meter efficiency may be more like 95 dB, which is certainly within the realm of possibility assuming 25-30 cubic feet devoted to those big twin 18" woofers. Duke

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Subject: They're "magnificent bastards" ain't they?  
Posted by [wunhuanglo](#) on Mon, 11 Sep 2006 09:34:54 GMT  
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The one I linked to is the "home version" of the big studio monitor - they put it into a tower configuration instead of the big "hope chest" cabinet. What I've always been really curious about is their use of the Smith horn - I've read an awful lot about that horn, bought a lot of books and old publications for just one article on it - and universally it's agreed that the Smith horn is very diffuse, no "imaging". That seems to go against the grain contrasted with everybody else's studio monitor hype.

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Subject: Re: Nobody doesn't not like Smith Horns  
Posted by [Bill Epstein](#) on Mon, 11 Sep 2006 21:57:29 GMT  
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They're all the rage at the Audio Heritage JBL Shrine.

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Subject: Re: Nobody doesn't not like Smith Horns  
Posted by [Bill Martinelli](#) on Tue, 12 Sep 2006 14:58:22 GMT  
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I havnt heard the smith horn yet. I've read a few peoples thoughts who tried them and I was under the impression they came up short. Maybe we should do a few and check them out?

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Subject: Smith Horns  
Posted by [spkrman57](#) on Tue, 12 Sep 2006 15:03:44 GMT  
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When properly used I have heard many talk highly about them. Westlake monitors use them and they are not cheap either. Ron

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Subject: Re: Smith Horns  
Posted by [Bill Martinelli](#) on Tue, 12 Sep 2006 18:27:52 GMT  
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Lets build some. Anyone have any design plans or specs available that make it a Smith horn?

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Subject: Re: Buncha Smith Horns  
Posted by [Bill Epstein](#) on Tue, 12 Sep 2006 18:57:07 GMT  
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2 minutes at lansing Heritage yielded this. There's much more pichers and specs

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Subject: Re: Smith Horns  
Posted by [GarMan](#) on Tue, 12 Sep 2006 20:53:46 GMT  
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Ya, I've built a pair. Much better than the 2380A I had before. I don't understand why people say they don't image well. Mine image just as well as direct radiators. In terms of building a pair, it shouldn't be any problem for you Bill. Here's a couple of posts on my build and link to photos.<http://www.audioroundtable.com/Craftsmen/messages/678.html><http://www.audioroundtable.com/Craftsmen/messages/686.html> I've also got a pair of extra throat adaptors at home if you don't want to make your own.gar.  
Smith Horn build.

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Subject: Re: Geez! I didn't pay attention first time around.  
Posted by [Bill Epstein](#) on Tue, 12 Sep 2006 23:26:59 GMT  
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But I just spent 20 minutes examining the fotos. The trammel has a graceful angle cut into it! Using a trammel to cut an arc is brilliant. The routed through mortise for the bolts is elegant. Your a Monster, Garman!

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Subject: Re: Geez! I didn't pay attention first time around.  
Posted by [GarMan](#) on Wed, 13 Sep 2006 02:36:36 GMT  
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It was always my intent to build that pair as a prototype, to see how it sounds before committing to the "final" horn. Built it out of baltic birch. That was over a year ago and I'm still using it. Never did get around to the solid cherry version. The trammel-cut vanes was my second attempt. The first go around with template router bit resulted in some rough cuts. If I was to do it again, I'd build a trammel jig for my table saw to get it done even faster. I thought the mortise for the bolts was a bit of a cheat. I went for it because I knew I'd screw up sinking four hanger-bolts through the back of the horn. One thing I do like about my horns is that the top and bottom overhangs the side, instead of the sides overhanging the top and bottom. Gives a cleaner looking top and lots of space for my wife to place nik-naks on top of.

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Subject: I'm in - Possible Group Build?  
Posted by [colinhester](#) on Wed, 13 Sep 2006 03:04:28 GMT  
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I'd love to give this a shot (and Spkrman57 would love to sell me some drivers )

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Subject: A commercial option

Posted by [wunhuanglo](#) on Wed, 13 Sep 2006 05:50:02 GMT

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MDF - cheapest available on the market that I know of.  
"Smith" Horn

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Subject: Re: I'm in - Possible Group Build?

Posted by [GarMan](#) on Wed, 13 Sep 2006 12:50:07 GMT

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If the numbers are good for the group build, it might be worthwhile to outsource the vanes to a central location. When building mine, the vanes were the most troublesome and time consuming. If the vanes were pre-made for the group build, it could be very fun weekend project. Not sure if you guys have the 1" or 2" exit drivers in mind. Most people operate 1" compressions, so that makes more sense. If we're doing a group build for 1" driver, and if vanes were prefab, count me in. Gar.

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Subject: Re: A commercial option

Posted by [GarMan](#) on Wed, 13 Sep 2006 12:53:50 GMT

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That price is very reasonable, considering used pairs of JBL 2397 goes for \$600. But being able to say "I made this!" - priceless

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Subject: Re: I'm in - Possible Group Build?

Posted by [Wayne Parham](#) on Thu, 14 Sep 2006 01:45:54 GMT

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I can get them cut on a CNC machine if you send me an AutoCAD file.

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Subject: You rock

Posted by [colinhester](#) on Thu, 14 Sep 2006 02:56:44 GMT

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I think you're going to have several people on the list. Thanks!

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