Subject: ARE SCOOP BINS THE BEST FOR KICKIN' BASS
Posted by Rudi on Wed, 16 Jan 2002 02:45:17 GMT
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I've got several scoop bins loaded with 18 inch bass drivers, Eminence Kilomax 1000 wrms, they kick hard and go deep, but i still can't get that unique chest-crushing, earthshakin' bass which makes you feel sick. I know that type of sound exists but I've only heard it at Notting Hill Carnival, where I think it had over 100kw of bass.Is it possible to get chest-crushing bass with 8- 18 inch scoop bass bins or would folded horns or other bass bins give better response?

Subject: "Scoops" aren't generally 20Hz horns, no
Posted by Wayne Parham on Wed, 16 Jan 2002 03:55:57 GMT
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Scoops are usually designed to work best above about 50Hz. They don't put out much bass in the 20Hz to 40Hz octave. That's fine for some applications where there isn't much below 50Hz to 60Hz or so.If you need bass below 50Hz, you really shouldn't try to use a small horn. Either use a larger basshorn or if size is a constraint, use direct radiating subs instead. A woofer that I am particularly fond of is the JBL 2245. It sounds very nice when installed in a 10 cubic foot cabinet tuned to 30Hz.

Subject: Re: ARE SCOOP BINS THE BEST FOR KICKIN' BASS
Posted by Adam on Wed, 16 Jan 2002 19:00:39 GMT
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Most pro drivers aren't a good choice for that really deep bass. Your best bet for hitting those super deep notes are higher Q, lower fs woofers in large ported boxes, something like the tempest or shiva available from www.adireaudio.com5 cubes, 2 4" diamter ports 12" long tuning 30 Hz for the tempest will give you amazing all around bass.Adam

Subject: Re: ARE SCOOP BINS THE BEST FOR KICKIN' BASS
Posted by mikebake on Wed, 16 Jan 2002 20:53:28 GMT
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The JBL 2245 that Wayne sez is the "best thing you can do" is a pro woofer.....on the

contrary, I'd say that the best pro subwoofers are the BEST thing for the "super deep" notes.

Subject: Re: ARE SCOOP BINS THE BEST FOR KICKIN' BASS
Posted by Adam on Wed, 16 Jan 2002 21:57:25 GMT
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Well I disagree. I've used a lot of pro woofers and ive used a lot of woofers like how i described. You will *not* achieve an f3 of 20 or 25 Hz like you can with a woofer like I mentioned with 99% of all home drivers, including lines offered by Eminence or JBL. I speak from personal experience. Maybe if you can afford absolutely giant enclosures they might work fine.Most pro woofers run lower Q values and higher fs values to make them effecient. These are not exactly golden parameters for super deep bass response. Kilomax 18's even in largish ported enclosures won't go flat to 30 Hz. You can get a tempest flat to 20 Hz and it has the excursion to handle it.Adam

Subject: Re: ARE SCOOP BINS THE BEST FOR KICKIN' BASS
Posted by Adam on Thu, 17 Jan 2002 14:32:41 GMT
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"I mentioned with 99% of all home drivers, including lines offered by Eminence or JBL"Sorry that should say 99% of all PRO drivers. I'm not meaning to stir trouble, just my personal experience and my logic doesn't point to what you say. ExampleJBL 2226 15" woofer, optimum flat response, ported box3.58 cuft, f3 of 53 Hz7.7 cuft, f3 36 HzAdire Tempest5.75 cuft, f3 25 Hz11.5 cuft, f3 18 HzAdam

Subject: Pro woofers vs. commercial woofers
Posted by Wayne Parham on Thu, 17 Jan 2002 23:00:42 GMT
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I think in general, you are right that commercial woofers designed for use in home or car are tuned for deeper bass in a smaller box. The market they're designed to sell in dictates electro-mechanical specs that would make them work that way. But that also means they cannot offer high efficiency. Prosound woofers are optimized differently. They put a higher priority on efficiency and power handling, with the trade-off being higher cutoff and/or larger cabinet requirements.Another thing to consider is distortion. The electro-mechanical specs of a prosound woofer tend to make it more efficient, which means it doesn't have to be driven as hard for the

same SPL as a less efficient woofer. They require less mechanical excursion, which translates to lower distortion. They are generally able to handle power better from an electro-magnetic perspective, which also reduces distortion and thermal compression. The best woofers use a Faraday ring, which reduces flux modulation, further reducing distortion.All of these things put together can make a pro woofer 100 times better than a home woofer in terms of distortion. As an example, you can expect around 1% distortion from 50Hz to 250Hz when driven to 110dB/M in half-space when using a good prosound woofer like a JBL 22xx. Most woofers designed for home or car will have double-digit distortion at this point, and many will be at triple-digits.

Subject: Re: ARE SCOOP BINS THE BEST FOR KICKIN' BASS
Posted by Walt on Fri, 18 Jan 2002 07:41:04 GMT
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Hello Rudi,First of all, scoops can produce chest-crushing, earthshakin' bass, which makes you feel sick. And they can do this better than any reflexloaded bin. But they need a suitable driver. For a horn (a scoop is a horn) a driver needs a very low Qts and a high Fs. Fs/Qts should be at least 120 , the higher Fs/Qts is, the better. Your Eminence Kilomax has a Fs/Qts=33/0.56 = 58Your Eminence drivers are NOT suitable for the scoops. The best enclosure for these 18" would be sealed of vented. I you want to keep the scoops (I would, they can give great bassresponse) replace the Eminence drivers. It will be difficult to find the proper drivers for a good price. Best choice will be Precision Devices PD-184 (Fs.Qts = 107) or PD1850 (Fs/Qts=143). RCF L18P300 may also work.By the way: it would have been a good idea if you had first invested what kind of drivers were needed for the scoops before buying them. Then you wouldn't have ended up with the wrong drivers in your cabinets.Best regards,

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Subject: Re: Pro woofers vs. commercial woofers
Posted by Adam on Fri, 18 Jan 2002 13:08:54 GMT
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Good explainations Wayne.Yes, pro drivers might be able to deliver better performance *if* you can use them in large cabinets or basshorns. I'd encourage you to keep an open mind though, because there is a lot of newer stuff out in the home department that you may not know all about yet. I'm not talking about stuff from Sony or something, I'm talking about true quality manufacturing that *does* have tight tolerances. These high excursion drivers really can do an incredible job at the lowest two octaves when placed in low-tuned and large ported boxes. I've found this out from experience. I think we just have to agree to disagree on how much better a huge, horn loaded pro driver would sound over a more compact home speaker in a ported box which ultimately is engineered spcifically for that task, moreso than the pro woofer.Adam

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Subject: Bass horn size
Posted by Wayne Parham on Fri, 18 Jan 2002 19:09:17 GMT
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It's all about size. A small scoop horn with short path length and limited mouth area is not good for deep bass. It's fine for midbass but can't hit the low notes.I would not recommend augmentation of the bottom octave by EQ because distortion is terrible. If you increase power under horn cutoff to bring the deep bass up, then the distortion products are what are amplified by the horn. The horn doesn't amplify the fundamentals below cutoff, but it does amplify the distortion products.So my conclusion is if you don't have the room to build a proper basshorn, don't build a truncated one. A properly tuned direct radiating sub is better than a basshorn run under cutoff and EQ'ed to compensate.

Subject: Re: Pro woofers vs. commercial woofers
Posted by Wayne Parham on Fri, 18 Jan 2002 19:59:12 GMT
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Don't get me wrong, Adam. Small size is a valid consideration for most home hifi subs. Not everyone can have a 25 cubic foot basshorn or even a 10 cubic foot vented box in their living rooms.Even if size isn't a problem, running under cutoff always is. If you have a lot of source material with 20-30Hz content, I'd rather have a 85dB/W/M sub tuned to 20Hz than a 100dB/W/M sub tuned to 40Hz with a heavy bump of EQ at 20Hz. The latter approach sounds heavy and thick because anything under 40Hz sent to it makes pure distortion.40Hz cutoff isn't the problem. Most music has very little content below 40Hz. But let the woofer rolloff without EQ. It will be much more natural sounding than to try and bring up the 20Hz level to match. If you want 20Hz, use a bass bin tuned to 20Hz. Don't try and push one designed for higher cutoff, whether it was made for prosound use or not. Higher power handling won't help if it is used out of band where the cone isn't loaded and excursion goes through the roof.

Subject: Re: Pro woofers vs. commercial woofers
Posted by Tom Brennan on Sat, 19 Jan 2002 14:30:06 GMT
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I've never cared for the sound of long-stroking woofers, I'll take big area short-stroking over small area long-stroking. That's why I use 2 JBL 4648s to augment my VOTs below 100 cycles, works well.

Subject: Agreed, 100%
Posted by Wayne Parham on Mon, 21 Jan 2002 03:09:19 GMT
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