Subject: Bloated Car Bass
Posted by AudioFred on Mon, 05 Dec 2011 20:38:43 GMT
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I've noticed new car audio systems sound much like the sound you hear in any big box store - the bass is turned waaaaay up to produce a bloated boomy fartbox-subwoofer midbass sound. Since this is the only place where most people can hear anything better than computer or TV speakers, I believe they assume this is "good" sound. This is the only explanation I can think of for the reason why every non audiophile I know who has a subwoofer sets it about 10dB to 20dB too loud.

I was curious about my Nissan Sentra. To hear natural sounding midbass I have to turn the bass down to -4 on a scale of -5 to +5. I measured the sound with the audio controls all set to zero, doors and windows closed, and the measurement mike placed atop the driver's side headrest (about ear level for the driver). Here's the sad story:

File Attachments
1) Sentra.bmp, downloaded 4463 times

Subject: Re: Bloated Car Bass
Posted by Wayne Parham on Mon, 05 Dec 2011 23:17:10 GMT
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Yo, Fred, you got one a dose cars dat makes de trunk buzz an go boom boom.

Sorry for my bad ebonic impression. Best I could do.

Subject: Re: Bloated Car Bass
Posted by AudioFred on Tue, 06 Dec 2011 00:00:43 GMT
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Wayne Parham wrote on Mon, 05 December 2011 17:17
Yo, Fred, you got one a dose cars dat makes de trunk buzz an go boom boom.

No, this cheap Sentra has the basic radio and not the super high quality Bose system . Doesn't even have a subwoofer. Rap sounds more like "mo fo ho" instead of "MO! FO! HO"!

Subject: Re: Bloated Car Bass

Posted by Shane on Tue, 06 Dec 2011 02:43:21 GMT
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Most factory car audio sounds like crap, period!

Most people who think car audio with uber bass sounds like crap have only heard them from the outside of the car.

I've listened to pro car systems that cost as much or more than a lot of the high-end home systems. I've never heard a home system that sounds anything remotely like what I have heard at rock concerts or any live concert that has someone actually playing a kick-drum or hitting a low B on a 5 string bass. I don't mean those little coffee house bands either or orchestra stuff.

Yes, some of them do have ill-defined bass and as such do sound like crap. But the good ones, the really good ones, are sheer pleasure to listen to. When I'm standing in the 3rd row of a concert or up on stage in front of the kick drum I can FEEL the bass damn near move me. Most of the home systems I have heard that have so called "natural" bass have no bass at all. Just blends right in and disappears. Fine if you're listening to acoustic guitar or orchestra, but electrically amplified instruments are designed to be able to be visceral IMO.

One of the best stereo systems I ever heard, car or home, was in a pro audio rig in a car. He had 4ea 6.5" subs with 100W amp going to each one. The bass was phenomenally tight and deep with no boom whatsoever, with the rest of the car essentially controlled with a DEQX type system to balance everything out.

Sorry, but I get very tired of the hi-fi crowd saying that car audio always sounds like crap. When done right they are very, very good, regardless of what the measurements say.

Subject: Re: Bloated Car Bass
Posted by Freddy on Tue, 06 Dec 2011 07:24:41 GMT
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I generally agree with Shane, I think some car audio systems sound amazing. The problem is that many people think they have a good system, when they really don't. So I can understand the bad reputation associated with this.

When a friend tells me to check out how great the bass in their car is, I'm usually skeptical. Once in a while it does impress me though.

Subject: Re: Bloated Car Bass
Posted by AudioFred on Tue, 06 Dec 2011 11:46:33 GMT
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Shane wrote on Mon, 05 December 2011 20:43 I've never heard a home system that sounds anything remotely like what I have heard at rock concerts or any live concert that has someone actually playing a kick-drum or hitting a low B on a 5 string bass... Sorry, but I get very tired of the

hi-fi crowd saying that car audio always sounds like crap. When done right they are very, very good, regardless of what the measurements say.

I agree. Well designed car audio systems that use high quality components do sound amazing. They do exactly what they're designed to do: to reproduce the sound with an overemphasis of the frequency extremes. But the issue I raised, which your response confirms, isn't whether car audio sounds "good" or "like crap". The issue is that the sound of the typical car audio system is highly colored, and this colored sound is what many people perceive as "good" sound.

Subject: Re: Bloated Car Bass
Posted by gofar99 on Wed, 07 Dec 2011 01:37:25 GMT
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Hi Shane, Stop by sometime and hear the bass. My system uses Martin Logan ESLs for everything above 50HZ. Below that is a pair of 7 cubic foot Altec Lansing cabinets with 15 inch subs that are flat to 23 HZ. You can feel the drums just fine. It also means that everything has to be tied down or it walks away. Back to car audio.... I have heard some that are pretty good, but more frequently not. There are challenges in cars that the average home doesn't face. Size, good locations for speakers, and so on. I am amazed that any sound good. I have noticed a trend it seems. Auto companies are going more for features like MP3 plug ins, USB touch screens and such and not on the sound quality itself. It speaks to the market place. They build what will sell. Anyhow for what it is worth, I don't usually listen to anything in the auto. Peace and quiet is hard to find and when I drive alone it is one of the few places that you can get that.

Subject: Re: Bloated Car Bass
Posted by Shane on Wed, 07 Dec 2011 01:47:38 GMT
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gofar99 wrote on Tue, 06 December 2011 19:37 Anyhow for what it is worth, I don't usually listen to anything in the auto. Peace and quiet is hard to find and when I drive alone it is one of the few places that you can get that.

I listen to NPR more than music anymore. Music maybe on the drive home from work as a tension release.

Subject: Re: Bloated Car Bass
Posted by Wayne Parham on Wed, 07 Dec 2011 06:43:04 GMT
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There is one very good thing that happens in cars: The absense of room modes in the bass. The pressure region goes way up high - cabin gain actually works all the way up to about 60Hz. It just isn't hard at all to pressurize a couple cubic meters and without modes, it's strong and smooth. Even if it's a little lossy, you still get cabin gain because the pressure is dynamic, sort of like how piston rings can hold pressure long enough to provide usable force even though there is some amount of blow-by. But what you pay for in the trade for getting all this great bass is high reflectivity in the midrange and treble, and no really good places to put speakers in that environment that can provide any sort of imaging. I think that's the hardest part.

In spite of all that, I think you can make it sound pretty good in a car, with the right gear and setup. Just have to accept its limitations and not expect it to sound like "you are there" or anything like that. Best you can do it to bring the band in the car, the "they are here" thing. Kinda cramped for an orchestra, but just great for a four piece rock and roll band.

Good memories: I used to run a Concorde head unit with Alpine amps. Best tape/tuner system I've ever heard, incredible sound for that era (late 1970s to early 1980s). If you never heard one, don't think JVC or Pioneer "Supertuner", don't even think Alpine or Nakamichi. The Concorde was beter than most people's home stereos and the tape deck rivals the best gear available even

drivers aren't available anymore, but Fostex F200 are very much like them.

Subject: Re: Bloated Car Bass
Posted by AudioFred on Wed, 07 Dec 2011 11:29:31 GMT
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Wayne Parham wrote on Wed, 07 December 2011 00:43
There is one very good thing that happens in cars: The absense of room modes in the bass. The pressure region goes way up high - cabin gain actually works all the way up to about 60Hz. It just isn't hard at all to pressurize a couple cubic meters and without modes, it's strong and smooth.

This accounts for the tactile bass of a kick drum or low B on a bass guitar that Shane mentioned - you have to be there and experience it yourself to understand this. You can actually feel the bass, just as you would at a live rock concert. This can be accomplished in a home system, but it requries some very exotic subwoofers, typically megawatt high efficiency horn-loaded subs like the ones that are used in dance clubs. I heard somewhere there's a sub called the 12Pi that can do this.

Subject: Re: Bloated Car Bass
Posted by gofar99 on Wed, 07 Dec 2011 16:05:27 GMT
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Hi That would be the 42 cubic foot one with 12 15inch drivers right?

Subject: Re: Bloated Car Bass
Posted by AudioFred on Wed, 07 Dec 2011 21:15:33 GMT
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gofar99 wrote on Wed, 07 December 2011 10:05Hi That would be the 42 cubic foot one with 12 15inch drivers right?

The 42cu ft subwoofer you describe would be the subwoofer no woman would have in her home. The much smaller 12Pi is a diminutive 45" by 45" by 28", with 108dB senstivity and 1,600 watts power handling capacity. However, one 12Pi will play at a very disappointing maxumum output level of only 138dB.

You would need a stack of four driven by 6.4 KW to achieve a respectable 150dB. With the right music this would impress even the guy in the purple Honda with the black rims that pulls up next to you at the light, and for the eternal duration of that light, shares his sophisticated musical taste with you: MO! FO! HO! MO! FO! HO! (for 4 more minutes and 43 seconds) MO! FO! HO! MO! FO! HO!