Subject: Re: questions.....
Posted by mollecon on Sat, 19 Oct 2002 09:01:24 GMT
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Wayne is right - at frequencies that have long wavelength compared to the room dimensions the whole room is pressurised instead of the waves spreading in a normal fashion. But the idea of low frequencies not being audible in small rooms is quite a persistant one it seems. But think of it; you mentioned headphones yourself - strictly speaking, the only room/dimension they have is the length from the headphone diaphragm to the eardrum - since that distance is less than an inch it would mean that you could only hear frequencies well above 10kHz on a pair of headphones! Which is quite absurd of course. Your listening experience with the headphones at the 40 Hz note doesn't surprise me - most headphones, regardless of price & what the manufacturer claims don't give out much below 100 Hz or so. So if you turned up the volume in the hope of hearing those 40 Hz you most likely overloaded them - which is probably what you heard.Concerning your other questions:When you're outside a car, you don't hear the rest of the music so loud - hence the bass become more appearant. When you're in the car, the notes at higher frequencies will tend to mask the bass. So, you feel the bass more than actually hearing it - especially in a listening environment as resonant (& leaky!) as a car.The 'masking' effect can to a degree explain your theater experience too - higher fequencies tend to loose their power at distance faster than the lower ones. So when you move back from the front/side speakers, the level of bass seems to rise relative to the rest. Furthermore, if you sit close to room bounderies (walls) like way back in the theater certain bass notes will be amplified due to standing wave modes & the higher pressure close to the walls. You can experience exactly the same at home - try turning your hifi up a bit & move about in the room; if you place your head (& thereby ears!) close to a wall, especially the wall opposite the speakers I bet you'll be able to hear the rise in bass level.OK - the whole question of bass & room behaviour is far more complicated than this, but this answer has become too long already - hope it helped a bit.Regards, Peter.