Subject: Re: 'way down deep' Article
Posted by tomservo on Sun, 07 Aug 2005 17:40:28 GMT
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Hi WayneI know you have a historical problem with me personally and so too my designs, that's your option, but in the interest of perspective I would say a few words for the Contra bass.It is smaller and lighter than some of the more powerful subs tested, uses a lot less power than some, doesn't require a processor, its low frequency output equaled or exceeded the most powerful sub tested over all and it costs less than many too.It is a 20 years old design of mine, competing against current state of the art "cost is no object" stuff.To expand your mention of VC linear motors, yes they approach perfection the closer one is to zero signal, a commutated motor gets progressively better as it approaches max signal. Depending which end of the systems dynamic range is more important to the user or the size issue where the Servodrive also has an edge, that governs which has an overall advantage. You focus on the low level flaw, result of static friction yet fully ignore the strength it has. You'll notice the reviewer said the low end output was equal to the most powerful sub tested and the Contra was as "fast" and precise sounding as the 12 inch woofers.Except for a faint ahh sound he thought he heard at low level with a very low pure tone (and no other speakers on), he did not hear the flaws you fear.In fact, the audible strengths of the ContraBass were enough for the same reviewer (who designs million dollar home theater systems for a living) to specify them in many high end Home cinema's, like the Sultanate of Oman, heck the George Lucas has two double Contra's in his personal home theater.People don't still use Contra's because of audible flaws, there looks or marketing.You comment "Engineers always passed it by" is especially strange , Intersonics policy prevented sales to individuals, the only people we could sell to were engineering types and designers. The hundreds of Contra's and servodrive Horns sold to various Disney parks and the other installation's over the years not to mention the concert tours were all a result of engineering evaluations and listening. While consumers and you perhaps never knew about Servodrives, the engineering / Pro-sound side made the business.Also, for what its worth, a different motor eliminates the static friction, If I still had anything to do with the product (other than being the Inventor), it would have a motor like in patent # 5313127 or a brushless electronically commutated motor.. Even now, making it a closed loop system (as is the norm with servomotors) eliminates the low level issues although at a $cost$.Yes the contra is different than a normal speaker, but I wonder how many other subwoofer designs will still stand up well to the most powerful subs available when they are 20 years old like the contra is? You comments about bass horns are interesting .When you say "don't do fidelity" exactly what do you mean?Do you mean in various properties that can be measured acoustically, or, philosophical "fidelity" as a concept or personal conviction ?FWIW, the advantage a horn like the LAB can have in a room over the direct radiator version of the same driver, is that even well below the low corner, the horn driver may still have less excursion for a given output SPL. On the same driver, less excursion = less distortion.Yes one has to be able to measure and then eq the system flat but if you are in a room you have to eq any sub to make it "flat" anyway. In the range where the horn is really working, one has FAR less excursion for the same SPL and so far less distortion and greater dynamic range with the horn.When you get your Pi 12 running you will hear what the LAB sub folks have been talking about "in room" response and low distortion. In the case of a much more current design than the Contrabass, the PB-12 tapped horn, one to one it is nearly +10 dB over a Contrabass in maximum output, how would you explain the sensitivity, response and output "if" the small horn on one 12" driver did nothing

useful? (no eq used either). Cheers,Tom Danley