
Subject: Okay, let me try...

Posted by [mollecon](#) on Sun, 10 Aug 2003 21:29:36 GMT

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Taking it from the top :-)
Quote: "...didn't use a passive crossover, actually they have only hi-pass filter for the piezo?"
Well, one of the tricks that's in using a piezo is that it doesn't need a cross-over - it cuts off lower frequencies by itself, because of its electrical/mechanical behaviour. How low the piezo goes depends on model - so you can simply choose one that only works over the area where the LF unit automatically rolls off. Then you have a cross-over less two way system.
Quote: "And simply add a different Subwoofer (different in everything, from the size of the driver, the enclosure design, everything!) the manufacturer said it will add a bottom end (again no low pass filter inside) and without worrying the group delay and phasing problem?"
The only way to make sure the two systems won't interact in a negative way is to use an active (electronic) crossover & let them handle different frequencies. A so-called band-pass subwoofer will have a roll-off of ~12dB/oct over its working area - but one still will have to make sure the other box doesn't interfere with it. No matter what the manufacturers say...
Having said that, I do recall having seen bass systems comprised of a box with four 10" units placed on top of another box with one 15" (or maybe 18"?) unit - but how they work, I don't know. If I know musicians, they may well ignore if there are problems of interference & such & simply run them in parallel, probably with two different amps. To musicians, it's more a matter of 'sound' - they usually don't care too much about all the tech problems the hifi/audiophile/whatever crowd finds important. The solution with two boxes makes it possible for the musician to only take one box (probably the 4X10) to smaller venues, & then supplying it with the 15-18 box a bigger one.
Quote: "But in the case of bass guitar cabinet, even for the stadium size concert?"
Huh? At such large venues there's usually a big PA system solely devoted to directing sound to the audience. The people on stage then have various monitor speakers to be able to hear themselves & the rest of the band properly. Without being an expert, it's my impression that the bass players at such venues simply use their own equipment (including speaker!) as their 'monitor' - if they (the bass players I mean) play such large gigs they usually have systems of their own large & loud enough to be able to 'compete'. So if that's the direction you're going, be ready to build something big! Or do as described above, build two smaller ones - I'd still go for making two that are alike, though. And I still don't see why you want to complicate things overly with a 'sub'...