Subject: Qes affected by series parellel
Posted by lcholke on Fri, 25 Jun 2004 15:48:26 GMT
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Hi all,I have a PE .87 x16 driver line array.It seems to make a big difference in sound how the wiring is done.I wired in a 4x series (32 ohm) then these in 4x parallel (giving 8 ohm). How was the Qes effected?My ears seem to say that the Qts went way downcompaired to a 4x array (2x series + 2x parallel).Or also to a single driver.------ThanksLinc

Subject: Re: Qes affected by series parellel
Posted by Bill Fitzmaurice on Fri, 25 Jun 2004 19:01:37 GMT
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I'm not sure about Qs as I haven't bothered to measure, but I built a pair of arrays using 8 of these mid woofs per side and the only way I can describe the sound is BIG- like horn big, though without the size of a horn. I only used 8 per side as the 4 ohm impedance resulting is not a problem for my amp, and my enclosure is a TL tuned for 100 Hz and so making it longer than 38 inches was not warranted.I doubt if the big sound is so much a factor of Q factors than the huge wavefront created by so many drivers.

Subject: Re: Qes affected by series parellel
Posted by Jim Griffin on Sat, 26 Jun 2004 02:07:53 GMT
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Linc,Qes remains the same for the array as for a single driver. What you might experience is that you have increased the 'head room' for the array vs. single driver. Hence, the array will effectively have the amount of the array gain improvement in dynamic range. For 16 drivers that would be 12 dB. Quite an improvement. Jim

Subject: Re: Qes affected by series parellel
Posted by lcholke on Sat, 26 Jun 2004 17:08:45 GMT
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Hi Bill,I saw your post on the PE .87 drivers you bought.Good to hear that your array turned out well. I like the array sound also.I have a pic posted as PE .87 16x on the fullrangedriver forum.They are about 7 ft high and 3 ft wide.They are running open baffel, no x-over.I was trying to see what a high sensitivity system sounded like.It is in some ways like headphones.The

distortion seems to be low from lower excursion for the samevolume. -----CheersLinc

Subject: Re: Qes affected by series parellel
Posted by lcholke on Sat, 26 Jun 2004 18:09:36 GMT
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Hi Jim,>Qes remains the same for the array as for a single driver.So If the array is wired in any 8 ohm configuration the Qes stays unchanged. I was hoping that Qes would explain the change.I wired the 4 drivers in series. Then these 4 sets in parallel. (8 ohm)>What you might experience is that you have increased the 'head room' for the array vs. single driver. >Hence, the array will effectively have the amount of the array gain improvement in dynamic range. I really like the 12db gain, and all the improvements that go with it.The 4x array I started with (OB, no xover) sounded very good.Wired as 2 sets in series, these then in parallel (8 ohm).I have a pic posted here as PE .87 16x array , http://fullrangedriver.com/tiki-browse_gallery.php?galleryId=2.Something is odd with the 16x array sound though.The impact of the sound is more like proac tablets (over dampened) than a fostex bk-16 back loaded horn (lively) . I first covered with blankets the top 4 and bottom 4 drivers to see if a cancellation was the problem. No real change. I was thinking that the curve of the baffle might have an odd comb effect. So I checked the wiring on the 16x array about six times thinking I missed something.I have now rewired to 8 total drivers/ side, 2x series combined to 4 sets parallel. (4 ohm total)The impact came back. Just as a ref note, the amp is a pass labs alpeh 5.I was hoping/thinking that the change had to do with the electrical dampening of the drivers.Finding the cause of a problem is most of the battle. --------Thanks for your help.Linc