Subject: piezos (to DB)
Posted by Bill Thornton on Mon, 01 May 2006 00:48:59 GMT
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Hi DB, I just thought I,d let you know I GOT MY MONEY BACK and the monacor 1165's only cost £2.50 ea. in the local guitar/pa shop, a net saving of£19.00. But it was more to do with not being ripped off! thanks again for your advice.

Subject: Re: piezos (to DB)
Posted by dB on Fri, 05 May 2006 17:08:04 GMT
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Good. It must be this one. MPT-165 Monacor similar on the outside to the Motorola 1165. (but)They don't come even close. (http://www.monacor.com/en/produktseite_stageline.php?artid=5353&spr=EN&typ=u). Are you using it with or without a piezo filter? Do you have the same SPL on the speakers? I just made one with a 5db attenuation@20KHz following Wayne's rule of thumb "Pi implementations of quartz piezoelectric tweeters".Regards

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Fri, 05 May 2006 21:01:31 GMT
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Hi dB, to be honest the "x-over" ended up quite complicated .I have no real measuring equipment except a free software frequency generator and my ear "lugs" There are 5 uf electrolytics (ugh) by-passed by sufflex small value c's, some resistors, some inductors in line with the 5" mid bassI messed around with the values until i got what I thought was a smoothsound. My wife says there too bright but since I,m 58 and my hearings on the slippery slope thats to be expected.One of the benefits of audioequipment ,as opposed to hifi is the addition of tone controls in my LEAK 2000 stereo receiver.So I cut the Hi-Frequency when she'slistening!! I think the problem I have left with the combination of these drivers is more to do with a hi-mid peak on the mid bass unit &I should design a soft notch filter when I get around to it.In generalthough ,the information retrieval capabilities and the bass extension for there size, for the paltry £20 per unit they cost me I,m well pleased.I'd like to Know the details of your set-up using these monacor units.

Subject: Re: piezos (to DB)

Posted by dB on Sun, 07 May 2006 11:19:23 GMT
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Hi Bill,I am not using this piezo. I'm using a double horn piezo on top of a 98dB 2 way monitor (reinforcement) that is short on highs. (I found two nice and blue, equal Philips MKP caps -- of the 5dB attenuator -- on a small TV set from garbage.)I will be pleased to help you (is anything you want to ask?) if I can. What are your 5" speaker parameters (brand & model)?, you don't have a tweeter besides the piezo I guess.

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Sun, 07 May 2006 16:41:37 GMT
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Hi dB, i feel a bit of a fraud continuing to use Waynes site to discuss NON PI speakers & since your interested in the 5" bass-midsI am using would you please consider going to the DIY AUDIO site andsearch the loudspeaker forum for the "my little speakers" thread and all the details ,including the specs. (provided by another user) will be revealed. If you care to register there we can carry on this discussion " legally " so to speak. Thanks for your interest.

Subject: Re: piezos (to DB)
Posted by dB on Mon, 08 May 2006 23:18:23 GMT
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Hi Bill,You are welcome. There are tigers out there... I see you have a 5" Wharfedale Diamond 6 midbass (they used to be the best studio monitors bang-for-the-buck. Good choice. From what I remember (10/20) years ago they were about 88dB SPL (are they made of paper, the cones?). You need a (about) 5dB att to go with a 93dB piezo, if you prefer it (for the frequency response) to be flat. Wayne use's a 0.22uF for a 4dB attenuation on the (his 1038) Motorola. Place the capacitor in series. If you use a resistor in parallel use a "only non inductive parts", for caps polypropylene only and never electrolytics because of sound quality. You can always read Wayne's Pi implementations of quartz piezoelectric tweeters on this forum.Best Regards

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Tue, 09 May 2006 21:31:42 GMT
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The vendor said the cones were polypropylene ,they look shiny and grainy in appearance a bit

like sintered filter material if that makes any sense.

Subject: Re: piezos (to DB)
Posted by dB on Tue, 09 May 2006 23:19:57 GMT
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I see. I'm using a paper cone for mids (1K-4K), in a new 3 way design. 10" Polypropylene with rubber edge surround for bass and a compression driver with a radial horn for the high's. The crossover point and the crossover filters is were (I) you put your (my) attention (passive filters this is). I know you want to add a sub in a later date.

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Wed, 10 May 2006 15:12:14 GMT
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Hi dB, The subs are already in use as it happens ,most people on the D.I.Yaudio forum warned me against trying this but I had some reasonably large inductors to limit the upper frequencies and the 12" speakers were already mounted under the stairs so they are not in any sort of near field as regards the stereo image. So there you have it a pseudo bass bin made out of part of the cottage , and 2 ,little speakers hanging in the corner of the living room. NOT hifi by any stretch of the imagination but all the frequencies seem to be present, upper-mids maybe too present!! but its still retrieving more info from sources than anything Ive had before.If i ever get divorced I may even find out what Hi-Fi sounds like! HA HA

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Sun, 21 May 2006 11:11:19 GMT
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Ive finally found out how to upload images so heres what all thefuss is about.As you can see ive doctored the piezos inside and out and they sound O.K. to me but then I,m no golden eared hi-fi expert.

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Sun, 21 May 2006 11:38:18 GMT

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Sorry try this

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Sun, 21 May 2006 11:44:15 GMT
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or this

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Sun, 21 May 2006 11:48:15 GMT
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and these

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Sun, 21 May 2006 12:10:04 GMT
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or this

Subject: Re: piezos (to DB)
Posted by Bill Thornton on Sun, 21 May 2006 12:11:24 GMT
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and this ----------sorry

Subject: Re: piezos (to DB)
Posted by dB on Mon, 29 May 2006 08:04:45 GMT
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Scary... I wouldn't be close (...much less in front of it!). Do you add the highs from the piezo to the highs of the mid-bass or do you have a band-pass xover on the mid-bass? (Do you have?) Attenuation of the piezo with a cap in series, also? Because you might have about 10dBs of a step difference there, unless you make a (xover) smooth transition. Regards

Subject: Re: (My) Dual section piezo horn
Posted by dB on Mon, 29 May 2006 10:29:14 GMT
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Hi,In my pic, the series cap is 0.4uF, the parallel resistor 22Ohms for an attenuation of 5dB@20KHz and 9KHz x-over. Attention that the quartz reactance might not be the same for a Single section piezo horn. The treble section of the pro speakers was short on highs that's why I added the piezos. Regards
My other white DIY disco speaker

Subject: Re: (My) Dual section piezo horn
Posted by Bill Thornton on Mon, 29 May 2006 14:01:21 GMT
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Ive just taken the x-over off the back of the "MLS" to check and what I ended up with was 0.47uf (green oblong -like a candy!) in series and 22 ohm 5% wire wound in parallel to neg rail. There are also some inductors in series with the Wharfedales and a 1 uf (green rectangle, not electrolytic)in parallel to neg rail. this is the area that needs attention I think.

Subject: Re: (My) Dual section piezo horn
Posted by dB on Sun, 04 Jun 2006 18:44:17 GMT
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Hi Bill,Sorry to be so late. I worked out a simulation for you in Spice (thanks Wayne!) for your piezo series. It gives an atten. of (about) -3dB at 20KHz and a xover frequency around 10K. You get about (with a 93dB flat-simulation- speaker output) +/- 87dB@10KHz, 89dB@15KHz and 91dB@20KHz. Looks good on this side (of the highs). Make shure your wire wounds are not

inductive or you will end with a pretty crazy bell-shaped-curve with a peack at 95 dBs.Regards.

Subject: Re: (My) Dual section piezo horn
Posted by Bill Thornton on Sun, 04 Jun 2006 20:14:38 GMT
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Wow , Thats really kind of you ,I only played around with what I,d had in my rubbish (based on info about piezos ,here and elsewhere) until they sounded about right.I must wind some air cored inductors on my little lathe and chop the upper mids from the wharfedales. I think they could then be rather fine little speakers.

Subject: Wharfedales & piezo
Posted by dB on Sun, 04 Jun 2006 22:43:27 GMT
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Hi Bill,Do you have them as a 3way system? With a xover between sub and mid-bass? Or do you have them as a 2way system; with only the warfedales and piezos.Regards.

Subject: Re: Wharfedales & piezo
Posted by Bill Thornton on Mon, 05 Jun 2006 00:03:41 GMT
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If you back track the thread you'll see that Ive mentioned the system layout earlier. Anyway, to sum up there are 2x12" speakers mounted at the rear of the room in the triangle formed by the stairs and fed viasome large ferrite cored inductors by-passed by 25mF reversibles .They are well out of the firing line as regards any mid frequencies they may put out and they are out of phase too. The MLS,s have to hang on rods in the corners and point into the seating area.This is far from Ideal and I would dearly love to have built MTM's with the 4 x 5" units and put them on stands either side of the fire place but there just wasn't room I make no claims to this set up being Hi Fi but at least all the frequencies are there and its amazingly detailed considering. So the answer is YES 3 WAY with sort of SUBS. Bill

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