
Subject: zobel network..many doubts!!

Posted by [Vinicius](#) on Sat, 09 Apr 2005 20:39:40 GMT

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Hi, Wayne Parham and everybody(Sorry for my English!!)I'm from Brazil and I saw this post, and I still have a doubt!! I have a bi-amplified system (two-way sytem or called component sytem) and a active crossover before de amplifier.The first doubt:I will put a zobel network and I need to know if can I put it between the amplifier and the speaker directly (without passive crossover)?-----The second doubt:Wich formulas above is correct to find the value of the capacitor to build the zobel? $f = \text{Frequency impedance double}$ $\pi = 3,14....$ $R_{vc} = R_e = \text{Resistance of teh coil voice}$ $C = 1 / (2 \times \pi \times f \times R_{vc})$ [http://sound.westhost.com/lr-passive.htm#1-impedanceorC\(microfarad\)= 1,000,000/\(6283 x Nominal impedance x f\)](http://sound.westhost.com/lr-passive.htm#1-impedanceorC(microfarad)=1,000,000/(6283 \times \text{Nominal impedance} \times f))<http://www.the12volt.com/caraudio/crosscalc3.asp#zobel>-----The third doubt:To find the frequency impedance double wich formulas is the correct? $L_{vc} = L_e = \text{Inductance of the voice coil}$ $f = R_{vc} / (2 \times \pi \times L_{vc})$ orf = $2 \times R_{vc} / f$ This means Frequency impedance double, but the values are different!!Thank you very much!!Vinicius

Subject: Zobel - Conjugate Impedance Compensation

Posted by [Wayne Parham](#) on Sun, 10 Apr 2005 14:03:53 GMT

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There is no reason for a conjugate filter unless you are running a passive crossover. The main reason for a Zobel is to conjugate the inductance a speaker's voice coil, to counteract for its rising impedance. It is done to modify the behavior of the crossover and make the filter function of a passive crossover more pure.

With an active crossover, you don't want a Zobel on the speaker drivers. Connect them directly to the amp.<p>Here are some documents that describe electrical filters in more detail:Crossover Electronics 101
