Subject: RLC Filter for Eminence Delta 12 LF
Posted by Pascal on Mon, 05 Aug 2002 14:59:00 GMT
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Hello,I use a 25W tube amp with a diy loudspeaker. This loudspeaker is made with a Fostex FE206E + FT17H on open baffle upon a bass enclosure with an Eminence Delta 12 LF. The problem is that the damping factor of this amplifier is not friendly with Delta 12LF and I have not enough dynamic and efficiency on basses. I need a RLC series notch filter before using bi amplification but I'm not sure how to calculate it. Does somebody could help me ? :(Thanks.Eminence Delta 12LF :Re = 6,06 ohmsfs = 45 HzQes = 0,45Qms = 7,28Impedance at fs = 93 ohmsPascal / France

Subject: Re: RLC Filter for Eminence Delta 12 LF
Posted by Wayne Parham on Mon, 05 Aug 2002 22:27:08 GMT
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You're right about the Delta 12LF and some tube amps. The trouble is that a notch filter probably won't help you. You can try it, and the way to calculate values is with the standard reactive formulas for capacitors and inductors. But sadly, I'm certain you'll find it is of little value.I recommend that you either run the woofers with a separate amplifier, or perhaps substitute a Delta 15 woofer in place of the Delta 12LF. That of course will require a pretty large box, so it may not be your favorite option.Sorry, but I'm afraid those are the best things I can suggest. But I think you'll find one of them will satisfy you, and it's better than attempting to use a notch filter to solve this problem.

Subject: Re: RLC Filter for Eminence Delta 12 LF
Posted by Pascal on Tue, 06 Aug 2002 05:27:51 GMT
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Hello Wayne,Thank you for your answer. The problem for me at this time is that I can't build active filter. For the future, yes, I will build a tube crossover and a mosfet amplifier for basses. But at this time I can only use a passive filter or replace the Delta 12LF by another 12" wich can be work in a 100 Litres box. I have read on the net that at the resonnance frequency, the power fall down with the peak impedance. For a driver wich have 6 ohms at 200Hz, and wich have 45 ohms at Fs, if you have 100W at 200Hz you have only 13W at Fs. So it certainly my problem with tube amp. I have tried my loudspeaker with a solid state amplifier (yamaha of my home theater system) and the problem is not so perceptible/discernible.I have found a link to calculate series notch filter on the net, but I'm not sure of the quality http://www.mhsoft.nl/SeriesNotchfilter.asp.Do you know this link ? Thank you for allCordialement.Pascal.

Subject: Re: RLC Filter for Eminence Delta 12 LF
Posted by Pascal on Tue, 06 Aug 2002 10:15:08 GMT
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Hello Wayne,thank you very much, after I have adding a LPad on Fostex drivers (more than 100db) the result is better. And I have added a little bit of "gaze" (in french) in vents. I have raise up the front of loudspeaker a little and give a slope/tilt to front baffle. Basses are more present and good. I think it will be better with active filter but at this time I'have not filter and second amplifier. This loudspeakers are made for the room where I work, and in this room I have only one amplifier. Others tube amplifiers and home theater are in my living room.On "money" of Pink Floyd, basses are very good, and medium + trebles are precise/definite . And "shine on you crazy diamond" is fabulous.Cordialement.Pascal.