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Subject: Re: LC tuning instead of ports

Posted by [Bill Fitzmaurice](#) on Thu, 06 May 2004 23:01:16 GMT

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This LC thing has been discussed over at AA and what has not been thoroughly explained by its proponents is that it's a power hungry mod, as is any that uses EQ either before or after amplification to increase bass response. It works, but it's not an efficient way of doing things, nor cost-effective, as you can get a high quality EQ for the price of the large inductors and caps required of an LC filter. Plus EQ is adjustable over 31 1/3 octave bands- LC filters aren't. Much the same is true of ELF. Technically that system uses a 12dB/octave filter to compensate for the 12dB rolloff below the Fb of a sealed box woofer. The system does work, limited only by the XMax of the driver and the amount of power available to push it. That power can amount to a whole lot of juice. With an Fb at 60 Hz and 200 watt input at 60 Hz you'll need some 3000 watts or so to maintain equal output at 30 Hz. The advantage to the system is high output from relatively small boxes, and pro-sound contractors are more concerned with cartage than they are the cost of multi-kilowatt amps. The system won't work with a ported box since ported boxes aren't loaded below Fb, and the resulting 24dB/octave rolloff cannot be compensated for within XMax limitations, not to mention the astronomical power requirements even if you could find a driver with the requisite six inches or so of excursion capability.

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