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Subject: Re: Effects of a low pass notch filter on BR versus TL: speculations

Posted by [Martin](#) on Wed, 24 Mar 2004 23:04:27 GMT

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Hi akhilesh, If we restrict our discussion to a classic TL (no restriction at the open end) and a classic BR (no stuffing). Ignoring any internal standing waves between the sides or the front and back of the boxes. In the BR ignore the standing wave from the top to the bottom, we need to include this direction in the TL or it would not work. The BR will have a smoother midrange response which is essentially just the woofer's SPL response. The mass of air in the port should kill all higher frequency output, remember that the port's acoustic SPL response rises at 12 dB/octave to a peak at the tuning frequency and then falls at 12 dB/octave above the tuning frequency. The SPL output from the port above the tuning frequency should monotonically fall as frequency increases. The classic TL's output from the terminus will produce gentle peaks and dips at the odd higher harmonics of the tuning frequency (assuming it is a straight line). This will create a ripple around the SPL that the woofer would naturally put out over the midrange. In the midrange, where baffle step occurs, the two systems should exhibit essentially the same average efficiency complete with the 3 to 4 dB rise due to the baffle step. The correction circuit should have the same effect on both types of designs. The only difference might be the frequency range which BSC cuts in due to size differences in the enclosures. Martin

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