
Subject: Re: Reverse attenuation and HF comp. networks, active X-over
Posted by [Wayne Parham](#) on Tue, 21 May 2002 03:34:46 GMT

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The formula is $\text{dB} = 20 \log V1/V2$, so you'll need approximately 1/3rd value shunt resistance for a 10dB attenuator. The thing is, you're doing more than just padding, so a resistive voltage divider isn't all there is to it. The crossover provides the traditional voltage splitter function and it also provides some response shaping. The HF filter should be slightly underdamped. Traditional 6dB/octave augmentation is provided for mass rolloff compensation, and the two transfer functions form a response curve that's flat up to about 4kHz, with 6dB/octave augmentation above that. I'd model your circuit with Spice, to verify it provides a transfer function that looks like this: