Subject: Re: Q on Tweeter XO
Posted by Wayne Parham on Tue, 25 Jul 2006 14:25:20 GMT
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The tweeter is actually about 1dB lower than the midwoofer. But if you need to reduce its output a little more, you can always use a series/parallel resistor combination. Be sure to do some modeling or measurements to set the Q of the circuit, to ensure that its damped enough that a peak doesn't form. That's what the 16 ohm resistor is for - It's a damping resistor. If you add series resistance to reduce tweeter output, you'll need to change the value of damping resistor.The 16 ohm damping resistor is only barely necessary on the stock circuit, because even without it, there is very little peaking. But amplifier output impedance and feedback change the characteristics of the circuit, so the damping resistor ensures that the circuit is well damped even in non-optimal conditions. If you increase series resistance to pad the tweeter, you'll probably find the shunt resistor used for damping should be a smaller value. This will increase damping and will attenuate the tweeter more at the same time.