Subject: Question about matching tweet to woof???
Posted by Bill Epstein on Wed, 15 Mar 2006 12:59:14 GMT
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Got a 98dB sensitive woofer in a 1.45 cu ft 2 way vented box tuned to 50 Hz. One tweeter choice is 90.5 dB. How do I bring the woofer in line, crossed at about 2500Hz.I also have a CD horn that came with a 1.5 uF cap could maybe also use that to bring up the treble?

Subject: Re: Question about matching tweet to woof???
Posted by Wayne Parham on Wed, 15 Mar 2006 14:44:56 GMT
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I wouldn't drop the sensitivity of the woofer to match. You can do it with a transformer or L-Pad, but I wouldn't. Too much power in the range you're talking about - 90% of the power is under 2.5kHz, hardly any power above. So I'd use a more efficient tweeter instead of padding the woofer.

Subject: Re: Question about matching tweet to woof???
Posted by Bill Epstein on Thu, 16 Mar 2006 00:27:52 GMT
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Why do you think this horn ships with a 1.5uF cap? The specs recommend a 2500 Hz cross. Maybe it's a little delicate?
CD Horn

Subject: Re: Question about matching tweet to woof???
Posted by Wayne Parham on Thu, 16 Mar 2006 14:43:54 GMT
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A single cap is a first-order network which is practically nothing at all for a compression horn. There is so much low frequency energy passing through a first-order highpass cap that the -3dB frequency point would have to be set very high. I think that's why they've chosen such a small value cap.

Subject: Re: Question about matching tweet to woof???
Posted by GarMan on Thu, 16 Mar 2006 19:51:13 GMT
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A 1.5uF cap against an 8 ohm driver would set the XO point at about 13KHz, which like Wayne said, is quite high. Nevertheless, signal would only be approx 17 or 18dB down at the recommended XO point of 2500Hz which does not seem to be enough to protect the driver.Also, doesn't attaching the cap directly to the driver make it difficult to properly implement an L-pad? Typically, L-pad sits between XO and driver.