Subject: hf response of 2226H vs. 2226J
Posted by Sam P. on Wed, 30 Apr 2003 16:46:13 GMT
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Considering the Le of the J model is twice as large as the H model, should there be a difference in the upper end rolloff characteristic of these drivers? Just wondering if the 16 ohm ones would still play nice up to 1.6kHz. Sam

Subject: Re: hf response of 2226H vs. 2226J
Posted by bmar on Wed, 30 Apr 2003 23:25:46 GMT
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Hi Sam,that pretty interesting. I have 2226G drivers and they have an Le of .94. the Bl is much lower also. I have done no comparasons with the other 2226 models but I can tel you I'm very happy with 4 ohm drivers I have. Bill

Subject: Re: hf response of 2226H vs. 2226J
Posted by Wayne Parham on Thu, 01 May 2003 01:33:22 GMT
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Le is higher but so is Re, so proportionally they're the same. When manufacturers make a driver with different impedance variants, they usually try to keep the characteristics similar in this regard. I can't think of an example where a manufacturer has made a particular model driver in an 8 ohm version and a 16 ohm version, but that had vastly different characteristics in other areas. That would be better done as a completely separate part and model number.

Subject: using 2226J
Posted by Sam P. on Thu, 01 May 2003 09:50:41 GMT
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would let you pad the HF a few more dB's, right, assumimg an 8 ohm cd is used. Is there an "ideal" pad situation using the psd-2002's where max. "flat" hf extension can be achieved with the bypass cap boost? I mean in the sense that 8dB padding doesn't give you much to work with, and a bypassed 20dB pad would be excessive "HF wise". Is 14 or 16dB any "better" than 12dB is the question. I know, I know, try it in spice and see. Samof course, the recent la scala debacle has

me thinking, hmmm, maybe the world just needs a couple more pairs of 4 Pi Pro's in it...

Subject: Top-octave compensation
Posted by Wayne Parham on Thu, 01 May 2003 16:39:10 GMT
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I've noticed that different horns and motors are sometimes optimal with slightly different top-octave compensation. All the ones I commonly use are pretty similar, but there are subtle differences. For an example, using a PSD2002, the Peavey CH-3, Eminence H290 and Martinelli 17" horns all need about 10dB, if memory serves. Using 12dB or more attenuation/compensation gives a little too much energy in the top octave and less than 8dB isn't enough. But the Altec 811 is best with 6dB or 8dB, and any more starts giving you too much in the top octave. It provides some acoustic EQ because of collapsing directivity, so if you equalize power response flat, then on-axis response rises into the top-octave.

Subject: Re: Top-octave compensation
Posted by DRC on Fri, 02 May 2003 14:07:33 GMT
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Hi Wayne!If I vary the value in the cap you supplied in the compensation network (.47uf), I assume I'm moving the point where the compensation starts. Where does it kick in at this value, and where would it happen at .33uf? (Alternatively, where can I look to answer these silly questions myself?) (Feed a man a fish and he's set for one day, teach him to fish . . . . .) ;-)
Keep your ears and your mind open.

Subject: Re: Top-octave compensation
Posted by Wayne Parham on Fri, 02 May 2003 15:44:05 GMT
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If you change the value of C1 - the bypass cap - it will make the top-octave compensation come in later and less. You can see the results by running Spice. In fact, the distribution archive at the preceding link has the data for your tweeter section in the 1K6a010dB model. The 0.47uF capacitor is just about perfect on the 010 model for Eminence PSD2002's on Bill Martinelli's horns.

Subject: Re: Top-octave compensation
Posted by DRC on Fri, 02 May 2003 15:55:34 GMT
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Hi Wayne!If I change it which way, up or down, the compensation will start higher and less?I'll have to find a PC to run Spice, I guess, since I don't think there's an equivalent for the Mac, which is what I live on..47uf is perfect for the Eminence driver, but I'm using TAD 2001's in my Maple Martinellis. What would you suggest in this case? (I know, look at Spice. I would if I could but I can't. I did read your 80pg speaker xo doc this afternoon, though) ;-)
Keep your ears and your mind open.

Subject: Re: Top-octave compensation
Posted by Wayne Parham on Fri, 02 May 2003 16:11:29 GMT
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If you go down in capacitance value, the top-octave compensation will start higher and be less. The 0.47uF cap is just about perfect on the 010 crossover for the PSD2002. For the JBL 2426, it's better on the 012 and 014 models, and the bypass on the 010 version could stand to be slightly larger, about 0.55uF if I recall. When I had your 1602's, I used them with 4001's. I never used 2001's, so this is speculation, but I'll bet you're on the right track. A tiny bit less capacitance might be better for the 1" TAD's.

Subject: Re: Top-octave compensation
Posted by DRC on Fri, 02 May 2003 18:03:34 GMT
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Hi Wayne!I have no idea which model xo I've got, but I can't wait to give it a go on Sunday when I get the new speakers and their xo's together for the first time!Thanks for the info.I'll be back with pix and impressions - most likely on Monday..... Keep your ears and your mind open.

Subject: Re: Top-octave compensation
Posted by Wayne Parham on Fri, 02 May 2003 19:21:48 GMT
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Please do let us know what you think of your TAD's. I think they're gonna be absolutely killer!!!Did you stick with the 2123 midrange or did you move to the 1201 for an all-TAD solution?

Subject: Re: Top-octave compensation
Posted by DRC on Sat, 03 May 2003 11:08:17 GMT
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Going with the 2123 for the first outing. I think it should do very well as the mid in this system.I'm already toying with the idea of doing a variant on the TAD 2252 monitor, which uses the 1102 and 2002. I would use the 2001 in a 12" x-flare Martinelli. But I'm trying to restrain myself until I've played with the ones already in the works! Keep your ears and your mind open.