Subject: The 2 Pi Towers have me thinking about direct radiators
Posted by Bill Epstein on Sat, 10 Sep 2005 11:29:53 GMT
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First, would the JBL 2123 drop in and behave the same as the ALpha re: naturally rolling off w/o coil or cap? Of course the Fs is higher: 85Hz but no matter.According to the link below the JBL 2123J is "ruler flat from 150 to 5000 Hz".That leads to the second thought of having a 4Pi Pro box with 2226J, a small sealed box on top housing the 2123J and then, for all JBL system the 2404 or 2402 bullet on top.The bullets are hards to find except the 2402 for almost $300 each. THAT leads to the third thought which is 'would the Vifa DX25 serve instead of the JBL Bullet? I refer of course to the drop in sensitivity from the 2123J about 100dB and the Vifa 94. Would attenuating the Vifa be much of a sacrifice vis a vis the very high price of the more efficient JBL Bullets? Interesting Mid drivers for the Klipschorn

Subject: Re: The 2 Pi Towers have me thinking about direct radiators
Posted by Wayne Parham on Sat, 10 Sep 2005 13:40:17 GMT
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I really like the 2226 and 2123 together. You can crossover at decade points, 200Hz and 2kHz. I haven't tried the Vifa DX25 with that combination, but I think it would work very well. You could even run them all with extremely simple crossovers, just a coil on the woofer, a coil and a couple of padding resistors on the mid and a cap and damper resistor on the tweeter. Should be silky smooooth.As for substituting the 2123 for an Alpha 10, it cannot be substituted when used in a

some of my other designs, because it depends on the behavior of the voice coil cover for the top end range, and there's a bit of balancing between circuit inductance, cone geometry and horn shape. So this is one I can't really model well because, in this case, rising response doesn't necessarily tell where sound is radiated from. If high frequencies are coming from the dust cap, the horn's high frequency output will increase but if not, they won't. And that is largely what determines the value of midrange circuit inductance.

Subject: Re: The 2 Pi Towers have me thinking about direct radiators
Posted by GarMan on Sat, 10 Sep 2005 22:28:39 GMT
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All this talk about the Towers, I'm getting the urge to lug mine out from the crawl-space to give them a listen again.

Subject: Re: The 2 Pi Towers have me thinking about direct radiators
Posted by Crazy Dave on Tue, 13 Sep 2005 17:04:48 GMT
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Hi Wayne,Is there some advantage to crossing over a decades? In particular, at 2K? I'm also curious that in the Pro 3 Pi, you switched from a padded down compression horn to the Vifa. Do you feel the Vifa is superior or is it that the cost increase does not justify the benefits?Thanks, Dave

Subject: Re: The 2 Pi Towers have me thinking about direct radiators
Posted by Wayne Parham on Wed, 14 Sep 2005 06:22:05 GMT
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Crossover at decades is sort of a pseudo-ideal. It isn't necessarily better or anything, it's just that if you made a three-way speaker crossed at decades [20-200, 200-2000 and 2000-20,000], each subsystem would be covering exactly a 10x frequency range (a little over three octaves each) and the entire audio band would be covered.About the Vifa DX25, I think it sounds very nice in hifi speakers designed for use under 115dB SPL. It has a wide surround and can handle some excursion, so it can be safely crossed over pretty low for a 1" dome tweeter. That characteristic also makes it respond well to first-order networks. Its response curve is ruler flat and goes

sounds very nice.Compression horns have other advantages. They're horns, so you can set directivity. They're efficient, so you can use them in powerful speakers that get loud. Those are very attractive features too, and important in many designs. I use them in a lot of my systems.

Subject: Re: The 2 Pi Towers have me thinking about direct radiators
Posted by Crazy Dave on Wed, 14 Sep 2005 14:27:45 GMT
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Thanks! That covered everything I wanted to know. (AT least for now!)Dave