Subject: CD vs expo horns
Posted by Paul C. on Sun, 12 May 2002 22:34:42 GMT
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Wayne, can you explain the differnce between CD horns and other types? Also, I read the Crossover paper you have on your site, and it covers many of the things you and I had discussed in the past, but in great depth and detail. Very good paper!!! Thanks from all of us!Paul

Subject: Re: CD vs expo horns
Posted by Wayne Parham on Sun, 12 May 2002 23:04:32 GMT
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Check out the post called "Characteristics of various horn flares." Be sure to go over the Peavey document contained therein, because it discusses the CD flare in particular, including a brief history of its development.

Subject: Re: CD vs expo horns
Posted by Paul C. on Mon, 13 May 2002 00:02:27 GMT
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Thanks for the links, Wayne, good reading!A followup question...After running the numbers with various horns, and looking at sometimes published cut-off frequencies, I am surprised at how low some small horns supposedly go. But in actual application, I see that HF horns are seldom used near their low end cutoff. One horn tweeter I have in my commercially mfg'd PA spkrs, the flare has a published cutoff of 780 hz, and programs I have run the numbers come in close to that. This horn is used with a 12 db crossover at 2500 hz.Is there a "rule of thumb" in this? For example, if a horn has a 500 hz cutoff, how much higher would be an appropriate crossover frequency? Or, conversely, if I had a driver which I wanted to crossover at 1000 hz (to pick a nice round number out of thin air), what cutoff would I look for in a flare?

Subject: Re: CD vs expo horns

Posted by SirAdam on Mon, 13 May 2002 00:33:19 GMT
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I believe you get higher distortion levels the closer you get to the flare frequency, so it tends to be better to keep crossover frequency an octave or more away from the flare frequency... Although I don't think you'd have serious problems?A lot of the times this is simply a cosmetic thing, I believe Wayne has mentioned this as a reason for suggesting a lense like the CH-3. An actual 1600 Hz lense would look kinda goofy on such big speakers.Adam

Subject: Re: CD vs expo horns
Posted by Wayne Parham on Mon, 13 May 2002 05:41:40 GMT
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The trouble with talking about a horn only using its flare frequency is there isn't enough information. The mouth area and flare profile are just as important, maybe even more so, when you're concerned with performance at low frequency. These will determine how much output there is and how peaky the response is. It's kind of like describing a bass-reflex box with only its Helmholtz frequency. You don't know if response is underdamped, overdamped or some other condition. So more information should be considred when looking at low frequency performance.

Subject: Hey Wayne What are the Baby Butts???
Posted by Robert Hamel on Mon, 13 May 2002 13:57:55 GMT
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A few months ago I asked if your compensation would work on the 2344A and you pointed me in the right direction to get the job done, Thanks.I am curious how these would be characterized. It appears they are not CD and definitely not expotential or Tractrix. Just curious cause they sure do sound good!

Subject: JBL 2344 - Wide dispersion bi-radial horn
Posted by Wayne Parham on Mon, 13 May 2002 15:26:23 GMT
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The JBL 2344A is an exponential bi-radial horn having wide dispersion in both the horizontal and

1K6 series crossovers.

Subject: Thanks Wayne!!! nt.
Posted by Robert Hamel on Mon, 13 May 2002 15:50:56 GMT
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nt