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Subject: Re: Why Flares?

Posted by [Adrian Mack](#) on Tue, 09 Mar 2004 06:05:35 GMT

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Yes, directionality is a word ;) > Many tweeter designs do not have horns, but they do not need the > control, as it is designed in. Why do you say this? Hi GarMan. Not everyone attenuates the HF horn with an L-pad. If the system is passive/all subsystems running off the same amplifier, then the L-pad is used to match the sensitivity of the HF horn to match that of the woofer (which should also be of a high efficiency design). If the woofer is horn loaded then it may not be necessary to include the L-pad, or at least the attenuation would be a lot less than 15db. High efficiency woofers as direct radiators still only reach around 98db 1w/1m whilst horn loading them will get you much closer to the ~110db 1w/1m of the HF horn. As Dean mentioned the flare also provides directional control, a big benefit of using a horn. It will also alter the frequency response curve and the horn can be designed to boost output on-axis such as a radial horn, or do other things too. Even though the horn may be attenuated you maintain the dynamic range of the device being another positive. If the system is bi-amped then output levels are matched with the amplifier and not attenuation circuits. Adrian

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