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Subject: Re: what kind of tweeter horn?

Posted by [Adrian Mack](#) on Wed, 24 Dec 2003 00:56:06 GMT

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Hey "stupid newbie" (haha, well thats the nickname ya used!). I'm using a horn based tweeter, JBL 2370 horn flares with P.Audio PA-D45 comp drivers attached and Waynes crossover network will be used on them. The flares are Bi-Radial type, having a radial design in both vertical and horizontal planes, unlike a normal radial flare where the vertical is actually exponential, only the horizontal is radial. Are you having a midrange horn too? Or just direct radiator midrange? Is it two way or 3 way system? You could do a conical horn flare for the tweeter if you wanted. Remember though the conical has a negative slope, so use it in a Hybrid form to make the slope closer to zero. The conical flare has reduced phase distortion. See Waynes post "Characteristics of various horn flares" at <http://www.AudioRoundTable.com/PiSpeakers/messages/1623.html> for details on Hybrid forms, etc. What sort of dispersion do your Corals have? So do you actually plan on building some conical HF horns by yourself? I built some midrange conical horn flares that I modelled in Hornresp, but I don't think you could model a compression driver in there (mostly due to lack of information). If you really wanted to, you could build a flare that gives you the dispersion you want etc, and then build the Hybrid section and attach the comp driver with a mounting flange like the ones Bill Martinelli uses on his woodhorns. Then keep taking freq response measurements with speakerworkshop and changing the expo/hyperbolic "hybrid" section until you get the response curve you want. Its quite a lot of work though. I did a lot of this measurement stuff and experimenting with the midrange horns I built. For a HF horn, I would rather just buy a ready made one as theirs some very good ones out there. But if your up for it, give it a shot!

Adrian

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