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Subject: Discontinuity in horn : is it important ?

Posted by [Eric Mainardi](#) on Wed, 23 Mar 2005 18:34:07 GMT

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What seems to me worthy (IMHO) in round (tractrix) horns is that you are able to perfectly match the horn to the driver throat in producing the same angle : all compression drivers have a conical output with some angle and you can start your horn with this angle. So there is strictly NO discontinuity. Some spectral measurements we were able to achieve show that any discontinuity in a horn expansion generates standing waves and turbulences..., I mean distortion. Meanwhile, some high end wood horns (TAD, FOSTEX, MARTINELLI,...) show a clear discontinuity at the output of the adapter (the metal piece where the driver is bolted to). So, my friends, do you attach some importance to this point or is it a "wrong" problem ?

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Subject: Re: Discontinuity in horn : is it important ?

Posted by [Wayne Parham](#) on Thu, 24 Mar 2005 02:47:51 GMT

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There is a terminus at both ends of all horns. An infinite horn is a theoretical thing. You can radius the edge to meet the baffle if you like, and you can match the entry of the horn to the built-in flare of the compression driver. Sometimes this makes a big difference, sometimes not. Best to model the horn and see, or measure a physical model if you have one available.

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Subject: Re: Yes

Posted by [Bill Martinelli](#) on Fri, 25 Mar 2005 02:42:25 GMT

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I thought I had addressed this problem by making the conical throat piece. By using this throat, there is an exact match to the driver which allows for some horn expansion before being blended into the rectangular part of the horn. Where as, like you say many square horns have immediate transitions from round to square. We worked to overcome that problem. Bill

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