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Subject: Re: Trapezoid enclosures

Posted by [Larry Acklin](#) on Mon, 09 Feb 2004 16:05:48 GMT

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From--

<http://www.atr-treehouse.com/PA10.html>

start quote

BOX DESIGN SHAPE - Trapezoidal vs. Square

The reason for that "wedge-back" trapezoidal enclosure geometry is to facilitate the creation of semicircular arrays where multiple enclosures are arranged closely side-by-side. Created initially for "flying" in elevated clusters, trapezoidal enclosures have also found their way onto stages all over and are used in small numbers with great success.

Their shape looks a little horn-like leading sometimes to speculation about them having "longer throw" than similar, square enclosures - of course we know better now. However there is a potential benefit in this shape - when properly configured, it reduces internal standing waves which means smoother frequency response and possibly improved phase coherence, a factor which gives the enclosure a "tight", "focused" sound. On the other hand, not all trapezoid boxes automatically benefit from this shape, nor do all square boxes fare less than favorably in comparison to them.

end quote

So in an array- better coverage, about 3 db gain by stacking close together, and a possible standing wave issue. Plus they pack better in the trailer.

-Larry

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