
Subject: Re: how'd we get here (or where is this)?

Posted by [Wayne Parham](#) on Sat, 31 Dec 2011 16:19:30 GMT

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Altec made excellent speakers in that era. Not too bad by today's standards either. But they definitely don't compare with a properly designed modern matched-directivity two-way (waveguide) loudspeaker, even though they look similar.

The following document tells you why, and even has a little bit of history too. You'll probably recognize an Altec horn in this whitepaper:

High-Fidelity Uniform-Directivity Loudspeakers
The differences are mainly the result of iterative improvements, not so much a paradigm shift. What Altec was trying to do in the 1950s is pretty much the same idea today. We're just better at it.

Top-of-the-line modern drivers provide smoother response, lower distortion, higher SPL and dynamic range. Modern horn/waveguides have less internal reflections and are also able to generate a more constant pattern, one with fewer coverage holes. Crossovers are more thoroughly optimized too, made possible using today's accurate measurement systems. As a result, response is better and the coverage pattern is more uniform.

As for the matter of subs verses mains with deeper extension, to me, there is no question which is better. There are several qualitative reasons to split the deepest bass out to subs. Distortion (both harmonic and intermodulation) is reduced by splitting the band and using dedicated subs. But the biggest improvement, in my opinion, is modal smoothing. See the following thread for more information about using distributed bass sound sources to smooth room modes:

Room modes, multisubs and flanking subs
