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Subject: Re: Former owner of several A7 VOTT's  
Posted by [Wayne Parham](#) on Mon, 27 Jun 2005 15:56:50 GMT  
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All due respect to Bruce Edgar, I'd say his design style is more vintage than Altec's. Bruce's loudspeaker designs harken back to the very first horn loudspeakers. They use simple crossovers and horns that provide acoustic EQ instead of pattern control. They're from a time when the most important thing for a horn to do was to make the sound louder. Pattern control and summing through the crossover range are not part of the design requirements. Altec introduced the concepts of pattern control and driver interaction, and some of their early thrusts in this regard were included in the VOTTs. The sectional horn was designed to put the sound where they wanted it, and their method of adjusting its position was a way to improve summing through the crossover range. Altec developed the Manta Ray horn, which was one of the first constant directivity horns. We're really only just now starting to move past the Manta Ray, and there are a lot of modern production horns that still employ its design features. So I'd say Altec actually used more modern design approaches. I don't think the difference in sound is due to modern versus vintage as much as it is due to implementation, to the differences between two-way and three-way loudspeakers and due to differences in equalization used. Two-way speakers have the advantage of simplicity and coherence over three-way systems, much like single drivers have this over two-way speakers. But the disadvantage is that frequency extremes are harder to push. A midwoofer in a two-way loudspeaker has to run clear into the upper mids and overtone region, and it also has to go deep in the bass. Altec chose a large two-way for their VOTT system, and they weren't expected to be used with soundtracks having deep bass rumbles or much content above 10kHz. Edgar prefers to run three-way systems, because horns are relatively narrow bandpass devices and his speakers are intended for home hifi use, covering a wider total audio band. Another thing is the equalization curves in each of these speakers. The VOTT is horn loaded through the midrange, and uses an even more efficient horn loaded tweeter. Bass is generated by simple direct radiation from the woofer, loaded by a bass-reflex rear chamber. So the system has rising response, with a few pretty distinct steps. But most people don't use equalization with VOTT speakers, so they can sound somewhat strident. Bruce's basshorns are generally used with equalization, which helps ensure the bass response is deep and full. So there are a lot of differences in implementation that make any comparison less one of vintage versus modern and more really just an apples and oranges thing.

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