

Aspherical Propagation Delay

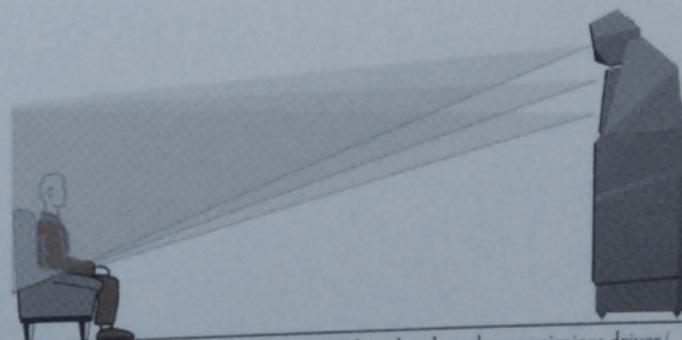
When it came time to redesign the MAXX, Wilson's engineers knew that the single upper module of the Series 1 and 2 was its most limiting feature. Although it was far more accurate than competing designs, the single, three-driver head ran into the laws of geometry and physics. It is simply impossible to align three drivers in one module for ideal propagation delay. The solution? Divide MAXX's dual midrange drivers and tweeter into two upper modules and introduce Aspherical Propagation Delay.

In conventional systems, drivers are mounted in a flat baffle such that each driver is positioned at a different distance in relation to the listener. Thus, energy from the tweeter arrives at the listening position in advance of the midrange, which in turn arrives before bass generated by the woofer. The problem of achieving both time-domain coherence and optimal driver dispersion is only exacerbated by larger speaker systems. Most speaker designers simply ignore this measurement. The fact is, misalignment of the drivers by small fractions of an inch will audibly degrade transient performance, soundstage height, width, and depth, as well as introduce tonal anomalies that destroy the otherwise convincing "presence" of an instrument or a singer's voice.

The key to solving this problem lies in the vertical alignment of the various drivers in an adjustable modular array so that each driver's waveform propagation "matches up" with its neighbors' in such a way as to create the sonic equivalent of a single point source. Wilson's patented Adjustable Propagation Delay has long set the standard for precise driver positioning in order to ensure correct propagation alignment for a wide range of listening locations. MAXX takes this technology a step further with its Aspherical Propagation Delay. MAXX's driver modules not only adjust forward and back (in the time domain), but also rotate on their vertical axis in order to achieve optimal driver dispersion for nearly any size room and for multiple listening positions. The Alexandria and now the MAXX Series 3 are the only loudspeakers to utilize these combined innovations.



Typical loudspeakers exhibit less than optimum propagation delay and dispersion characteristics. The sound quality is compromised for all listeners in all rooms.



Adjustable Propagation Delay in Wilson loudspeakers optimizes driver/room interaction for a wide range of rooms and listening positions.