

SUSPENSION SYSTEM GEOMETRY

Many of P Audio's new designs utilized new suspension system and spider geometries. The suspension system's to provide bearing points that act to control the motion of the voice coil and cone assembly. In this role, the suspension system must allow the desired motion of the voice coil and cone in order to produce acoustic energy. This motion is often very high and can be easily viewed in a sub woofer or low frequency loudspeaker. While allowing this motion, the suspension system must severely limit the side to side motion to prevent voice coil rubs and system failures. During very large excursions, notably at low frequencies, the suspension system can become very non-linear and allow substantial "off axis" motion. The new designs offer a substantially higher linear displacement and produce not only a more reliable design but also provide high sound pressure levels and greater musical impact. The new geometry is shown below.

