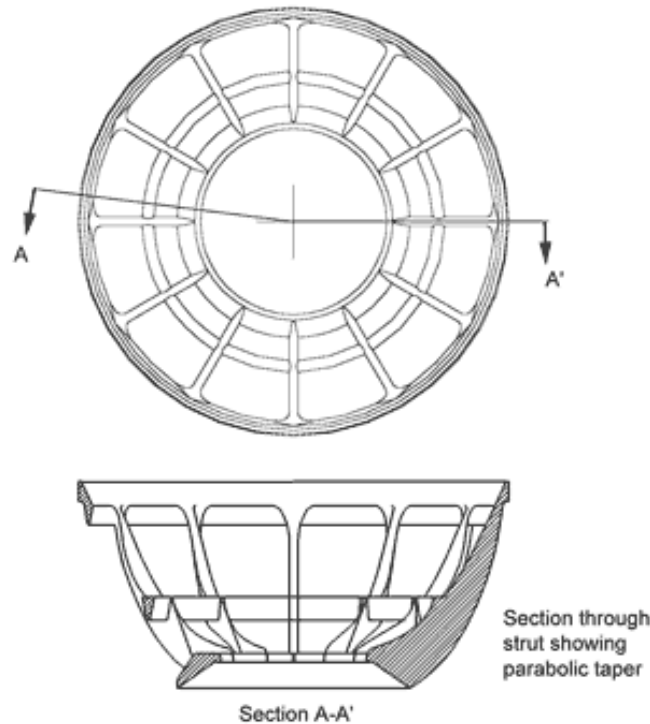


## Highly Aligned Chassis



Basically, the chassis of a loudspeaker maintains the relative position of the magnet, suspensions, voice coil and cone assembly. Ideally there should be nothing behind the cone which might cause resonance, reflection or any other perturbation of the sound coming from the rear of the diaphragm as this will affect its free motion and thus the sound coming from the front.

Many early chassis took the form of a pressed metal dish with a few punched holes and, as a result, suffered badly from both resonance and reflection. Ironically, the most common early magnet systems used field coils or Alnico which tend to present a small area but this potential advantage was usually completely lost as a result of the simple chassis. Better engineered loudspeakers tend to use die cast aluminium chassis but often with rather broad struts since this simplifies the design of the tooling. The advent of ceramic magnets was definitely a backward step from the point of view of rearward obstruction with magnets frequently having similar areas to that of the cone.

Vivid Audio chassis are made from pressure die cast aluminium and have a unique construction in which the struts, of which there are twelve, have an unusually narrow aspect ratio and are aligned in such a way as to present a minimum of obstruction. In fact, the 3mm wide legs have a total area of just 10% of the cone area which effectively renders them acoustically invisible. The compact rare earth radial magnet assembly fully complements this chassis with its small frontal area.

A further function of the chassis is to act as a heatsink for the motor assembly and the cooler the motor runs, the smaller the power compression and the drive level is increased.

By having a large number of chassis struts which are relatively deep next to their point of attachment to the magnet, the chassis is turned into a highly efficient finned heatsink almost tripling the total radiating area.