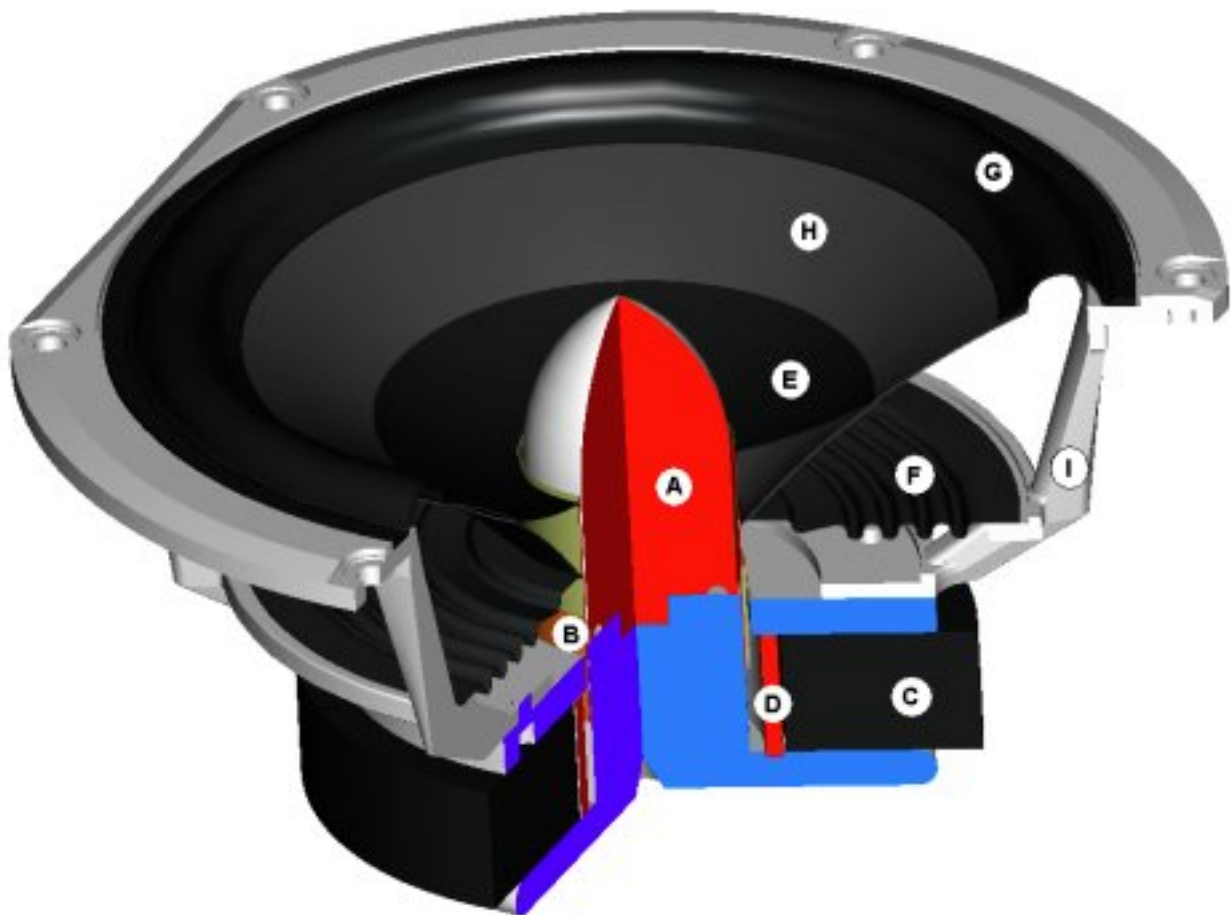


Architecture Notes: HDS Platform

High Definition Sound: A new class of midbass drivers from Peerless.

By introducing the High Definition Sound (HDS) class, Peerless has pushed the performance limits of midbass drive units. The main applications for the range are demanding two and three way box systems where the visual and sonic performance must be second to none.

In the design the emphasis has been put in to achieve long time reliability and very low distortion combined with soft clipping and astounding bass performance for the size.



A. Aluminum Phase Plug

The aluminum spacer eliminates compression under the dust cap and serves as heat sink for the coil to reduce power compression.

B. Long Voice Coil

The 1.25-inch voice coil is long in a narrow gap to ensure sustained BL over long excursions.

C. 20mm Magnet System

The magnet is 5mm higher than the normal 15mm magnets used in conventional speakers to avoid bottoming of the coil to the pole piece.

D. Distortion Reduced Motor

A long 4 layer voice coil normally results in high self induction and impedance varying with excursion. Its many ampere-turns react on the magnetic field in the air gap. These two main factors causing motor distortion in midbass drivers are practically eliminated by the combined impact of the Aluminum Short Circuiting Ring (D) and the Aluminum Phase Plug (A) on the pole piece.

At the same time they both contribute as heat sinks for the voice coil, reducing power compression.

The result is unbelievable clean bass reproduction.

E. Double Bonded Dustcap

With Peerless new design we have two bonds on the dustcap. This way the dustcap and cone will respond to every coil movement in a way never seen before.

F. Progressive Spider

The progressive suspension is designed in house to achieve soft clipping and low distortion even under extreme load.

G. Rubber Surround

The surround is made from SBR rubber because of the wide operating temperature, low creep and long term reliability.

H. Laminated Sandwich Cone

The cone is constructed from a propriety cone material using a laminate of different polypropylene films and adhesives. This creates a stiff but still dampened cone that will remain stable even under very large sound pressures.

I. Rigid Cast Aluminum Basket

The attractive rigid cast basket with an aerodynamic profile provides the necessary sturdy base for the magnet structure and suspension and allows for the long excursion of the cone. The spider is ventilated to achieve the lowest possible compression and allowing air to flow freely to create a cooling effect for the voice coil.

The design of the basket front allows for very slim box designs and the edges are chamfered to reduce the necessary amount of countersinking.