

---

Subject: Split-path horns

Posted by [Wayne Parham](#) on Tue, 27 Jul 2004 19:17:55 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Klipschorns, LaScalas and Belles are all split-path horns. Some people call this a "W" fold, because the shape of the paths look like a "W" or an "M". In a Klipschorn, the two paths are laid on each side of the motor chamber and throat. Some designs have one path above the driver and the other below. But that's just a layout difference; The design is basically the same. Splitting the path means each can have smaller cross-section area. It is really an architectural device in that it allows the horn designer to layout the cabinet shape to suit his taste. The cross-section area of each path is added together at a given distance down the throat to determine total cross-section area. It can also be modeled as two small but identical horns driven by a common radiator, but the effect is the same, acting as a single horn. Another thing that splits the horn path is phase plugs. A phase plug is a device that splits the path into many segments. It is used to keep path lengths nearly the same from all points on the radiator into the throat. There are designs that use two different horns driven by a single radiator. These kinds of designs usually have two different flare rates and horn lengths, often with a smaller front-loaded horn and a larger rear-loaded horn. In this case, the two paths work at different frequency ranges.

---