

## Martin Audio – W8L Line Array White Paper



*W8L 2 x 8" mid horn*

Similarly, the 2 x 8" mid-horn produces 108dB @1m for a 1W input. By contrast, cross-firing direct radiator mids will have an efficiency of, at best, 102dB for a 1W input. This means the W8L mid-horn can produce 3dB greater maximum SPL when compared to 4 x cross-firing direct radiator mids - again with half the input power.

Martin Audio has been developing high efficiency cone midrange horns for over 20 years. In recent times, cone midrange devices have been developed that work higher up the frequency range, whilst maintaining their constant directivity characteristics and not "beaming" as the frequency rises.

In the W8L, the twin 8" mid-horn geometry and the toroidal "donut" phase plug work together to maintain the wide 90° horizontal coverage pattern of the mid right up to the 2.5kHz crossover point. By refining the key midrange horn element to allow the mid/high crossover point to be shifted upwards, it has become possible to replace traditionally used large format compression drivers by smaller 1" exit devices. This combination contributes to a smoother sound in comparison with large format compression drivers crossed over low and driven hard.