Claims

1. An omnidirectional speaker comprising:

at least one speaker driver;

at least one waveguide corresponding to the at least one speaker driver;

two or more tapered sound wave deflectors are extending ~~arranged~~ radially on the at least one waveguide;

wherein the at least one speaker driver is arranged along the axis and orthogonal to the at least one waveguide;

wherein the sound wave deflectors have a thick edge and a thin edge, the sound wave deflectors tapering from the thick edge to the thin edge, wherein the thin edge is closer to the centre of the at least one waveguide than the thick edge;

such that in use, the sound wave deflectors are adapted to distribute and disperse sound waves produced by the at least one speaker driver and reflected off of the at least one waveguide.

~~2. The omnidirectional speaker according to claim 1, wherein the soundwave deflectors have a thick edge and a thin edge, the soundwave deflectors tapering from the thick edge to the thin edge, wherein the thin edge is closer to the centre of the waveguide than the thick edge.~~

~~3~~2. The omnidirectional speaker according to claim 1 ~~or 2~~, wherein the sound wave deflectors have a smooth outer peripheral surface, free of irregularities, discontinuities and/or abrupt transitions.

~~4.~~3 The omnidirectional speaker according to any one of the preceding claims, wherein the at least one waveguide has a differentiable surface.

~~5~~4. The omnidirectional speaker according to any one of the preceding claims, wherein the at least one waveguide has a smooth surface, free of irregularities, discontinuities and/or abrupt transitions.

~~6~~5. The omnidirectional speaker according to any one of the preceding claims, wherein the surface of the at least one waveguide is continuous with the surface of the sound_wave deflectors, such that the transition between the two surfaces is smooth and free of irregularities, discontinuities and/or abrupt transitions.

~~7~~6. The omnidirectional speaker according to any one of the preceding claims, the omnidirectional speaker having 2 to 10 sound_wave deflectors on the at least one waveguide.

~~8~~7. The omnidirectional speaker according to any one of the preceding claims, wherein the sound_wave deflectors are identical in shape, size and height, and are located at the same distance from the centre of the waveguide, as well as from each other, on the at least one waveguide.

~~9~~8. The omnidirectional speaker according to any one of the preceding claims, wherein the at least one waveguide has a base with a raised centre, the raised centre facing the at least one speaker driver.

~~10~~9. The omnidirectional speaker according to claim ~~9~~8, wherein the at least one waveguide tapers in a concave manner from the base to the raised centre.

~~11~~10. The omnidirectional speaker according to claim ~~9~~8, wherein the at least one waveguide is convex.

~~12~~11. The omnidirectional speaker according to any one of the preceding claims, wherein the at least one speaker driver has a first diameter, and the at least one waveguide has a second diameter, and wherein the second diameter is larger than the first diameter.

~~13~~12. The omnidirectional speaker according to any one of the preceding claims, the omnidirectional speaker further comprising a housing.

~~14~~13. The omnidirectional speaker according to claim ~~12~~11, wherein the part of the surface of the sound_wave deflectors furthest from the centre of the at least one waveguide, is substantially continuous with the peripheral surface of the housing.

~~15~~14. The omnidirectional speaker according to any one of the preceding claims, the omnidirectional speaker having two speaker drivers: a first high frequency driver and a second mid-range frequency driver, wherein the centre of each speaker driver is aligned with one another.

~~16~~15. The omnidirectional speaker according to claim ~~14~~13, the omnidirectional speaker having two waveguides: a first high frequency waveguide corresponding to the first high frequency driver and a second mid-range frequency waveguide corresponding to the second mid-range frequency driver.

~~17~~16. The omnidirectional speaker according to claim ~~15~~14, wherein the first high frequency driver faces the second mid-range frequency driver.

~~18~~17. The omnidirectional speaker according to claim ~~16~~15, wherein the high and midrange frequency waveguides are positioned between the first high frequency driver and the second mid-range frequency driver so as to block a direct path from the first high frequency driver to the second mid-range frequency driver.

~~19~~18. The omnidirectional speaker according to any one of claims ~~14~~ 13 to ~~17~~16, the omnidirectional speaker further includes a low frequency driver.