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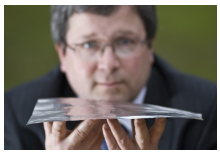

New paper-thin speakers Warwick Audio Technologies

New Technology Permits Paper-Thin Speakers

Just 0.25 mm thick

In general, audio speakers are not exactly the smallest things around, most of them (especially the audiophile-grade ones) having some pretty large form factors. However, it seems that things might radically change in the future, given the fact that the engineers from the University of Warwick have managed to develop a new technology that will allow for the development of speakers just 0.25-mm thick.

As Warwick Audio Technologies (the commercial entity that will be in charge of monetizing this amazing development) informs us, this technology relies on some basic physical principles related to sound.

Hence, all speakers work by converting an electric signal into sound, and, usually, the signal is used to generate a varying magnetic field, which in turn vibrates a mechanical cone, thus producing the sound. Warwick Audio Technology's FFL technology is in fact an assembly of thin, conducting and insulating, materials resulting in the development of a flexible laminate, which, when excited by an electrical signal, vibrates and produces sound.

The speaker laminate operates as a perfect piston resonator. The entire diaphragm therefore radiates in phase, forming an area source. The wave front emitted by the vibrating surface is phase coherent, producing a plane wave with very high directivity and very accurate sound imaging.

As for the uses of such a technology, they are really countless. In fact, as Steve Couchman, CEO of Warwick Audio Technologies, states, "We believe this is a truly innovative technology. Its size and flexibility means it can be used in all sorts of areas where space is at a premium. Audio visual companies are investigating its use as point of sale posters for smart audio messaging and car manufacturers are particularly interested in it for its light weight and thinness, which means it can be incorporated into the headlining of cars, rather than lower down in the interior."

Of course, it remains to be seen when this development actually makes its way to the market (in a finite form), but it's very likely that the respective moment will arrive quite soon, given just how innovative this technology is and how useful it might prove to be, at least for certain segments (such as digital signage).

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