

Panphonics loudspeaker elements in earphones

The Panphonics loudspeaker elements can be installed in earphones. The proprietary structure of the Panphonics elements enables cutting the light weight and thin audio transducers into any size and shape. The small movement of the film between the two stator plates creates enough sound pressure to provide high fidelity sound over the whole frequency range when exited close to the ear canals.

A benefit of the electrostatic principle is the exceptionally exact impulse response provided by low weight and small movement amplitude of the diaphragm. In comparison to other electrostatic transducers used in earphones, Panphonics audio element is a one-piece structure easily installed into the separately manufactured frame. The porous layers seal the charged surfaces, making protective grilles obsolete and providing an enhanced comfort by lightening the earphone structure.

With use of signal processing, very effective active noise cancellation can be achieved by sensing the incident sound and by using the Panphonics audio element in creating a cancelling sound having opposite polarity. The noise may be sensed using a separate microphone, or the same Panphonics transducer technology can be used also for that.

Dr. **Antti Kelloniemi**, Technology Manager
R & D, Panphonics Oy
Olarinluoma 16, 02200 ESPOO,
FINLAND, EUROPE
tel. + 358 9 8193 8560
fax + 358 9 8193 8561 www.panphonics.com

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