PANPHONICS
Audio Innovations

Custom designed, Panphonics digital signage loudspeakers are installed above the plasma screens

The escalator ride-time is covered with even sound field.

Helsinki's newest shopping centre utilises Panphonics audio technology

Helsinki's rapidly developing city centre recently welcomed its latest, and most modern shopping mall. Opened in March 2006, the Kamppi Shopping Centre is a 37,000 square metre complex featuring 150 retail outlets located above the city's main bus terminal and an underground railway station.

Accent on high quality media visibility

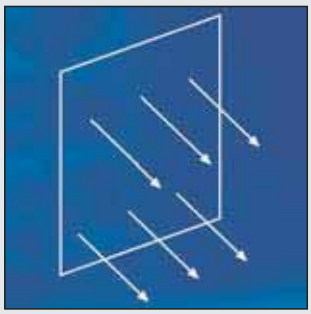
The facility features a network of 42 inch advertising screens located along all main corridors and escalators. The system was designed to offer advertisers the latest in high quality media visibility. The acoustical challenge, which is one typical of large retail centres such as this, was to provide audio that could be clearly heard and understood. With so many different messages being transmitted by the various advertisers, and with the level of ambient background noise, the answer lay in PlaneWave Technology audio elements from Panphonics.

Focused sound patterns

In the same way that laser technology directs and focuses beams of light, the Panphonics audio technology directs and concentrates sound into a specific area. With the audio elements just 4 mm thick, Panphonics was able to custom design the sound system for each customer, and install them above the screens. Thanks to this technology, the advertising messages are directed exclusively to the area in front of each screen. Unlike with conventional speakers, sound does not spread to the sides where it would interfere with other advertising messages, nor does it add to the general noise level of the facility. Furthermore, the sound volume remains virtually unchanged, regardless of the listener's distance from the screen.

Added value for advertisers

In utilising Panphonics audio technology, the Kamppi Shopping Centre has been able to provide advertisers with clearly defined marketing areas. Within each area, the advertising message can be clearly heard and understood since the audio quality is excellent and is not competing with sound from adjacent areas. The message can be clearly heard more than ten metres before each screen while the volume remains consistent and non-intrusive. While advertisers clearly benefit from this latest development in audio messaging, so too does the shopping mall itself. Instead of an unintelligible wave of competing messages that creates a noisy environment, shoppers at the Kamppi Centre can make their purchases amid an atmosphere that is pleasant and relaxed.



Panphonics Audio Technology

Panphonics, a Finnish-based audio technology company, has developed new and innovative technology that solves many practical audio application problems associated with conventional loudspeaker technologies. Panphonics Plane Wave Technology is based on the electro-mechanical film (EMFi) concept, originally developed in cooperation with the Technical Research Centre of Finland during the early 1990s.

The Panphonics audio element offers considerable technical advantages over conventional dynamic loudspeaker and flat panel speaker technologies. Amongst the most significant technical advantages are its controllable directivity, even sound field, superior sound quality, extremely thin and light structure and its nonmagnetic environment.

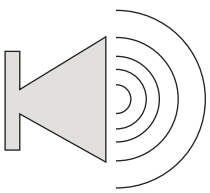
Panphonics technology is particularly suitable for difficult acoustical environments, and products based on our technology are ideal in audio applications requiring focused, high quality sound over long distances with a consistent sound volume level.

The basic difference between Panphonics' Plane Wave Technology and conventional dynamic loudspeakers is depicted below.

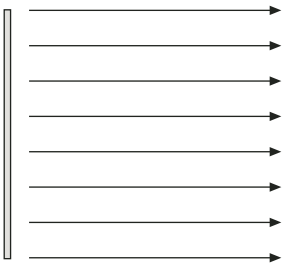
The surface of the Panphonics audio element is just 4 mm thin, and the shape can be customer defined

Panphonics audio elements emit a highly directive constant phase plane wave, resulting in very slow attenuation of the on-axis sound pressure level with distance, compared to conventional loudspeakers. Due to the extremely high directivity, reflections are minimized resulting in a significant improvement of speech intelligibility, when compared to conventional loudspeakers.

Conventional speaker:



Panphonics audio element:



Panphonics Oy
Olarinluoma 16
02200 ESPOO
FINLAND

tel. + 358 9 8193 8560
fax. + 358 9 8193 8561

Sales
sales@panphonics.fi

www.panphonics.fi