



HELSINKI 1.5

CONTROLLED DIRECTIVITY

Gradient Helsinki utilizes Controlled Directivity, the very essence of unique Gradient loudspeaker design philosophy. By directing more of the speakers high frequencies and middle frequencies to the listener and less to the reflecting surfaces the listener hears more of the original recording and less of the room.

DIPOLE BASS

Rooms develop strong peaks and dips below 200Hz - these are determined by the three dimensions of the room ie. the Length Width and Height. The most audibly damaging node arises from the shortest room dimension, usually the floor to ceiling height.

An ordinary box speaker radiates in all directions at low frequencies. This has the unfortunate effect of generating standing waves in all dimensions.

Dipole bass stimulates bass in just one direction (the direction of driver excursion) and not the other two. In this way the speaker reduces nodes due to the ceiling height and the direction 90 degrees from the radiating direction.

The bass part of the Gradient Helsinki loudspeaker consists of one 30cm custom made long throw woofer. It is assembled on an open baffle giving the low frequencies a "figure eight" or dipole radiation pattern.

INTELLIGENT BASS ADJUSTMENT

Bass response of the Gradient Helsinki can be adjusted by tilting the speaker. Tilting has a noticeable effect on bass reproduction. The more you toe-in, the stronger bass you will get. Also the further away from the wall you use them, more sideways towards the wall they can be positioned.

ALSO FOR SMALL ROOMS

Gradient Helsinki is tailored to produce the most beautiful sound in all environments from home to lounge bars and hotel lobbies. These loudspeakers are easy to position and they deliver very open and wide sound stage everywhere to the room.

In a small listening room or with rather wide backwall, you can also experiment with very different placement than previously described. By positioning Gradient Helsinki straight against the backwall you'll get very open and dynamic soundstage without much of a space for loudspeaker placement. Due to the radiation pattern at middle and high frequencies, unwanted early reflections are not created. The music remains smooth and open with correct timbre.

CONNECTIONS TO THE AMPLIFIER

For fast, easy and high quality connecting, Gradient Helsinki is equipped with a professional four-pole Speakon connector and cable housing. Speakon is very durable and easy to connect and lasts hundreds of plug-in and plug-out connections. A pair of binding posts is offered as an option.

VARIETY OF FINISHES

Environmentally friendly components for each pair are individually selected and approved with very high standards of quality. Standard finishes are walnut and oak. Customized colour variants are available on request.

TECHNICAL SPECIFICATIONS

Radiation patterns:	Bass: dipole Midrange & treble: cardioid
Frequency response:	60-20000Hz +/-2dB, 35Hz -6dB
Impedance:	6 Ohms, minimum 4 Ohms
Sensitivity:	85dB/2.83V/1m
Recommended amplifier power:	50...250W
Drivers:	1 x 300mm long throw woofer, 150mm pulp cone midrange, 19mm aluminum dome tweeter
Crossover frequencies:	200 and 2200Hz
Connections:	Professional Speakon connector or pair of binding posts
Features:	Bi-wiring, bi-amping ready (Applicable when Speakon chosen)
Finish:	Oak or Walnut
Height:	92cm
Weight:	23kg

Made in Finland by Gradient Labs Ltd

www.gradient.fi

