

AudioBeam

Conference and Information Systems | AudioBeam

Cat. No. 009859

General Description

AudioBeam is a new type of directional loudspeaker that is able to focus sound like the light beam of a torch, creating an audio spotlight for museums, exhibitions, theme parks and many other applications. Unlike conventional loudspeakers, which are only able to focus sound at high frequencies, AudioBeam emits sound as a lobe that can be precisely directed and is reflected by objects.



Technical Data AudioBeam Master

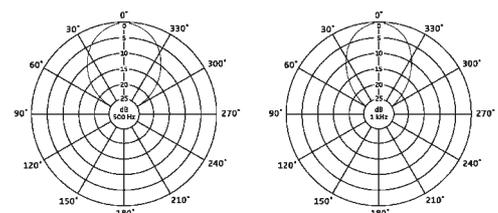
Modulation	wideband AM
Carrier frequency	40 kHz
Amplitude limiting	limiter amplifier
Audio channels	1
Audio input	balanced XLR-3F socket, contacts metallically separated
Input sensitivity	6 dBm (1.55 V) or -14 dBm (150 mV)
Impedance	600 Ω
Sound pressure level	75 dB ± 5 dB
Audio output	1 x BNC, 50 Ω, short-circuit-proof
Amplifier output	approx. 90 W
Power supply	via switched-mode power supply 110 – 240 V, 50 – 60 Hz, max. 100 W
Dimensions	264 x 82 x 320 mm
Weight	approx. 3.1 kg

Features

- Ultrasonic loudspeaker focusses sound like a light beam
- Switchable sensitivity, +6 dB/-15 dB
- Automatically adapts to mains voltages between 110 and 240 V, and mains frequencies between 50 and 60 Hz
- Delivery includes: 1 AudioBeam, mains cable (European, UK, or USA version)

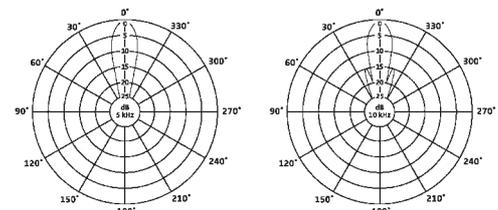
Recommended Accessories

- Thread adaptor
- GZP 10 mounting plate
- GZG 1029 swivel joint
- MZT 100 anti-vibration table stand



500 Hz

1000 Hz

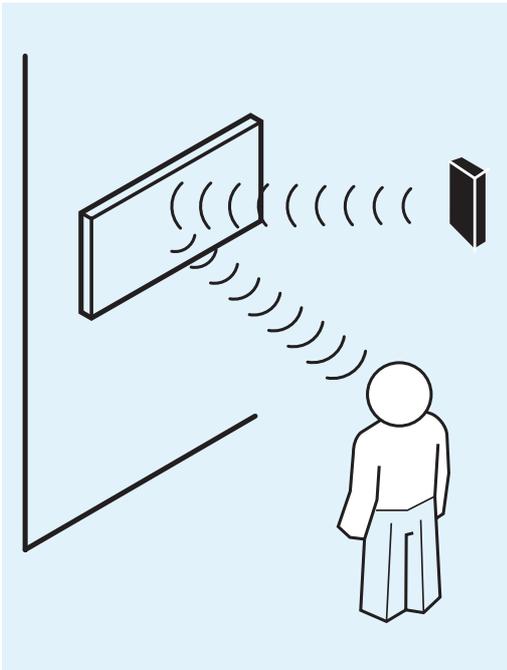


5 kHz

10 kHz

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The AudioBeam directional loudspeaker works with ultra-sound, modulating the audible sound onto an ultrasonic carrier frequency, much like a radio station does, and then emitting this signal via 150 special piezoelectric pressure transducers. Audible sound is only generated at a distance from the AudioBeam, when the signal is demodulated because of the non-linearity of air. This can be imagined like the creation of many small, virtual loudspeakers in the ultrasonic zone.

No sound is audible beside or behind an AudioBeam – you will only hear the audio information if you are directly within the sound beam, or if the sound is reflected by a smooth surface. This makes AudioBeam an ideal tool for information terminals, exhibitions, or even conferences where various AudioBeams emit several languages to a defined part of the auditorium.

As the effects of ultrasound on the human body have not yet been thoroughly investigated, AudioBeam is fitted with a sensor that switches the loudspeaker off when it registers movement within four metres.

AudioBeam is suited to a wide variety of applications:

- **For theme parks and exhibitions**

AudioBeam is an ideal tool for theme parks where it creates amazing effects with moving sound when combined with a small stepper motor. In an exhibition, AudioBeam will give explanations on an exhibit, which are only audible within a defined area. When mounted opposite an exhibit, the work of art will seem to "talk" to the visitors, as the ultrasonic beam is reflected by smooth surfaces.

- **For the PC**

PC users can forget all about headphones. AudioBeam is their personal loudspeaker – without disturbing others in the office.

- **Automatic machines with voice function**

A very discreet way of addressing customers: the sound will only reach the person directly in front of the machine.

- **In safety areas**

AudioBeam can be used to directly address an individual person within a safety area – putting them in an audio spotlight.

