NEUROTECHNOLOGY

FOCUSONICS™
Model B

USER'S MANUAL

Introduction

Thank you for purchasing Focusonics™ speaker by Neurotechnology!

As you probably know, Focusonics™ is not any traditional speaker – it uses ultrasonic waves to focus and constrain sound to a narrow beam for tens of metres away from the speaker. In the beam the listener is immersed into music or speech while steps away no sound can be heard.

Neurotechnology has made novel, patent pending developments to bring this ultrasound technology closer to a widespread adoption. Whether your application is personal listening, advertising, gaming or other, we wish you an unforgettable experience and look forward for your feedback!

www.focusonics.com
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Contents

Safety notice

- Focusonics™ speaker as used in this safety notice refers to both constituent components: the speaker and amplifier/control unit.

- Focusonics™ speaker is designed for an indoor use only.

- Do not use the Focusonics™ speaker in rain/snow as it presents electrical shock and fire hazards and most likely will damage the speaker.

- Do not use the Focusonics™ speaker in wet/damp conditions or near the water.

- Do not use the Focusonics™ speaker in an explosive atmosphere.

- Use only dry or slightly damp cloth for cleaning Focusonics™ speaker. Make sure the speaker is disconnected from the mains outlet.

- Do not cover the Focusonics™ speaker with items that block the natural air ventilation.

- Do not install the Focusonics™ speaker near heat sources such as radiators, stoves, etc.

- Ensure that there is an earth connection at the mains outlet where the Focusonics™ speaker will be powered up.

- Follow installation instructions provided in this manual when installing the Focusonics™ speaker.

- Do not connect the amplifier unit to any other speaker, it is not designed to be used with other speakers.

- Do not put your ear close to the speaker as it emits ultrasonic waves. Listen to the speaker from recommended distance (>1m).

- Focusonics™ speaker should be serviced by authorized personnel only.

- Do not use the Focusonics™ speaker with suspected failures. In cases such as, but not limited to, the speaker does not operate as expected, the speaker was exposed to the rain, the speaker was dropped, other objects has been dropped on the speaker, liquid has been spilled on the speaker, have the speaker inspected by qualified personnel before further operation.

- Do not start using the Focusonics™ speaker if the packaging was damaged.

- Do not open the speaker or amplifier/control unit as this will remove the warranty.

- Do not connect the amplifier/control unit to any other speakers as this will likely destroy the speaker and/or amplifier/control unit.
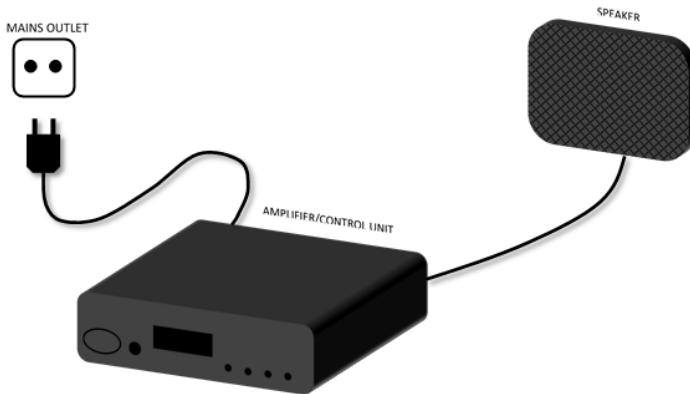
Device

Device consists of two parts:

- speaker
- amplifier/control unit

The package should also contain:

- power cable to connect the amplifier/control unit to the mains outlet.
- 3.5mm jack cable to connect line-in source.
- 4 screws for speaker mounting.

The speaker should have a cable running out of the back of it with an audio connector on the other end, which is used to connect the speaker to amplifier/control unit.

Optional accessories

Optional accessories include:

- VESA wall mount brackets. This can be used for speaker installation on the wall/ceiling.
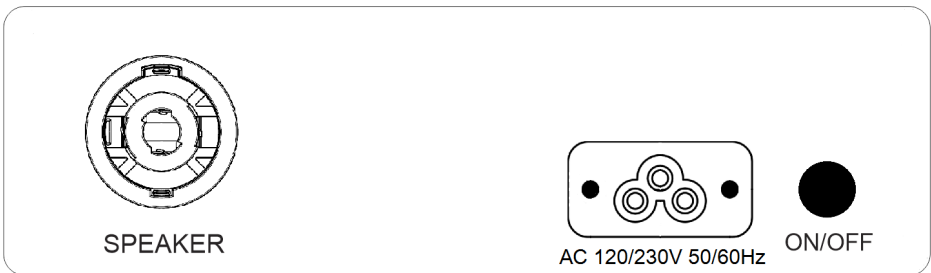- VESA mount stand. This can be used to install the speaker on a desk, table, floor and etc.

These accessories can be bought at www.focusonics.com

Installation

Focusonics™ speaker can be installed on the wall/ceiling using VESA wall mount brackets (100mm x 100mm standard). The speaker can also be mounted on a VESA stand (100mm x 100mm standard) and installed on a desk, table, floor or other. The provided 4 x 4mm screws should be used to attach the speaker to VESA mount brackets or VESA stand. The speaker should be mounted 1-5m from the listener for best results.

Set-up

Connect the speaker cable to the 'SPEAKER' socket at the back of the amplifier/control unit. Connect the power cable to power inlet at the back of the amplifier/control unit. Plug in the power cable to mains power outlet (120/230 VAC, 50/60 Hz) that has an earth connection. You are now ready to start using the Focusonics™ speaker.

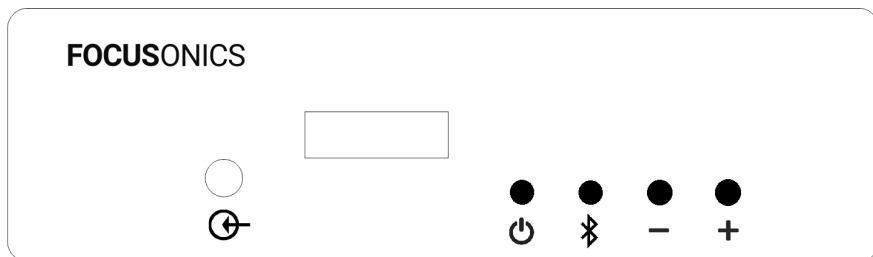SPEAKER   AC 120/230V 50/60Hz   ON/OFF

Installation tips for best sound localization results

- Do not use the speaker in very small spaces. Reflections from the walls and other objects may lead to the sound filling the whole space. The speaker works best in large, open spaces.

- Mounting the speaker on the ceiling and directing it straight to the floor will help avoiding reflections from the walls.

- Sound absorbing material such as carpets, curtains, etc. could be used in places where reflections occur to improve sound localization.

- Install the speaker high enough in order to avoid an unintended blocking of the sound beam by a passing person.

'Virtual source' effects

Focusonics™ speaker uses ultrasonic waves to reproduce sound and as ultrasonic waves reflect very well from most surfaces, the speaker can be used to create 'virtual source' effect. If you direct the speaker to a certain object that reflect ultrasonic waves well, it will appear that the sound is coming from that object rather than from the speaker itself. This object can be, for instance, a TV screen, a sculpture, a glass wall, etc. Multiple reflections can be used to fill the space with various sounds to achieve unique experiences. For example, bird/animal sounds can be used to create an illusion of their presence in a much more convincing manner than using traditional speakers as the sounds would appear to originate from various objects/surfaces rather than filling the whole space with sound.

Using the device

FOCUSONICS

Once the speaker is installed and set-up, turn on the main power switch at the back of the amplifier/control unit. A small dot should appear on the lower right corner of the LCD screen indicating that power is supplied to the speaker and you can start using it.

The device has two audio input means: line-in and Bluetooth. The line-in audio signal should be provided via 3.5mm jack plug located at the front panel of amplifier/control unit.

The device is turned on/off with the On/Off button.

The short-press of Bluetooth button selects either line-in or Bluetooth as audio input source. The long-press of Bluetooth button initiates the Bluetooth pairing mode. In order to cancel pairing mode short-press the Bluetooth button again.

The speaker volume is adjusted with Volume-up/down buttons.

Bluetooth

In order to connect to the Focusonics™ speaker via Bluetooth, enable bluetooth on your audio device (smartphone, laptop, etc) and connect to a device called 'Focusonics'.
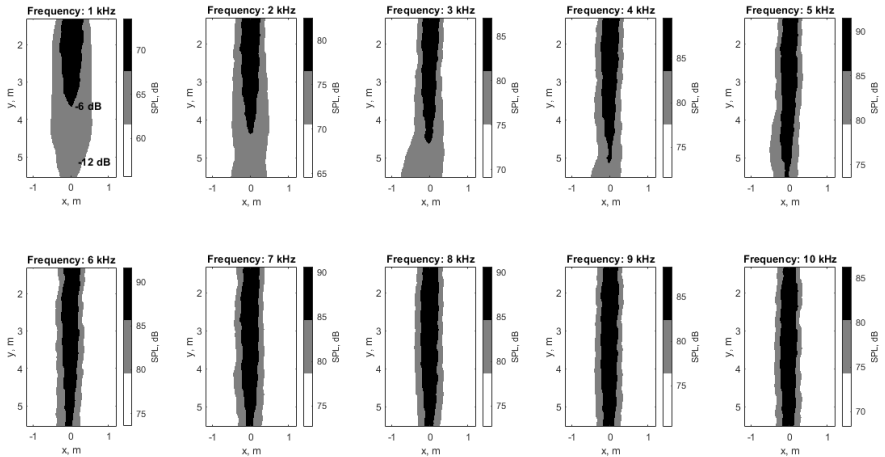
Some audio devices will require to initiate device-pairing before they can discover the Focusonics speaker. In order to enter pairing mode, select Bluetooth as audio source using the Bluetooth button. Then hold the Bluetooth button for a couple of seconds until the 'PAIRING MODE' will appear on LCD screen. 'Focusonics' speaker should now appear on the available devices' list on your audio device.

If you select to forget 'Focusonics™' speaker on your audio device, you will need to enter pairing mode in order for the 'Focusonics™' speaker to become discoverable by your audio device again.
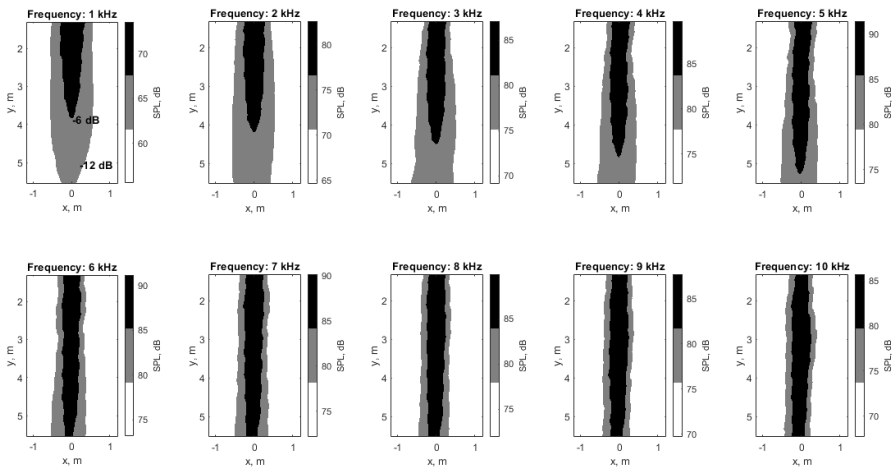
Specifications

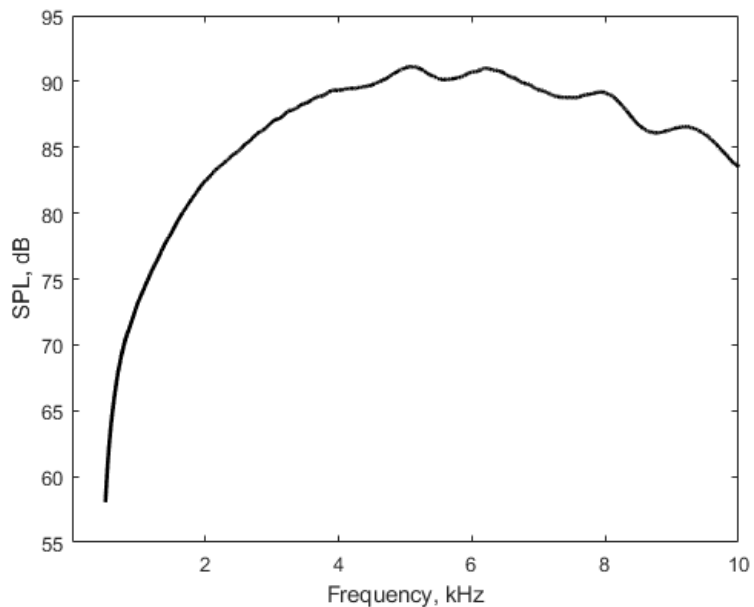Below are shown beam characteristics and frequency response of the Focusonics™ speaker.

Power supply	230 VAC 50Hz / 120VAC 60Hz 40W
Weight	Speaker: 1.4 kg Amplifier/control unit: 0.7 kg Total package: 2.9 kg
Dimensions	Speaker: 441 x 221 x 18 mm Amplifier/control unit: 153 x 153 x 48 mm

Beam profile at different frequencies along the wider dimension of the speaker.

Beam profile at different frequencies along a shorter dimension of the speaker.

Frequency response at 1 m distance.

Warranty

Neurotechnology ltd. warrants this product against defects in materials and workmanship for one (1) year from purchase date under normal consumer use conditions. If the product fails during normal and proper use within the warranty period, Neurotechnology will repair or replace the product. The liability of Neurotechnology does not include any incidental or consequential damages.

This warranty does not include failure caused by improper installation, operation, maintenance, accident, damage, misuse, modifications not approved by Neurotechnology, normal wear and tear, any event or act outside Neurotechnology's control.

This warranty does not apply if serial number of the product has been altered or removed, warranty seals have been damaged or altered or the product has been tampered or repaired by unauthorized personnel.

Support

Please contact Neurotechnology if you have any problems using the

Focusonics™ speaker.

Neurotechnology ltd.

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Email: support@focusonics.com

Website: www.focusonics.com