

NEUROTECHNOLOGY

FOCUSONICS™

Model B

USER'S MANUAL

Introduction

Thank you for purchasing Focusonics speaker by Neurotechnology!

As you probably know, Focusonics is not a 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
Neurotechnology

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Safety notice

- 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 block the ventilation grill at the back of the speaker.
- Do not block the access to the mains socket where the speaker supply cable is plugged so that it can be quickly unplugged in an event of malfunction.
- Do not install the Focusonics speaker near heat sources such as radiators, stoves, etc.
- Follow installation instructions provided in this manual when installing the Focusonics speaker.
- Do not put your ear close to the speaker as it emits ultrasonic waves. Listen to the speaker from recommended distance (>2 metres).
- 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 as this will remove the warranty.

Package

The package should contain:

- The speaker.
- Power supply unit with power cable to connect it to the mains outlet.
- 3.5mm jack cable to connect line-in source.
- 4 screws for speaker mounting.
- micro SD card with preloaded configuration file.

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 and Set-up

Focusonics speaker can be installed on the wall/ceiling using VESA wall mount brackets (100 mm x 100mm standard). The speaker can also be mounted on a VESA stand (100 mm x 100 mm 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. It is important to make sure that the chosen VESA brackets/stand should not block the ventilation grill at the back of the speaker. The speaker should be mounted 1-10m from the listener for best results.

Connect the provided power supply unit to the power outlet (120/230 VAC, 50/60 Hz). Connect the output of the power supply to the designated power input socket at the back of the speaker. The red light should lit up at the right bottom corner at the front of the speaker indicating that the power is supplied to the speaker. You are now ready to start using the Focusonics speaker.

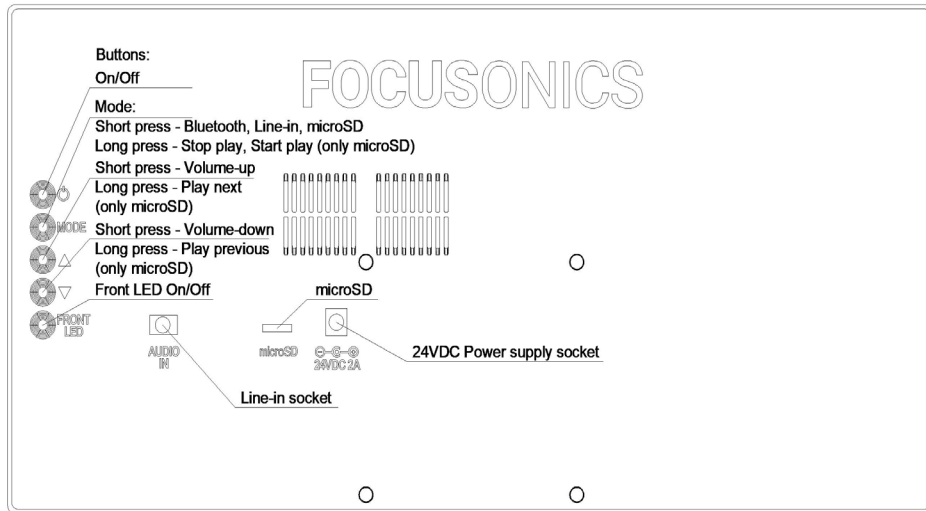
Installation tips for best sound localization results

- 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.
- Keep significant distance from the speaker to the listener, the distance is needed for ultrasonic waves to demodulate and achieve highest audible level. 2-4 metre range is most optimal for Model B.
- 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 if blocking of the sound beam by a passing person needs to be avoided.

'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



Once the speaker is installed and set-up, press an On/Off button to turn the device on. The indicator colour will change from red to a different colour indicating the current audio source. Different input sources can be selected by toggling the MODE button. The device has three audio input means:

- Line-in, indicated by a green colour. It should be provided via 3.5mm jack plug to the input socket located at the back panel of the speaker.
- Bluetooth, indicated by a blue colour. In order to connect to the Focusonics speaker via Bluetooth, enable bluetooth on your audio device (smartphone, laptop, etc) and connect to 'Focusonics' device.
- SD card player, indicated by a white colour. Upload your audio content to the provided micro SD card. Insert it to the micro-SD slot located at the back panel of the speaker. The play/pause of tracks can be initiated by long-pressing MODE button and switch tracks by long-pressing up/down buttons. The play of audio tracks can be triggered using the integrated presence sensor, please read the following section for more information.

The speaker volume is adjusted with up/down buttons.

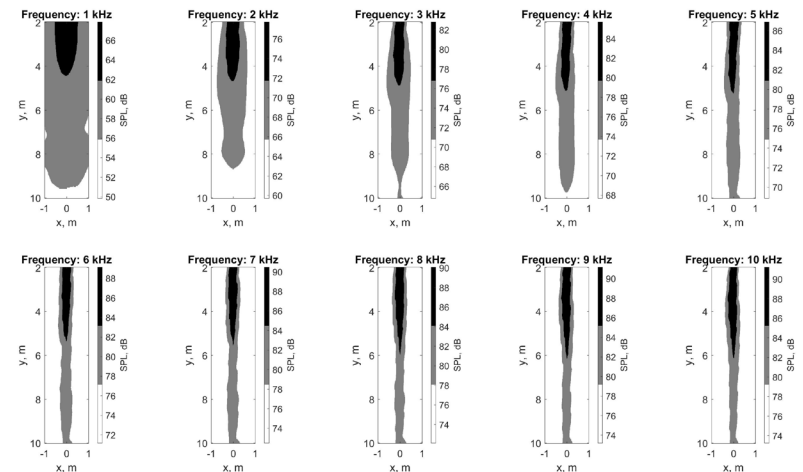
FRONT LED button turns on/off the led indicator.

Presence Sensor

The speaker has integrated presence sensor located at the front of the speaker that could be used to trigger the play of audio track on micro-SD card. The trigger conditions can be configure using the configuration file which is pre-uploaded in the provided micro-SD card. Things like trigger distance, playback time after trigger, etc. can be defined in the configuration file.

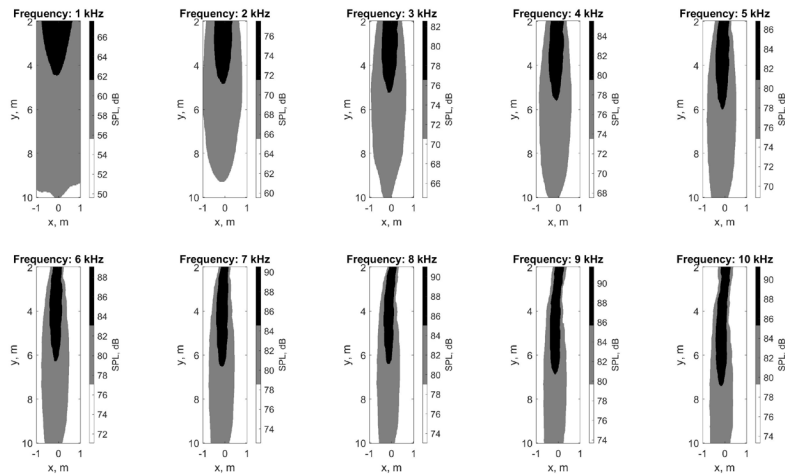
Specifications

Power supply	230 VAC 50Hz / 120VAC 60Hz 40W
Weight	Speaker: 1.4 kg Shipping box: 2.5 kg
Dimensions	Speaker: 442 x 221 x 25mm Shipping box: 520 x 295 x 135 mm

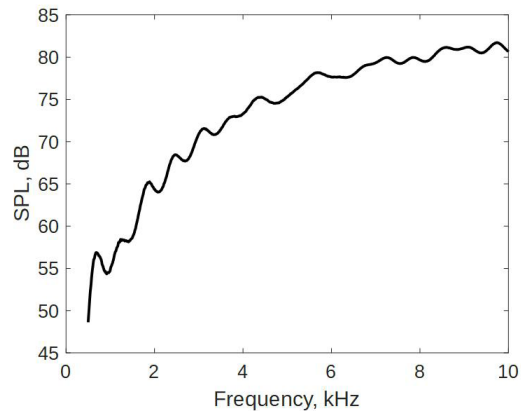


Beam profile at different frequencies along a wider dimension of the speaker.

Specifications



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 two (2) years 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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