



Akoustic Arts

B directional loudspeaker

Quick start guide V1.0



www.akoustic-arts.com

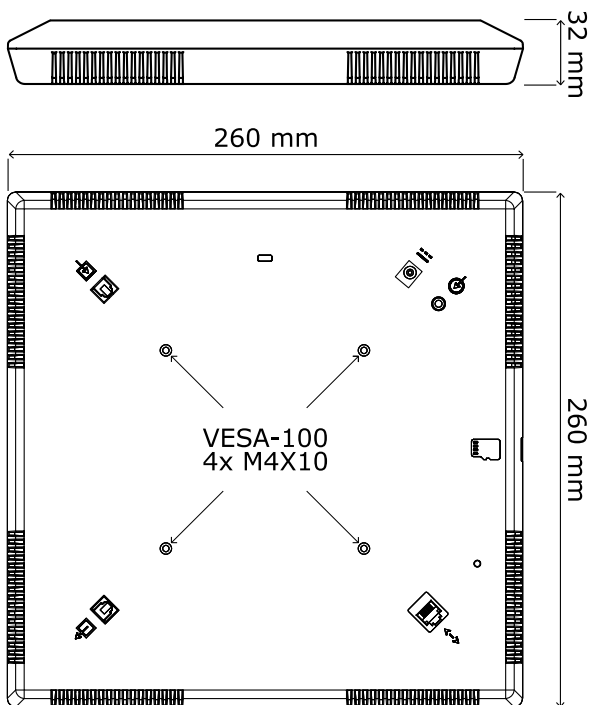
Specifications

Physical	26x26x3.2 cm - 1kg net
Mounting	VESA FDMI MIS-D 100x100mm M4X10 inserts
Power	100-240VAC, 36W
Operating conditions	Indoors only
Temperature	0 - 40°C
Humidity	10 - 70% non-condensing
Analog input	3.5mm TRS mini-jack Stereo 1.4V R.M.S., 60KΩ Balanced 4V R.M.S., 40KΩ
Digital input/output	TOSLINK optical connectors S/PDIF LPCM 32-96KHz
Supplied accessories	Quickstart guide Power adapter & AC cable IR remote & battery
Optional accessories	External presence detector Wall & ceiling mounts TOSLINK optical cables Audio isolation transformer



For indoor use only, in a dry and well ventilated area. Keep the product vents unobstructed. Do not open or disassemble the product in any way. In case of accidental fall, please use caution as sharp edges may appear. Please use exclusively the supplied power adapter. Do not listen at a distance shorter than 0.5m. Prolonged listening at high volume levels may lead to hearing loss.

Dimensions



Interfaces

-  24VDC power input
-  3.5mm TRS mini-jack analog audio input
-  TOSLINK S/PDIF digital audio input
-  TOSLINK S/PDIF digital audio output
-  RJ12 automation interface
-  Update button
-  MicroSD card slot
-  Security lock insert
-  VESA-100 inserts for M4X10 screws

Quick setup

1. Select a suitable wall or ceiling mount compatible with VESA-100 and install your B loudspeaker securely using all four M4 screws. See the « mounting options » section of the manual for details.
2. Connect your analog source to the 3.5mm mini jack, or your digital source to the TOSLINK input connector. See the « Audio source selection » section of the manual for details.
3. Connect the supplied power adapter to both your B loudspeaker and the AC mains.
4. Remove the plastic tab located at the bottom of the remote and start using your B.

Warnings & errors reporting

The central indicator will blink for:

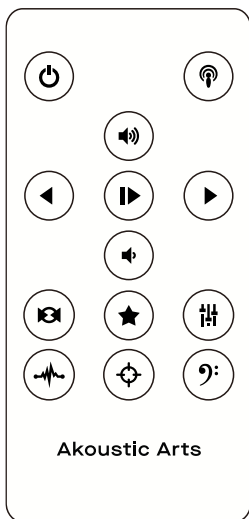
-  System muted, press  to resume
-  User too close (<0.5m)
-  System log warning
-  System temperature warning

The central indicator will flash for:

-  System corrupted, please update software
-  System log error, please contact support
-  System temperature shutdown

This manual is subject to change without notice. For warranty information, please refer to our website at www.akoustic-arts.com/support/.

IR remote control

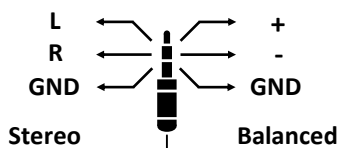


- On / Standby Press 2s for reset
- Presence trigger
○ Always on ○ 5s ○ 10s
- Volume up
○ ○ ○ ○ ○
- Volume down
○ ○ ○ ○ ○ ○
- Play / Mute
- Input source
○ Stereo ○ S/PDIF ○ Balanced
- Channel selection
○ Left+Right ○ Left ○ Right
- Sound presets
○ Music ○ Voice ○ Loud
- Test signals
○ ∅ ○ Tone ○ Noise
- Sound field
○ Norm ○ Narrow ○ Wide
- Bass enhancer
○ Level I ○ Level II ○ ∅

Audio source selection

Your B loudspeaker supports both analog and digital audio sources. Switch between inputs & options by pressing  on the remote.

Analog audio sources: 3.5mm TRS mini-jack



 **Stereo** line audio (computer, smartphone, tablet)

Set your source at maximum output volume for best performance. If excessive noise is present, consider inserting an audio isolation transformer in series with the input to break potential ground loops.

 **Balanced** line audio (professional equipment)

Set your source for a 4V R.M.S. nominal output.

Digital audio sources: TOSLINK optical jack



 **S/PDIF** IEC60958 Type II (TV, Display)

Only LPCM is supported, with a sampling frequency of 32 to 96 kHz. Please set your source accordingly.

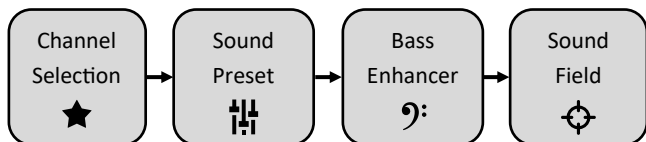
Daisy-chaining loudspeakers:

When using TOSLINK, Several loudspeakers can be daisy-chained by connecting the TOSLINK output from the first loudspeaker to the next, and on. Two channels are transmitted along the chain, enabling two independant audio contents to be played back. Each B loudspeaker is configured independently so every listening zone can be individually optimized.

Audio processing

Your B loudspeaker includes digital processing blocks to automatically enhance the audio signal and ensure a consistent, loud sound signature.

A simplified signal path is below:



★ **Channel Selection** switches the channels of a stereo input signal to be played back:

○ Left+Right ○ Left only ○ Right only

🔊 **Sound Preset** tunes the adaptive dynamics block, with the following optimisations:

○ Music ○ Voice ○ Loud

The dynamics block can be bypassed by pressing 🔊 for 2 seconds, and again to resume.

🎵 **Bass enhancer** leverages harmonics generation to enhance low frequency perception. Harmonics level can be tuned depending on content:

○ Level I ○ Level II ○ Disabled

This block is disabled when the Voice preset is in use as it can reduce speech intelligibility.

⊕ **Sound field** modifies the directivity pattern of your loudspeaker. Please refer to the « sound field control » section of the manual for details.

Sound field control

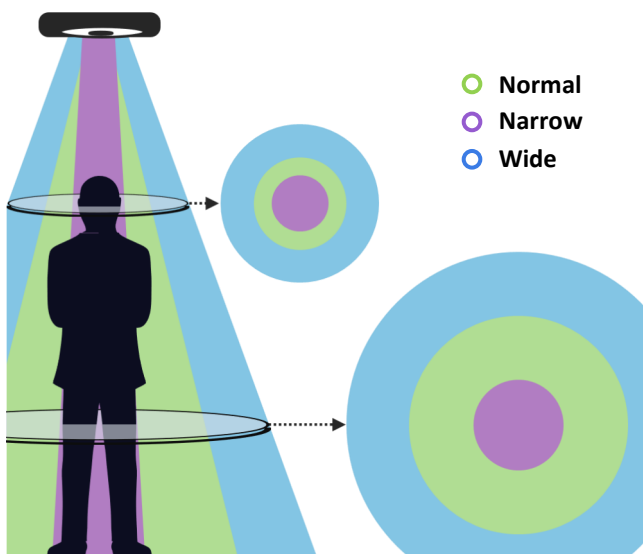
Your B loudspeaker employs innovative technologies to control the directivity of the audio beam and match a particular environment and setup.

Switch between sound field modes by pressing  on the remote.

 **Normal** sound field for when the B loudspeaker is installed above the user, at a distance of 1 to 1.5m.

 **Narrow** sound field for when the user is located further away from the loudspeaker and requires the highest output level.

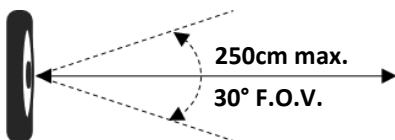
 **Wide** sound field when a wider area coverage is desired. Sound reflections on hard surfaces are also reduced, easing integration in bright environments.



↕	Normal	Narrow	Wide
100cm	Ø44cm	Ø22cm	Ø74cm
150cm	Ø75cm	Ø30cm	>Ø100cm
200cm	Ø100cm	Ø40cm	>Ø100cm

User detection & triggering

Your B loudspeaker includes a sophisticated presence detector that monitors objects located in its sound field.



Safety distance detection is always enabled and ensures that the user is not located closer than 0.5m to the front of the loudspeaker, otherwise sound output is reduced and the central indicator blinks purple. ○

Presence trigger enables playback only when a user is detected in front of the loudspeaker to further minimize sound pollution in public spaces.

A calibration process is necessary to ensure accurate detection in a particular setup. Position yourself at the desired detected location before enabling presence triggered playback using  on the remote. The sustain parameter, time during which playback is maintained after a user has left the detection area, is programmable:

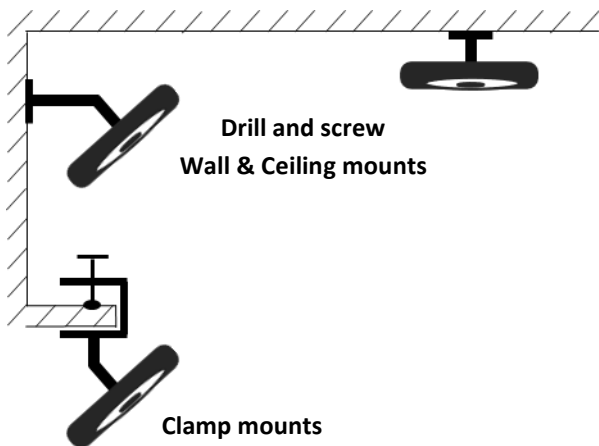
○ Always on ○ 5s sustain ○ 10s sustain

The calibration routine will complete in a second. The central indicator will report on detection reliability:

The maximum detection distance is 2.5 meters, but may be reduced in some Lightning conditions.

Mounting options

Your B loudspeaker is equipped with four M4-10 inserts placed in a 100mm square, compatible with VESA-100 mounts. Select a solution appropriate for your support material and desired orientation. Best results are typically achieved with the loudspeaker facing down at less than 45° angle.



Once your mount is solidly anchored, attach your B loudspeaker using all four M4 screws. Orient the loudspeaker towards the desired listening position prior to tightening the mount in order to reduce stress on the support during positioning.

An audio signal generator is embedded in the loudspeaker to ease installation. Test signals are accessible by pressing  on the remote.

 Ø Normal  1kHz Tone  Pink Noise

Pink noise approximates an audio signal and can be useful to fine tune the orientation of your speaker as well as setting the ad-hoc sound field.

Software update

Software updates are released regularly to improve the performance and reliability of your products. They are installed using a MicroSD card.

Creating the update microSD card:

1. Make sure to format the card before use as no files should be left present. A free formatting tool is available from the SD card association website at www.sdcard.org/download/formatter. Follow the provided instructions to perform a quick format, with all options left default.
2. Download the latest software version for your loudspeaker on the corresponding support page at www.akoustic-arts.com/support. Decompress the downloaded .zip file onto the root of the freshly formatted card, then eject it from your computer and insert it in the card slot located on the side of your B loudspeaker.

Updating your B loudspeaker:

3. Power up the loudspeaker, then press the update button located on the back panel for about 5s, or until the central indicator turns blue. 

The procedure will take a few minutes to complete, during which the loudspeaker should not be turned off as it may be rendered inoperable. Once the update is complete, the loudspeaker will restart automatically. 

If the update failed, the central indicator will flash orange.  Please proceed with the update again.

If the failure persists, please contact our support department at www.akoustic-arts.com/support.