

Børresen BM3

USER GUIDE

Rev.1.0 ENG

 Børresen

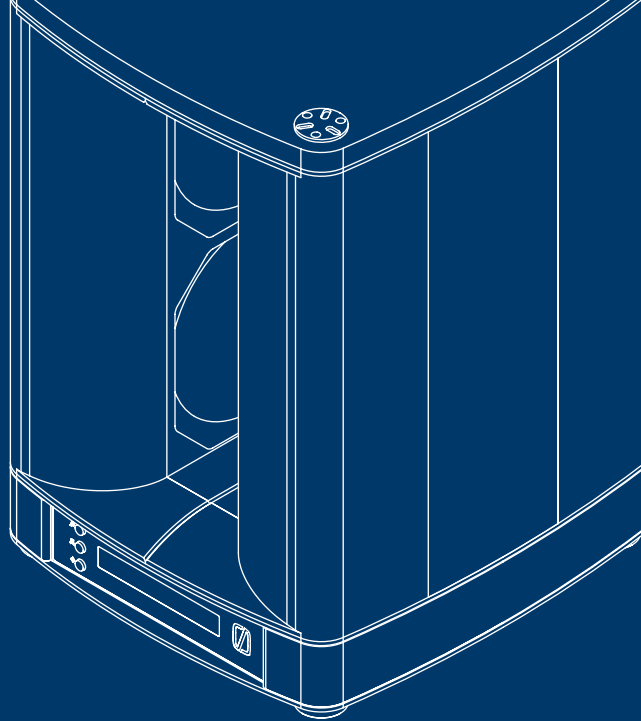
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SAFETY INSTRUCTIONS

1. Read and retain these instructions.
 2. Follow all warnings and guidelines.
 3. Clean the device with a dry, lint-free cloth. For deeper cleaning, unplug it and use a damp cloth. Avoid chemical solvents or cleaners.
 4. Do not place near heat sources like radiators, stoves, or heat-producing equipment.
 5. Protect the power cord from damage, especially at plugs, outlets, and exit points.
 6. Unplug during lightning storms or extended periods of non-use.
 7. Do not modify the polarized or grounding plug.
 8. Place the device horizontally on a stable surface.
 9. Only qualified personnel should perform servicing.
 10. Servicing is required if the device shows damage, such as:
Exposure to moisture or foreign objects
Liquid spills
 11. Keep liquids and objects away from the device's openings. Avoid dripping or splashing; do not place liquid-filled items (e.g., vases) on it.
 12. Use in moderate climates and domestic settings only.
 13. Connect only to the specified power supply. Ensure the mains plug is easily accessible for quick disconnection.
 14. If smoke or abnormal odors occur, turn off the device, unplug it, and contact your dealer.
- WARNING:**
- To reduce fire or shock risk, do not expose the device to rain or moisture.
 - The lightning symbol in a triangle alerts users to potentially hazardous voltage inside the device.
 - Do not remove the cover or back panel. There are no user-serviceable parts inside. Refer servicing to qualified personnel.





CONGRATULATIONS

You've selected the Børresen Bass Module 3 (BM3), a truly unique bass module designed for fast, clean, and natural low-frequency performance. Its folded-dipole design minimizes room interaction while enhancing clarity and depth.

Developed through the combined vision of Flemming Erik Rasmussen and Michael Børresen, the BM3 brings remarkable control, precision, and musical realism.

Enjoy bass performance on an entirely new level.

ABOUT THE PRODUCT

A bass module unlike any other

Unlike most subwoofers on the market, the Børresen Bass Module 3 is a velocity converter rather than a pressure generator. Instead of compressing air within a conventional ported or sealed enclosure, this folded-dipole speaker propagates air through openings on its front and back, delivering fast, precise bass with minimal distortion and resonance. Its design minimizes enclosure coloration and enhances bass dispersion control, making it an ideal choice for high-fidelity audio systems.

An exceptional design born from two exceptional minds

In mid-2021 Flemming Erik Rasmussen joined our design and development team, bringing over 35 years of experience and a profound artistic passion for hi-fi equipment. Flemming's arrival marked the beginning of a dynamic and productive collaboration, merging his artistic and aesthetic sensibilities with Michael Børresen's innovative approach. The result speaks for itself.

A heart that sets the pace

The power amplifier inside the Børresen BM3 is based on the latest version of Pascal class D amplifier technology, featuring high-speed UMAC switching modulation and generating less noise than its already excellent predecessor. This circuit now requires less filtering and has lower output impedance, ensuring precise control over the Bass Module's four woofers and delivering exceptional sound quality throughout the design.

A bass speaker designed as a room acoustics device

The Børresen Bass Module functions not only as a deep low-frequency source but also as an acoustic control device. Its dipole-like radiation pattern emits bass energy forward and backward in opposite phase, creating lateral cancellation that limits side-wall reflections and standing waves. This controlled dispersion reduces room interaction and smooths response, so bass sounds tighter, clearer, and better integrated with the space. In effect, the Børresen BM3 shapes room acoustics as much as it delivers accurate, powerful low-end performance.



POSITIONING

1. Introduction

The Børresen Bass Module is a precision-built low-frequency system designed to extend and enhance your loudspeakers. Its folded dipole design delivers fast, natural, and articulate bass.

Good placement is key—it helps the Bass Module blend seamlessly with your speakers and the room, maintaining clarity and balance across the soundstage.

2. Understanding Room Interaction

Every room has its own acoustic fingerprint caused by standing waves (or “room modes”). The Bass Module’s dipole design handles these more gracefully than a typical subwoofer, radiating sound evenly to reduce unwanted resonances.

Give the Bass Module some open space to breathe—this allows it to perform at its best. Keeping it too close to walls limits its ability to control reflections and may reduce its clarity.

3. Using Two Bass Modules

If you’re using a pair of Bass Modules, place each one **inside** its matching main speaker, not outside.

Better alignment: This keeps bass energy centered and in sync with your speakers.

Balanced sound: It also ensures even bass across the room.

Align the Bass Modules’ front panels with your speakers for the best phase and visual harmony.

4. Distance from Walls

For the dipole design to work effectively, avoid placing the Bass Module right against walls.

- Leave at least 30 cm from the rear wall.
- Keep at least 30 cm from side walls as well.

This spacing allows the rear wave to disperse naturally and prevents uneven bass buildup.

5. Using a Single Bass Module

With one Bass Module, think of it as a **bass extension**, not a subwoofer.

Best option: Place it centrally between your speakers, aligned with their front edges.

Alternative: If space is tight, place it just left or right of your equipment rack—whichever gives the clearest path to the listening spot.

Corner or outer placement can work, but more open space usually sounds better.

6. Fine-Tuning and Listening

Once the Bass Module is placed, run a quick calibration and listen for smooth, even bass. You shouldn’t hear “extra” bass—just a solid foundation that feels part of the music.

Use the phase control (0–180°) to fine-tune integration. Start at 0° and adjust in small steps until the bass sounds tight and blends naturally with the main speakers.

Acoustic instruments like double bass or piano are great test tracks—the bass should sound full and effortless, never boomy.

7. Key Tips

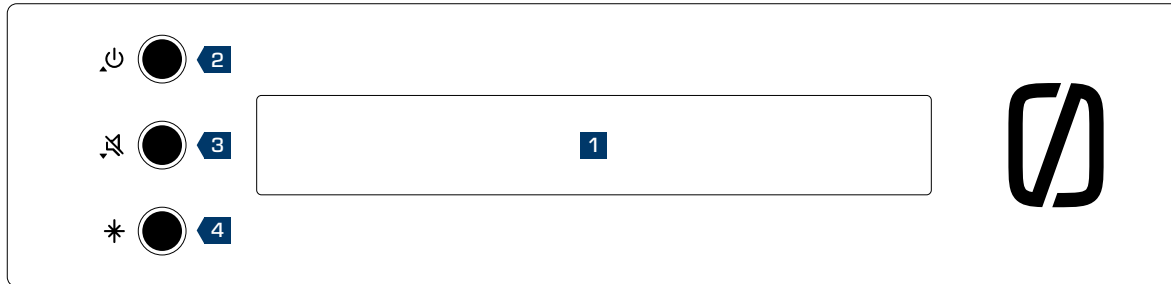
- Place two Bass Modules **inside** the speaker pair.
- Align the **fronts** with the main speakers.
- Leave **30 cm or more** from rear and side walls.
- For a single module, **center** it if possible.
- Aim for **symmetry** and **phase alignment**.

8. In Summary

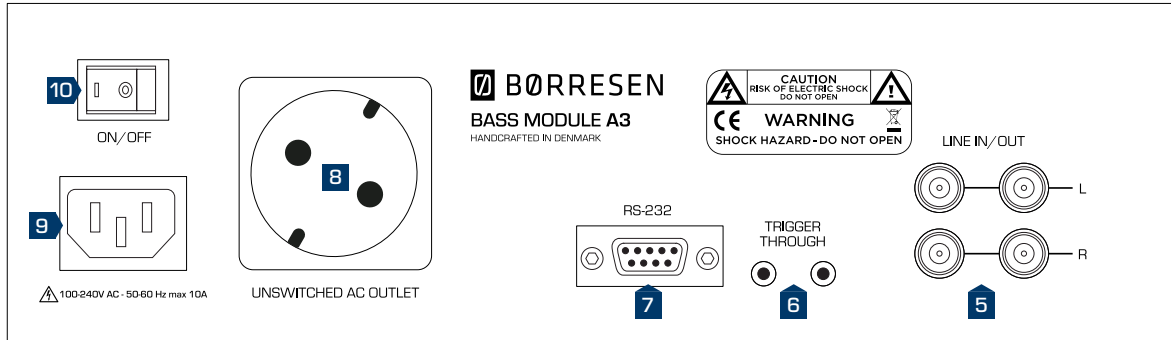
The Børresen Bass Module isn’t just about more bass—it’s about better bass. With thoughtful placement and a bit of fine-tuning, it becomes an organic extension of your loudspeakers, delivering low frequencies that are fast, natural, and deeply musical.

FUNCTIONS

Buttons on the front of the device



Connectors on the back of the device



FRONT/REAR PANEL FUNCTIONS

1 Display

During normal operation (with default settings) only a dot in the lower right corner is lit. If display dimming is switched off in the settings, the text "BBM" will be shown. When changing settings, the display will show the setting being changed.

2 Standby

Press the standby button to switch the speaker on from standby mode, or back to standby mode. When in standby mode, the front panel's lower left corner will show a single dim LED dot. Upon switching it on from the standby mode, the amplifier section will have its outputs muted, while a red dot line illuminated on its display will progress while the amplifier section is initialising.

When trigger cables are used between an amplifier and other units, these devices will be switched on and off together with the amplifier.

When the speaker is in menu mode, the standby button on the front panel is used as an up arrow.

3 Mute

When pressed briefly, the mute button will mute the speaker. The display will show "Mute". Press the button again, to switch off muting.

When the speaker is in menu mode, the mute button on the front panel is used as a down arrow.

4 Menu button

Press and hold the menu button for 3 seconds to enter the menu. You can change setting using the standby and mute buttons, and then press the menu button to step to the next setting. If you don't need to step through all the settings, press and hold the menu button for 3 seconds again to exit the menu. For more information, see the "Menu Functions" section.

5 Line inputs/Outputs

The speaker is equipped with two sets of single-ended, RCA line inputs/outputs. They can be connected to the pre-out terminal of an amplifier, or to a low pass output if you are using external crossover filtering.

If you are using one bass module (stereo operation), connect a signal to both the left and right inputs. Otherwise connect one channel input only (either input can be used). The second set of connectors can be used for daisy chaining multiple bass modules, or passing the signal to other active speakers.

6 Trigger connectors

The speaker is equipped with two DC trigger connections. These can be used to power-on speakers, power amps, and other equipment together with an amplifier. The second connector can be used to daisy chain another piece of equipment.

7 RS-232, software update

The amplifier RS-232 connector is used for software updates. You can check for software updates on the Børresen homepage.

8 Power outlet (CAUTION)

This outlet can be used to daisy chain further bass modules, or other active speakers. The outlet is unswitched. To ensure the best performance, please consult your Børresen dealer for a suitable mains cable.

9 Power inlet (CAUTION)

The speaker accepts mains voltages from 100 to 240VAC 50-60Hz. The power inlet accepts power cables with an IEC 60320-C13 female connector. To ensure the best performance, please consult your Børresen dealer for a suitable mains cable.

10 Power on/off switch

Toggle the switch to switch between fully off and standby mode. When the speaker is in standby mode, the power consumption is less than 1W. When the speaker is on and idling, the power consumption is less than 30W.

MENU FUNCTIONS

Note: Settings are stored when your device is switched to standby. So remember to switch your device to standby, before removing power, if you have changed settings.

Using the front panel you can change many settings of the speaker.

To enter or exit the menu, press and hold the MENU BUTTON **4** for 3 seconds.

When entering the menu, the current gain setting will be shown.

Press the MENU BUTTON **4** to cycle through the options.

Use the up and down front panel buttons (**2** / **3**) to change the settings.

The speaker will return to normal operation once cycled through all the options, or you can exit the menu when you have changed the required setting(s).

SETTINGS	DISPLAY SHOWS
GAIN Using this function you can set the gain of the speaker's preamp section. The range is 10 to 28dB.	Gain: 20.0dB
LOW PASS FILTER In this submenu, you can switch the internal crossover section on or off. If connection the speaker to a pre out connection, leave the filter switched on. If using an external electronic crossover, or a low pass output, you can switch the internal filter off.	Lo-pass: On
LOW PASS FREQUENCY In this submenu, you can change the crossover frequency of the internal filter. The range is 33-91Hz.	LPF Freq: 63Hz
DISPLAY BRIGHTNESS In this submenu, you can set the display brightness to 10, 40, 70 or 100%.	Bright: 40%
DISPLAY DIM In this submenu, you can set the display to switch off automatically after 1-5 seconds. The standard display dim setting is "5s". The display set in this mode shows a single red LED dot in its lower right corner.	DispDim: 5s
MODE In this submenu, you can select the operating mode of the speaker. The options are M/°C, M/°F, S/°C and S/°F. M and S refers to mono and stereo. Set this to mono, if you are using one (or more) bass modules per channel. If you use only one use the stereo setting. °C and °F refers to celsius of fahrenheit used for the temperature indication.	Mode: M/°C

MENU FUNCTIONS

SETTINGS

DISPLAY SHOWS

PHASE INVERSION

In this submenu, you can invert the phase of the output signal.

Invert: Off

VARIABLE PHASE

In this submenu, you can adjust the phase of the output signal. Note:

This option is only available, when using the internal filter. This can be used to integrate the bass module with the main speakers and the listening room. The adjustment range is 20-160°, or 200-340° if the phase is inverted.

Invert: Off

TEMPERATURE

In this submenu, the current operating temperature of the amplifier section is displayed.

Temp: 21°C

SOFTWARE VERSION

In this submenu, you can check the current software version installed on this device. If necessary, the software can be updated via the RS-232 connector on the rear panel.

SWVer: 1.0.0

FACTORY RESET

Press the ARROW UP button to reset all settings to factory default. When the reset is complete, the speaker will switch off.

Fact reset ^

SPECIFICATIONS

Børresen Bass Module 3

LINE INPUT	Maximum input 9V RMS (mono) or 4.5V RMS (stereo) Input impedance 10kohm
VOLUME CONTROL	56 0.5dB steps
NOISE REDUCTION	Active Tesla Coils: 36 Active Square Tesla Coils: 72 Dither circuitry: 3 Anti Areal Resonance Coils: 3
POWER CONSUMPTION	Standby: <1W Idle: <30W
INPUT VOLTAGE	100-240V 50-60Hz
MAX CURRENT	10A
ENCLOSURE IP RATING	IP20
DIMENSIONS	Height: 585 mm Width: 399 mm Depth: 429 mm Height: 23.03 in Width: 15.71 in Depth: 16.89 in
WEIGHT	46,4 kg / 102.3 lbs
FREQUENCY RESPONSE	20 Hz - 120 Hz
INPUT IMPEDANCE	10kΩ
DRIVERS	4 x Børresen DCC8 Neo
FINISH	High gloss black w. carbon details

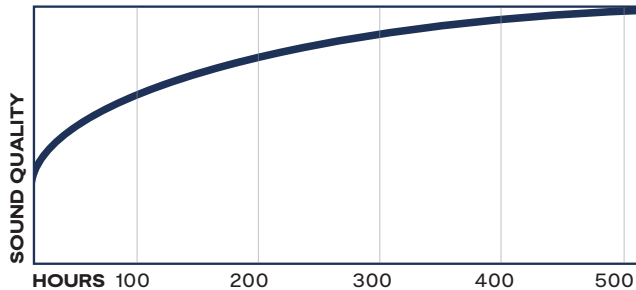
BURN IN

All new high-quality loudspeakers require a certain period of burn-in before they reach their full sonic potential.

Because Børresen loudspeakers are built with long-stroke bass drivers featuring natural rubber surrounds, they typically need **at least 50-100 hours** of real music playback at a reasonable listening level to settle in properly.

During this time, you may notice a gradual and continuous improvement in overall sound quality—tighter bass, more open midrange, and increased clarity as the drivers loosen and stabilize.

There are **no special precautions** you need to take throughout the burn-in period; simply enjoy your music as the loudspeakers naturally evolve toward their optimal performance.





Børresen

Support & Contact

For any questions, technical guidance, or assistance with setup and system optimization, our support team is available to help you achieve the full potential of your system.

Mail: info@audiogroupdenmark.com

audiogroupdenmark.com