Børresen BM2

USER GUIDE

Rev.1.1 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
Unusual operation, physical damage, or being dropped.

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:

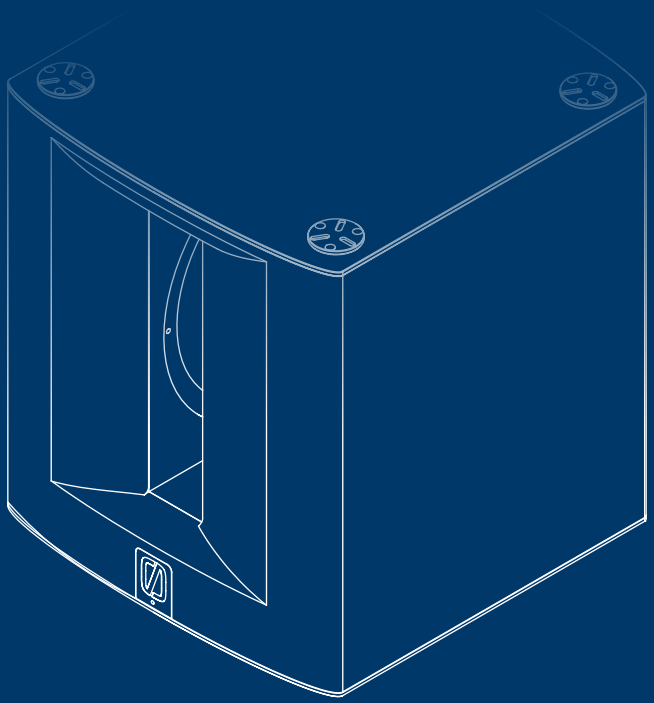
- To reduce fire or shock risk, do not expose the device to rain or moisture.

- 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 2 (BM2), 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 BM2 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 2 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 BM2 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 BM2 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 (30–120°) to fine-tune integration. Start with variable phase switched off (7), and then switch it on at 30° (7 and 8), and adjust in small steps until the bass sounds tight and blends naturally with the main speakers.

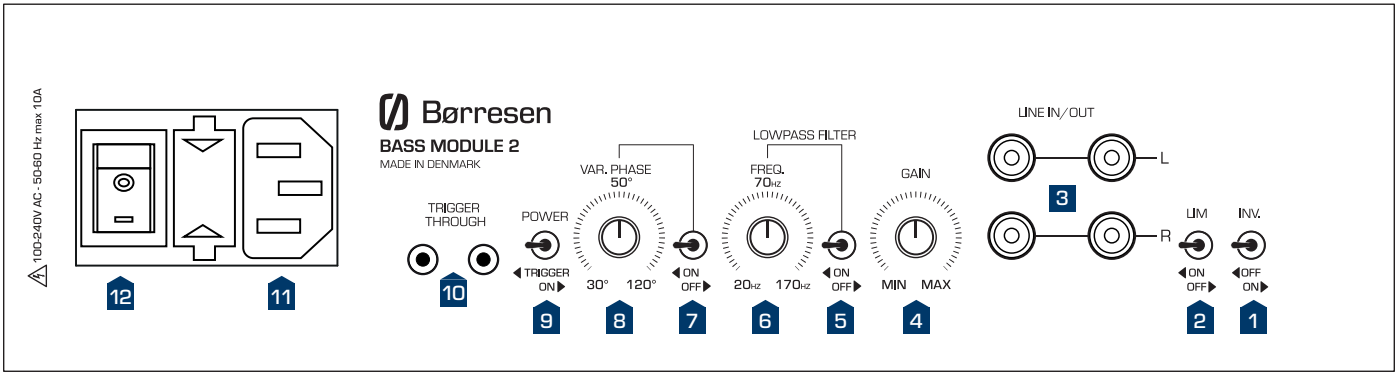
Acoustic instruments like double bass or piano are great test tracks—the bass should sound full and effortless, never boomy.

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

Connectors and controls on the back of the device



REAR PANEL FUNCTIONS

1 Phase inversion
Using this switch you can invert the phase of the output signal.

2 Limiter
Using this switch, you can enable or disable the limiter function. When enabled this limits the maximum output power delivered to the speaker drivers. For best sound quality, you should leave the limiter off.

3 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.

4 Gain
Using this control you can set the gain of the speaker's preamp section.

5 6 Lowpass filter
Using the switch 5, you can switch the internal crossover section on or off. If connecting 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.

Using the control 6, you can change the crossover frequency of the internal filter. The range is 20-170Hz.

7 8 Variable phase
Using this function, you can adjust the phase of the output signal. This can be used to integrate the bass module with the main speakers and the listening room. The adjustment range is 30-120°, or 210-300° if the phase is inverted - both phase angle ranges at 100Hz.

Use the switch 7 to enable/disable the function, and the control 8 to set the phase angle.

9 10 Power switching
The speaker can be powered on/off together with the rest of the audio system, using the trigger connectors. A 5-24V DC voltage applied to one of the connectors 10 can switch on the power. To use this function, set the switch 9 to TRIGGER. The second trigger connector can be used to daisy chain another piece of equipment.

If you set the switch 9 to ON, power is switched on permanently.

In both cases, the speaker will switch to low power mode, if an input signal has been absent for several minutes.

11 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.

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

SPECIFICATIONS

	Børresen Bass Module 2
DIMENSIONS	Height: 42.5 cm | Width: 37 cm | Depth: 38.5 cm Height: 16.73 in | Width: 14.57 in | Depth: 15.16 in
WEIGHT	22.5 kg / 49.6 lbs
LINE INPUT	Maximum input 9V RMS (mono) or 4.5V RMS (stereo)
POWER CONSUMPTION	Off in trigger mode: <1W | Idle: <30W
MAINS VOLTAGE	100-240V 50-60Hz
MAX CURRENT	10A
ENCLOSURE IP RATING	IP20
FREQUENCY RESPONSE	20Hz - 170Hz
INPUT IMPEDANCE	10kΩ
DRIVERS	2x Børresen Shallow10 Neo driver
FINISH	Matt black

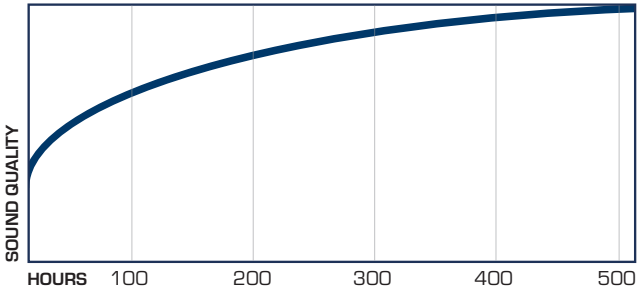
BURN IN

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.






Barresen
BASS MODULE 2

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