BØRRESEN X1

USER GUIDE | LOUDSPEAKER

X1



BØRRESEN

Rev.1.0 ENG | Please find the latest version of this manual on our website **audiogroupdenmark.com**

SAFETY INSTRUCTIONS

Avoid bringing external metal objects close to the loudspeaker. The tweeter contains very strong magnets and close contact with metal objects can cause damage.

The loudspeakers may be damaged due to distorted output signals from too weak, defective or overloaded amplifiers. Use only high quality amplifiers and run these within the specified power ratings.

Let the speaker reach room temperature before plugging it in. Condensation may arise in the electronic circuitry when moving the speaker from cold to warm surroundings. Such moisture may damage the speaker's components.

To protect the surface, please wear protective gloves when handling the loudspeaker.

Never use the product in damp settings. Foreign bodies must not be inserted into the bass reflex ports of the speaker. Avoid touching the speaker elements.

MAINTENANCE

Do not use a vacuum cleaner to remove dust from the loudspeakers elements. Brush it away gently with a soft brush.

Do not use any detergent. It may discolor the finish.

Clean the surface of the loudspeakers with a firmly wrung, damp cloth.

Do not expose the cabinets to direct sunlight.



CONGRATULATIONS

The Børresen audio engineering team are grateful and congratulates you for your choice of the Børresen loudspeakers. We are convinced that you will enjoy the exquisite music experience just as intimate and close as it was originally performed by the artist themselves.

Børresen Acoustics' philosophy is to bring people closer to the music by creating access to great, authentic and emotional music experiences. Børresen believes that everyone deserves these kinds of wonderful moments. The Børresen X1 has been designed on the solid foundation of Børresen Acoustics' development traditions, design philosophy and technological know-how.

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ABOUT THE PRODUCT

X-series membrane

Michael Børresen and his team of experts were able to leverage the cutting-edge technology and development process of the Børresen M series membrane. This exclusive membrane was engineered to achieve unparalleled stiffness while minimizing noise. To meet the stringent technological demands for exceptional high-end membrane performance, it was imperative to create, develop and assemble all components in-house.

The X series membrane consists of three layers laminated into a single unit: two layers of spread carbon fiber, with a layer of aramid honeycomb spacers in between. The combination of these materials gives this membrane its unique properties. The spread-tow carbon fiber was designed to provide a skin with optimal stiffness. This unique feature of the membrane reduces sound-disturbing vibrations and resonances to unprecedented levels.

The magnetic motor system

Børresen uses double copper caps on the pole rings of the X1 magnet motor system to achieve a balance between high flux and low inductance. The use of these double copper caps was adopted from the Børresen Z-series. Copper responds to flux variations, and the effectiveness of these copper rings determines the steepness of the inductance curve and the extent to which electromagnetic resonance is reduced. Consequently, lower inductance results in fewer spikes on the impedance curve, which ultimately reduces the load on the amplifier. To achieve optimum efficiency, the X1 has two pole rings, which inevitably results in some flux loss and thus, lower efficiency. However, this drawback is compensated for by the use of a larger magnet.





The tweeter

The Børresen X1 loudspeaker features a tweeter that shares the same design as the tweeters found in all other Børresen loudspeaker series. However, the mass of both the magnet and iron components has been reduced. This reduction was made possible by the exceptional efficiency of the original tweeter. Although the efficiency has dropped slightly from the excellent 94 dB to 90 dB, it remains an impressive value for a tweeter. The tweeter operates from about 2.5 kHz and upward with an incredibly low moving mass of only 0.01 grams. Its fully concealed design allows for fast operation, and its remarkable durability allows it to handle highly dynamic sound transients without any disruptive drops in audio quality.

Crossover

The Børresen X1 is equipped with a parallel crossover built with the same high-quality components from the Z Series. This makes for a very mechanically stable crossover that minimizes its self-resonance.

The cabinet

The surface of the cabinet of the X1 speakers is finished in an elegant black or white piano lacquer and enhanced with optical carbon fiber inserts. The cabinet itself is made of a robust wood composite material that has been carefully reinforced to effectively eliminate sound distortion. In addition, this material minimizes the impact of mechanical factors, particularly hysteresis. The result is a significant improvement in sound performance. The cabinet of the Børresen X1 is equipped with 8 bass reflex ports, and the tweeter is vented to compensate for the air pressure that builds up. The bass section features carefully calibrated, tuned ports, precisely tailored to match the musically relevant frequencies.

UNPACKING

Børresen loudspeaker models are protected during transport by stable and secure packaging.

Due to their weight and dimensions, they are shipped in double layer box.

1. Carefully lay the box flat on a plane floor.

2. Open the outer and inner box. Do not use knife or sharp instruments to break the tape.

3. Put on protective gloves for further handling of the loudspeaker.

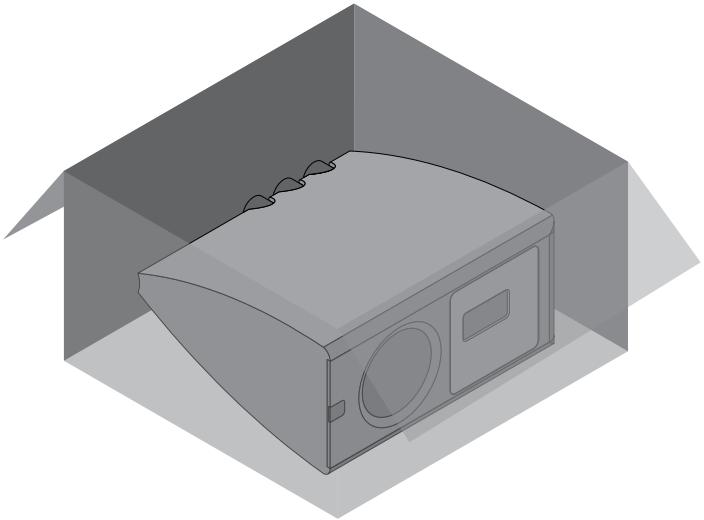
4. Now, lift the box to an upright position.

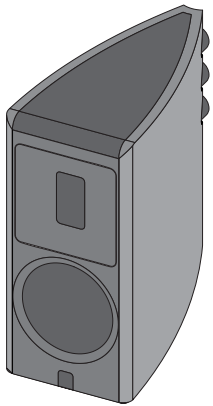
5. Pull the loudspeaker and the protective foam out of the box, sliding it on the bottom foam. Be careful not to tilt.

6. Remove the bottom foam by tilting the loudspeaker and then the remaining foam to unpack the loudspeaker completely.

7. Put the loudspeaker to the position you desire.

8. Please observe guidelines for positioning and connecting your loudspeakers on page 7 and 8.





CONNECTING THE SPEAKERS

With every connection system, ensure that the contact is tight and has a proper contact area.

Connectors with gold plating will typically offer the best results and remain corrosion-free.

Please ensure that the positive and negative cables do not make contact with each other.

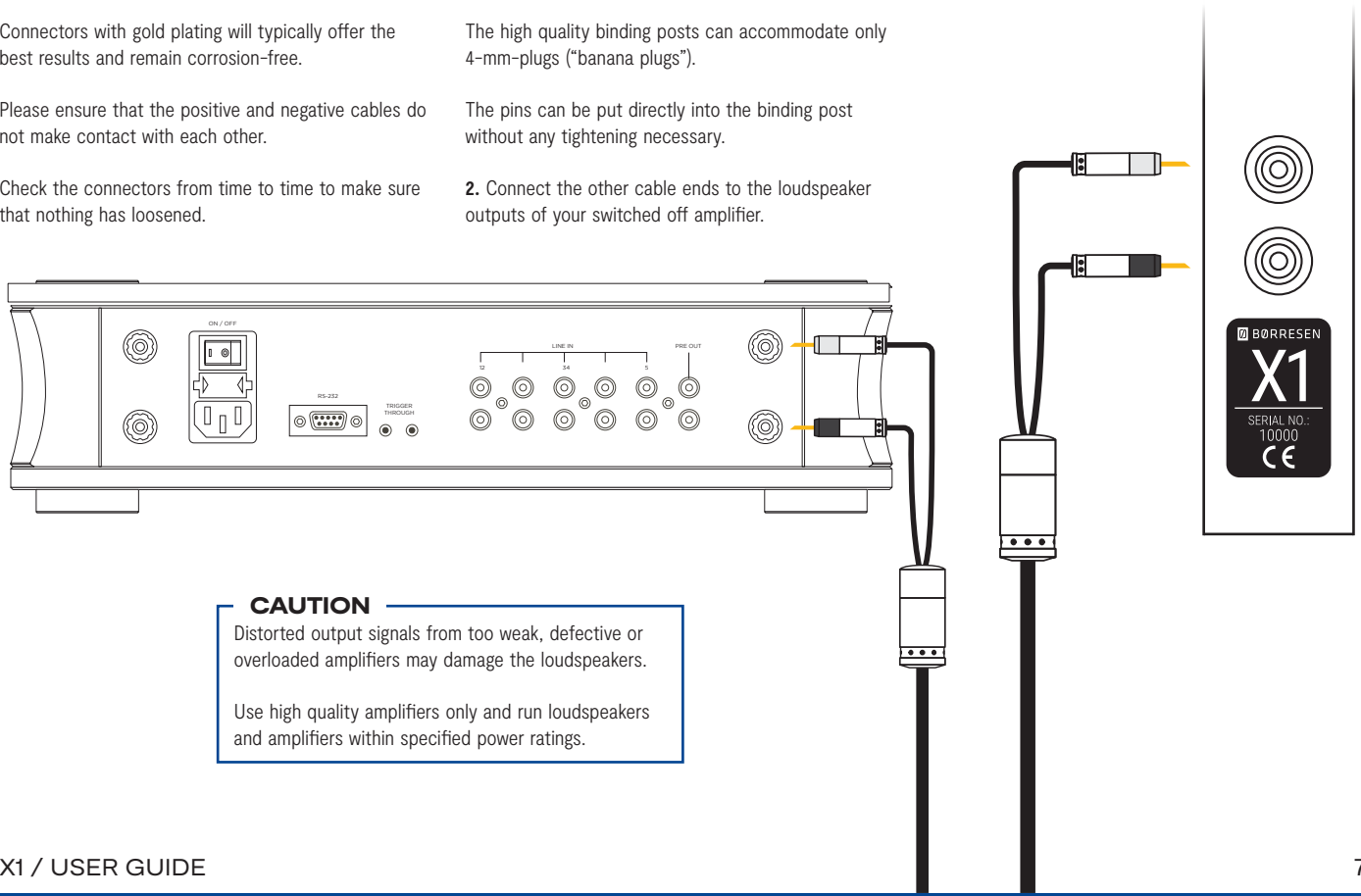
Check the connectors from time to time to make sure that nothing has loosened.

1. Connect a two-pole (+/-) loudspeaker cable to the binding posts, located at rear of the loudspeaker.

The high quality binding posts can accommodate only 4-mm-plugs (“banana plugs”).

The pins can be put directly into the binding post without any tightening necessary.

2. Connect the other cable ends to the loudspeaker outputs of your switched off amplifier.



CAUTION

Distorted output signals from too weak, defective or overloaded amplifiers may damage the loudspeakers.

Use high quality amplifiers only and run loudspeakers and amplifiers within specified power ratings.

POSITIONING

The sound from loudspeakers depends very much on the room and on the way they are set up. Please consult your dealer for advice on how to set up your Børresen loudspeakers in your home.

These guidelines are general and will give you a good starting point for further experimenting in finding out what is just the right setup for your room.

A

The distance from the side walls to the loudspeakers

The Børresen loudspeakers are not that sensitive in regard to getting to close to sidewalls. A distance of about 15 cm will be enough. Too short a distance to the side walls is likely to increase the amount of bass.

B

The distance between the rear of the loudspeakers and the wall behind them

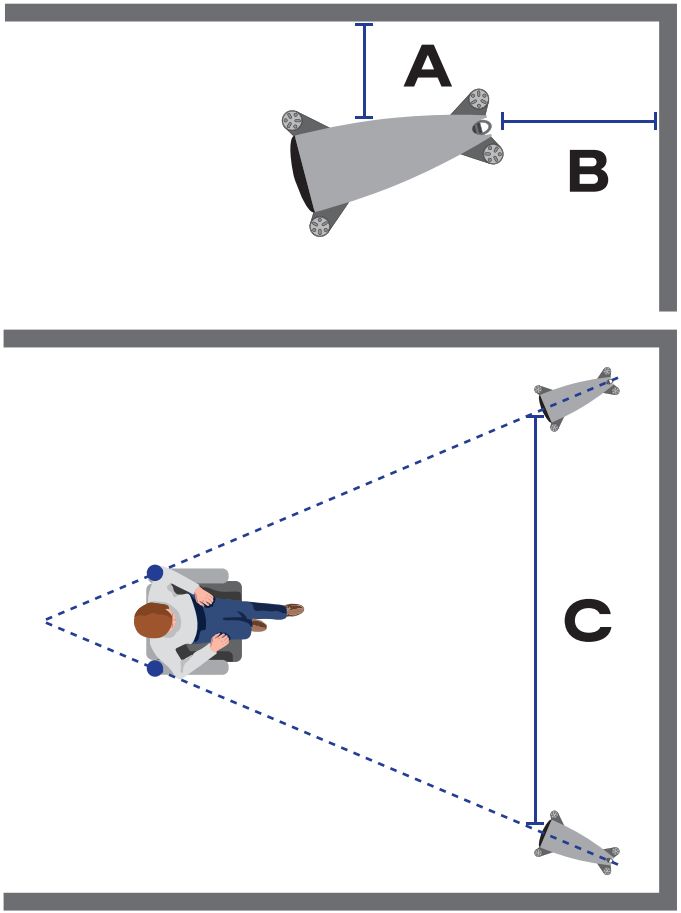
Start with a distance of 50 cm. This distance should be exactly the same for both loudspeakers. Try the loudspeakers out with music you know and find out what distance gives the best sound.

Greater distance = weaker bass, more precise bass, better precision and bigger sound stage. Shorter distance = more and softer bass, and a smaller sound stage.

C

The distance between the loudspeakers and the listener

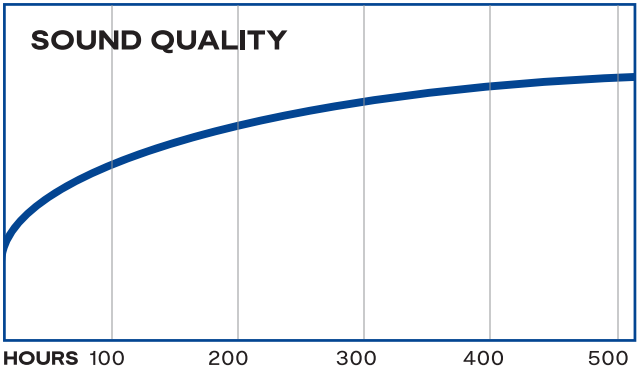
The ideal distance between the loudspeakers is not less than 3 metres. Put the loudspeakers in an angle making the center point at the listeners shoulders. The lines should cross about one meter behind the listeners head, meaning that the listener should just be able to see the two inner sides of the speakers.



BURN IN

All new high quality loudspeakers need a certain period of burn in time.
As Børresen loudspeakers uses long-stroke bass driver with natural rubber surrounds, the loudspeakers needs at least 50 – 100 hours of actual music playing at decent sound level.

You will notice a gradual improvement in sound quality.
No particular precautions need to be taken during those hours.



RECOMMENDED PRODUCTS

Ansuz loudspeaker cables

Børresen recommends using high-end Ansuz speaker cables with the X6 speaker. These cables are designed to deliver pure signal flow, reducing resistance, induction, and noise floor for an authentic soundstage. As Børresen speakers and Ansuz cables are developed and designed by the same team, they share the same DNA and a unique synergy that ensures a seamless and exceptional sound reproduction experience.

Ansuz PowerBox

For clean power delivery to the speakers, Børresen recommends using the Ansuz PowerBox. This device reduces noise and controls resonances, resulting in an expansive soundstage with enhanced musicality and detail.

Ansuz Darkz resonance control

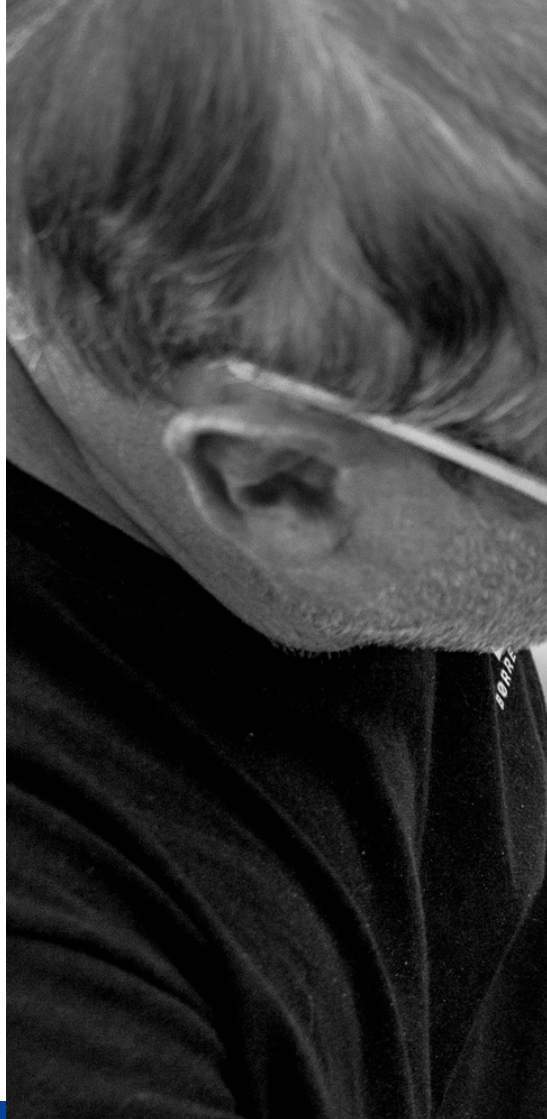
The loudspeaker stands are prepared for using the Ansuz Darkz resonance control devices. Ansuz Darkz absorb vibrations that are not directly related to the signal path. The absorption results in an audible vibration feedback, which affects the sound quality. It is the natural and authentic sound that Ansuz Darkz devices are designed to preserve. There is no alteration of the authentic sound reproduction which, when using conventional grounding materials, often make the sound unnaturally cold and harsh.

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SPECIFICATIONS

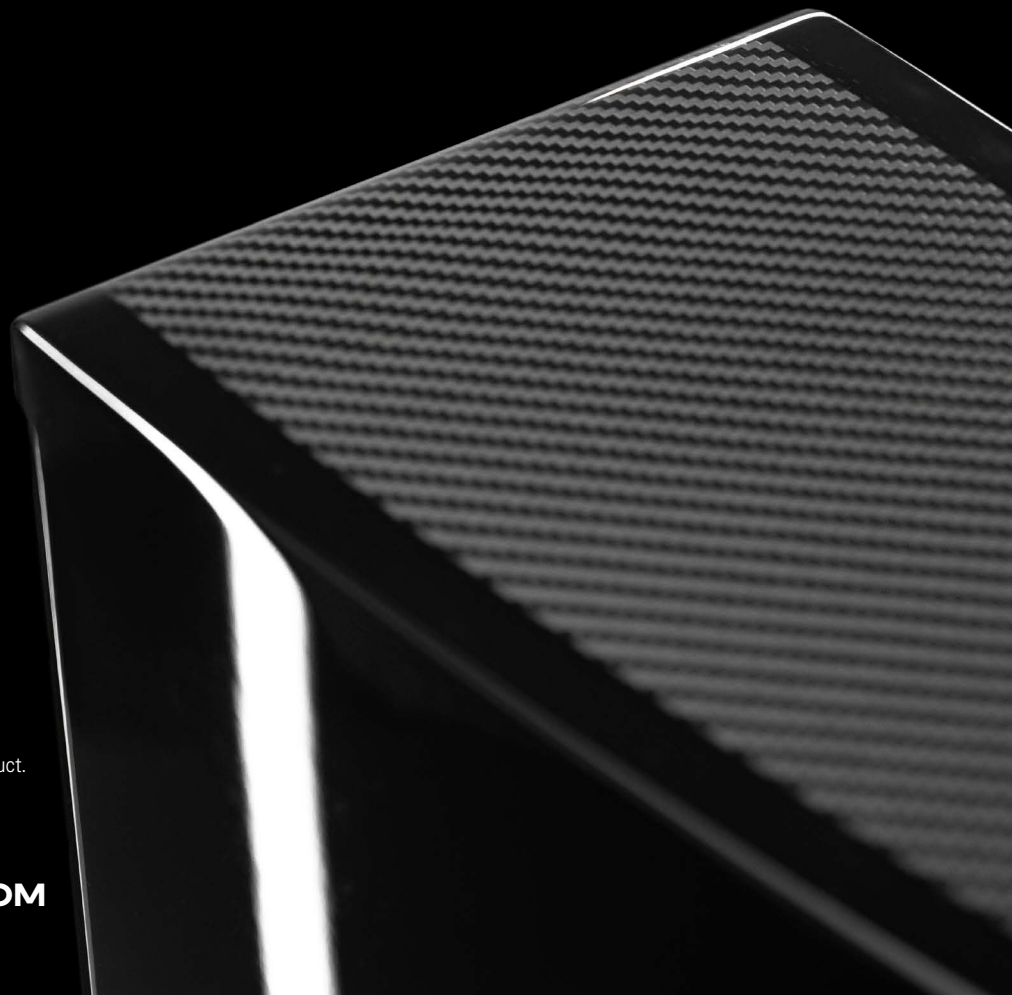
DIMENSIONS H x W x D	**Speaker:** 42,0 x 20,0 x 39,0 cm / 16,5 x 7,9 x 15,4 inch **Stand:** 71,0 x 29,5 x 39,0 cm / 28,0 x 11,4 x 15,4 inch **Speaker & stand:** 113,0 x 29,5 x 39,0 cm / 44,5 x 11,4 x 15,4 inch
WEIGHT	**Speaker:** 12,9 kg / 28,4 lbs **Stand:** 10,8 kg / 23,8 lbs **Speaker & stand:** 23,7 kg / 52,3 lbs
FREQUENCY RESPONSE	50 Hz – 50 kHz
SENSITIVITY	86 dB / 1W
IMPEDANCE	>6 Ohm
RECOMMENDED AMP.	50W

1 X TWEETER	Børresen X-series ribbon planar tweeter
1 X DRIVER	Børresen bass/midrange driver: 4.5 inches
FINISH	**Speaker:** Black or white piano lacquer **Stand:** Black




HANDCRAFTED
IN DENMARK

BØRRESEN



We would love to hear about your experience with this product.
Don't hesitate to contact us with feedback or questions.

info@audiogroupdenmark.com

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