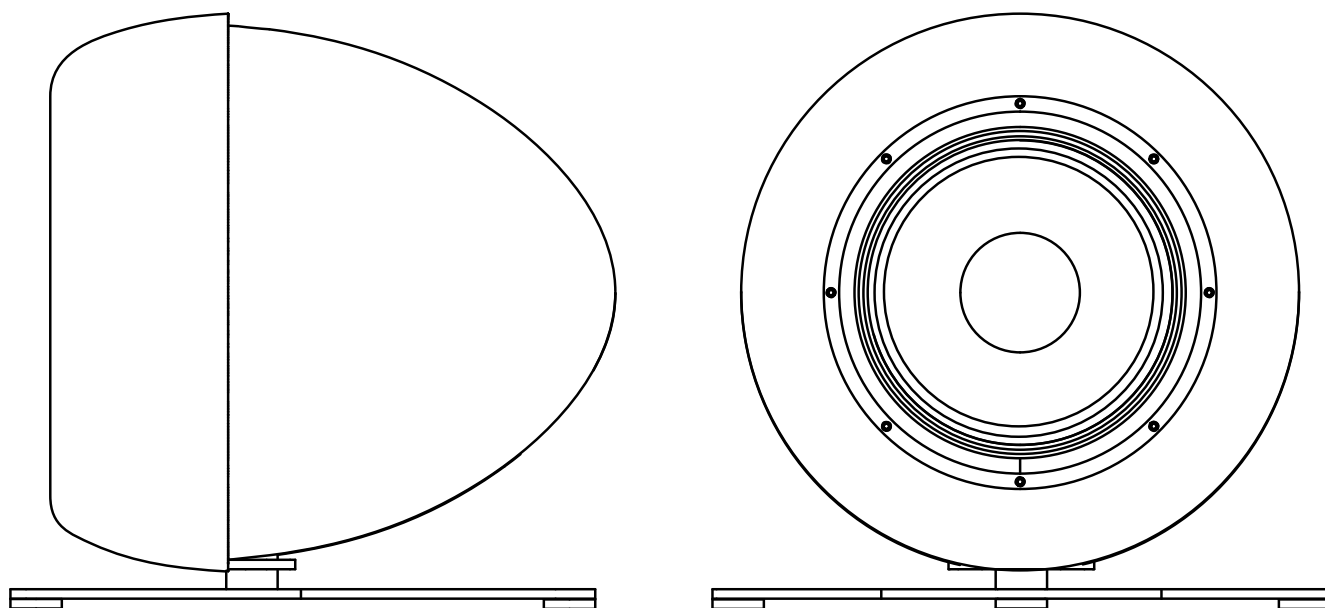


Borea Sub 13.1

12" Acoustic suspension subwoofer



User guide

Borea Sub 13.1

12" Acoustic suspension subwoofer

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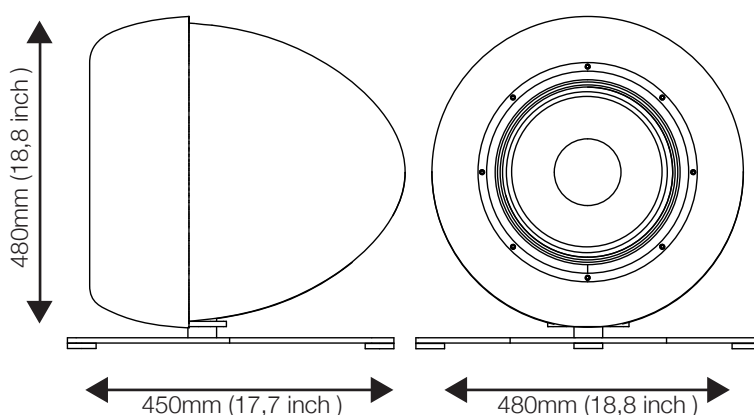


1 Technical Specifications

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Borea Sub 13.1 is a long excursion acoustic suspension system in a ovoidal axisymmetric closed structure, characterized by extreme sensitivity, dynamics and emission power, made with an incredibly rigid and light structure of durable composite materials. Unlike all other alternatives currently available, this low-frequency speaker was made without technical and dimensional compromises, with structural technologies not utilized in the professional audio market. Thus it achieves maximum acoustic performance with an elegant design and a unique personality. All other subwoofer, bass reflex, on the professional audio market are built inside wooden box structures. This makes them flawed due to structural resonances and internal acoustic problems related to stationary waves. Furthermore, the wooden structure is very heavy and is characterized by problems related to protection and durability, with little resistance to atmospheric agents. Ovoidal 13.1 represents an exclusive technological innovation, built from high quality composite materials in a special ovoidal shell shape. The scratch-resistant glossy surfaces deliver resistance to atmospheric agents, combined with a great power with an extremely high efficiency and a very high sensitivity, which allows Ovoidal 13.1 to truly distinguish itself when compared to any product from the main competing brands. Borea Sub 13.1 guarantees the perfect loading of low frequencies in sensitivity, depth, control and SPL expressed by the usage of few watts. Borea Sub 13.1 uses a single high quality , high excursion transducer of 12" diameter. The structure is rigid and very light (considering the overall weight and the dB/Kg ratio). The aesthetic impact is extraordinary and is absolutely unique on the professional sound market.

TYPE	Acoustic suspension subwoofer in ovoidal structure
FREQUENCY RESPONSE	38 Hz - 1,5 KHz
TOTAL SENSITIVITY	92 dB 1W/1m
NOMINAL IMPEDANCE	8 Ohm
POWER HANDLING	450 W nominal, 900 W power continuous program
MANAGE	2 Ch amplifier to a couple of Borea (stereo)+DSP to match to satellite. High-pass filter @30Hz, 24 dB/oct. But Low- pass filter @100-120Hz, 24 dB/oct. LR
RECOMMENDED AMPLIFIER	Full Fatt Audio FFA 6000
DISPERSION	Omnidirectional
CONSTRUCTION MATERIALS	Fiber-reinforced composite, stainless steel
FINISH	all ral color and texture on order
CONNECTORS	1(2)x Neutrik NL4 or custom preference
DIMENSIONS (WITH SUPPORT)	(W) 480mm (H) 480mm (D) 450mm (W) 18,8inch (H) 18,8 inch (D) 17,7inch
WEIGHT	15 Kg (33 lb)



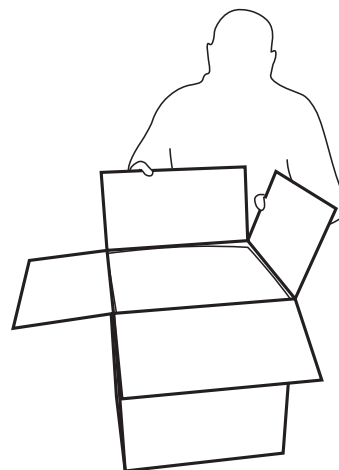
2: Unboxing

The Borea system, like every other Pequod product, is built with high standards of control and quality. At the end of the production process and before packaging, each system is tested: acoustically measured and recorded in our company database. For each Borea serial number, we have the related test files recorded in the archive. Before being packed in its box we complete an inspection of surfaces and structures. Units are packed into wooden crates or heavy cardboard boxes with internal foam padding before shipping.

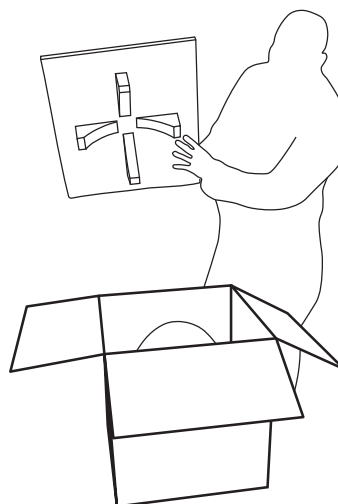
Extraction from box:

The Borea weighs 15 kg each, and is taken from the box simply following the steps shown here. Keep the packaging for further storage or transportation, unless units are to be permanently installed.

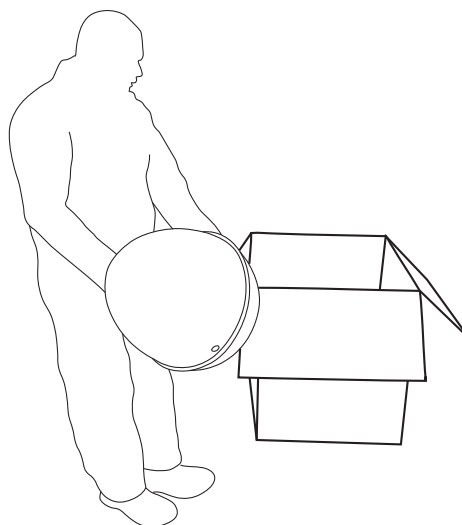
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1: Carefully cut tape and open cardboard box



2: Remove packing materials and save for re-use



3: lift speaker body with both hands when ready

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Pequod 
HIGH PRO SPEAKERS

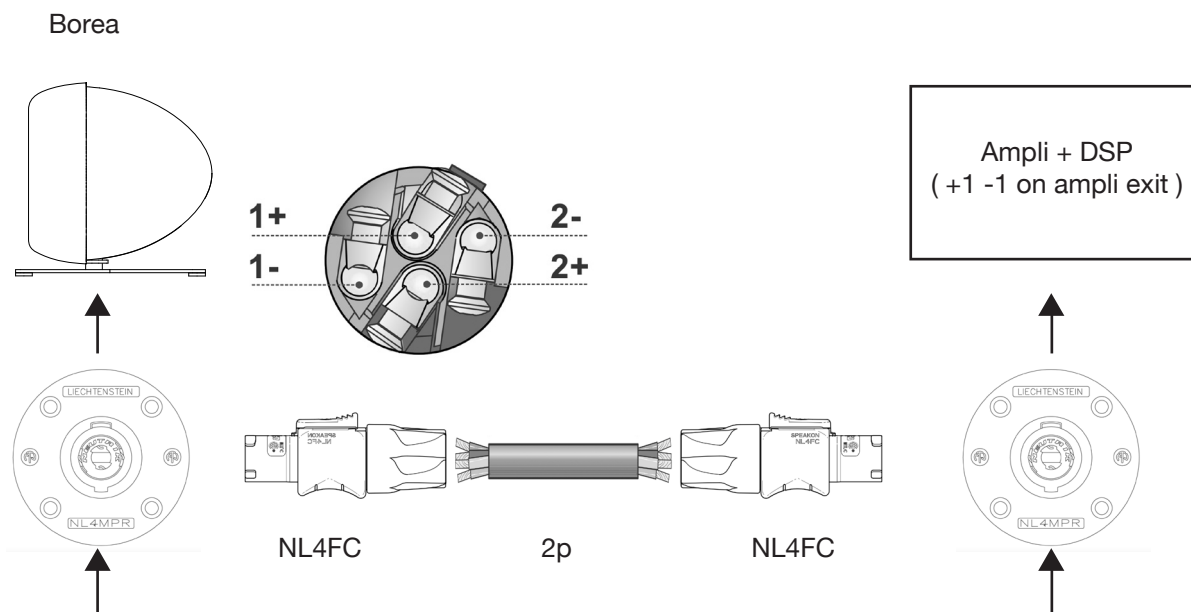
Borea has an input made with a female NL4 connector. Through a dedicated cable and terminated with 2 male NL4Fc connectors it is connected directly to the output of the power amplifier. The connectors are standard NL4 (+ 1 / -1 connected + 2 / -2 empty) or water proof on request.

In case of custom realization by the installer of the connection cables, we recommend specifying installation-grade Low Smoke Zero Halogen (LSZH) cables for permanent installations. The cables should use Oxygen Free Copper (OFC) of grade C11000 or above.

For distances of over 15 meters between Borea and amplifiers we recommend increasing the section of the cable poles to 4 sq mm, to avoid excessive emission level losses. For lengths of less than 15 m, you can use 2-pole cables, each with a section of 2.5 sqmm.

Connection diagrams:

A) 1x Borea (see fig.below): Cable between Borea and amp (not supplied): 2-pole cable (2.5 sq mm minimum section per pole up to 15 m cable length, in addition we recommend switching to 4 sq mm for pole), terminated with NL4Fc male connector (+ 1 / -1 connected and corresponding to +1 red and -1 black on the amplifier, + 2 / -2 empty) to connect to the Borea input, which has an NL4 female connector, standard or WP on request.



**B) 2x Borea (in parallel, close to each other)
(see fig. Below):**

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1x Main cable between Borea and amp, made with 2-pole cable.

Terminals made with NL4 male connectors (+ 1 / -1 connected + 2 / -2 empty), terminal towards the amplifier made with NL4 male connector (+ 1 / -1 connected to +1 red and -1 black on the amplifier and + 2 / -2 empty). Sections of poles: 2.5 sq mm minimum section per pole up to a cable length of 15 m, in addition we recommend switching to 4 sq mm per pole.

1x Secondary cable, 2-pole, which connects the 2 Boreas together.

Terminals made with NL4 male connectors (+ 1 / -1 connected + 2 / -2 empty). Sections of poles: section 2.5 mmq per pole and cable length of about 1.5 m

DSP general settings:

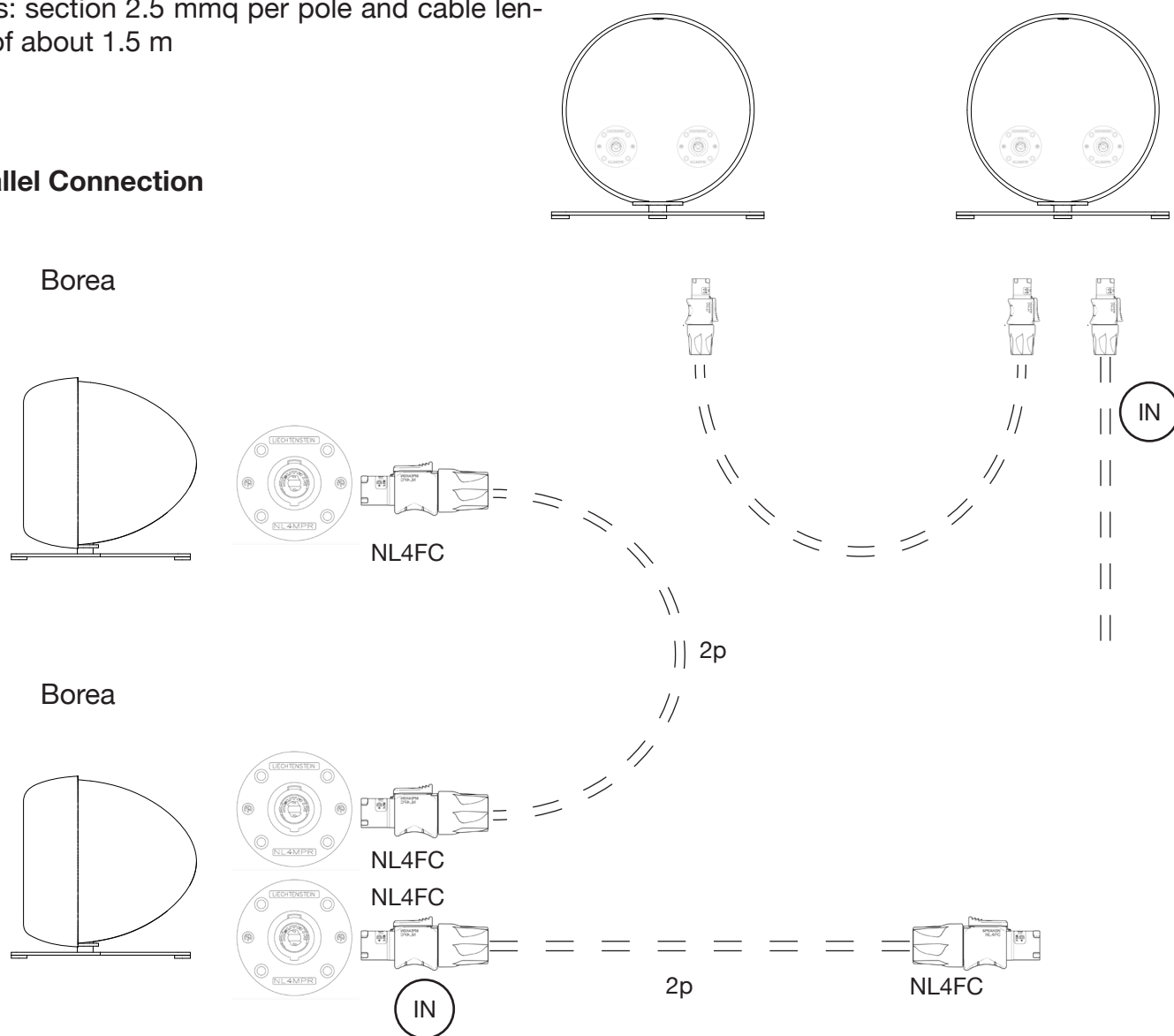
Band pass:

High-pass filter @ 30Hz, 24 dB / oct But.

Low pass filter @ 100-120Hz, 24 dB / oct LR.

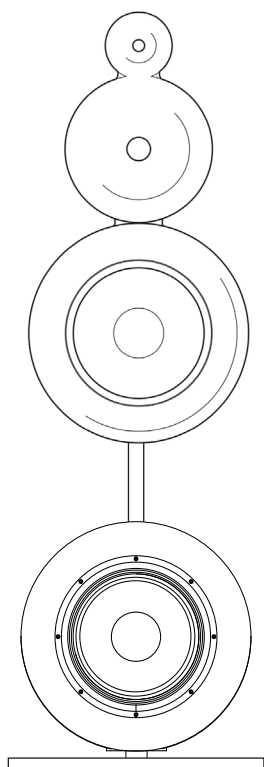
Gain and Time Alignment: it depends on Satellite utilized

Parallel Connection

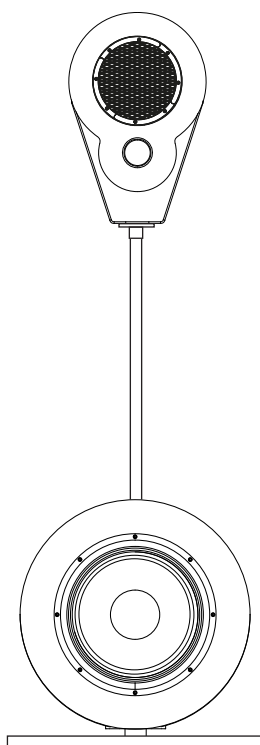


The Borea can typically be used as a very high quality system to sonorize small listening areas, or as subwoofer for small-scale live events in need of high sound quality. In all cases it is necessary to use suitable satellites (Ostro, Zephyrus, Kona available from the catalog Pequod) to have a full range system. Borea represents the optimal choice as a subwoofer to be combined with the Ostro, Zephyrus (or for Kona storm by increasing the number of sub Borea for each satellite, to balance the emissions), to have a full range system, of high quality and global sensitivity.

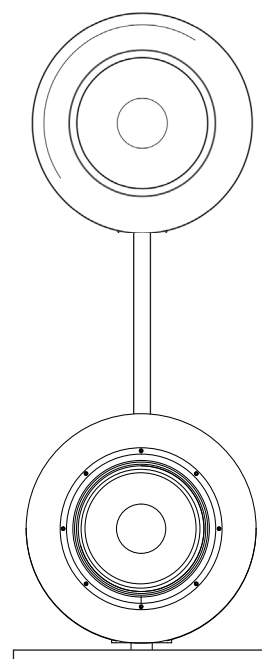
The figure shows the typical combination, with Kona, Zephyrus and Ostro.



Kona + Borea



Zephyrus + Borea



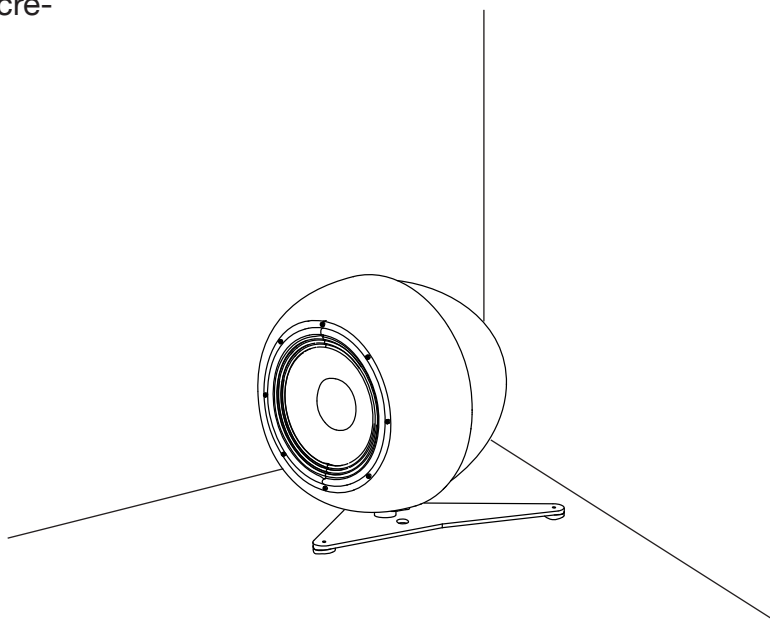
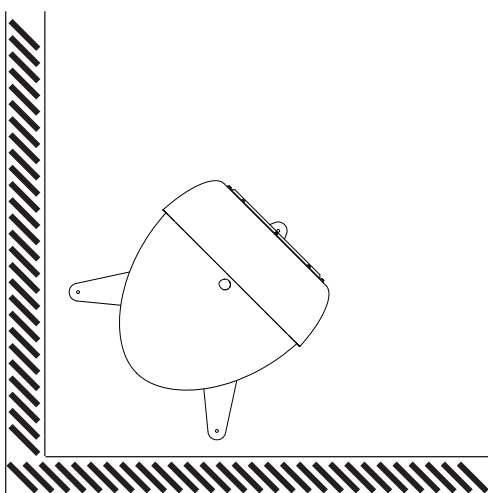
Ostro + Borea

In Indoor systems:

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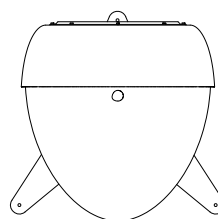
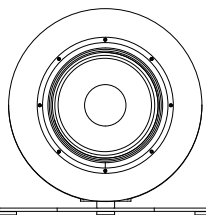
we recommend placing the Borea against the wall (wall position) or in a corner position, to avoid harmful (for the purposes of emission regularity) reflections of acoustic waves and increase the overall performance of the system.

Corner Position

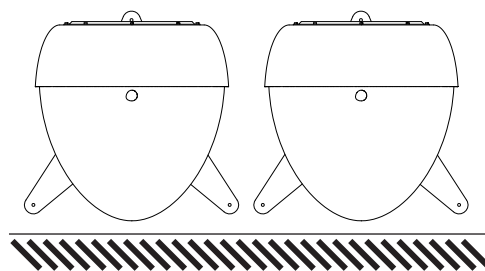
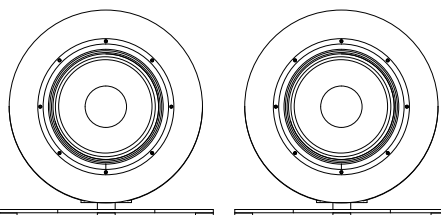


Wall Position

x1



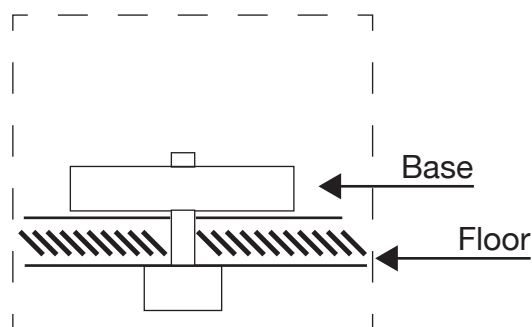
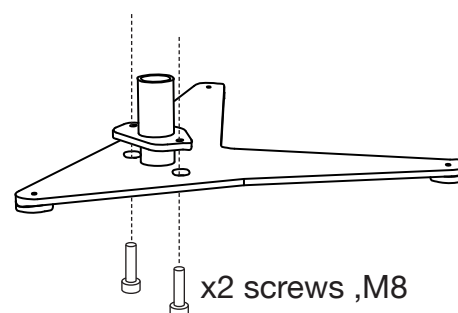
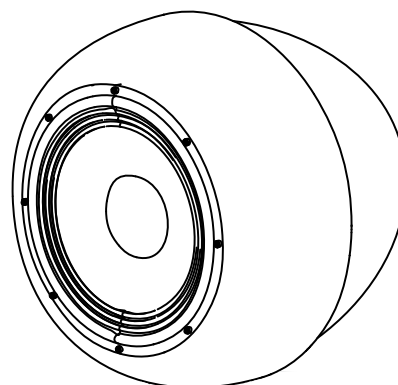
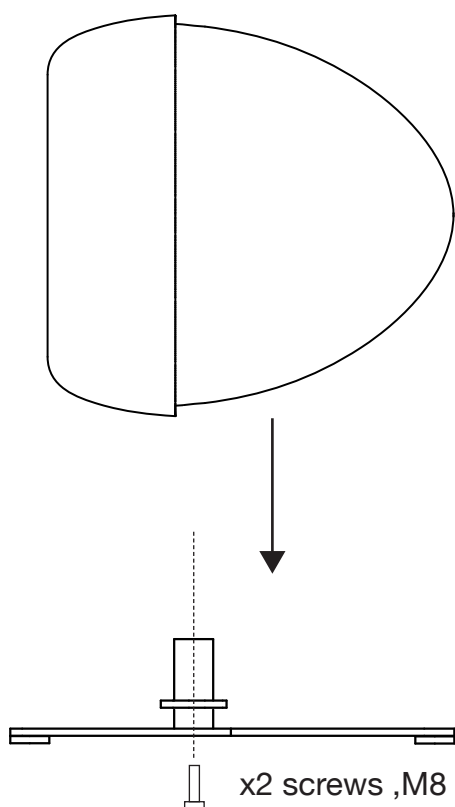
x2



Assembly + anchoring:

As for the assembly and possible anchoring of Borea during installation, the subwoofer must be placed in its frame, inserting the tube in the lower seat of the sub (tighten the 2 screws, metric thread M8).

If necessary, there is the possibility of anchoring the 3 feet of the frame to the ground, by means of screws, metric thread M6, screwed between the floor and the threaded insert M6, placed in each foot of the product.



5: Accessories

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In the Pequod catalog there are some accessories to be used with Borea.

Cod. BAG01BO: Protective PVC Bag sized for Borea, waterproof soft finish to protect from scratches and weather

Cod. GRBO: Front Protection Grille of the woofer, made of stainless steel. Usually included as standard component in most orders, delete option is available when protection is not needed

Cod. BS01BO: Stainless steel base for Borea: necessary when Borea is connected to a Sat (with interconnection pipe)

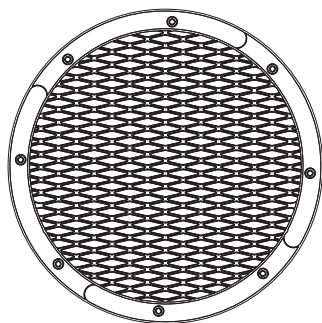
Cod. BS02BO: Stainless steel base for Borea: recommended when Borea is a stand alone subwoofer (on floor ,stage ,desk)

Cod. TBBBO: Interconnection pipe, stainless steel diameter 35mm for sat. (Lenght: 350, 550, 650, 1000)

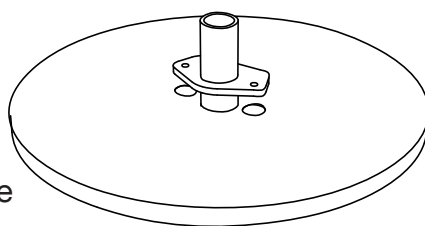
Cod. TBB20BO: Interconnection pipe, stainless steel diameter 20mm for sat. (Lenght: 350, 550, 650, 1000)

Cod. ADT3520: adapter to use interconnection pipe with diameter 20 mm

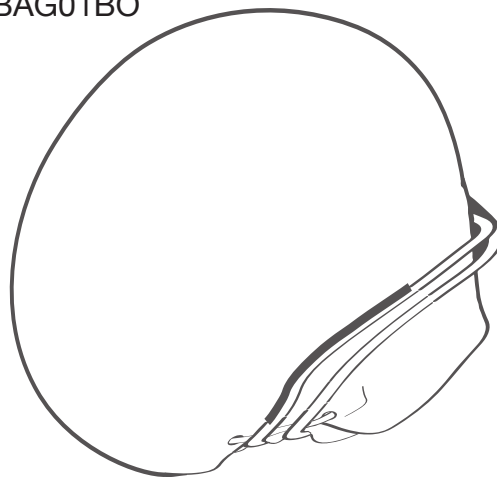
Steel Mesh grille
Cod. GRBO



Stainless steel base
Cod. BS01BO



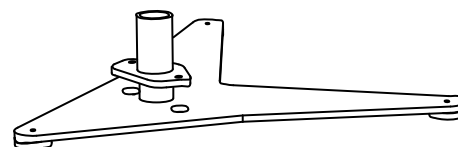
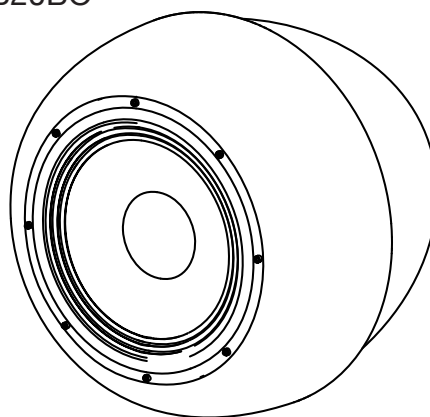
Water proof bag
Cod. BAG01BO



Ovoid connection pipe
Cod. TBBBO

Adapter
Cod. ADT3520

Ovoid connection pipe
Cod. TBB20BO



Stainless steel base
Cod. BS02BO

6: Maintenance and Surface Protection

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All Pequod units are built from a unique high quality composite material which is inert to atmospheric agents and requires minimal regular maintenance, just a simple cleaning of the surfaces with a soft cloth dampened with alcohol.

For best practice in long term care of the composite components, and to obtain or restore a truly professional level of surface finish, we recommend using the 3M "Perfect It™" line of Gelcoat cleaners and protective waxes (above right).

Follow the instructions provided to ensure the best possible finish for your Pequod composite speaker bodies and accessories.

Many installations require Stainless Steel support structures or armatures to complete mounting and assembly of different Pequod units. For these components, we recommend cleaning with 3MTM Stainless Steel Cleaner and Polish (right).



Pequod Acoustics offers a guarantee to the original owner (person or company who purchased the product brand new) of each new Pequod product (provided it was purchased directly from Pequod or through a Pequod Acoustics Authorised Dealer/ Distributor) that it is free of defects in materials and workmanship and that each product was tested in the factory to meet or exceed all specifications declared. Each model has a test file recorded in our database, related to its serial number.

The period of limited warranty is three (3) years from the date of delivery to the original purchaser (as shown on the original invoice or sales receipt; a copy may be required as proof of warranty dates)

Pequod Acoustics will repair or replace (at its discretion) all defective parts at no charge for labor or materials; subject to following provisions:

Pequod Acoustics shall take no responsibility for repair or replacement under this warranty if:

- a) The damaged product has been subject to misuse, accident, neglect or failure to comply with normal maintenance procedures
- b) There are improper alterations or unauthorized parts or repairs.
- c) The serial number has been altered, defaced or removed and the original owner won't be able to give information related to our Anti-counterfeit authentication system (see below, section 8)

Pequod Acoustics will remedy any defect, regardless of the reason for failure (except as excluded above) by repair or replacement. Pequod Acoustics will ship the product within a reasonable time after receipt of the defective product at a Pequod Acoustics Authorised Service Centre.

How to obtain service under warranty:

If a Pequod Acoustics product requires service, the original owner must contact the Pequod Acoustics dealer who supplied the product, to receive our Return Authorisation Code (RA code), and instructions on how to return the product to the Pequod Authorised Service Centre, or to Pequod Acoustics.

The original owner must give information about:

- Problems with the product
- Serial number
- Original invoice or sales receipt
- Anti-counterfeit system (see section 8)

After receiving the RA code the owner can pack the unit in the original factory packaging if possible. Please include a note describing the problem packed together with the product. Do not send it separately.

All products being returned to the factory or service center for repairs must be shipped prepaid. Ensure safe transportation of your unit to the authorized service center

Pequod Acoustics (or an Authorised Service Centre) will initiate corrective repairs upon receipt of the returned product, in order to complete the repairs and ship back the product within a reasonable amount of time.

If the repairs made by Pequod or a Pequod Authorised Service Centre are not satisfactory to the owner, they are instructed to give written notice to Pequod.

The original owner is not entitled to recover from Pequod any incidental damages resulting from any defect in the Pequod product. This includes any damage to another product or products resulting from such a defect.

The warranty is not extended by the length of time which the owner is not engaged in active use of the product. Repairs and replacement parts provided pursuant to the warranty will be covered only by the non-expired portion of the warranty.

8: Authentication and Anti Counterfeiting Measures

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Each product by Pequod Acoustics is carefully hand made using high quality components that are, by themselves, difficult to replicate. But we also protect our products using special marks on the inside and outside, which are unique and serve to authenticate original Pequod products.

Thus, each individual product has a special mark, placed in a unique position. For each product (each serial number) we keep a record of the exact position where we placed this mark.

When warranty claims are made, or other requests that require authentication of an individual Pequod product, we will ask the owner to provide a description of the identifying marker as further proof of originality.