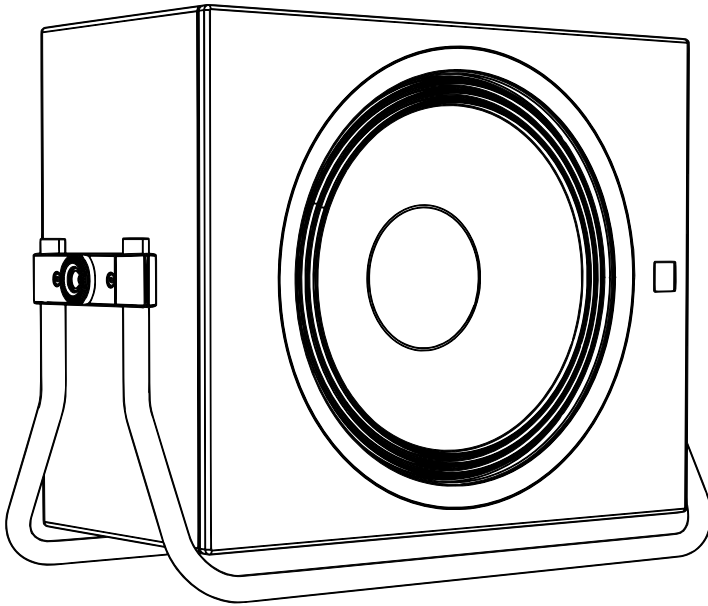




avantgarde
ACOUSTIC



User Manual

COLIBRI C18 SUBWOOFER

Version 1.0

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SAFETY INFORMATION

CAUTION



To prevent fire, shock or damage, do not expose the components to rain or moisture.



Conditions for operation:

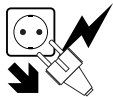
room temperature 5 – 35° C,
humidity 10 – 75%



It is intended to alert the user of the presence of uninsulated "dangerous voltage" within the products enclosure. To avoid electrical shock, do not open the cabinet of the components.



Excessive sound pressure levels might cause serious damage to your health. Do not turn up the volume of the loudspeaker system to loud!



Should any solid object or liquid fall into the cabinet of the components, unplug the unit and have it checked by qualified personnel before operating it any further.



Unplug the components of your system from the wall outlet and antenna if they are not to be used for an extended period of time. To disconnect the power cord, always pull on the plug and never on the cord directly. Never touch the plugs with wet hands.



Only have the system installed and repaired by authorized personnel.

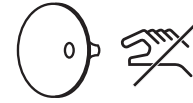
PRIVATE USE ONLY

These loudspeakers are designed for the playback of audio signals. Any misuse, especially commercial operation, will invalidate the warranty.



SAFETY INFORMATION

PRECAUTIONS ON INSTALLATION



Do not carry the speakers by the horn.



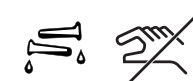
Place the loudspeaker on a flat floor with a load-bearing capacity that adequately supports the weight of the loudspeakers.



To prevent internal heat build-up in the components, place units in a location with sufficient air circulation. Do not install the speakers in a location near heat sources such as radiators, or in a place subject to direct sunlight, excessive dust, or mechanical vibration.



Connect everything securely. Always insert the cables and plugs fully into the jacks. A loose connection may cause hum pick-up and can damage the system. Use only high-quality cables with self-tightening banana speaker and RCA or XLR plugs.



To avoid damaging the finish, never use alcohol, paint thinner or aggressive cleaners to clean the components.



Read this operators manual thoroughly before operating the speaker system.

OPERATING VOLTAGE



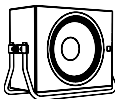
The amplifier can be powered from mains voltages of 90 – 250 volts with a mains frequency of 50-60 Hz.



This device complies with Part 15 of the FCC Rules. This device does not cause harmful interference and can tolerate radiated external emissions.

CONTENT OF PACKAGES

COLIBRI C18 SUBWOOFER

1 x  Cardboard box with one subwoofer

1 x  Power cable

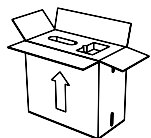
1 x  User manual

UNPACKING

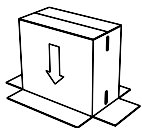
COLIBRI C18 SUBWOOFER



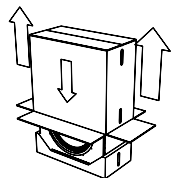
Be aware of the heavy weight of the speakers when unpacking and setting up! For this work, we strongly recommend the assistance of at least one other person!



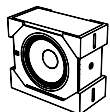
① Place the cardboard box upright and open the top of the box.



② Turn the box upside down with the lid open.

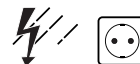


③ Carefully pull the cardboard box upwards and remove it.



SAFETY PRECAUTIONS

ON INSTALLATION



The power to all components must be switched “off” (or disconnected from the household AC) before making any audio connections.



To prevent malfunction/defects, never operate components with unassigned input sockets (unwired)!.



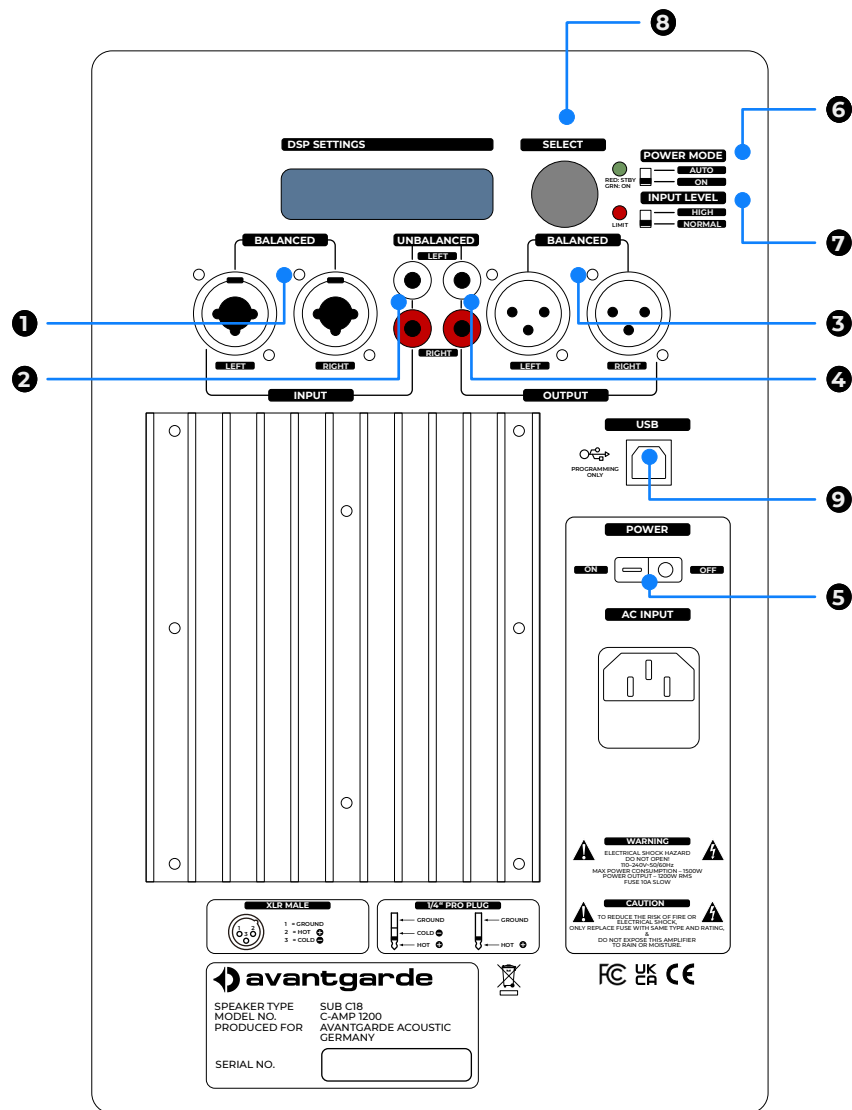
Control the polarity of speaker cables! Never mix up “+” and “-”. Wrong polarity will deteriorate the sound quality and can damage amplifier and the active power module of the subwoofer.

Do not short circuit the +/- electric poles of the speaker cables.

Use high quality cable with solid speaker plugs (spades, bananas etc).

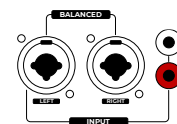
C-AMP 1200 AMPLIFIER

COLIBRI C18 SUBWOOFER



AMPLIFIER CONTROLS & CONNECTIONS

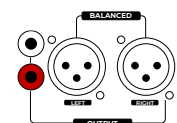
COLIBRI C18 SUBWOOFER



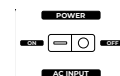
Connect the balanced ① or RCA ② inputs of the subwoofer amplifier to the subwoofer output of a surround amplifier (Sub Out, LFE Out) or to any preamplifier output (Pre Out). For single Sub Out or LFE Out connections, the left channel is sufficient.



The input level switch ⑦ can be used to reduce the sensitivity of the subwoofer power amplifier from "NORMAL" (0dB) to "HIGH" by -6dB.



To connect additional subwoofers, use the balanced ③ or RCA ④ outputs on the subwoofer power amplifier. Using the Colibri Control software, the RCA ④ outputs can optionally be programmed with a variable high-pass filter to attenuate low frequency signals.



The power switch ⑤ turns the subwoofer power amplifier ON or OFF.



The power mode switch ⑥ can be used to switch the subwoofer to the power-saving "AUTO" mode instead of the permanent "ON" mode. In this mode, the subwoofer automatically turns on after approx. 2 seconds when an audio signal is detected. The Power LED lights green. If there is no audio signal for approx. 20 minutes, the subwoofer will go into standby mode. The Power LED turns red, indicating that the subwoofer amplifier is in AUTO standby mode.



We recommend using a PC with the Colibri Control software to program the extensive features. Connect the PC to the USB port ⑨. This is also used to upload firmware updates.



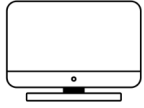
IMPORTANT! The USB port ⑨ is not suitable for connecting music sources!



Only use the "Select" knob ⑧ to navigate through the amp's extensive function menu in exceptional cases (no PC available) or to quickly adjust the volume!

DSP COLIBRI SOFTWARE

SOFTWARE USER INTERFACE



To program the extensive functions, we recommend using a PC with the Colibri Control software.

Download the corresponding software from the website www.avantgarde-acoustic.de.



Open the software and select the TOOLS menu:

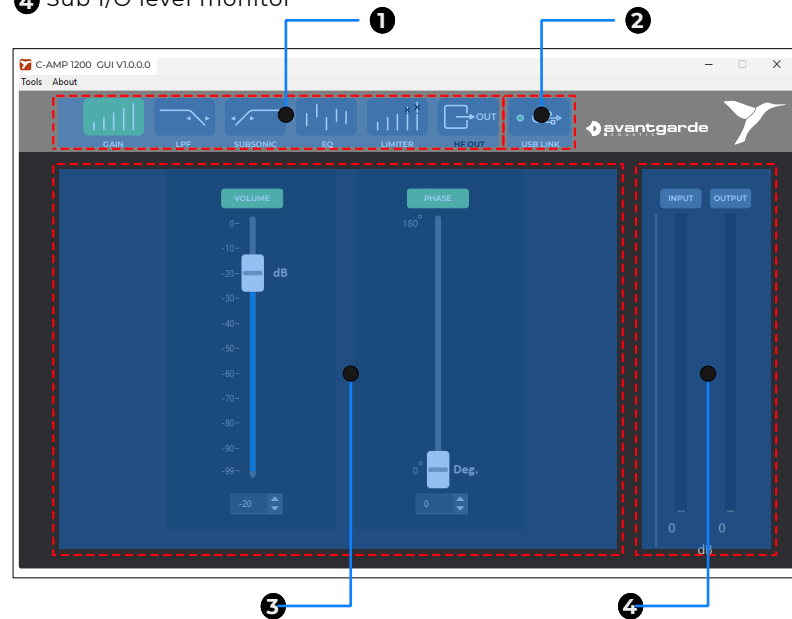
Read Setting	Read all settings of the connected sub
Save Settings to File	Save current settings on the PC
Load Settings from File	Loading saved settings onto the sub
Reset to default Setting	Reset the sub to factory settings

The user interface of the Colibri software has the following functional areas:



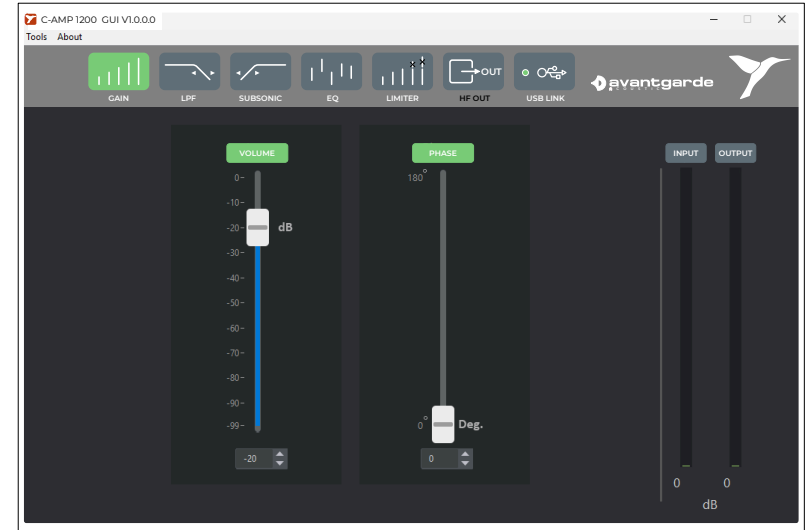
USB LINK

- 1 Menu for selecting the various DSP functions.
- 2 USB link indicator (green = connection ok)
- 3 Area for setting the various DSP parameters.
- 4 Sub I/O level monitor



DSP COLIBRI SOFTWARE

GAIN SETTINGS



The bass response of the subwoofer is affected by the room and the position of the speaker. Depending on the placement, the subwoofer's bass response can be boosted or attenuated. To compensate for these effects, the first step is to adjust the overall bass level.



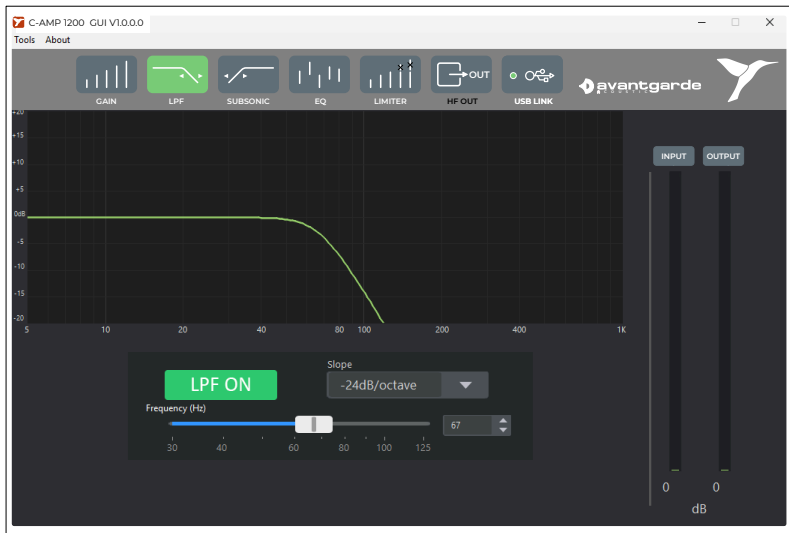
GAIN

Use the VOLUME control in the GAIN menu to adjust the subwoofer volume.

The PHASE control allows you to adjust the phase (or frequency-dependent time shift) continuously from 0° to 180° .

DSP COLIBRI SOFTWARE

LOW PASS FILTER SETTINGS



LPF

The upper crossover frequency of the subwoofer is set in the LPF menu. By default, the crossover frequency is set for a linear transition to the Colibri C2 satellite. This means that the frequency response of the subwoofer seamlessly blends into the frequency response of the Colibri C2 satellite.



The crossover frequency can be used to adjust the tonal balance of the system.

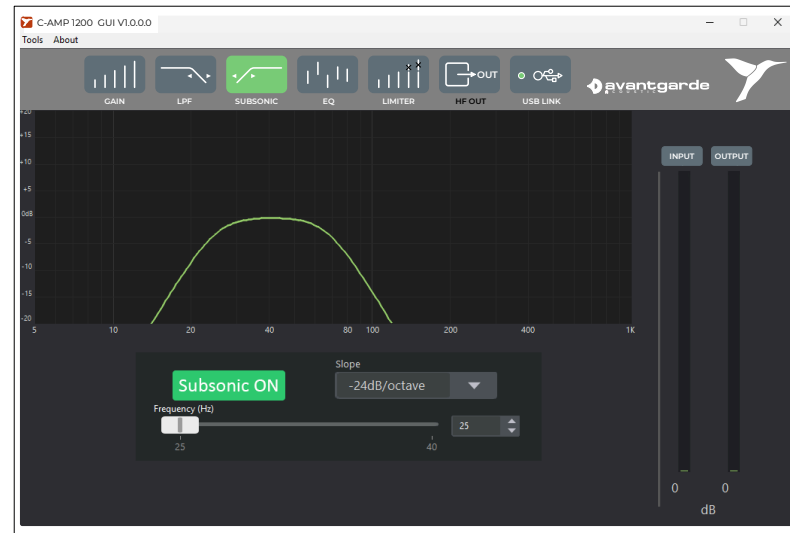
At higher frequencies, the subwoofer frequency response partially overlaps with the Colibri C2 satellite frequency response. This makes vocals/instruments sound "warmer" and "fuller".

When the crossover frequency is set to a lower frequency, the subwoofer and the Colibri C2 satellite have a small gap. The tonal balance of the system shifts towards a more "dynamic & punchy" sound.

- LPF ON/OFF** Switch filter on or off
- SLOPE** Set the filter slope (-12dB / -24dB)
- FREQUENCY** Set cut-off frequency of the selected filter

DSP COLIBRI SOFTWARE

SUBSONIC SETTINGS



SUBSONIC

The lower cut-off frequency of the subwoofer can be adjusted in the SUBSONIC menu.



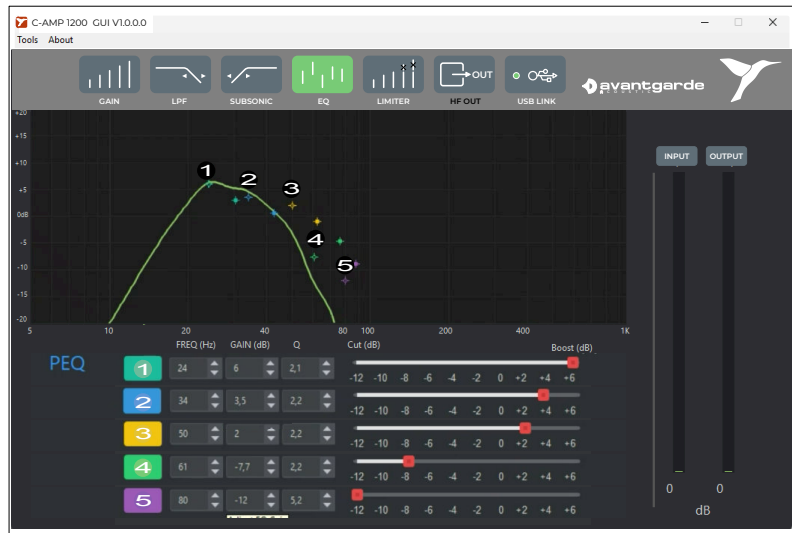
The factory settings of the subwoofer are set for an extended low frequency response.

When listening to very loud music, you may want to reduce the low frequencies being reproduced. The SUBSONIC filter can be used to raise the lower cutoff frequency, thereby increasing the the maximum attainable volume of the subwoofer.

- SUBSONIC ON/OFF** Switch filter on or off
- SLOPE** Set the filter slope (-12dB / -24dB)
- FREQUENCY** Set frequency of the selected filter

DSP COLIBRI SOFTWARE

EQ SETTINGS



EQ

Use the 5-band equalizer for individual frequency settings. Each of the 5 bands can be raised by up to +6dB or lowered by -12dB. This allows you to adjust the bass response to specific sound profiles (linear, techno, disco, pop, etc.) or reduce broadband room resonances.

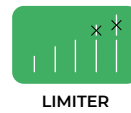
- BAND ON/OFF** Switch filter on or off
- FREQUENCY** Set the center frequency of the selected filter (10–200 Hz in 1 Hz steps)
- GAIN** Enter the numerical value of the gain (-12dB to +6dB in 0,1 Hz steps)
- Q FACTOR** Setting the Q Filter shape (Bandwidth) (0,4 – 16Q in 0,1 steps)



Bands can be adjusted by cursor or direct input and/or sliders

DSP COLIBRI SOFTWARE

LIMITER SETTINGS



LIMITER

The dual-band limiter is an audio processor that prevents a signal from increasing in volume above a set threshold. This ensures that the subwoofer is not overdriven and damaged at very high listening levels.

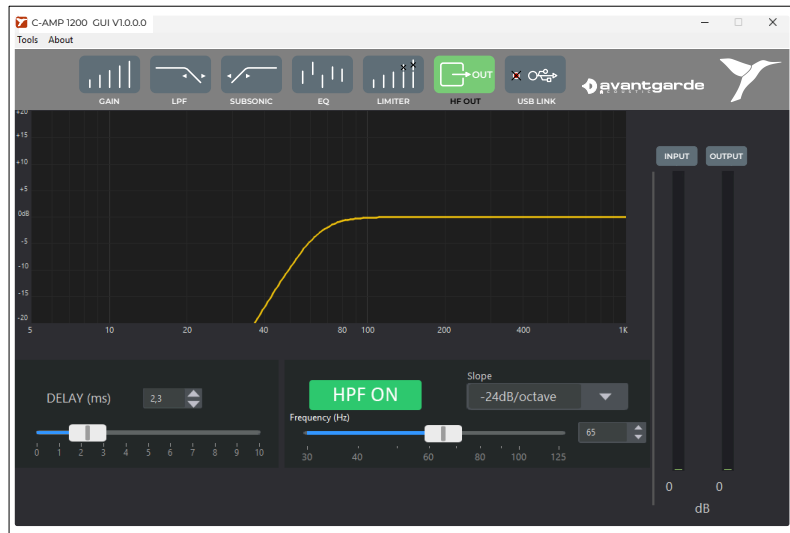
- THRESHOLD** Setting the threshold value of the limiter (0 to -12dB in 0,1dB steps)
- ATTACK** Sets the "attack time" of the limiter, i.e. the "speed" at which excessive levels are reduced to the threshold. (1/5/10/20/100ms)
- RELEASE** Sets the "release time" of the limiter, i.e. the "speed" at which the original level is restored when the signal falls below the threshold. (60/120/240/480/1000/2000ms)
- FREQUENCY** The transition frequency point between band 1 and band 2



IMPORTANT: The Limiter is a professional tool for experienced audio engineers only. Its use by private individuals is strongly discouraged. Please contact your dealer for further information.

DSP COLIBRI SOFTWARE

HF OUT SETTINGS



HF OUT

To connect additional subwoofers, use the balanced **3** or RCA **4** outputs on the subwoofer power amplifier. (see page 8-9).

In the HF-OUT menu, the RCA **4** outputs can either be daisy-chained as a full-range signal or optionally programmed with a variable high-pass filter to attenuate low-frequency signals.

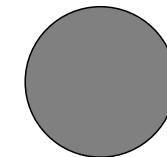
HPF OFF	Signal is looped through without filter
HPF ON	High-pass filter for attenuating low freq. is active
SLOPE	Set the slope of the filter (-12dB / -24dB)
FREQUENCY	Setting the frequency of the filter
DELAY	Time delay of the HF-OUT signal to the subwoofer signal.

SETTING THE VOLUME ON THE AMP

QUICK ADJUSTMENT OF THE VOLUME WITHOUT A PC

DSP SETTINGS

SELECT



VOLUME

You can also quickly adjust the volume without a PC by using the SELECT button **8** and the display directly on the subwoofer power amplifier panel.

- 1 Select the VOLUME menu with a single click of the SELECT button.
- 2 Adjust the volume by turning the SELECT button (0.1 dB increments). Turning the knob clockwise increases the volume. Counterclockwise decreases the volume.
- 3 Double-click to complete the adjustment and exit the VOLUME menu.



Rotating the JOG **8** from the main menu navigates through a series of additional menus. However, this is not very user-friendly and is only recommended in emergencies when a PC is not available.

FINE TUNING

SUBWOOFER PLACEMENT

In principle, low frequencies below 100 Hz cannot be located and the subwoofer can actually be positioned anywhere in the room. This applies in particular to the very low 50–70 Hz cut-off of the subwoofer in combination with the Colibri satellites.

However, the placement of one or more subwoofers in the room may require different approaches depending on the desired effect.

For music reproduction, we recommend setups that allow precise bass reproduction without unwanted booming.

On the other hand, for an immersive cinema experience, placements may be preferred that lead to an increased boominess when watching an action movie, but therefore provide impressive sound effects.

Depending on whether you are using the subwoofer individually or as a pair, we recommend the following placement options:

PLACEMENT OF ONE SUBWOOFERS

Placing the speakers directly against a side wall or corner of the room will increase the sound pressure level, but may stimulate unwanted room resonances and cause boom at certain frequencies.

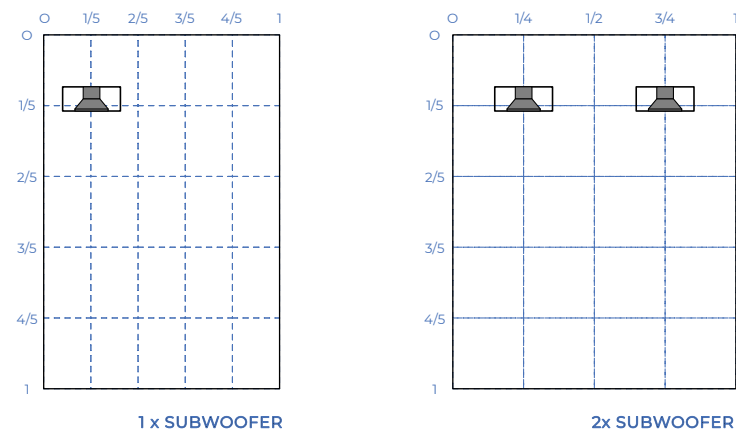
In normal sized rooms, wall distances equal to integral multiples of one-fifth of the room's length and width are advantageous. (see graphic on next page)

In larger rooms, this rule is inevitably violated due to the large distances involved. The goal here is to find the best compromise between bass performance and room design.

FINE TUNING

PLACEMENT OF TWO SUBWOOFERS

By using two subwoofers, the sound waves are more evenly distributed throughout the room. Transverse modes between the side walls can be avoided with this setup. To achieve this, the subwoofers should be placed in a line, each about a quarter of the width of the room from the corresponding side wall.



TEMPERATURE AND SOUND

During the cold season, the speakers must be "acclimatized" to room temperature before use. Condensation can form on cold electronic components inside the sub and possibly cause an electric shock. Low temperatures also have a considerable effect on the moving parts of a loudspeaker, such as the cone/voice coil, surround and spider. The ability of these components to follow rapid movements or perform large excursions is greatly reduced.

BREAK-IN TIME

New drivers usually require at least 40 hours of break-in time. During this time, the sound quality will continuously improve. Please leave the subwoofers switched on during this run-in period.

After this, it may be necessary to check the positioning of the systems and the settings on the subwoofer again and correct them if necessary.

CLEANING

CLEANING OF HIGH GLOSS LACQUER SURFACES



We recommend to regularly clean high gloss color-coated surfaces (for ex. high gloss subwoofer front frame) with a dry soft fabric (duster) or a soft cosmetic brush.

To remove finger prints and dirty spots we recommend the use of glass detergent.

To remove small scratches we recommend the use of automotive waxes and polishing compounds for cars. Please proceed carefully and strictly follow the cleaning instructions of the manufacturer.

- ☛ First apply glass detergent, waxes or polisher on the backside of the horns to test the result!
- ☛ Do not touch the membranes while cleaning the horns!
- ☛ Avoid scratching the horns with dirty fabrics and never use aggressive detergents or abrasives!

CLEANING OF SATIN-FINISHED LACQUER SURFACES



We recommend to regularly clean satin finished color-coated surfaces (for ex. subwoofer body) with a dry soft fabric (duster) or a soft brush.

To remove finger prints and dirty spots we recommend the use of glass detergent.

- ☛ Do not use waxes or polisher!

CLEANING OF METAL SURFACES

Clean the powder coated and anodized surfaces with a regular duster or slightly moisted (i.e. by glass detergent) piece of cloth.

WARRANTY

SPEAKER REGISTRATION

Register your speaker and receive an extension of your factory warranties for 1 year at a time as the first owner.

- ① Please fill out the warranty card:

name:

street:

city:

serial no.

serial no. subwoofer

purchase date:

dealer:

- ② Take a photo of the completed warranty card with your cell phone.
- ③ Send the photo by mail using the QR code to:
"info@avantgarde-acoustic.de"



WARRANTY

Avantgarde Acoustic Lautsprechersysteme GmbH warrants that the products are free from defects attributable to faulty manufacture. The warranty is limited to ten (10) years for the stability of the connecting elements (between metal, wood and plastic parts, including the horns), five (5) years for the color coating and the drivers, and two (2) years for all electronic components.

All Avantgarde Acoustic products have been thoroughly checked before shipping. In the case of problems, please check the following:

1. This warranty begins on the date of original purchase and may be enforced only by the original purchaser. Please keep the original dated sales slip as proof of warranty coverage. The warranty period is not effected by warranty services provided within the warranty period.

2. Except as specified below, this warranty covers all defects in material and workmanship in this product. Our liability for any defective product is limited to repair or replacement of the products, at our option. Any implied warranties, including warranties of merchantabilities and fitness for a particular purpose, or damages based upon inconvenience, loss of use of the product, or commercial loss, or any other damages are not covered by this warranty.

3. Any modification, alterations or changes to the product are strictly prohibited.

4. In case of defects, please contact at first your dealer. If at the sole descretion of Avantgarde Acoustic it is necessary to ship the product to the manufacturer, please make sure that:

- The product is carefully packed and shipped in its original shipping box.
- The Avantgarde Acoustic warranty card is filled out and added to the product or, alternatively the original invoice from the dealer or a proof of online product registration in the Avantgarde Customer Club.
- The product is shipped free of charge to us, e.g. you must pay all shipping charges (ex. Freight, insurance etc.).

WARRANTY

5. The following are not covered by this warranty:

- Regular inspections, tuning, repairs or replacement of parts which are attributable to normal wear and tear.
- Damage occuring during shipment of the product. All transport claims must be presented to the carrier.
- Damages or scratches on the surface of the product (ex. Housing, horns, metal parts, color coating etc.). These claims must be presented within 3 days after the date of original purchase with your dealer.
- Damage resulting from incorrect placement, faulty connections, improper operation. Damage resulting from failure to follow instructions supplied with the product.
- Damage resulting from accident, misuse, abuse, neglect, electrical surges, lightning or other acts of God.
- Damage resulting from repair or attempted repair by anyone other than Avantgarde Acoustic or an authorized Avantgarde Acoustic dealer.
- Consequential, secondary or subsequent damages to other third party appliances.

6. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

7. Register your new speaker on our website and receive an extension of your factory warranties by 1 year (first owner only).

www.avantgarde-acoustic.de

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