PSI AUDIO

AVAA C225

User Manual



Table of Contents

Select a section to navigate.

1 Introduction 3

2 Safety Instructions 3

2.1 Warnings 4

2.2 Service 5

3 Product Overview 6

3.1 Description 6

3.2 Before you start 7

3.3 Front Panel Description 7

3.4 Rear Panel Description 8

4 Technical Specifications 9

4.1 Dimensions and weight 9

4.2 Performance 9

4.3 Power Requirements 9

5 Quick Start 10

6 Operation 12

6.1 Standalone Mode - Power ON LED (Green) 12

6.2 Remote Mode - Power ON LED (Blue) 12

6.3 Limiter 12

6.4 Standby 12

6.5 Adjusting the gain of your AVAA 13

7 Remote Mode (Wireless Network) 14

7.1 Remote Control 14

7.2 Enabling/Disabling Wireless Network 15

7.3 Factory reset 16

7.4 Resetting Wireless Network credentials 16

7.5 Firmware update (using the AVAA Controller app) 17

7.6 Pairing process 18

8 Placement and positioning in room 19

8.1 Environment 19

8.2 Positioning 19

9 Troubleshooting 20

9.1 Power on LED does not light up 20

9.2 AVAA C225 is unstable and emits noise 20

9.3 Connection problem with the remote control 20

10 Certificates of conformities 21

10.1 C.E. & RoHS Conformities 21

11 Warranty 22

12 Notes 23

1. Introduction

Thank you for choosing the AVAA C225, our advanced digital active bass trap. Congratulations on making an excellent decision to enhance your acoustic environment.

The AVAA C225 offers flexible operation with two distinct modes: **Standalone Mode** for independent use and **Remote Mode** for seamless integration with smartphone app.

- Standalone Mode (not connected to a wireless network): when you unpack your AVAA C225 and turn it on for the first time, it will work in Standalone mode, you can manually turn it on and off. The LED is green when it is working.

- Remote Mode (connected to a wireless network): thanks to digital technology, you can now control your AVAA C225 using an app. When you are in this mode, the LED is blue.

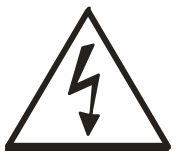
In this user manual, we will always refer to "**Standalone Mode**" and "**Remote Mode**".

Carefully following the instructions in this manual will ensure that your system will give you many years of reliable and trouble free operations.

For the latest information, help or advice, please contact your local PSI Audio representative or PSI Audio directly.

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2. Safety Instructions



This symbol alerts the user to the presence of electrical power within the product that may be of sufficient magnitude to constitute a risk of electric shock.



This symbol alerts the user to important operating and maintenance (servicing) instructions or warnings.

2.1 Warnings

1. **Read Instructions Carefully**
   Before operating the AVAA C225, carefully read and follow all provided instructions to ensure safe and proper use.

2. **Fall Hazard**
   Positioning the AVAA C225 above floor level can create a fall hazard. Always ensure the device is securely placed or mounted in a stable position to prevent it from falling. Take extra precautions to ensure children cannot accidentally knock it over.

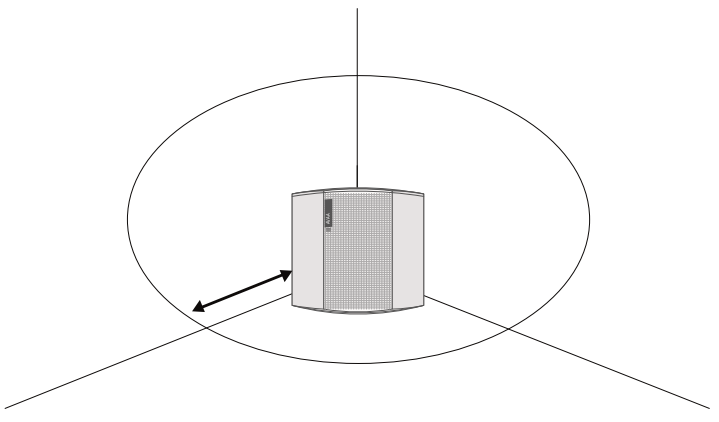
3. **Do Not Open the Device**
   Opening the AVAA C225 can result in electric shock. Never attempt to disassemble or modify the unit.

4. **Avoid Exposure to Liquids**
   Do not expose the AVAA C225 to liquids. For cleaning, use only a dry cloth. To prevent spills, avoid placing containers with liquids on or near the device. Additionally, do not use the AVAA C225 near water, as this may create an electric shockhazard.

5. **Use Proper Power Cables**
   Only use three-wire mains cables and connectors with proper grounding, in accordance with your country's electrical standards.

6. **Avoid Confined Spaces**
   The AVAA C225 is designed to be placed on the rubber foot located on the bottom of the unit. Ensure it is placed on a flat, solid, and stable surface. Do not operate the device in confined or cramped environments.

7. **Room Size and Placement**
   The AVAA C225 is designed for use in rooms with a minimum size of 10 m². For optimal performance, position the device in a corner of the room. Avoid placing large reflective objects within 1 meter of the frontof the AVAA C225, as this may cause instability.



8. **Keep Away from Heat Sources**
   Do not operate or install the AVAA C225 near any heat sources, as this may damage the device or pose a safety risk.

9. **Use Approved Accessories Only**
   Only operate the AVAA C225 with accessories specified or approved by PSI Audio. Using unauthorized accessories may compromise performance or safety.

2.2 Service

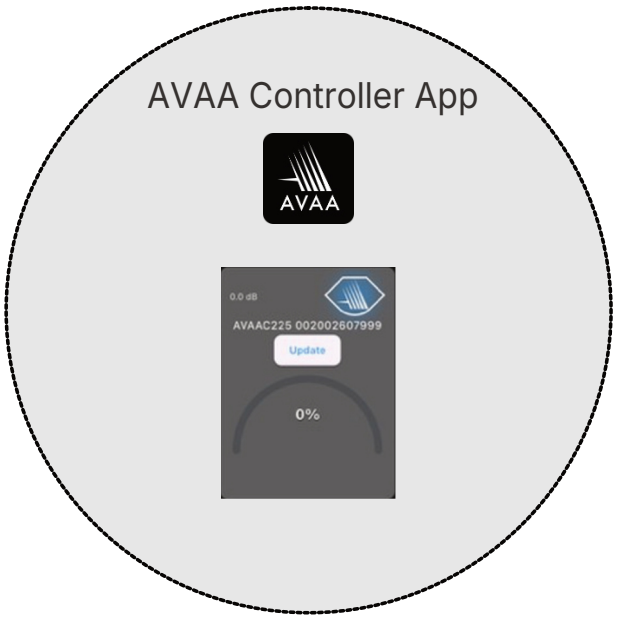
The AVAA C225 contains no user-serviceable parts. Service must be performed by qualified personnel. The unit must not be opened by the user – risk of a severe electric shock.

Servicing is required when:

- the AVAA C225 has been damaged in some way, such as when the power-supply cord or plug is damaged.
- the AVAA C225 has suffered from exposure to rain or moisture.
- liquid has been spilled into the AVAA C225.
- objects have been dropped into the AVAA C225.
- the AVAA C225 does not work correctly.

Software update:

- If software or firmware update is required, you will see it in your Smartphone app:



Spare part supply:

- for ordering, please contact your authorized reseller, mentioning your AVAA C225 model and serial number.

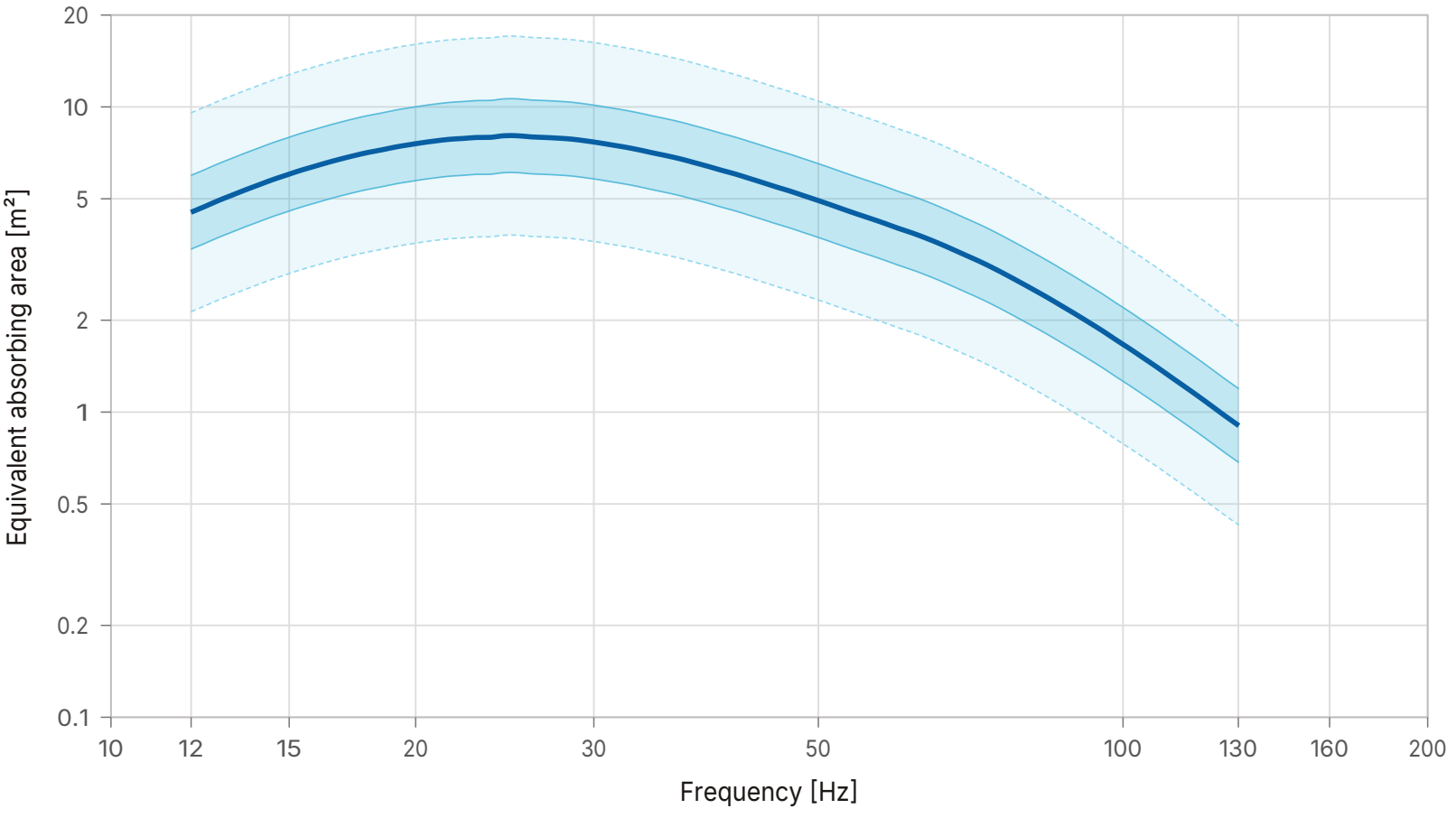
3. Product Overview

3.1 Description

The AVAA C225 is designed to absorb standing waves in the 12–130 Hz range. Above this frequency, passive acoustic treatments are more effective. For optimal performance, the AVAA C225 should be installed in a room where **medium and high frequencies have already been treated** with passive solutions.

For frequencies below 130 Hz, each AVAA C225 functions as if it were a **large opening** in the wall, significantly larger than its physical size. The exact equivalent absorption area varies depending on frequency and room characteristics but typically ranges between **15 and 45 times** the AVAA's actual surface area.

The graph below illustrates the **typical equivalent absorption** area of an active AVAA C225 across its designed frequency range. As a reference, the AVAA C225 has a surface area of **0.13 m²**, meaning an equivalent absorption area of **4 m²** would be **30 times its size**.



Under **normal operating conditions**, the AVAA C225 does **not** emit any audible sound or anti-sound. It simply **absorbs low frequencies efficiently**, relative to its compact size, without affecting the **direct sound** from speakers or other sound sources.

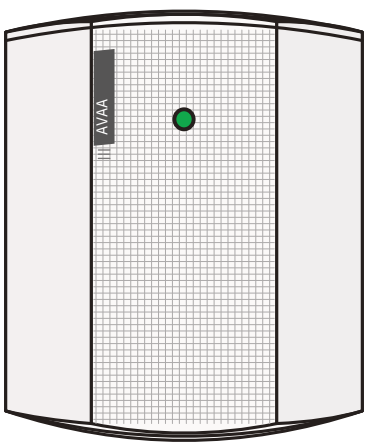
3.2 Before you start

Special care has been taken in the packaging of your PSI Audio product. Before you start to install it, please check that the following parts are included:

- AVAA C225.
- Warranty certificate of calibration.
- Quickstart Guide (also included in this User Manual).

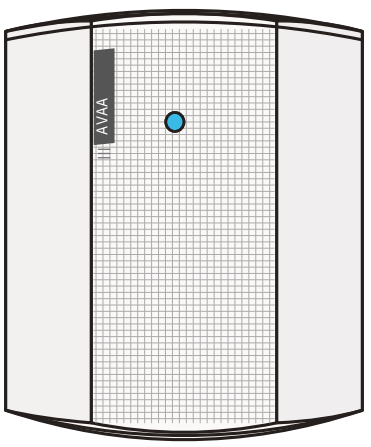
3.3 Front Panel Description

Standalone mode - GREEN LED
(without wireless network)



- Operating
- Overload
- Warning alert
- Critical issue (needs to be restarted)

Remote mode - BLUE LED
(Controlled by an app)



- Waiting for connection (breathing)
- Connecting to Wi-Fi
- Connected to Wi-Fi
- Overload
- Warning alert
- Critical issue (needs to be restarted)

For the detailed procedure on how to connect your AVAA C225 to the Wi-Fi network, please refer to the Chapter 7. Remote Mode.

3.4 Rear Panel Description



Settings buttons

Blue (–) Reduce gain
Red (+) Increase gain

The buttons sit on top of the rear plate. Their other functions include Wi-Fi control, factory reset and firmware version display.

AC power and identification



Left Model, serial number and QR code

Centre Power switch above the AC inlet and fuse drawer

Right Voltage selector and fuse information

4. Technical Specifications

4.1 Dimensions and weight

- **Dimensions (HxWxD)**: 780 × 570 × 570 mm
- **Weight**: 33 kg



4.2 Performance

- **Operating Frequency Range**: 12 Hz to 130 Hz
- **Absorption Efficiency**: Equivalent to a passive absorber 40 times its size
- **Maximum Sound Level for Full Operation**: 135 dB SPL (Sound Pressure Level)
- **Absorption Principle**: Active Bass Absorption using internal microphones, actuators, and electronics

4.3 Power Requirements

Input Voltage Selection (115 V / 230 V)

Always disconnect the power cable from the mains before changing the voltage setting.

Select the input voltage manually using the fuse drawer integrated into the AC power inlet. For 115 V operation, rotate or reposition the drawer to the 115 V configuration. For 230 V operation, position the drawer in the 230 V configuration.

Before reconnecting the unit to the mains, check that the selector matches the local supply and that the correct fuse rating is installed for that setting.

Input voltage	100 to 240 V AC, 50/60 Hz (manual selection: 115 V or 230 V)
Amplifier power	300 W
Power consumption	8 W standby · 50 to 100 W typical · 300 W maximum

5. Quick Start

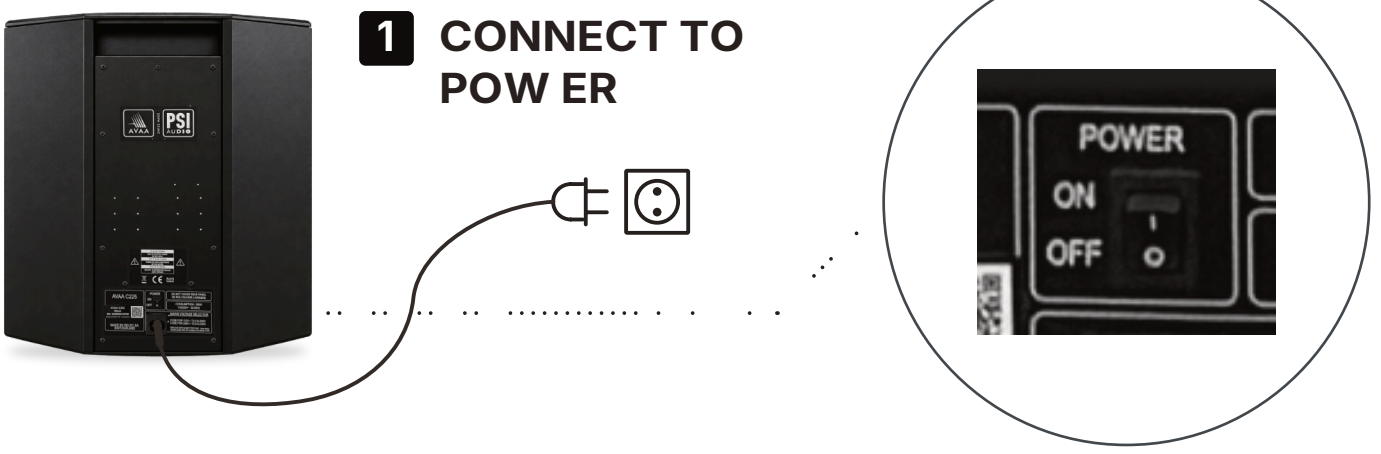
The setup process typically involves testing the AVAA C225 in a few different locations to determine the most effective placement. Using a remote control can make this process significantly easier. However, if you need to get started quickly, refer to the **Quick Start Guide** on the next page. The rest of this manual will help you fine-tune the AVAA C225 for your listening environment.

Setup Steps:

- **Connect the power cable**, ensuring you follow the safety instructions outlined in the manual.
- The AVAA C225 is a **broadband absorber** designed to be effective between 12 and 130 Hz in environments that already absorb higher frequencies, such as **home cinemas, cinemas, clubs, small venues, living rooms and studios**. In these settings, no adjustments are needed.
- **Important**: Under certain critical conditions, the AVAA C225 may become unstable and emit noise. PSI Audio is not responsible for any damage resulting from use under unstable conditions.
- The AVAA C225 allows **sensitivity (gain) adjustment** to optimize performance based on the environment. The sensitivity can be increased until the first signs of instability appear.

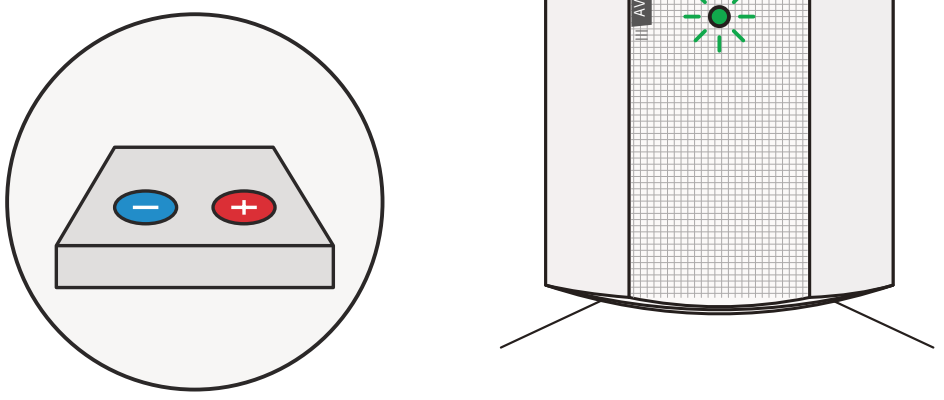
QUICK START GUIDE

AVAA C225



1 CONNECT TO POW ER

2 SWITCH ON



3 PLACE IN CORNER
AND/ OR TEST
IN DIFFERENT
LOCATIONS

4 ADJUST GAIN W ITH BUTTONS
MAX ONE LEVEL BELOW FIRST
SIGNS OF INSTABILITY





Available on the App Store

GET IT ON Google Play

5 APPLICATION FOR REMOTE CONTROL

AVAA Controller

DOWNLOAD USER MANUAL

6. Operation

6.1 Standalone Mode - Power ON LED (Green)

The green LED on the front panel indicates that the AVAA C225 is powered on and ready for operation. If the LED does not light up, ensure the device is properly connected to an AC power source.

In Standalone Mode, the AVAA C225 operates normally but cannot be controlled remotely via the app. However, you can still adjust its efficiency manually (see Section 6.5 for details).

6.2 Remote Mode - Power ON LED (Blue)

To activate Remote Mode, follow the steps outlined in Section 7.2 - *Enabling/Disabling wireless network.*
When the AVAA C225 is in Remote Mode, the front LED will turn blue instead of green, indicating that the device is ready for remote control via the app.

6.3 Limiter

The AVAA C225 features an internal limiter that monitors the acoustic pressure it is exposed to. If the device reaches its maximum absorption capacity, the LED will shine brighter for approximately 2 seconds. This occurs when the AVAA C225 is exposed to sound levels exceeding 135 dB at its location and is operating at full capacity.
This brighter LED serves as an indication that the AVAA C225 cannot absorb additional low-frequency energy. While this is not a malfunction, it is recommended to reduce the sound level to ensure optimal performance.
If the LED remains continuously bright, it indicates that the AVAA C225 is working at its limit. In such cases, adding additional AVAAs in different locations is generally more effective than placing multiple units in the same location.

6.4 Standby

A red LED on the front panel indicates that the AVAA C225 is in **Standby Mode**. This mode can only be activated via the remote control application, and the device must be connected to a wireless network.
The LED may also turn red if the device overheats. Common causes of overheating include insufficient ventilation or placement in a hot environment (e.g., near radiators, in direct sunlight, etc.). Ensure adequate air circulation around the AVAA C225, both in front and behind the unit, to prevent overheating.

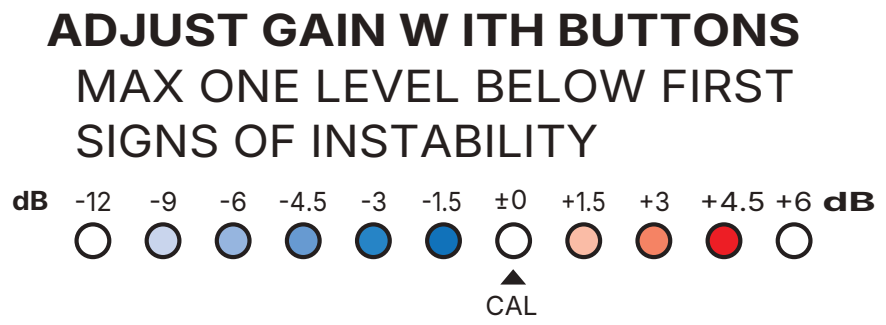
6.5 Adjusting the gain of your AVAA

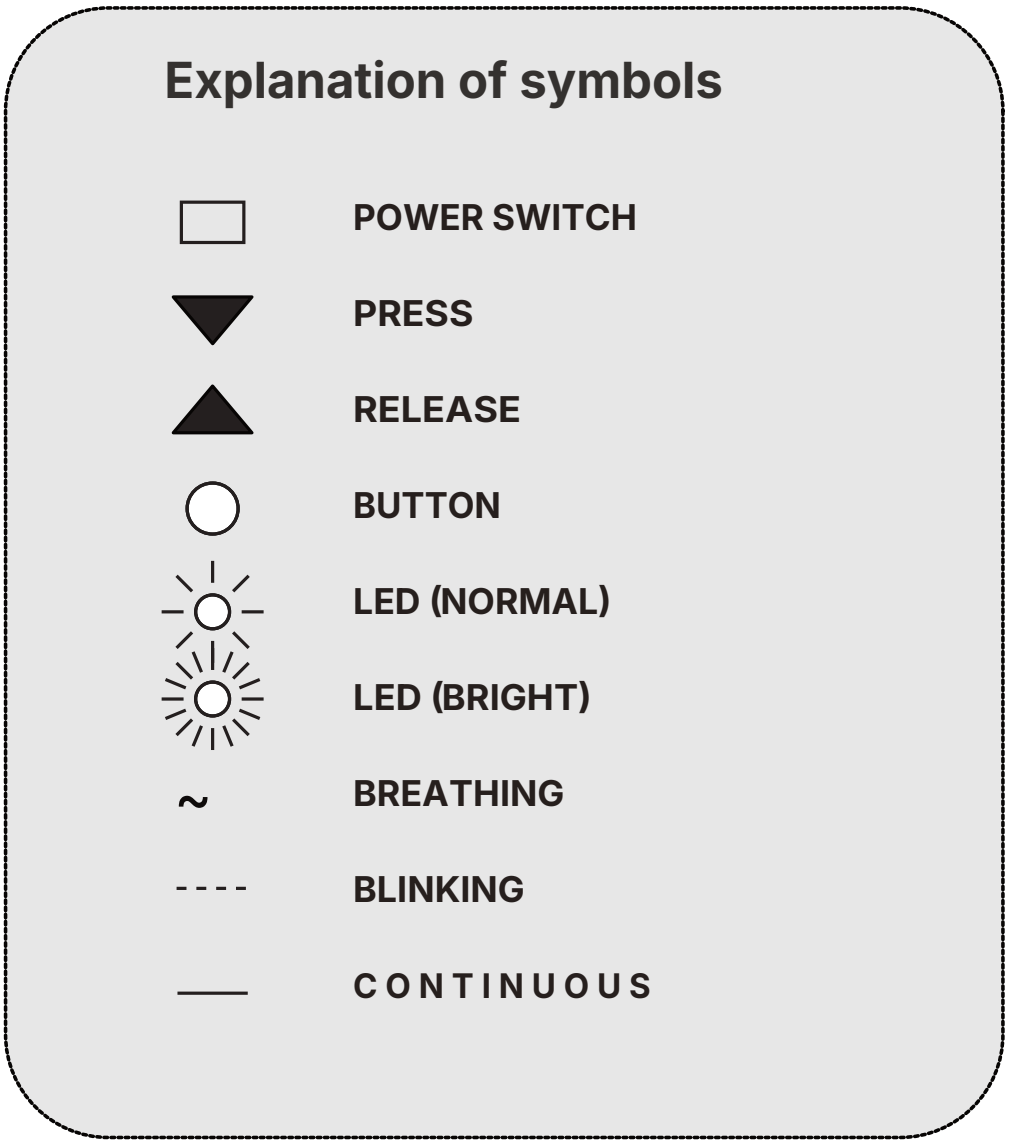
In highly reverberant environments, it may be beneficial to reduce the gain of the AVAA C225. Conversely, in well-treated rooms, increasing the gain can enhance absorption performance. Use the rear panel buttons to adjust the gain:

- Press the **blue button** to decrease the gain.
- Press the **red button** to increase the gain.

The gain adjustment range is **-12 dB to +6 dB**.

At the minimum, maximum, and neutral (0 dB) gain settings, a white LED will illuminate to indicate these specific values, as illustrated below.





7. Remote Mode (Wireless Network)

7.1 Remote Control

PSI Audio offers you a new experience by using a smartphone as a remote control. To take control of your AVAA C225, please download the application on the stores (search for “AVAA Controller”).

The Smartphone app allows:
- **Remote control** (ON/OFF) of each AVAA C225 individually or in a group.
- **Remote control the gain** (efficiency)of each AVAA C225 individually.
- Link to **help** on the PSI Audio website.
- **Upgrade** the AVAA C225 **firmware**.



Once downloaded, please follow the steps to pair your AVAA C225 to your wireless network.

Before starting the pairing operation, please check that your AVAA(s) wireless network is enabled. Please refer to the “Enable/disable wireless network” (section 7.2).

Use only 2.4 GHz wifi network!
A 2.4 GHz Wi-Fi network operates in the 2.4 GHz frequency band, which provides several advantages over 5 GHz Wi-Fi networks:

- **Wider Range**: The 2.4 GHz frequency band has a longer wavelength, which means it can penetrate walls and other obstacles more effectively, providing a wider coverage area for the wireless network signal.

- **Better Compatibility**: Older devices and some smart home devices operate in the 2.4 GHz frequency band, so a 2.4 GHz Wi-Fi network provides better compatibility with these devices.

- **Lower Interference**: The 2.4 GHz frequency band is less congested than the 5 GHz frequency band, so there's less interference from other devices that use the same band, such as cordless phones, baby monitors, and microwave ovens.

In "standard" rooms, the AVAAs can be operated at full sensitivity for optimal performance.

7.2 Enabling/Disabling Wireless Network

Your AVAA C225 can connect to a wireless network, but by default, wireless access is disabled. To use remote control features or update to the latest firmware, you must connect the AVAA C225 to a wireless network. (For remote control, an internet connection is not required.)

Enabling Wireless Network

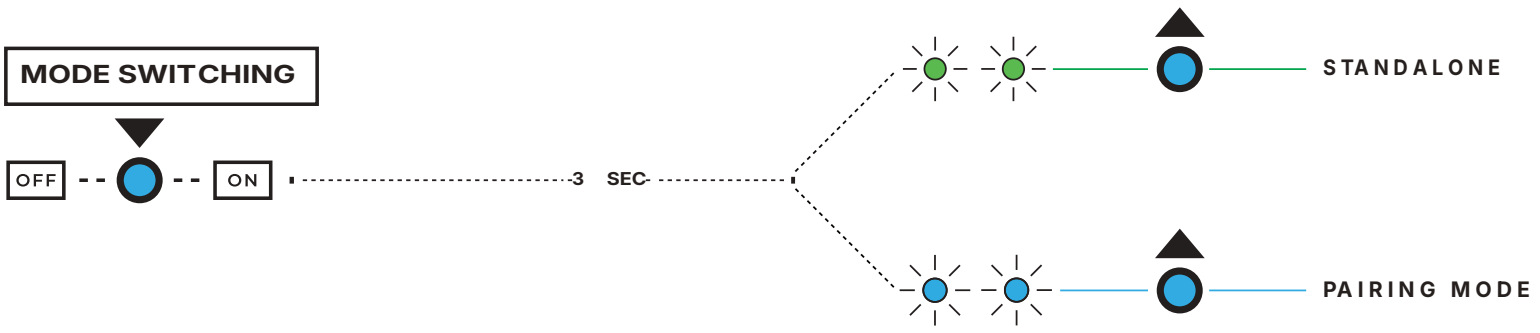
Follow these steps to enable the wireless network:

1. Turn off your AVAA C225.
2. Press and hold the rear BLUE button.
3. Turn on on your AVAA C225.
4. Wait until the blue LED blinks (~3 sec) - this confirms that wireless is enabled.
5. The front led should now be breathing blue.
6. You are now ready to connect your AVAA(s) with the smartphone app.

Disabling Wireless Network

Follow these steps to disable the wireless network:

1. Turn off your AVAA C225.
2. Press and hold the rear BLUE button.
3. Turn on your AVAA C225.
4. Wait until the blue LED blinks (~3sec) - this confirms that wireless is disabled.
5. The wireless antenna is now OFF and the front LED turns green.

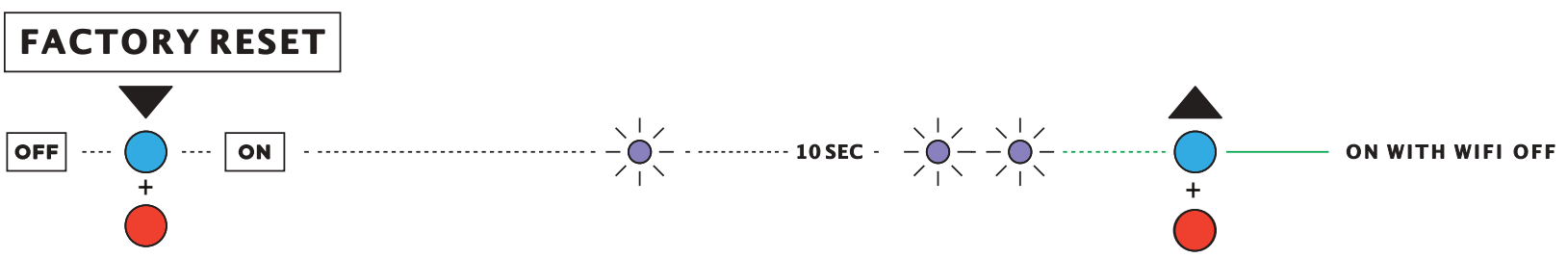


7.3 Factory reset

You can reset your AVAA C225 to its **factory firmware version** at any time. This may be necessary if you experience unexpected behavior or if you find that absorption was better before an update.

To perform a factory reset, follow these steps:

1. **Turn off** your AVAA C225.
2. **Press and hold** both the **RED and BLUE** rear buttons.
3. **Turn on** your AVAA C225.
4. Keep holding the buttons during startup until the **LEDs turn purple.**
5. Wait for the **purple LEDs to flash (~10 sec)** - this confirms the reset.
6. **Restart** your AVAA C225.



7.4 Resetting Wireless Network credentials

You may need to change your AVAA C225 wireless network, either because you have changed your router or traveled with your AVAA(s). There are two ways to do it:

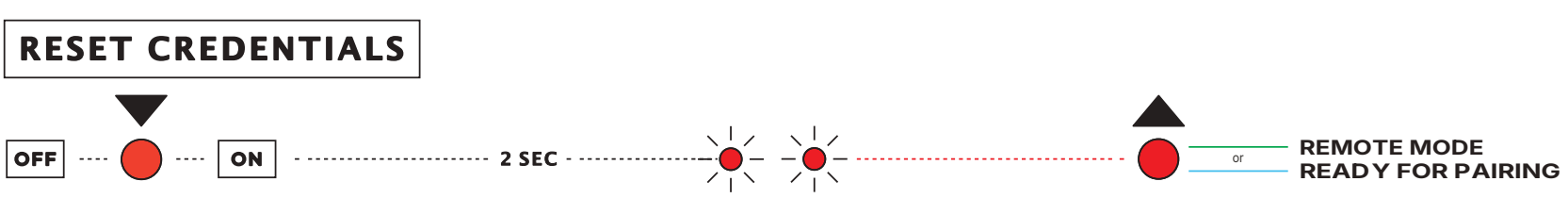
1. Reset via the App (recommended method):

1. Open the PSI Audio app and go to the AVAA C225 settings, or press and hold in the AVAA Controller app.
2. Click on "**Forget Device**" .
3. **Confirm** that you want to **remove the device from the wireless network**.

2. Manual Reset (if unable to remove via the App):

1. **Turn off** your AVAA C225.
2. **Press and hold** the **RED** rear button.
3. **Turn on** your AVAA C225.
4. Wait until the **red LED blinks (~2 sec)** - this confirms that the **wireless credentials have been erased**.
5. **Restart** your AVAA C225.

Important: Manually erasing the wireless credentials means that the AVAA C225 will no longer be controllable from the app. You must also **delete it from the app manually**.



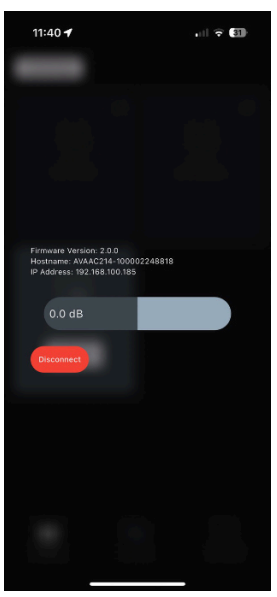
7.5 Firmware update (using the AVAA Controller app)

From time to time, we may release internal firmware updates for your AVAA C225. These are generally **minor enhancements or fixes** to ensure that your C225 AVAA continues to operate correctly. You will find the reference of the currently installed version under the settings page of the smartphone application:

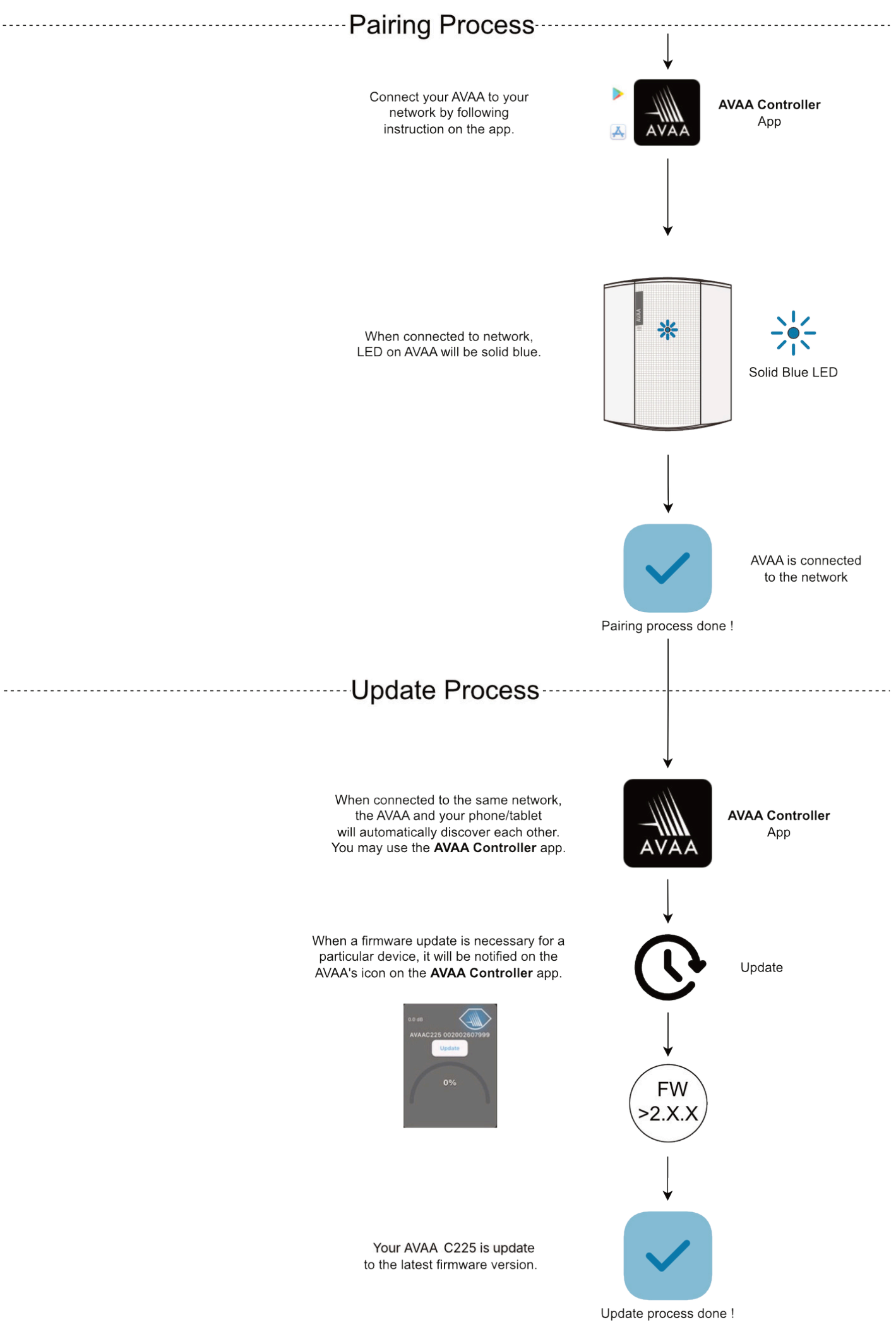
1. Ensure that your AVAA C225 is **turned on** and connected to the AVAA Controller app (please refer to remote control section).
2. If an "**Update" button** is displayed, you can click on it in order to process to the update.



3. To **check the Firmware version**, press an AVAA device in the list to display its version.



7.6 Pairing process



8. Placement and positioning in room

8.1 Environment

The AVAA C225 is designed to be effective in living rooms and studios with an Rt60 of less than 2 seconds for frequencies above 200 Hz. In smaller, more reverberant spaces, reducing the gain can help optimize performance.

8.2 Positioning

The effectiveness of the AVAA C225 depends on the room's acoustic characteristics and the **placement of the loudspeakers.**

For optimal results, position the AVAA C225 where the walls contribute most to the problematic room modes affecting the listening area. In practice, finding the best placement is simple and can be achieved through a few comparative tests.

1) Usual positioning of the AVAA, based on our experience

The starting position is in corners behind the source speakers as this is the most effective position in a majority of cases. However, depending on the structure of the room boundaries and listening position, other AVAA locations might turn out to be more effective. Try positioning them in different corners or against walls and evaluate effectiveness.

In practice, finding the best location is **quick and easy** by following the basic rules:

- AVAAs **positioned in corners** are more effective.
- AVAAs located **against rigid walls** are more effective.
- AVAAs positioned **in corners behind the source** are in general more effective than other similar corners.

Keep in mind that the AVAA C225 is designed to **absorb long wavelengths**, so precise positioning is not crucial.

2) Positioning the AVAAs based on room measurements

A more technical "two-step process" can also be employed to determine the optimal placement for the AVAAs.

1 - Identify the disturbing room modes:

Assuming the loudspeakers and listening position have been set, measure the frequency decay time in the listening position.
Note that the most disturbing room modes are the ones with the longest extinction time and not necessarily the peaks and nulls that are the result of inevitable first reflections.
You may typically identify 3 to 6 room modes.

2 - Identify the highest pressure zones for each problematic room mode:

Play a sine wave at the frequency of each disturbing room mode.
For each of these frequencies, walk around the walls of the room and note down the highest-pressure areas. You can do this with a sound level meter or listening with a single ear.
As a result, you should have a map of your room highlighting the wall areas most contributing to each disturbing room mode. This will clearly show the best locations for the AVAAs.

9. Troubleshooting

9.1 Power on LED does not light up

Please check that the **power switch is set on the ON** position and that the **mains cable is properly connected** to the mains. If the problem persists, check the fuse, the voltage selector and the AC power voltage. If this doesn't solve the problem, please contact PSI Audio or a PSI Audio authorized dealer.

9.2 AVAA C225 is unstable and emits noise

In normal operating mode the AVAA C225 doesn't emit any audible sound. The presence of reverberating objects in the near field of the AVAA may destabilize the system and produce noise or whistling. If the AVAA C225 becomes unstable you will distinctly hear it until the overload protection is reached, the system stops briefly and starts again.

- Remove any large reflective object that is close to the AVAA C225.
- Try positioning the AVAA C225 in a different location.
- If necessary, reduce the sensitivity of the device by pressing the blue button on the back (or via the remote on the app). 6 pressures reduce the efficiency by 12 dB.

9.3 Connection problem with the remote control

It might be possible that your smartphone does not find the AVAA C225 that you would like to pair with. In this case, please check that your internet router/box has not an automatic configuration of the frequency range of the wireless network.

To pair your AVAA, it is mandatory to have a **2.4 GHz** frequency for the wireless network. Sometimes the router prefer 5 GHz which is not compatible with the AVAA antenna.

To change this on your internet router, please check the manual of your router and disable the automatic frequency function. You can also try to generate 2 distinct network (one at 2.4 GHz and one at 5GHz).

Visit our FAQ on our website for more resources

10. Certificates of conformities

10.1 C.E. & RoHS Conformities

RELEC SA, Rue des Petits Champs 11 a+b, 1400 Yverdon-les-Bains, Switzerland, declares under its sole responsibility that the PSI Audio AVAA C214 and AVAA C225 conform to the applicable EU harmonization legislation. The declaration refers to Regulation (EU) 2019/1020.

Applicable directives
2014/35/EU (Low Voltage) · 2014/30/EU (EMC) · 2011/65/EU, as amended by (EU) 2015/863 (RoHS)

Applied harmonized standards
Electrical safety: EN IEC 62368-1
EMC: EN 55032, EN 55035, EN IEC 61000-3-2 and EN 61000-3-3
RoHS technical documentation: EN IEC 63000

11. Warranty

Our products undergo several steps of quality control to ensure they leave our factory in perfect condition. We offer a warranty against any manufacturing or material defect for a period of 5 years on all electronics and transducers and 2 years on the MDF boxes. Only Relec SA is able to qualify a manufacturing or material defect and its eligibility to be covered by the warranty. Wear and tear is not covered by the warranty.

Please contact your reseller for any query about warranty or servicing.
We kindly remind the user that unauthorized servicing can void the warranty. In order to provide a quality service, we ask the user to always include the warranty card at each service.

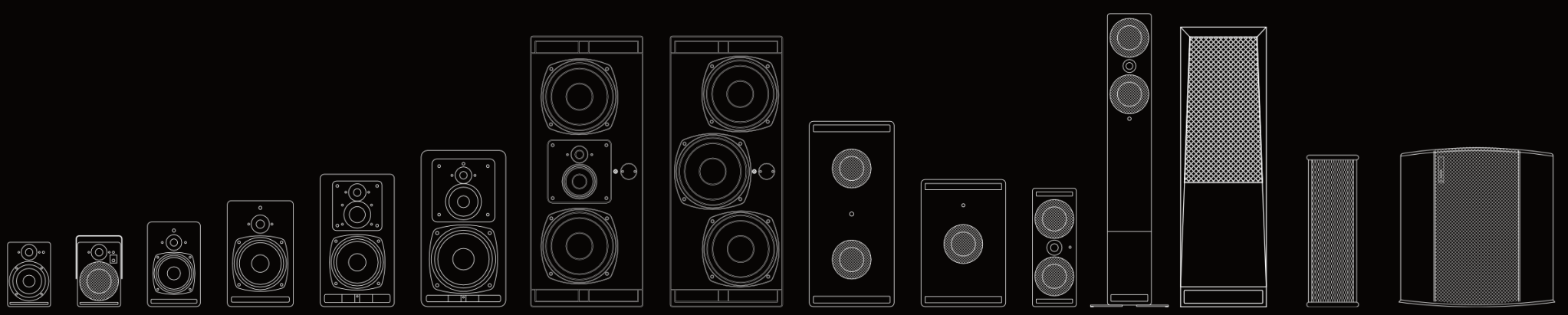
If goods need to be returned to the manufacturer (Relec SA), the symptoms must be clearly mentioned. In case of warranty, the parts and labour costs are at the charge of the manufacturer. If no defect in workmanship is detected, the warranty is considered invalid. A quote for the repair will be sent and the relative cost charged to the customer.

For services (covered or not by warranty), the expenses and the risks of the transports both ways between the customer and his supplier are the responsibility and at the charge of the customer.
For any other provision, the Swiss code of obligations, Articles 197 to 210 will apply.
For any legal action, reference will apply to the Court of Yverdon-les-Bains (Switzerland) only.

12. Notes

PSI AUDIO

AVAA C225



PSI AUDIO THE REAL THING!

psiaudio.swiss