



Achat 208 HL, 208 HR

Passive Speaker

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1 General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under www.thomann.de.

1.1 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this document.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – suspended load.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is designed as a PA system. The device is designed for professional use only and is not suitable for use in households. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety



DANGER!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.



WARNING!

Possible hearing damage due to operating the device at a high volume!

The device can produce volume levels that, when operated at a high volume, may cause temporary or permanent hearing impairment. Over an extended period of time, even levels that seem to be uncritical can cause hearing damage. Avoid operating the device at excessively high volumes over an extended period of time. Decrease the volume level immediately if you experience ringing in your ears or hearing impairment. If this is not possible, keep a greater distance or use adequate ear-muffs.



NOTICE!

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the “Technical specifications” chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.

3 Features and scope of delivery

Special features of this passive 2-way speaker:

- 2 × 8-inch mid-range speaker (ferrite) with 50-mm voice coil
- 1 × 1.4-inch tweeter (RuFeB) with 36-mm voice coil
- Horn tweeter, beam angle 45° × 80°
- Horn left 208 HL (item no. 283310) or horn right 208 HR (item no. 283313)
- 2 × lockable Speaker Twist (IN/OUT)
- Flying tracks on the top and bottom
- Black textured paint
- M10 thread for speaker stand flange
- Stand flange 36 mm
- Carrying handles
- Protective cover (optional, item no. 321393)
- Adapter plate (Achat Stack Board 208) for stacking on Achat 115 Sub, Achat 118, TP 118/800 and TP 218/1600 (optional, item no. 291479)
- Connection rails (Achat link bars) for vertical connection of 2 Achat 208 (optional, item no. 283315)

4 Installation and starting up

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.



WARNING!

Risk of injury from falling speakers that were inadequately secured!

If speakers are not properly secured when mounted, they can cause severe injury and considerable damage by falling.

Always secure portable sound systems (speakers) with two independent safety devices, for example with safety cables.



WARNING!

Risk of injury due to improper installation!

Improper mounting can lead to serious injuries and significant damage to property.

When installing and operating, make sure to follow the standards and regulations that apply in your country. In Germany, this is DGUV regulation 17 “Staging and Production Facilities for the Entertainment Industry”.

Ensure that speakers are only mounted by trained specialists.



WARNING!

Risk of hearing damage due to high volumes!

This device can produce high volume levels that may cause temporary or permanent hearing impairment in a short period of time.

Set up the device so that no persons can stay in its immediate vicinity.

Never use the device as a stage monitor.



CAUTION!

Risk of injury due to heavy weight!

The device is heavy. Lifting and dropping it during transport and installation can cause injuries.

Make sure at least two people work together when transporting and installing the device.



NOTICE!

Possible property damage to adjacent devices due to magnetic fields.

Speakers generate a static magnetic field. This magnetic field can affect other neighbouring units and in unfavourable cases damage them.

Ensure that speakers are always a sufficient distance away from sensitive equipment that may be affected by an external magnetic field.



NOTICE!

Potential property damage due to unsuitable stands!

If the device is mounted on an unsuitable stand, there is a risk that the stand will fall over and cause damage.

Only use stands whose maximum bearing capacity is at least as high as the weight of the device. Always ensure that the stand is stable.



NOTICE!

Possible staining due to plasticiser in rubber feet!

The plasticiser contained in the rubber feet of this product may react with the coating of the floor and cause permanent dark stains after some time.

If necessary, use a suitable mat or felt slide to prevent direct contact between the product's rubber feet and the floor.

4.1 Tips on handling speakers

We recommend you to set up the speakers in a way, that the sound signals can reach the audience unobstructedly. It will often be helpful to mount the speakers on tripods. Thus, the sound will be evenly spread with maximum range throughout the audience area.

Always use high grade cable to connect your equipment. Otherwise you won't reach maximum sound quality.

For optimum results both impedance and power handling of the speakers must match the requirements of the amplifier. Always follow the technical specifications of the speakers! The overall impedance of the connected loudspeakers must not exceed the minimum output impedance of the amp. The amps max. RMS output power should be 50 % above the power handling capacity of the connected speakers.

If you notice distortion during operation, either the amp or the speaker is overloaded. This may permanently damage the amp or the speaker. Always reduce the volume when you hear distortion.

4.2 Setup options

The Achat 208 HL (left-hand version) and the Achat 208 HR (right-hand version) are always operated in pairs. The side where the horn is located is marked with a grooved line and with "AIM". When viewed from the front, the grooved line shows the vertical orientation of the horn (8° downwards).

This allows you to see where the main radiation axis hits the ground and you can determine the range of the speaker via the height at which it is operated.

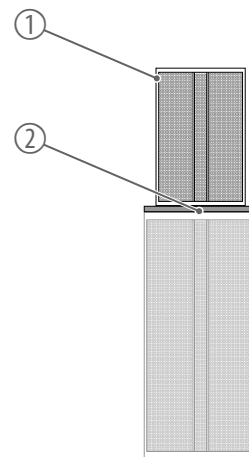
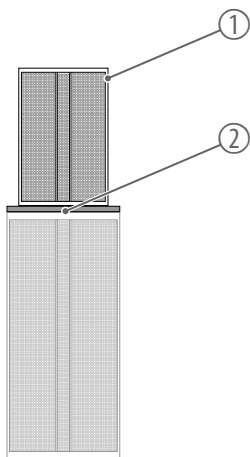
In single and double block setups, the lines always point to the stage centre.

In all applications, the use of additional woofers is recommended to cover the range from low bass frequencies to the crossover frequency. Due to the level that the Achat 208 can achieve, at least a double 18-inch woofer should be used for each Achat 208.

The recommended adapter plate is the Achat Stack Board 208, which can be placed on an Achat 115 Sub, Achat 118, TP 118/800 and TP 218/1600 and engages in place there.

In double or quad block configurations, each stack consists of two Achat 208, one on top of the other. For this purpose, they are firmly connected to each other with the optionally available connecting rails (link bars), see [🔗 'Mounting the connection rail \(link bar\)' on page 20](#).

Single setup, edge of stage



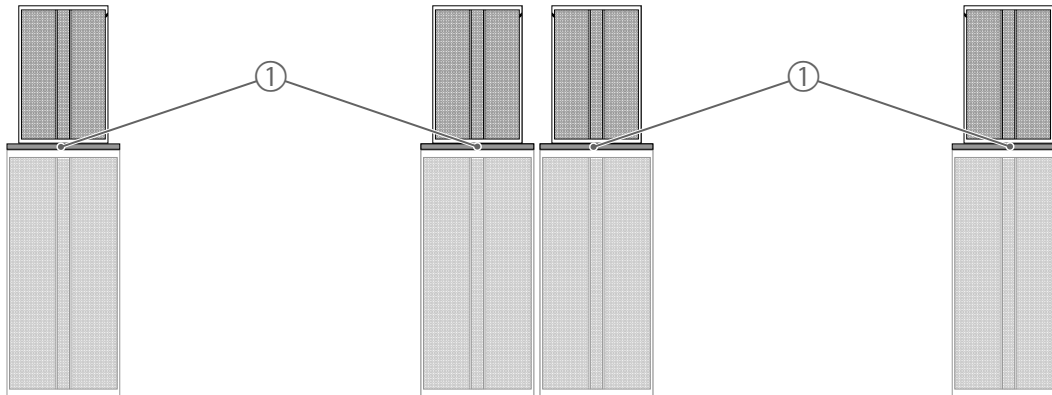
1 Grooved line marks the side where the horn is located

2 Adapter plate

Single setup, edge and centre of stage

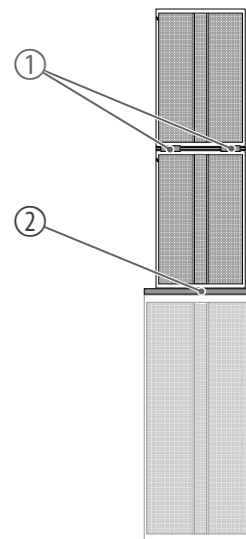
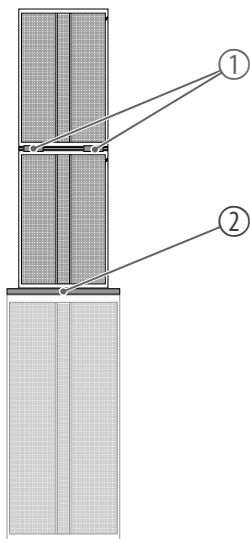
If you separate the two central speakers by approx. 10 cm, the acoustic diffusion will be more even (about 100° horizontally).

If the housing walls of the two central speakers are in direct contact, this achieves maximum coupling with a high concentration of the medium frequencies.



1 Adapter plate

Double block, edge of stage

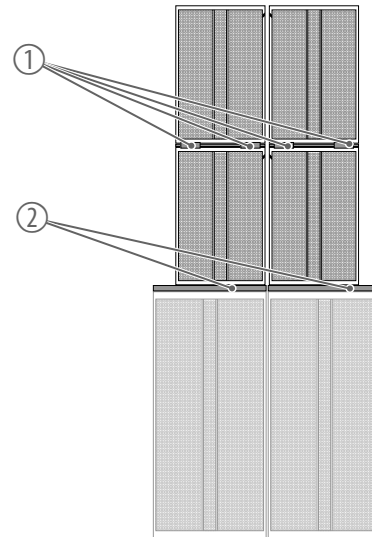
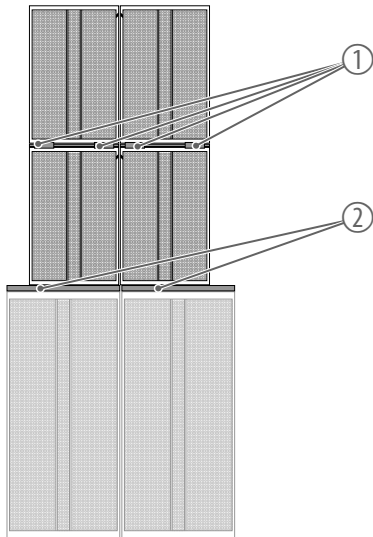


1 Link bar, for connecting 2 Achat 208

2 Adapter plate

Quad block, edge of stage

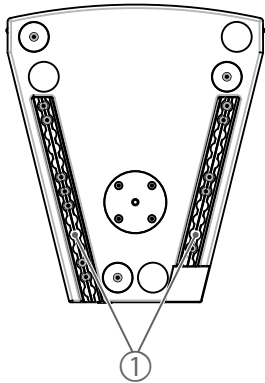
This setup achieves the greatest range.



1 Link bar, for connecting 2 Achat 208

2 Adapter plate

Mounting the connection rail (link bar)



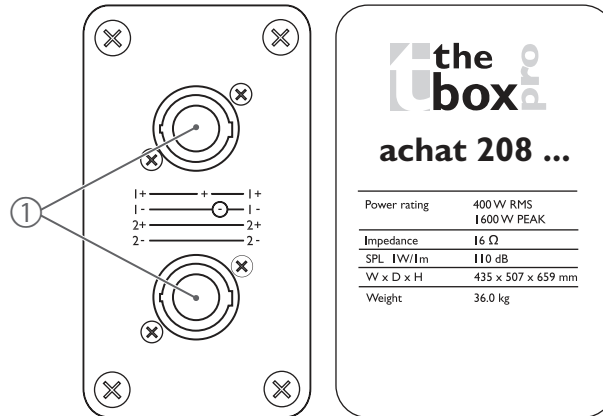
The link bar is available in pairs.

1. ➤ Stack the speakers and align the speakers.
2. ➤ Slide the link bar into the left or right groove of the speakers (1). Make sure the link bar buckle is correctly aligned.
3. ➤ Secure the buckle in the groove of the speakers until the buckle engages.
⇒ The link bar is secured.
4. ➤ Repeat the steps with the second link bar.

4.3 Hanging the speaker box

To hang the speaker box on special mounting devices (aka 'flying') both sides of the box offer built-in Aeroquip or fly tracks. In these tracks safety eyelets (double studs) can be screwed or latched. Check the secure connection of the safety eyelets with the box carefully, before you use it in 'flying mode'.

5 Connection options



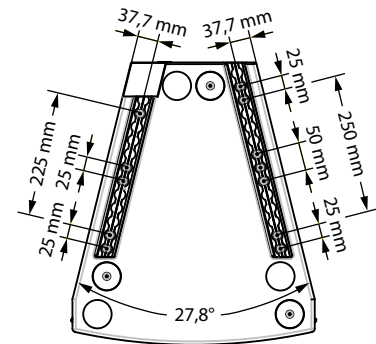
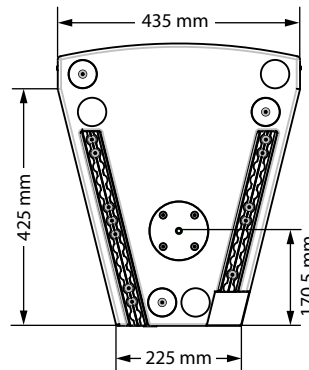
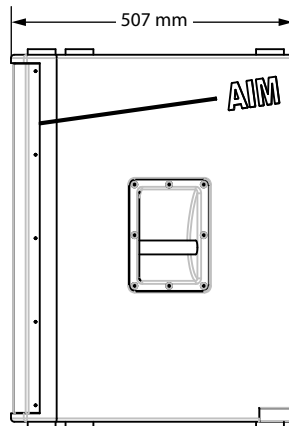
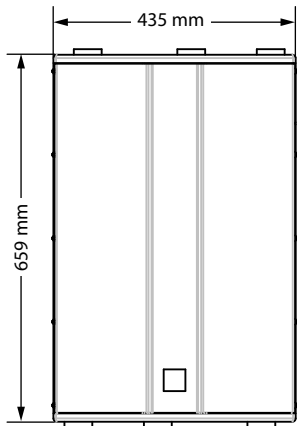
1 Speaker Twist with parallel wiring

- 1+, 1- connected and assigned
- 2+, 2- connected and not assigned

6 Technical specifications

System	Passive 2-way speaker	
Configuration	Mid-range speaker	2 × 8-inch speaker (ferrite) with 50-mm voice coil
	Tweeter	1 × 1.4-inch tweeter (RuFeB) with 36-mm voice coil
Input connections	2 × Speaker Twist	
Output connections	2 × Speaker Twist	
Frequency range	150 Hz ... 20 kHz, -3 dB	
Load capacity	RMS: 400 W	
	Peak: 1600 W	
Sensitivity (1 W/1 m)	110 dB SPL	
Rated impedance	Single setup	16 Ω
	Double block	8 Ω
	Quad block	4 Ω
Max. sound pressure level	Single setup	136 dB SPL
	Double block	139 dB SPL
	Quad block	142 dB SPL

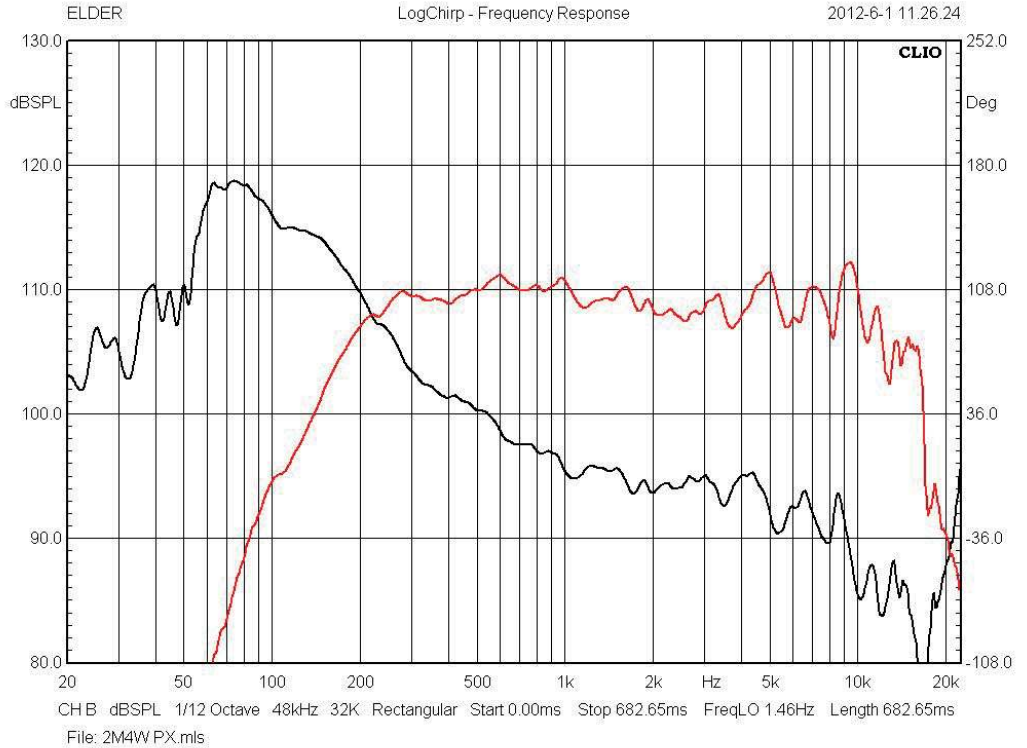
Max. short-term sound pressure level	Single setup	142 dB SPL
	Double block	145 dB SPL
	Quad block	148 dB SPL
Beam angle (H × V)	45° × 80°	
Dimensions (W × H × D)	435 mm × 659 mm × 507 mm	
Weight	36 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)



Further information

Housing	Wood
Colour	Black
Truss-capable	Truss rail
Monitor inclination	No
Ways	2-way
Stand flange	36 mm
Wall mount	No
Protective cover	Optional (item no. 321393)
Adapter plate (Achat Stack Board 208)	Optional (item no. 291479)
Connecting rails (Achat link bars)	Optional (item no. 283315)

Frequency response



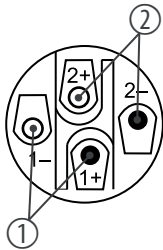
7 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment in such a way that a perfect sound experience is ensured.

Please note these advices, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into the socket, an incorrect connection may result in a destroyed power amp, a short circuit or 'just' in poor transmission quality!

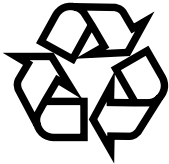
Speaker Twist chassis connector



1, +	Signal 1 (in phase)
1, -	Signal 1 (out of phase)
2, +	Signal 2 (in phase)
2, -	Signal 2 (out of phase)

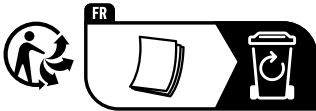
8 Protecting the environment

Disposal of the packing material



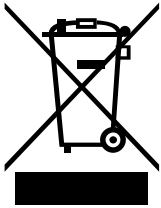
Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

Do not dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the instructions and markings on the packaging.



Observe the disposal note regarding documentation in France.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. If in doubt, consult your local waste management facility. You can also return the device to a retailer if they offer to take the device back for free or if they are legally obliged to do so. When disposing of the device, comply with the rules and regulations that apply in your country. You can also return your old device to Thomann GmbH at no charge. Check the current conditions on www.thomann.de.

Proper disposal protects the environment as well as the health of your fellow human beings. This is because the proper handling of old devices negates the potential negative effects of hazardous substances, and because it conserves resources by recycling them.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal. For example, use the classified ads of Thomann GmbH.

If your old device contains personal data, delete those data before disposing of it.

