

Achat 208 HL / 208 HR  
passive speaker

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# 1 General notes


This user manual contains important information on safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device, include the manual for the next owner.

Our products are subject to a process of continuous development. We therefore reserve the right to make changes without notice.

## **Symbols and signal words**

This section provides an overview of the symbols and signal words used in this user manual.

Signal word	Meaning
<b>DANGER!</b>	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.
<b>WARNING!</b>	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.
<b>CAUTION!</b>	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
<b>NOTICE!</b>	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 signs	Type of danger
	Warning – danger zone.

## 2 Safety instructions

### Intended use

This device is designed for sound reinforcement. 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!**

#### **Danger for children**

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard! Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke! Never let children unattended use electrical devices.



### **WARNING!**

#### **Consequences of faulty mounting**

Faulty mounting may lead to lethal injuries or property damage. Please ensure that the norms and regulations valid in your country are always observed when mounting and operating your product. In Germany: BGV C1, "Event and Production Sites for Stage Presentations". Only expertly trained staff may mount speakers.



### **CAUTION!**

#### **Possible hearing damage**

The device can produce volume levels that may cause temporary or permanent hearing impairment. Over an extended period of time, even levels that seem to be uncritical can cause hearing damage. 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 sufficient ear protectors.



### **CAUTION!**

#### **Risk of injury due to heavy weight**

Due to the heavy weight of the device, at least two persons are required for transport and installation.





### **NOTICE!**

#### **Operating conditions**



This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations. Only operate the device within the ambient conditions specified in the chapter 'Technical specifications' of this user manual. Avoid heavy temperature fluctuations and do not switch the device on immediately after it was exposed to temperature fluctuations (for example after transport at low outside temperatures). Dust and dirt inside can damage the unit. When operated in harmful ambient conditions (dust, smoke, nicotine, fog, etc.), the unit should be maintained by qualified service personnel at regular intervals to prevent overheating and other malfunction.



### **NOTICE!**

#### **Possible staining**



The plasticiser contained in the rubber feet of this product may possibly react with the coating of your parquet, linoleum, laminate or PVC floor and after some time cause permanent dark stains. In case of doubt, do not put the rubber feet directly on the floor, but use felt-pad floor protectors or a carpet.

## 3 Features

Special features of the device:

- 2 × horn-loaded 8" mid-frequency transducers and 1 × 1.4" high-frequency driver
- Left horn 208 HL (item no. 283310) or right horn 208 HR (item no. 283313)
- 2 × NL4 connections (1+, 1-)
- Flying tracks on top and bottom
- Black textured coating
- M10 thread for speaker stand mounting flange
- Handles
- Link Bar for coupling two Achat 208 H speakers (option)
- Adapter plate for stacking on top of Achat 115SUB, Achat 118, TP 118/800 and TP 218/1600 (option)

## 4 Installation

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 caused by falling objects**

Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.



### **WARNING!**

#### **Hearing damage**

These devices can produce volume levels that may cause temporary or permanent hearing impairment in a short period of time.

Set up the devices so that no persons can stay in their immediate vicinity. The devices must not be used as stage monitors.



### **CAUTION!**

#### **Risk of injury due to heavy weight**

Due to the heavy weight of the device, at least two persons are required for transport and installation.



### **NOTICE!**

#### **Possible property damage by magnetic fields**

Loudspeakers produce a static magnetic field. Therefore, maintain an appropriate distance to devices that can be adversely affected or damaged by an external magnetic field.



**NOTICE!**

**Use of stands**

When mounting the device onto a stand, ensure that the stand is in a safe and stable position and that the weight of the device does not exceed the maximum permissible load capacity of the stand.

### 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.

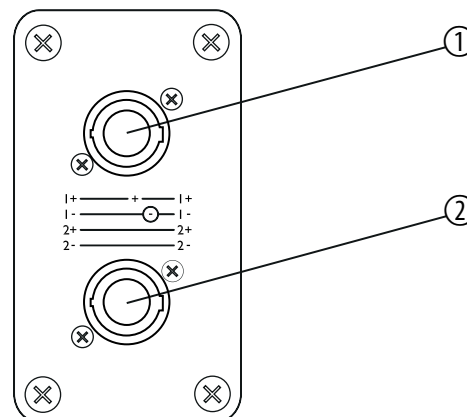
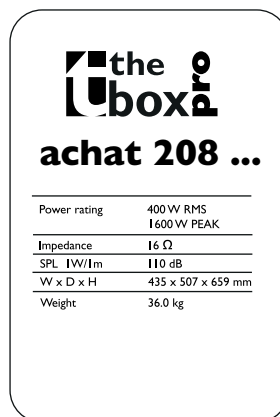
For optimum results both impedance and power handling of the speakers must match the requirements of the amplifier. Always follow the technical specifications of the speakers! The overall impedance of the connected loudspeakers must not exceed the minimum output impedance of the amp. The amps max. RMS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

## 4.3 Connections



1, 2 NL4 connections wired in parallel (1+, 1- through-connected and assigned; 2+, 2- through-connected and not assigned)



## 4.4 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 box via the height in which it is operated.

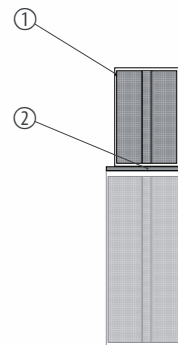
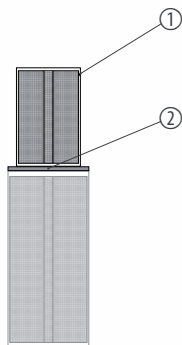
In single and double block setups, the lines always point to the stage centre.

In all applications, the use of additional woofers covering the range from low bass frequencies to the crossover frequency is recommended. Due to the achievable level of the Achat 208, at least a double 18" woofer should be used for each Achat 208.

The Achat stack board is recommended as an adapter plate that can be put on all woofers of the Achat series (from Achat 115 SUB onwards) and engages there.

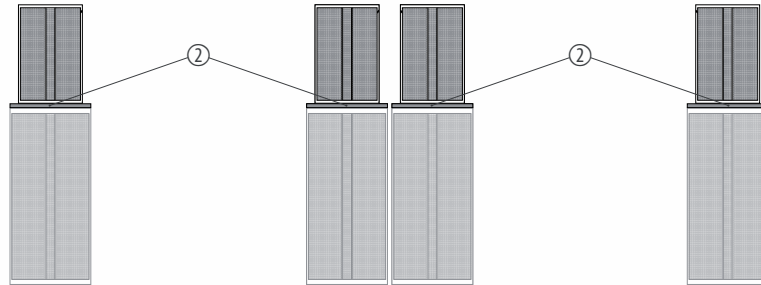
In double or quad block configurations, two Achat 208 each are set on top of one another. To this end, they are fixed together with the optionally available link bars.

### Single setup at both sides of the stage



- |   |   |
|---|---|
| 1 | Grooved line marks the side where the horn is located |
| 2 | Adapter plate   |

### Single setup at both sides and in the centre of the stage

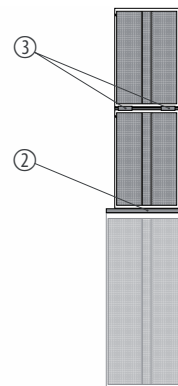
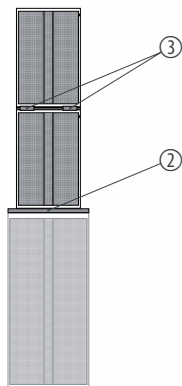


#### 2 Adapter plate

When you spread the two centre loudspeakers by approximately 10 cm, you will get a more even acoustic diffusion (about 100° horizontally).

When the box walls of the the two centre loudspeakers are located directly to one another, maximum coupling with a high concentration of the medium frequencies is achieved.

### Double block at both sides of the stage

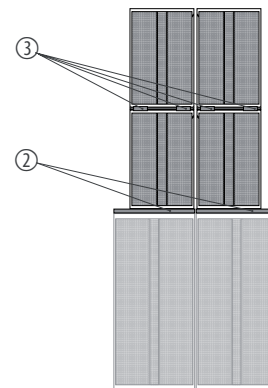
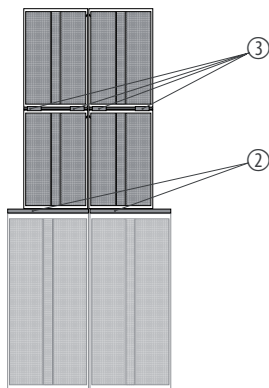


2 Adapter plate

3 Link Bars for coupling two Achat 208

**Quad block at both sides of the stage**

The highest range is achieved with this setup.



- |   |                                      |
|---|--------------------------------------|
| 2 | Adapter plate                        |
| 3 | Link Bars for coupling two Achat 208 |

## 5 Technical specifications

Speaker	2 × 8" mid-frequency transducers, 1.4" high-frequency driver
Input connections	2 × NL4 sockets (Power Twist)
Frequency range	150 Hz ... 20 kHz, –3 dB
Load capacity	400 W (RMS), 1600 W (peak)
Sensitivity (1 W/1 m)	136 dB, for single setup
	142 dB, quad block
Rated impedance	16 Ω, for single setup
	8 Ω, double block
	4 Ω, quad block
Dispersion angle (V × H)	60° × 40° (mid-range transducers)
Dimensions (W × H × D)	435 mm × 475 mm × 670 mm
Weight	36 kg

Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non-condensing)

### Further information

Monitor inclination	No
Colour	Black
Stand adapter	Suitable stand adapter optionally available (item no. 120118)
Protective cover	Suitable protective cover optionally available (item no. 321393)

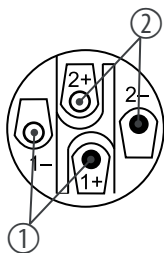
## 6 Plug and connection assignment

### 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)



## 7 Protecting the environment

### Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

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

### Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.





