

User Manual



A 218 LA

Active Speaker

Thomann GmbH

Hans-Thomann-Straße 1

96138 Burgebrach

Germany

Telephone: +49 (0) 9546 9223-0

Internet: www.thomann.de

24.05.2024, ID: 313916 (V3)

Table of contents

1	General information.....	5
1.1	Symbols and signal words.....	5
2	Safety instructions.....	7
3	Features.....	10
4	Installation.....	11
5	Connections and controls.....	13
6	Starting up	17
7	Networking and remote control	20
8	Technical specifications.....	23
9	Plug and connection assignment.....	25
10	Protecting the environment.....	27





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 – high-voltage.
	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!

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.



DANGER!

Danger to life due to electric current!

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.



DANGER!

Risk of death from electrical current!

A short circuit can cause fires and loss of life. Always use properly insulated, tripe-core mains cable. Do not modify the mains cable. If the insulation is damaged, immediately switch off the power supply and have it repaired. If in doubt, contact a qualified electrician.



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!

Risk of fire due to covered vents and neighbouring heat sources!

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can over-heat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.



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.

**NOTICE!****Risk of fire by exceeding the maximum current!**

The device can supply power to other devices of identical design and connected in series. If too many devices are connected, the maximum permitted power consumption can be exceeded, which can cause the device to overheat and burst into flames. Only connect devices of identical design to the device. When deciding how many devices you can connect in series, make sure that the maximum output current specified on the device and in the “Technical specifications” chapter of the user manual is not exceeded. Only use power cords with a cable cross-section designed for the required current intensity when connecting the devices in series.

**NOTICE!****Damage to the device due to high voltages!**

The device can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the device matches the local power grid before plugging in the device. Only operate the device from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). As a precaution, disconnect the device from the power grid when storms are approaching or if the device will not be used for a longer period.

3 Features

Special features of the device:

- Active subwoofer with 2 × 18-inch woofers (4-inch voice coils)
- 4000-W-D-class amplifier with PFC
- Built-in sound processor (DSP) with four presets
- Connection options: XLR panel socket for signal input, XLR panel plug for signal output
- Lockable input socket (Power Twist)
- Network connection for connecting to a notebook/PC using only the CanBus converter (item no. 440591 the box pro USB2CAND CanBus Converter) and Pronet software (free download from www.thomann.de)
- Ten carrying handles
- Birch plywood housing with waterproof paint
- Four heavy-duty casters included

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.



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.



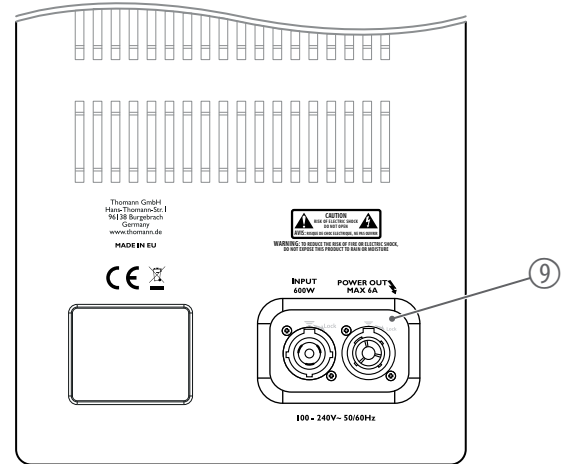
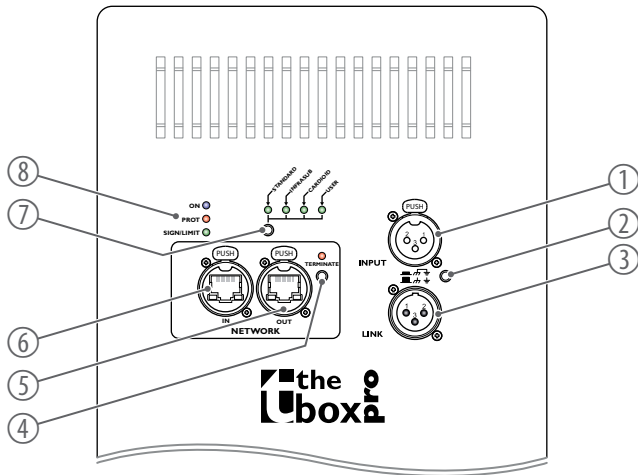
NOTICE!

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.

5 Connections and controls



1	<i>[INPUT]</i> Audio signal input with lockable XLR panel socket. The socket has fully balanced electronic wiring for an optimal signal-to-noise ratio and a sufficient power reserve, including A/D conversion.
2	<i>[GND LIFT]</i> pushbutton If hum is caused by a ground loop, you can use this switch to disconnect the connection between the earth pin of the device and the signal ground of the device. Switching only has an effect if balanced connection cables are in use.
3	<i>[LINK]</i> Audio signal output with XLR panel plug for connecting other line array elements or speakers to which the input signal is transferred.
4	<i>[TERMINATE]</i> pushbutton If the device is connected to elements of a line array with a network cable, the last device must be terminated with the built-in load resistance. Press the <i>[TERMINATE]</i> pushbutton to do so. The LED above lights up.
5, 6	<i>[NETWORK IN/OUT]</i> RJ45 CAT5 connectors for establishing a network connection with the CanBus converter (item no. 440591), the Pronet software and the line array elements.

7 Preset button

This button has two functions:

- If kept pressed while the element is switched on, the ID assignment is made. The internal digital signal processor (DSP) assigns a new ID to the device for the remote control within the Pronet network. Each element must have a unique ID so that it can be represented in the Pronet network. If you assign a new ID, all elements with already assigned IDs must be on and connected to the Pronet network.
- If the element is already on, pressing the button selects the DSP preset. The selected preset is indicated by the corresponding LED.
 - *[STANDARD]* | This setting is suitable for all applications where the frequency range up to 90 Hz is to be transmitted and amplified. The setting is suitable for most environments and for combinations with vertical truss-mounted line arrays.
 - *[INFRASUB]* | This setting can be used when a deeper “response” in the bass range is required. This will slightly reduce the sound pressure of the system. Please note that the *[STANDARD]* and *[INFRASUB]* settings must not be used simultaneously by two adjacent devices.
 - *[CARDIOID]* | This setting is useful for a device that is aligned to the stage behind the backs of two other subwoofers. The bass level is reduced towards the stage. For a sample application, see ↗ ‘Application example for stacked subwoofers’ on page 18.
 - *[USER]* | This LED lights up while the user setting is loaded. This setting corresponds to user memory slot no. 1 on the DSP. In the delivery state, the user setting is identical to the *[STANDARD]* setting. If you want to change it, you must connect the element to a PC, edit the parameters using the Pronet software, and save the setting to user memory slot no. 1.

- 8 *[SIGN/LIMIT]* LED | This LED lights up green when an input signal is present. This LED lights red when the internal output signal is limited (due to excessive input signal level!).

[PROT] LED | This LED lights up red when the protection circuit of the amplifier module responds due to an internal error and the amplifier is therefore muted. This LED lights red when the internal output signal is limited (due to excessive input signal level!).

[ON] LED | This LED lights up green when the device is on and the supply voltage is present.

- 9 *[POWER OUT]* | Lockable output socket (Power Twist) for connecting another device to the power supply To connect another device to the power supply, insert the Power Twist connection cable into this socket and lock the plug by turning it clockwise. Connect the other end of the Power Twist connection cable to the Power Twist input socket of the other device. To disconnect the other device, pull the locking lever on the plug backwards and turn the plug anti-clockwise.

[INPUT] | Blue lockable input socket (Power Twist). To switch on the device, plug the Power Twist power cable or Power Twist connecting cable from another element into this socket and turn the plug clockwise to the *[ON]* position. To turn off the device, pull the locking lever on the plug backwards and turn the plug anti-clockwise to the *[PUSH OFF]* position.

6 Starting up

Switching on

Once you have established all the necessary connections, you can turn on the audio system.

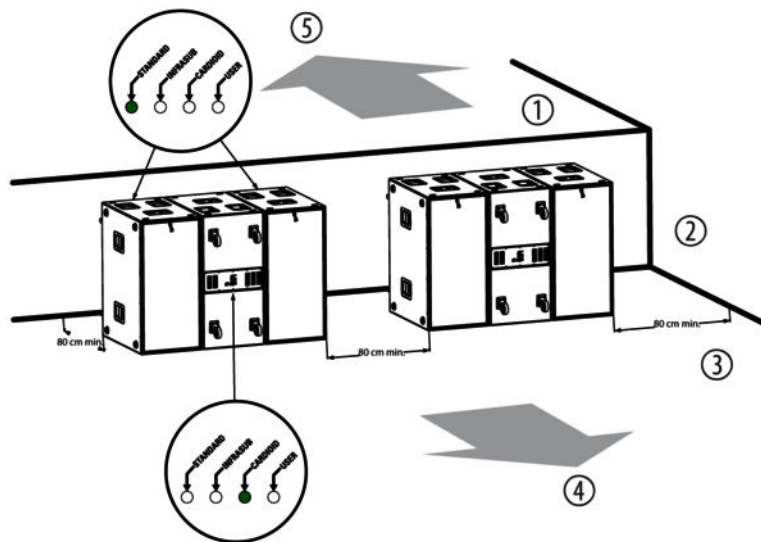
It is recommended to provide one switch for turning on the entire audio system and to always leave the Power Twist plugs connected to the sockets of the individual elements. With this simple trick you can extend the life of the Power Twist connectors.

DSP preset

Select the required DSP preset (*[STANDARD]*, *[INFRASUB]*, *[CARDIOID]* or *[USER]*).

Application example for stacked subwoofers

The devices can be combined vertically or horizontally into subwoofer stacks. Of each three devices, the middle one should face the stage and work with the [CARDIOID] DSP preset. The other two devices face the audience and work with the [STANDARD] DSP preset. With this configuration, the bass level is reduced for the artists on stage but maximised for the audience.



1 Stage

2 Wall or large obstacle

3	Auditorium
4	Doubled bass
5	Reduced bass

Subwoofer stacks must be placed at a distance of at least 80 cm from walls and fixed obstacles, so that the sound is not affected by reflections.

7 Networking and remote control

Network capability

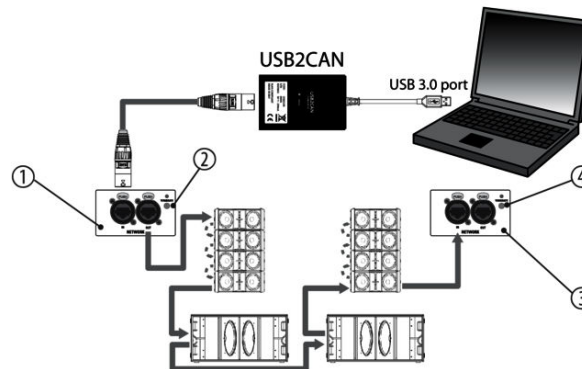
Using the network sockets on the back of the device, the individual devices of the entire audio system can be networked and controlled remotely via a notebook/PC.

Pronet

The communication protocol used in the Pronet network is CanBus.

USB2CAND

All you need to build such a network is the free Thomann Pronet software, which you can download from the Thomann Cyberstore, the CanBus Converter (item no. 440591) available from Thomann and a notebook/PC. An installation manual and a user manual are included in the free software download.



1	Network sockets on the back of the first device.
2	[<i>TERMINATE</i>] pushbutton must not be pressed. The LED above it is off.
3	Network sockets on the back of the last device.
4	[<i>TERMINATE</i>] pushbutton must be pressed. The LED above it is on.

Network setup and termination

The individual devices must be linked in linear fashion via RJ45 CAT5 cables. The start and end of the network bus must be terminated. The beginning is terminated by the CanBus converter. At the end, the [*TERMINATE*] switch on the back of the last device must be pressed to enable the built-in terminating resistor for termination. The [*TERMINATE*] switch on all devices between the CanBus converter and the last device may not be pressed.

ID assignment

Each device in a Pronet network must have a unique identifier or ID. By default, the USB2CAND converter has the ID 0. Any other device can only have an ID equal to or higher than 1. There must be no devices with the same ID in the network. The ID is assigned automatically when a device connected to the network is turned on for the first time.

Proceed as follows to assign a unique ID to all devices in the Pronet network:

1. Turn off all devices.
2. Connect them with the RJ45 CAT5 cables in the required order.

- 3.** ➤ Press the *[TERMINATE]* switch on the back of the last device.
- 4.** ➤ Turn on the first device while holding down its *[PRESET]* button on the back.
- 5.** ➤ Leave the first device turned on and repeat step 4 for all other devices until the last device is turned on.

To add a new device, you just need to repeat step 4. Each device keeps its ID even when turned off, as the ID is stored in the internal memory of the device. The ID is only deleted or reassigned by explicit allocation as described above. Find more detailed information and instructions in the user manual supplied with the Pronet software.

8 Technical specifications

Configuration	2 × 18-inch woofers (4-inch voice coil)	
Input connections	Power supply	1 × lockable input socket (Power Twist)
	Audio signal	1 × XLR panel socket, 3-pin (balanced)
	Network connection	1 × RJ45-CAT5 input socket
Input impedance	20 kΩ	
Input sensitivity	+4 dBu / 1.25 V	
Output connections	Audio signal	1 × XLR panel socket, 3-pin (balanced)
	Network connection	1 × RJ45-CAT5 input socket
	Power supply for further devices	1 × lockable output socket (Power Twist) Output current, max.: 6 A
Output power	2 × 2000 W (RMS)	
Frequency range	36 Hz ... 100 Hz (−3 dB)	
Sound pressure level (SPL), max.	141 dB	
Power consumption	600 W (nominal)	
	2000 W (maximum)	

Technical specifications

Supply voltage	100 - 230 V ~ 50/60 Hz	
Dimensions (W × H × D, without casters)	1,215 mm × 590 mm × 950 mm	
Weight	101.7 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

Further information

Colour	Black
Stand flange	No
Protective cover	Not included (item no. 334761)

9 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!

Balanced and unbalanced transmission

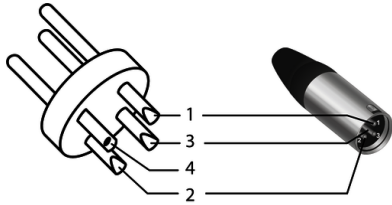
Unbalanced transmission is mainly used in semi-professional environment and in hifi use. Instrument cables with two conductors (one core plus shielding) are typical representatives of the unbalanced transmission. One conductor is ground and shielding while the signal is transmitted through the core.

Unbalanced transmission is susceptible to electromagnetic interference, especially at low levels, such as microphone signals and when using long cables.

In a professional environment, therefore, the balanced transmission is preferred, because this enables an undisturbed transmission of signals over long distances. In addition to the conductors 'Ground' and 'Signal', in a balanced transmission a second core is added. This also transfers the signal, but phase-shifted by 180°.

Since the interference affects both cores equally, by subtracting the phase-shifted signals, the interfering signal is completely neutralized. The result is a pure signal without any noise interference.

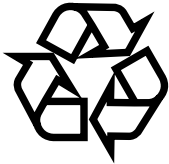
XLR plug (balanced)



1	Ground, shielding
2	Signal (in phase, +)
3	Signal (out of phase, -)
4	Shielding on plug housing (option)

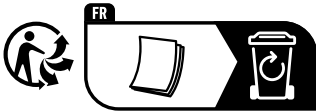
10 Protecting the environment

Disposal of the packing material



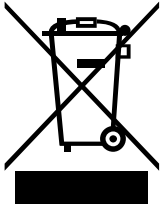
Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

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.

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

