the box

# MA5

## active monitor

th•mann
MUSIC IS OUR PASSION

user manual

Musikhaus Thomann
Thomann GmbH
Hans-Thomann-Straße 1
96138 Burgebrach
Germany
Telephone: +49 (0) 9546 9223-0
E-mail: info@thomann.de
Internet: www.thomann.de

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# Table of contents

# 1 General information

This manual contains important instructions for the safe operation of the unit. Read and follow the safety instructions and all other instructions. Keep the manual for future reference. Make sure that it is available to all those using the device. If you sell the unit please make sure that the buyer also receives this manual.

Our products are subject to a process of continuous development. Thus, they are subject to change.

## 1.1 Further information

On our website (*www.thomann.de)* you will find lots of further information and details on the following points:

| | |
|---|---|
| Download | This manual is also available as PDF file for you to download. |
| Keyword search | Use the search function in the electronic version to find the topics of interest for you quickly. |
| Online guides | Our online guides provide detailed information on technical basics and terms. |
| Personal consultation | For personal consultation please contact our technical hotline. |
| Service | If you have any problems with the device the customer service will gladly assist you. |

## 1.2 Notational conventions

This manual uses the following notational conventions:

**Letterings**

The letterings for connectors and controls are marked by square brackets and italics.

**Examples:** *[VOLUME]* control, *[Mono]* button.

## 1.3 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 manual.

| 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. |
| **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 intended to be used in a sound reinforcement system. This device is designed for professional and not household use. 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.

**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.

**DANGER!**

**Electric shock caused by high voltages inside**

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 if covers, protectors or optical components are missing or damaged.

**DANGER!**

**Electric shock caused by short-circuit**

Always use proper ready-made insulated mains cabling (power cord) with a protective contact plug. Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.

**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.

**NOTICE!**

**Risk of fire**

Do not block areas of ventilation. Do not install the device near any direct heat source. Keep the device away from naked flames.

**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.

**NOTICE!**

**Power supply**

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user.

Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

# 3 Features

Special features of the device:

- 5" full-range Neodym driver
- Built-in 150 W class D power amp
- 3-channel mixer with 3-band EQ
- Mic / line and AUX inputs
- 3/8" microphone tripod bracket
- Manual standby mode

# 4 Installation

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device 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.

**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.

## 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.

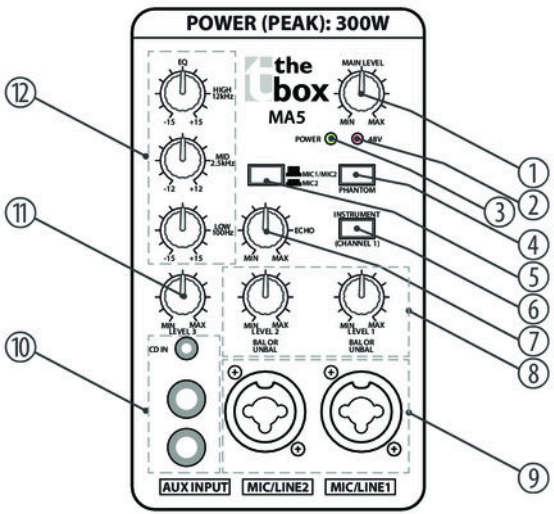
Always use high grade cable to connect your equipment. Otherwise you won't reach maximum sound quality.

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 deceed 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.

# 5 Connections and controls

**Front panel**

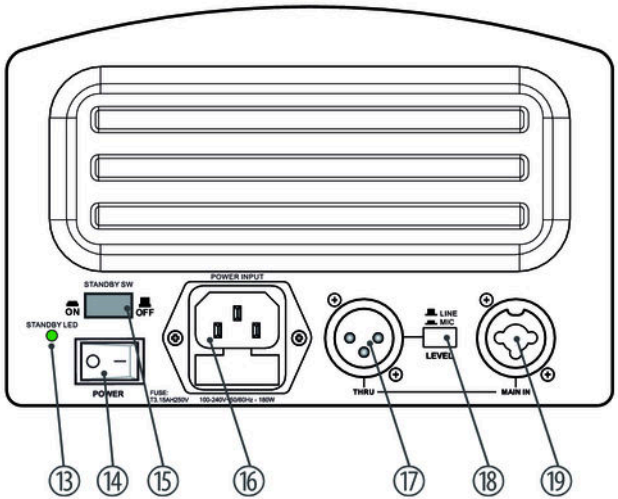


| | |
|---|---|
| 1 | *[MAIN LEVEL]*<br>Overall volume control |
| 2 | LED *[+48V]*<br>Control LED for phantom power. This LED lights when the phantom power is turned on. |
| 3 | LED *[POWER]*<br>Control LED for power supply. This LED lights when the device is turned on. |
| 4 | *[PHANTOM]*<br>Turns on phantom power for the microphone inputs.<br>The phantom power leads to damage to the device if unbalanced cables are connected. Only switch on phantom power while exclusively balanced cables are connected. |
| 5 | *[MIC1/MIC2 / MIC2]*<br>Turns on the Delay effect. When the switch is pressed, the Delay effect is active only for channel 2. If the switch is not pressed, the delay effect will affect channel 1 and channel 2. |
| 6 | *[INSTRUMENT (CHANNEL 1)]*<br>Press this switch when an instrument is connected to the input for channel 1. |

| | |
|---|---|
| 7 | *[ECHO]*<br>Control to adjust the delay time. |
| 8 | *[LEVEL 1]*, *[LEVEL 2]*<br>Controls to adjust the level for channel 1 and 2. Turn this knob clockwise or counter-clockwise to increase or reduce the volume.<br>In zero position, the signal is muted, in maximum position the signal is processed without any attenuation. |
| 9 | *[MIC/LINE 1]*, *[MIC/LINE 2]*<br>XLR / 1/4" combo sockets for signal input channel 1 and 2. |
| 10 | *[AUX INPUT]*<br>Signal inputs for channel 3, designed as RCA socket (*[CD IN]* e.g. for MP3 or CD players and as 2 × 1/4" phone socket.) |

| | |
|---|---|
| 11 | *[LEVEL 3]*<br>Control to adjust the level for channel 3. Turn this knob clockwise or counter-clockwise to increase or reduce the volume.<br>In zero position, the signal is muted, in maximum position the signal is processed without any attenuation. |
| 12 | *[HIGH 12kHz]*, *[MID 2.5kHz]*, *[LOW 100Hz]*<br>3-band EQ with high, mid and low frequency controls (boost / attenuation by ±15 dB |

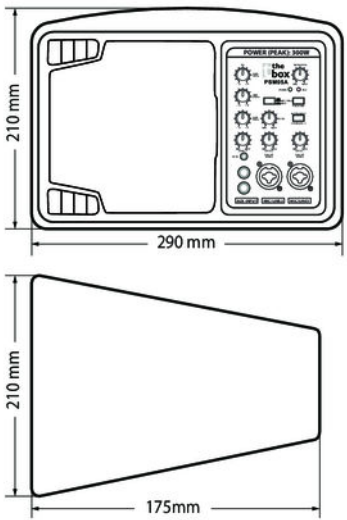
**Rear panel**


STANDBY SW
ON
OFF
STANDBY LED
POWER
POWER INPUT
LINE
MIC
LEVEL
THRU
MAIN IN
13
14
15
16
17
18
19

| | |
|---|---|
| 13 | *[STANDBY LED]*<br>Indicator light for standby mode. LED lights up green: Device active. LED lights up red: Device in standby mode. |
| 14 | *[POWER]*<br>Main switch. Turns the device on and off. |
| 15 | *[STANDBY SW]*<br>*[ON]* turns standby mode on.<br>*[OFF]* turns standby mode off.<br>The device will switch to standby mode after approx. 30 minutes without input signal. |
| 16 | IEC chassis plug for power supply with fuse holder. Should the fuse have blown, disconnect the unit from the power supply and replace the fuse with a new fuse of the same type. |
| 17 | *[THRU]*<br>XLR chassis plug: Via this output the signal (down mix of channels Main, 1, 2 and 3) can be forwarded to further active speakers. |

| | |
|---|---|
| 18 | *[LEVEL]*<br>Switch for the signal level at the output *[THRU]*. Switch released: Line level, switch pressed: microphone level. |
| 19 | *[MAIN IN]*<br>Signal input for Main channel, designed as XLR / 1/4" combo socket. |

# 6 Technical specifications




| | | |
|---|---|---|
| System | | Active monitor |
| Speaker | | 1 × 5" full-range Neodym driver |
| Inputs | | XLR / 1/4" combo sockets, RCA socket |
| Output | | XLR chassis plug |
| Frequency response | | 20 Hz… 20 kHz |
| Output power | | RMS: 125 W<br>Peak: 150 W |
| Sensitivity (1 W / 1 m) | LINE1, 2 | MIC: –40 dBu ± 2 dBu; LINE: –20 dBu ± 2 dBu |
| | LINE 3 (RCA input) | -10 dBu ± 2 dBu |
| | MAIN | MIC: 0 dBu ± 2 dBu; LINE: 0 dBu ± 2 dBu |
| Maximum sound pressure level (SPL) | | 114 dB |
| Operating supply voltage | | AC 100 – 240 V ~ 50/60 Hz |

| | |
|---|---|
| Fuse | 5 mm × 20 mm, 3,15 A, 250 V, slow-blow |
| Power consumption | 180 W |
| Dimensions (W × H × D) | 290 mm ×175 mm ×210 mm (15.35in. × 5.31in. × 15.55in.) |
| Weight | 2.8 kg |

**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!

**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.

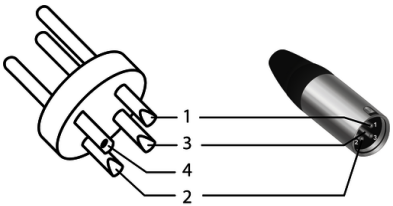
**1/4" TS phone plug (mono, unbalanced)**


| | |
|---|---|
| 1 | Signal |
| 2 | Ground, shielding |

**1/4" TRS phone plug (mono, balanced)**


| | |
|---|---|
| 1 | Signal (in phase, +) |
| 2 | Signal (out of phase, –) |
| 3 | Ground |

**XLR plug (balanced)**




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

**RCA connection**

Drawing and table indicate the pin assignment of an RCA plug.


| | |
|---|---|
| 1 | Signal |
| 2 | Ground, shielding |

# 8 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.

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