



**the  
box**

MS 12  
active speaker

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# 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](http://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
<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>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 – high-voltage.
	Warning – danger zone.

## 2 Safety instructions

### Intended use

This device is intended to be used in a sound reinforcement system. 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.





**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.



### **NOTICE!**

#### **Danger of short circuit**

Switching on phantom power will damage the device if unbalanced XLR cables are connected.

Only turn on phantom power when exclusively balanced XLR cables are connected.

### 3 Features

- 2-way speaker system with active and passive loudspeaker box
- 12" woofer, 1" tweeter (Neodym)
- Output power 150 W (RMS)
- Frequency range 55 Hz ... 20 kHz
- four mono input channels (Line, MIC) with built-in 2-band equalizer and individually switchable FX
- two stereo input channels (Line) with built-in 2-band equalizer
- switchable phantom power
- built-in WAV / MP3 player (USB, Bluetooth)
- Housing with tripod flange and carrying handle

## 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.

Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.



### **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.

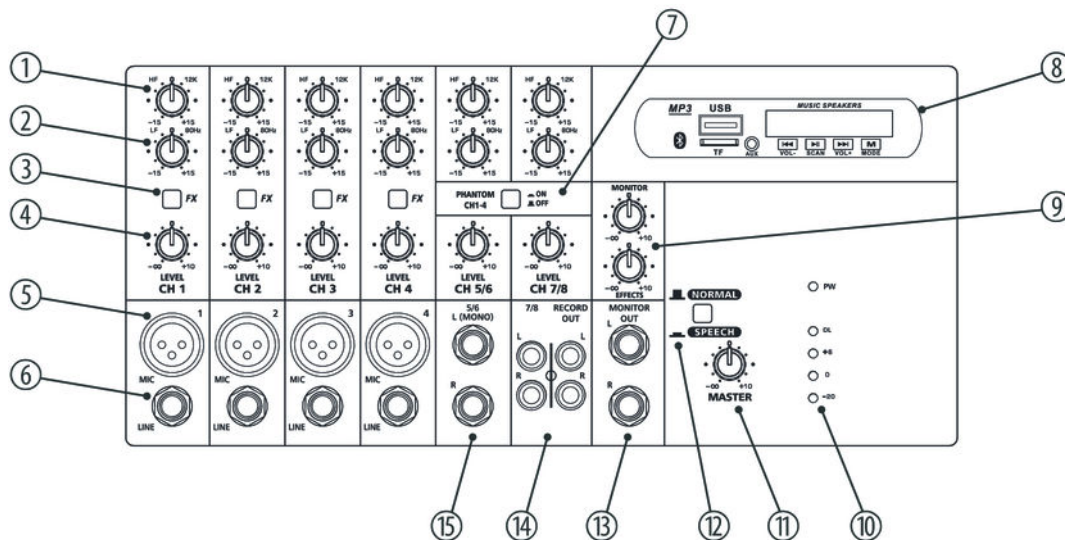
Always use high grade cable to connect your equipment. Otherwise you won't reach maximum sound quality.

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 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.

## 5 Connections and controls

### Control panel





1	<i>[HF]</i> Equalizer: Control for adjusting the high frequencies of each channel in a range of -15 ... +15 db.
2	<i>[LF]</i> Equalizer: Control for adjusting the low frequencies of each channel in a range of -15 ... +15 db.
3	<i>[FX]</i> Pushbutton for turning the digital effect for channels CH1 ... CH4 on and off.
4	<i>[LEVEL]</i> Separate volume controls for CH1 ... CH7/8.
5	<i>[MIC]</i> Microphone inputs of channels CH1 ... CH4. Only microphones may be connected to these inputs. When using condenser microphones, turn on phantom power with pushbutton <i>[PHANTOM]</i> (7).

- |   |   |
|---|---|
| 6 | <p><i>[LINE]</i></p> <p>Line inputs of channels CH1 ... CH4.</p> <p>Instruments like keyboards, synthesizers or drum machines as well as effects devices can be connected to these inputs.</p>  |
| 7 | <p><i>[PHANTOM]</i></p> <p>Push button to turn the phantom power on / off for the XLR microphone inputs of the CH1 ... CH4.</p> <p>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.</p>  |
| 8 | <p>MP3 / WAV player with display and function buttons.</p> <p>Press the <i>[MODE]</i> button of the player to select the desired audio source. Options: USB (‘<i>USB</i>’), SD card (‘<i>SD</i>’), Bluetooth (‘<i>VIRE BT</i>’).</p> <p>Use the <i>[VOL-]</i>, <i>[SCAN]</i> and <i>[VOL+]</i> buttons to control the playback.</p> <p>Keep the buttons <i>[VOL-]</i> or <i>[VOL+]</i> for at least two seconds pressed to adjust the volume of the player.</p> |

9	<p><i>[MONITOR]</i> Control to adjust the monitor volume.</p> <p><i>[EFFECTS]</i> Control to adjust the effect proportion of the output signal.</p>
10	<p>LED indicators:</p> <ul style="list-style-type: none"> <li>■ <i>[PW]</i>: Power indicator. This LED lights when the unit is powered and turned on.</li> <li>■ <i>[DL] ... [-20]</i>: Output signal strength indicator</li> </ul>
11	<p><i>[MASTER]</i> Overall output volume control</p>
12	<p><i>[NORMAL/SPEECH]</i> Pushbutton to switch between basic frequency settings for music (Normal) and speech.</p>
13	<p><i>[MONITOR OUT]</i> 1/4" output sockets for connecting the unit to an external amplifier or active speaker boxes.</p>

14 [7/8]

RCA input sockets for connecting an external audio source.

[RECORD OUT]

RCA output sockets for connecting the device to an external recording device.

15 [5/6]

1/4" input sockets for connecting an external audio source. For mono operation, use the [L (MONO)] socket only.

## Rear panel



- |    |   |
|----|---|
| 16 | IEC chassis plug for mains connection, with fuse holder.                    |
| 17 | Main switch to turn the device on and off.                                  |
| 18 | Output for connecting the external passive speaker box (1/4" phone socket). |

## 6 Technical specifications

Active speaker	
Inputs	4 × XLR (mono)
	4 × 1/4" phone socket (mono)
	1 × pair of 1/4" phone sockets
	1 × pair of RCA sockets (L/R)
	1 × USB
Outputs	1 × pair of 1/4" phone sockets
	1 × pair of RCA sockets (L/R)
	1 × speaker 150 W, 8 Ω
Speakers	Two-way system with 1" driver (Neodym) and 12" woofer
Frequency range	55 Hz ... 20 kHz
Crossover frequency	3.5 kHz

<b>Active speaker</b>	
Sound pressure level (max.)	122 dB
Power consumption	50 W
Output power	150 W (RMS)
Operating supply voltage	AC 100/230 V ~ 50/ 60 Hz
Fuse	110 V: 5 mm x 20 mm, 1,6 A, 250 V, slow-blow 230 V: 5 mm x 20 mm, 1 A, 250 V, slow-blow
Dimensions (W x H x D)	390 mm x 515 mm x 370 mm
Weight	15 kg

<b>Passive speaker</b>	
Input	1 × 1/4" phone socket
Speakers	Two-way system with 1" driver (Neodym) and 12" woofer
Frequency range	55 Hz ... 20 kHz
Crossover frequency	3.5 kHz
Sound pressure level (max.)	122 dB
Power handling	300 W
Dimensions (W × H × D)	390 mm × 515 mm × 370 mm
Weight	14.6 kg



## 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)



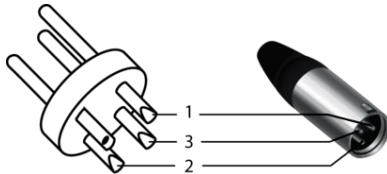
1	Signal (in phase, +)
2	Signal (out of phase, -)
3	Ground

**Three-pole 1/8" mini phone jack  
(stereo, unbalanced)**



1	Signal (left)
2	Signal (right)
3	Ground, shielding

**XLR plug (balanced)**



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

## RCA connection



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

1	Signal
2	Ground, shielding

## 8 Cleaning

### Device components

Clean the device components that are accessible from the outside regularly. The cleaning frequency depends on the operating environment: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the device components.

- Clean with a dry soft cloth.
- Stubborn dirt can be removed with a slightly dampened cloth.
- Never use solvents or alcohol for cleaning.

## 9 Protecting the environment

### Disposal of the packaging material



For the 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 batteries



Batteries do contain some hazardous chemicals so they should not be thrown away with the normal household waste. They should be returned to the manufacturer for disposal or recycled elsewhere in accordance with your local regulations.

Remove lithium batteries from the device before disposal. Protect used lithium batteries against short circuit, for example by taping the poles.

### 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.











