



Mon A10, Mon A12, Mon A15

Active Speaker

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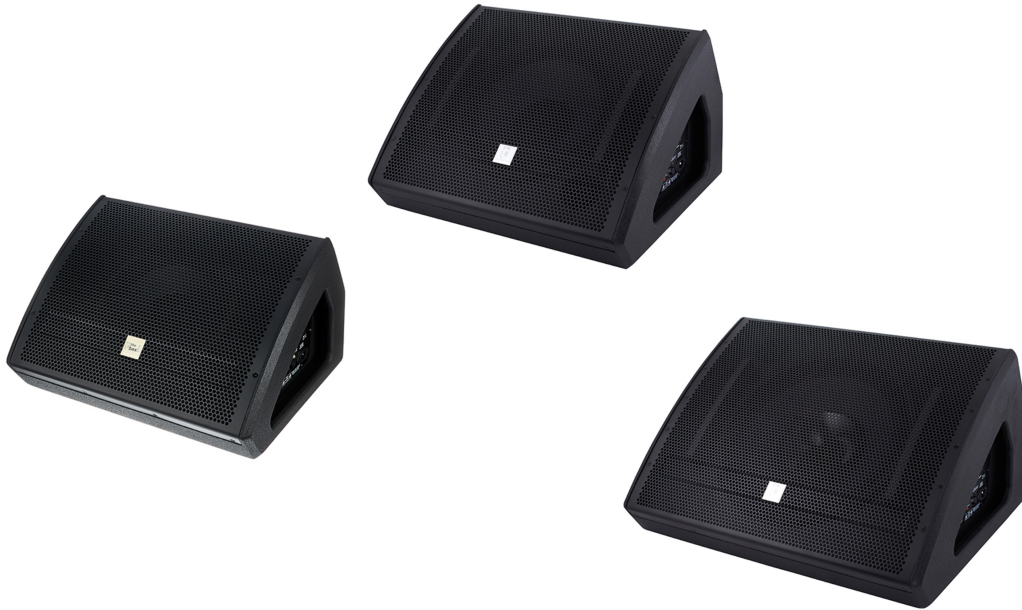
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1 General information

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.
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 as 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!

Danger to life due to electric current!

A short circuit could lead to a fire hazard and risk of death. Always use proper ready-made insulated triple-core mains cable with a safety plug. Do not modify the mains cable or the plug. In case of isolation damage, disconnect immediately the power supply and arrange repair. If in doubt, seek advice from 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 overheat 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!****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. The voltage selector switch can be used to set the device to the required operating voltage. Make sure that the voltage set on the device matches the local power supply network before plugging in the device. Only operate the device from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). Ensure that the power cord plug is easily accessible at all times if it is the only device to safely disconnect the device from the mains supply. 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

The active monitors are suitable for amateur use in smaller rooms as well as for professional use on very large stages.

Special features of the device:

- 2-way system:
 - 1-inch tweeter and 10-inch woofer (item no. 309203)
 - 1.35-inch tweeter and 12-inch (item no. 309205) or 15-inch woofer (item no. 309207)
- Coaxially arranged driver combination
- Class D amplifier
- Dual level limiter
- XLR and jack connectors
- Integrated pole stand flange, 35 mm, for stand mounting
- Protective cover (optional)

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.



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.

4.1 Tips on handling speakers

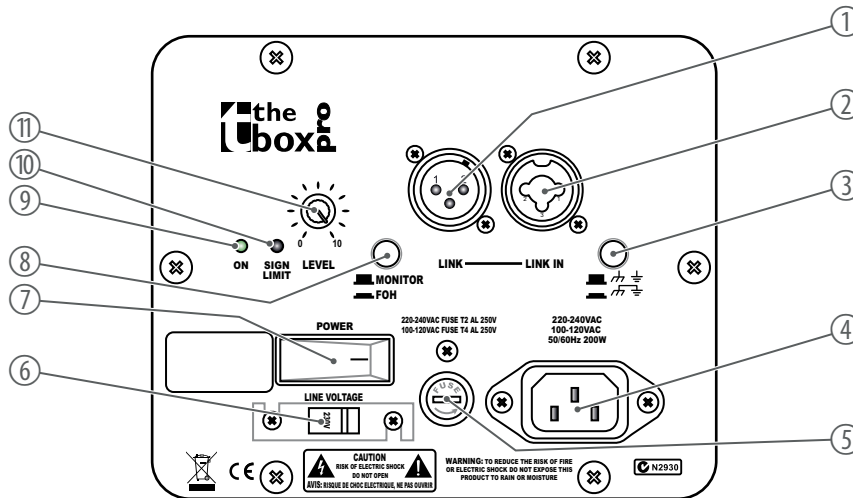
We recommend you to set up the speakers in a way, that the sound signals can reach the audience unobstructedly. It will often be helpful to mount the speakers on tripods. Thus, the sound will be evenly spread with maximum range throughout the audience area.

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 amp's 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



- 1 *[LINK]* | Output for signal forwarding to other active speakers, designed as XLR panel plug.
- 2 *[LINE IN]* | Input for balanced or unbalanced line level signals, designed as XLR/jack combo socket.

3	Ground/Lift pushbutton If a ground loop is generating humming noises, you can use this button to break the connection between the earth conductor of the device and the signal ground of the device.
4	Rubber panel plug for the power supply.
5	Fuse holder.
6	<i>[LINE VOLTAGE]</i> This slide switch is used to set the device to the local power supply. <i>[115]</i> 105...120 V ~ <i>[230]</i> 210...240 V ~ (default setting)
7	<i>[POWER]</i> Mains switch for turning the device on and off.
8	<i>[MONITOR/FOH]</i> Use this pushbutton to select different equalizer characteristics to suit different applications. <i>[MONITOR]</i> Operation as stage monitor with feedback reduction <i>[FOH]</i> Operation as a loudspeaker facing the audience (front of house)
9	<i>[ON]</i> This LED lights up green when the device is on and the supply voltage is present.
10	<i>[SIGN/LIMIT]</i> This LED lights up green when an input signal is present. The LED lights up red when the internal output signal is limited (due to excessive input signal level!).
11	<i>[LEVEL]</i> Rotary control for adjusting the level of the LINE input. Turn this control clockwise or anti-clockwise to increase or reduce the volume of the input. In the zero position, the signal is muted completely; in the maximum position, the signal is processed without any attenuation.

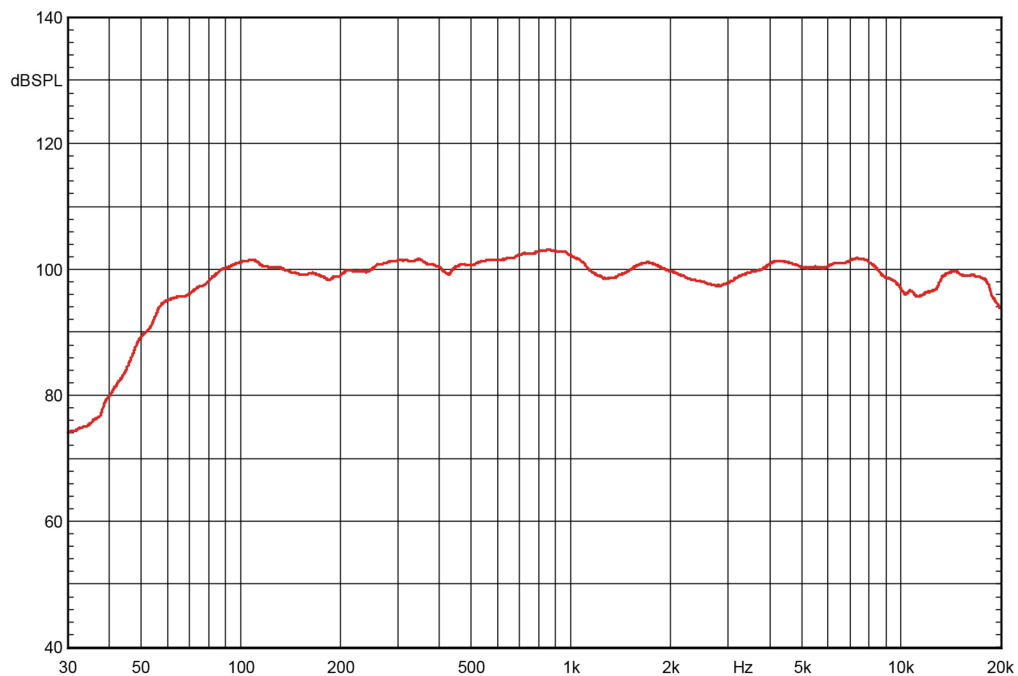
6 Technical specifications

Mon A10

System	Active 2-way speaker	
Amplifier class	D	
Configuration	Woofers	1 × 10-inch coax speaker (ferrite) with 2-inch voice coil
	Tweeter	1 × 1-inch tweeter (neodymium) with 1-inch voice coil
Input connections	Power supply	Rubber panel plug C14
	Line	XLR/6.35-mm jack combo socket
Input impedance	30 k Ω (balanced), 15 k Ω (unbalanced)	
Output connections	Line	XLR panel plug (link)
Frequency range	60 Hz... 20 kHz, -3 dB	
Crossover frequency	4140 Hz (high-pass filter tweeter), 2550 Hz (low-pass filter woofer)	
Output power	RMS: 250 W	
	Peak: 500 W	
Rated impedance	8 Ω (tweeter), 4 Ω (woofer)	

Sound pressure level (SPL), max.	123 dB		
Beam angle (H × V)	80° × 80°		
Power consumption	Typical current draw depending on the output power level (RMS value A_{RMS}). All values based on mains voltage of 230 V ~ and a 1 kHz input signal at 0 dB (sine).		
	Load	1/8 nominal power	1/3 nominal power
	8/4 Ω	165 W	315 W
Supply voltage	110/230 V ~ 50/60 Hz		
Fuse	220 - 240 V: 5 mm × 20 mm, 2 A, 250 V, slow blow		
	100 - 120 V: 5 mm × 20 mm, 4 A, 250 V, slow blow		
Dimensions (W × H × D)	480 mm × 300 mm × 420 mm		
Weight	11 kg		
Ambient conditions	Temperature range	0 °C...40 °C	
	Relative humidity	20%...80% (non-condensing)	

Frequency response



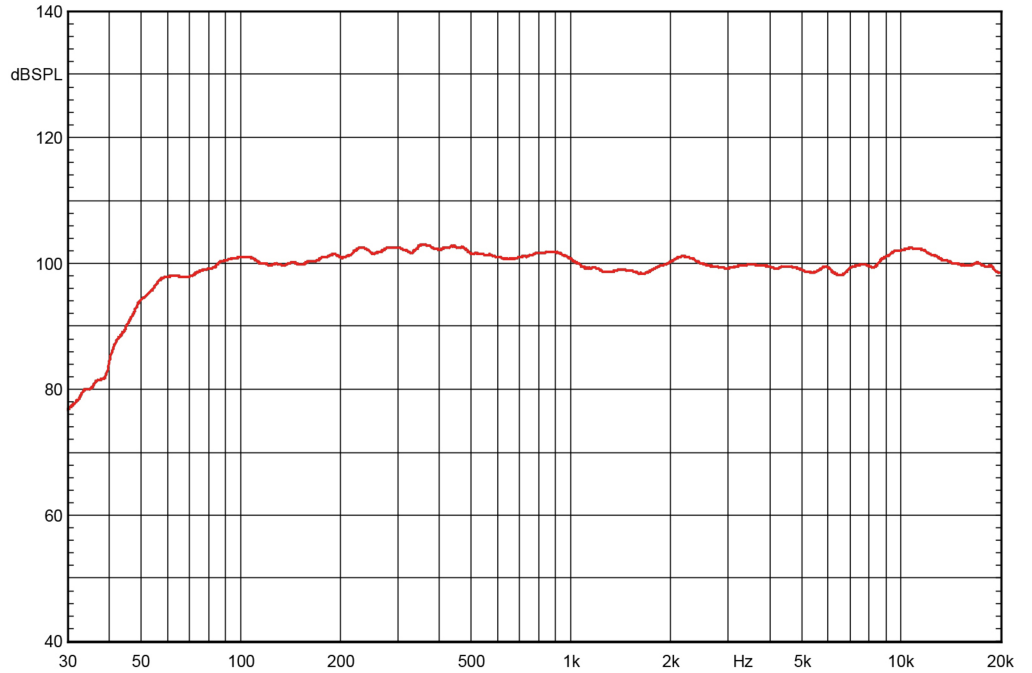
Mon A12

System	Active 2-way speaker	
Amplifier class	D	
Configuration	Woofer	1 × 12-inch coax speaker (ferrite) with 2.5-inch voice coil
	Tweeter	1 × 1.35-inch tweeter (ferrite) with 1.35-inch voice coil
Input connections	Power supply	Rubber panel plug C14
	Line	XLR/6.35-mm jack combo socket
Input impedance	30 k Ω (balanced), 15 k Ω (unbalanced)	
Output connections	Line	XLR panel plug (link)
Frequency range	50 Hz... 20 kHz, -3 dB	
Crossover frequency	2830 Hz (high-pass filter tweeter), 2550 Hz (low-pass filter woofer)	
Output power	RMS: 350 W	
	Peak: 700 W	
Rated impedance	8 Ω (tweeter), 4 Ω (woofer)	
Sound pressure level (SPL), max.	124 dB	

Technical specifications

Beam angle (H × V)	80° × 80°		
Power consumption	Typical current draw depending on the output power level (RMS value A_{RMS}). All values based on mains voltage of 230 V ~ and a 1 kHz input signal at 0 dB (sine).		
	Load	1/8 nominal power	1/3 nominal power
	8/4 Ω	235 W	445 W
Supply voltage	110/230 V ~ 50/60 Hz		
Fuse	220-240 VAC: 5 mm × 20 mm, 3.15 A, 250 V, slow blow		
	100-120 VAC: 5 mm × 20 mm, 6.3 A, 250 V, slow blow		
Dimensions (W × H × D)	510 mm × 340 mm × 500 mm		
Weight	15 kg		
Ambient conditions	Temperature range	0 °C...40 °C	
	Relative humidity	20%...80% (non-condensing)	

Frequency response

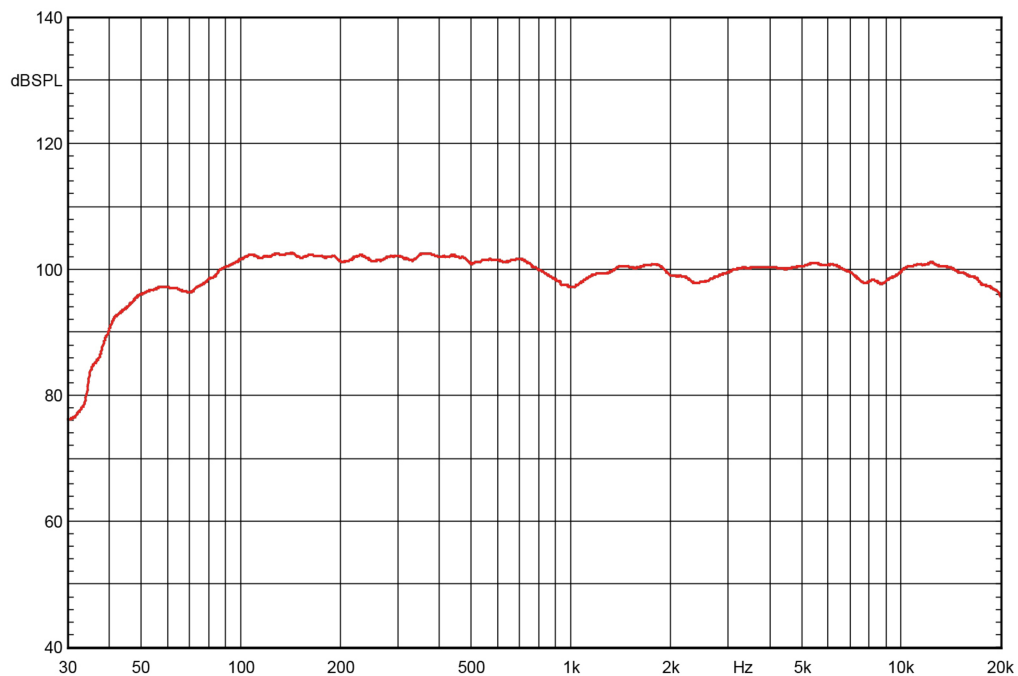


Mon A15

System	Active 2-way speaker	
Amplifier class	D	
Configuration	Woofer	1 × 15-inch coax speaker (ferrite) with 3-inch voice coil
	Tweeter	1 × 1.35-inch tweeter (ferrite) with 1.35-inch voice coil
Input connections	Power supply	Rubber panel plug C14
	Line	XLR/6.35-mm jack combo socket
Input impedance	30 k Ω (balanced), 15 k Ω (unbalanced)	
Output connections	Line	XLR panel plug (link)
Frequency range	45 Hz ... 20 kHz, -3 dB	
Crossover frequency	2839 Hz (high-pass filter tweeter), 2550 Hz (low-pass filter woofer)	
Output power	RMS: 450 W	
	Peak: 900 W	
Rated impedance	8 Ω (tweeter), 4 Ω (woofer)	
Sound pressure level (SPL), max.	126 dB	

Beam angle (H × V)	60° × 60°		
Power consumption	Typical current draw depending on the output power level (RMS value A_{RMS}). All values based on mains voltage of 230 V ~ and a 1 kHz input signal at 0 dB (sine).		
	Load	1/8 nominal power	1/3 nominal power
	8/4 Ω	300 W	575 W
Supply voltage	110/230 V ~ 50/60 Hz		
Fuse	220-240 VAC: 5 mm × 20 mm, 3.15 A, 250 V, slow blow		
	100-120 VAC: 5 mm × 20 mm, 6.3 A, 250 V, slow blow		
Dimensions (W × H × D)	610 mm × 365 mm × 545 mm		
Weight	19.5 kg		
Ambient conditions	Temperature range	0 °C...40 °C	
	Relative humidity	20%...80% (non-condensing)	

Frequency response



Further information

	Mon A10 (item no. 309203)	Mon A12 (item no. 309205)	Mon A15 (item no. 309207)
Housing	Wood		
Colour	Black		
Truss-capable	No		
Monitor inclination	Yes		
Ways	2-way		
Stand flange	35 mm		
Wall mount	no		
Protective cover (optional)	Item no. 322027	Item no. 322028	Item no. 322029

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)



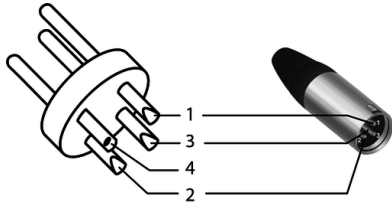
1	Signal (in phase, +)
2	Signal (out of phase, -)
3	Ground

1/4" TRS phone plug (stereo, unbalanced)



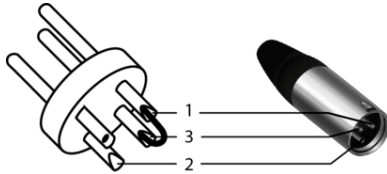
1	Signal (left)
2	Signal (right)
3	Ground

XLR plug (balanced)



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

XLR plug (unbalanced)



1	Ground, shielding
2	Signal
3	Bridged to pin 1

8 Troubleshooting

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

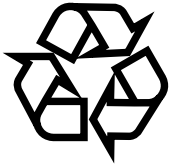
Symptom	Remedy
The device is not working	1. Check the power supply terminal and the position of the <i>[POWER]</i> mains switch.
No sound	1. Check the position of the <i>[LEVEL]</i> rotary control. 2. Check whether the <i>[SIGN/LIMIT]</i> LED is lit up green. If not, the input signal is too weak or not present. 3. Check the correct connection of the signal cable. 4. Check the signal cable and/or the signal source. 5. Try using another signal cable.
Distortion is audible	The input signal is too strong. Reduce the signal level. Never operate the speaker with such a high signal level that the <i>[SIGN/LIMIT]</i> LED lights up red all the time!
Different channel levels are available (when using two monitors)	1. Check that the same cable types (balanced, unbalanced) are used for both channels

Symptom	Remedy
	2. Check that your speaker system is fully connected and both speakers have the same input impedance
Noise and hum occur	1. Press the "Ground/Lift" pushbutton, if necessary on all amplifiers connected to the system.
	2. Make sure that only balanced cables are used.
	3. Make sure that all audio devices are connected to the same power circuit and thus share the same ground reference.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at www.thomann.de.

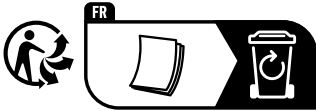
9 Protecting the environment

Disposal of the packing material



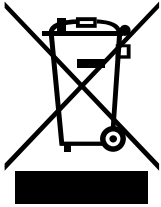
Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

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.

