

# PL 108 A, PL 110 A, PL 112 A, PL 115 A



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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 <u>www.thomann.de</u>.

## **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 pos- sible 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 pos- sible 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!

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.



#### 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.



## 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. 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). 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 it the device will not be used for a longer period.

#### NOTICE!

#### Risk of fire due to installation of a wrong fuse!

Using fuses of a different type than compatible with the device may cause a fire and seriously damage the device. Only use fuses of the same type. Observe the labelling on the device casing and the information in the "Technical data" chapter.

#### NOTICE!

#### Possible staining due to plasticiser in rubber feet!

The plasticiser contained in the rubber feet of this product may react with the coating of the floor and cause permanent dark stains after some time. If necessary, use a suitable mat or felt slide to prevent direct contact between the device's rubber feet and the floor.

## 3 Features

Special features of the active 2-way speaker for PA and DJ applications:

- 8-inch, 10-inch, 12-inch or 15-inch woofer (model-specific)
- 1-inch compression driver
- 2-band equalizer
- Maximum output power 240 W, 320 W or 600 W (model-specific)
- Built-in media player with display, SD card slot, USB port and Bluetooth receiver
- Connection options:
  - 1 × MIC input (XLR/jack combo socket, item no. 383474 and item no. 383475) or 2 × MIC input (XLR socket and 6.35-mm jack socket, item no. 383476 and item no. 402989)
  - 1 × AUX IN (cinch)
  - 1 × LINE IN (3.5-mm jack, item no. 383474 and item no. 383475)
  - 1 × AUX OUT (cinch)
  - 1 × lockable Speaker Twist panel connector for connecting an additional passive speaker
- 35 mm pole flange on the bottom
- Solid plastic housing with carrying handles
- Protective cover (optional, item no. 407135, item no. 407136, item no. 407137, item no. 407138, model-specific)

## 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.

If you notice distortion during operation, the active speaker is overloaded. This may permanently damage the device. Always reduce the volume as soon as you hear distortion.

## 4.2 Playback via Bluetooth

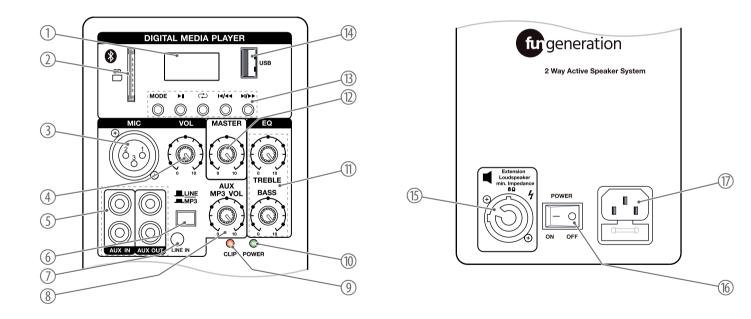
You can play music wirelessly from mobile Bluetooth devices such as smart phones, tablets or laptops via the built-in Bluetooth receiver of the device. Observe the user's guide of your Bluetooth device. Place the Bluetooth device near the box and turn it on.

Press [MODE] or [USB/SD] repeatedly (depending on version) until the display shows 'BT NOT LINK'. After a few seconds your Bluetooth device is detected and will be displayed as 'PL108A', 'PL110A', 'PL112A' or 'PL115A'. The display shows the message 'BT CONNECTING'..

You can then play the music files stored in the Bluetooth device. Use the buttons of the built-in player for control.

## 5 Connections and controls

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- 1 Display of the built-in media player
- 2 SD card slot
- 3 [MIC] | Balanced XLR/jack combo socket (3-pin) for connecting a microphone
- 4 [VOL] | Volume control. Use this control to adjust the volume of the MIC input signal.
- 5 [AUX IN] | Line input. Cinch input sockets for connecting an external audio device (mixer, CD or MP3 player).

[AUX OUT] | Line output. Cinch output sockets for connecting an active speaker. The sum signal of all input sources of the device, which is independent of the [MASTER] volume control, is on this output.

- 6 [LINE | MP3] | Input signal switch. Use this button to toggle between the external (line input [AUX IN]) and internal (built-in media player) signal sources. When the switch is pressed and thus set to [MP3], the signal of the internal media player is played. When the switch is not pressed and thus set to [LINE], the audio signal of an external player is played.
- 7 [LINE IN] | Line input. 3.5-mm input socket for connecting an external audio device (CD or MP3 player).
- 8 [AUX MP3 VOL] | Volume control. Use this control to adjust the volume of the line input signal and the volume of the built-in media player.
- 9 [CLIP] | Overload indicator (red). This LED flashes or lights up as soon as the speaker overloads. In this case, turn the device's master volume control ([MASTER]) down until the LED goes out or lights up only sporadically on signal peaks.
- 10 [POWER] | Power indicator (green). This LED lights up permanently during normal operation.
- 11 [EQ] | 2-band equalizer for adjusting the high ([TREBLE]) and low ([BASS]) frequencies of the sum signal
- 12 [MASTER] | Volume control. Use this control to adjust the overall volume of the device (sum of all input signals).

13 Selection and control buttons of the built-in media player:

[MODE] | Button for changing the operating mode

▶ II | Play/pause button for starting/stopping the playback of tracks

Selection button. Press this button repeatedly to activate a playback mode. The active mode and the title of the track being played are shown on the display:

- *NOR'*: normal playback, all tracks from the selected audio source are played in the stored order once.
- *RALL'*: Default setting, all tracks from the selected audio source are played in the stored order in an endless loop.
- *'RONE'*: the selected track is played in an endless loop.
- *FOLD*': all tracks in a specific folder of the selected audio source are played in an endless loop.
- *RAN'*: all available tracks are played in random order.

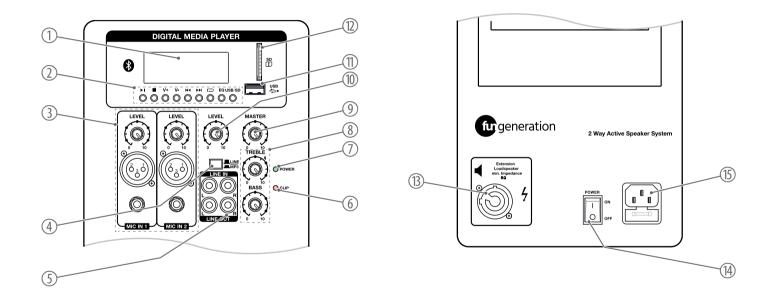
◄ |Back button. Press the button briefly to return to the previous track. Hold the button down to search backwards for a specific part of the current track.

▶ | Next button. Press the button briefly to go to the next track. Hold down the button to search forward for a specific part of the current track.

#### 14 USB connection

- 15 Lockable Speaker Twist panel connector for connecting another passive speaker. The rated impedance of  $8 \Omega$  must not be undershot.
- 16 [POWER] | On/off switch
- 17 Rubber panel plug with fuse holder for the power supply

#### PL 112 A, PL 115 A



- 1 Display of the built-in media player
- 2 Selection and control buttons of the built-in media player:
  - ▶ II | Play/pause button for starting/stopping the playback of tracks
  - | Stop button for stopping playback

[V+V-] | Buttons for increasing and decreasing the volume of the internal media player

◄ | Back button. Press the button briefly to return to the previous track. Hold the button down to search backwards for a specific part of the current track.

▶ | Next button. Press the button briefly to go to the next track. Hold down the button to search forward for a specific part of the current track.

Selection button. Press this button repeatedly to activate a playback mode. The active mode and the title of the track being played are shown on the display:

- *NOR*': normal playback, all tracks from the selected audio source are played in the stored order once.
- *RALL'*: Default setting, all tracks from the selected audio source are played in the stored order in an endless loop.
- *RONE'*: the selected track is played in an endless loop.
- *FOLD*': all tracks in a specific folder of the selected audio source are played in an endless loop.
- *RAN'*: all available tracks are played in random order.

[EQ] | Button for switching the equalizer on and off (PL 112 A and PL 115 A).

[USB/SD] | Toggle button. Press this button to select an audio source directly: SD card, USB input or Bluetooth interface. The active source is shown on the display.

- 3 [MIC IN 1]/[MIC IN 2] | Input channel 1 and 2, each with a 3-pin XLR balanced input socket for connecting a microphone and a 6.35-mm jack socket as well as separate [LEVEL] volume controls.
- 4 [LINE | MP3] | Input signal switch. Use this button to toggle between the external (line input [AUX IN]) and internal (built-in media player) signal sources. When the switch is pressed and thus set to [MP3], the signal of the internal media player is played. When the switch is not pressed and thus set to [LINE], the audio signal of an external player is played.
- 5 [AUX IN] | Line input. Cinch input sockets for connecting an external audio device (mixer, CD or MP3 player).

[AUX OUT] | Line output. Cinch output sockets for connecting an active speaker. The sum signal of all input sources of the device, which is independent of the [MASTER] volume control, is on this output.

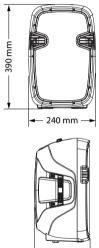
- 6 [CLIP] | Overload indicator (red). This LED flashes or lights up as soon as the speaker overloads. In this case, turn the device's master volume control ([MASTER]) down until the LED goes out or lights up only sporadically on signal peaks.
- 7 [POWER] | Power indicator (green). This LED lights up permanently during normal operation.
- 8 [TREBLE]/[BASS] | 2-band equalizer for adjusting the high ([TREBLE]) and low ([BASS]) frequencies of the sum signal.
- 9 [MASTER] | Volume control. Use this control to adjust the overall volume of the device (sum of all input signals).
- 10 [LEVEL] | Volume control. Use this control to adjust the volume of the line input signal and the volume of the built-in media player.
- 11 USB connection
- 12 SD card slot
- 13 Lockable Speaker Twist panel connector for connecting another passive speaker. The rated impedance of  $8 \Omega$  must not be undershot.

- 14 [POWER] | On/off switch
- 15 Rubber panel plug with fuse holder for the power supply



# 6 Technical specifications

## PL 108 A



🗲 205 mm 🔸

System	Active 2-way speaker		
Configuration	1 × 8-inch woofer		
	$1 \times 1$ -inch compression tweeter driver		
Input connections	Line	$1 \times pair of cinch sockets (L/R)$	
		1 × 3.5-mm jack socket, stereo	
	Microphone	1 × XLR/jack combo socket, balanced	
	USB port	1 × USB-A	
	Power supply	Rubber panel plug C14	
Output connections	Line	$1 \times pair of cinch sockets (L/R)$	
	Additional speakers	1 × Speaker Twist	
Output power	RMS: 60 W		
	Peak: 240 W		
Frequency range	90 Hz 18 kHz		

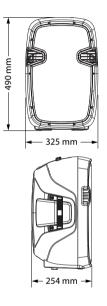
Crossover frequency	3.5 kHz		
Sound pressure level (SPL), max.	107 dB		
Bluetooth <sup>®</sup>	Frequency range	2.402 GHz 2.480 GHz	
	Max. transmission power	+2 dBm	
	Standard	Version 5.0	
	Bluetooth name	PL108A	
Storage media	SD card, USB devices		
File system	FAT32		
Playback formats	MP3, WAV		
Number of files, max.	999		
Power consumption	85 W		
Supply voltage	230 V ~ 50 Hz		
Fuse	5 mm × 20 mm, 1 A, 250 V, slow blow		
Dimensions $(W \times H \times D)$	240 mm $\times$ 390 mm $\times$ 205 mm		
Weight	5.2 kg		





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## PL 110 A

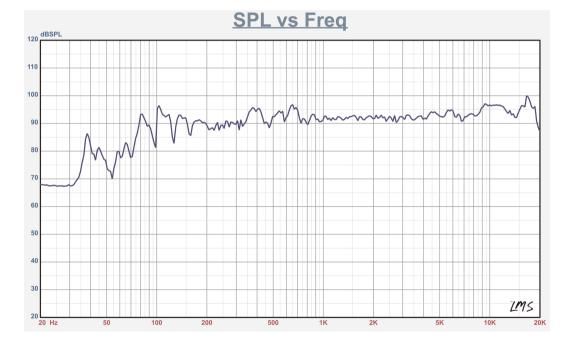


System	Active 2-way speaker		
Configuration	1 × 10-inch woofer		
	$1 \times 1$ -inch compression tweeter driver		
Input connections	Line	$1 \times pair of cinch sockets (L/R)$	
		1 × 3.5-mm jack socket, stereo	
	Microphone	1 × XLR/jack combo socket, balanced	
	USB port	1 × USB-A	
	Power supply	Rubber panel plug C14	
Output connections	Line	$1 \times pair of cinch sockets (L/R)$	
	Additional speakers	$1 \times \text{Speaker Twist}$	
Output power	RMS: 60 W		
	Peak: 320 W		
Frequency range	80 Hz 18 kHz		
Crossover frequency	3.3 kHz		

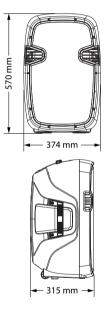
Sound pressure level (SPL), max.	109 dB	
Bluetooth®	Frequency range	2.402 GHz 2.480 GHz
	Max. transmission power	+2 dBm
	Standard	Version 5.0
	Bluetooth name	PL110A
Storage media	SD card, USB devices	
File system	FAT32	
Playback formats	MP3, WAV	
Number of files, max.	999	
Power consumption	85 W	
Supply voltage	230 V ~ 50 Hz	
Fuse	5 mm $\times$ 20 mm, 1 A, 250 V, slow blow	
Dimensions $(W \times H \times D)$	325 mm × 490 mm × 254 mm	
Weight	7.8 kg	



## **Frequency response**



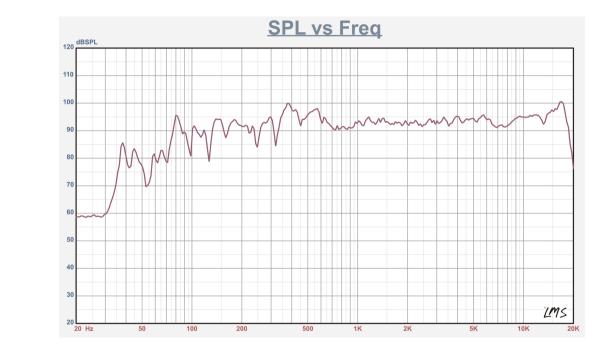
### PL 112 A



System	Active 2-way speaker		
Configuration	1 × 12-inch woofer		
	$1 \times 1$ -inch compression tweeter driver		
Input connections	Line	$1 \times pair of cinch sockets (L/R)$	
	Microphone	2 × 6.35-mm jack socket	
		$2 \times XLR$ socket, balanced	
	USB port	1 × USB-A	
	Power supply	Rubber panel plug C14	
Output connections	Line	$1 \times pair of cinch sockets (L/R)$	
	Additional speakers	$1 \times Speaker Twist$	
Output power	RMS: 140 W		
	Peak: 600 W		
Frequency range	80 Hz 19 kHz		
Crossover frequency	3.0 kHz		
Sound pressure level (SPL), max.	114 dB		

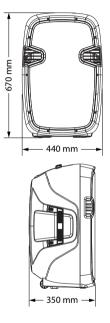
Bluetooth®	Frequency range2.402 GHz 2.480 GHz		
	Max. transmission power	+2 dBm	
	Standard	Version 5.0	
	Bluetooth name	PL112A	
Storage media	SD card, USB devices		
File system	FAT32		
Playback formats	MP3, WAV		
Number of files, max.	999		
Power consumption	215 W		
Supply voltage	230 V ~ 50 Hz		
Fuse	5 mm $\times$ 20 mm, 2 A, 250 V, slow blow		
Dimensions 374 mm × 570 mm × 315 mm (W × H × D)			
Weight	11.5 kg		
Ambient conditions	Temperature range	0 °C40 °C	
	Relative humidity	20%80% (non-condensing)	





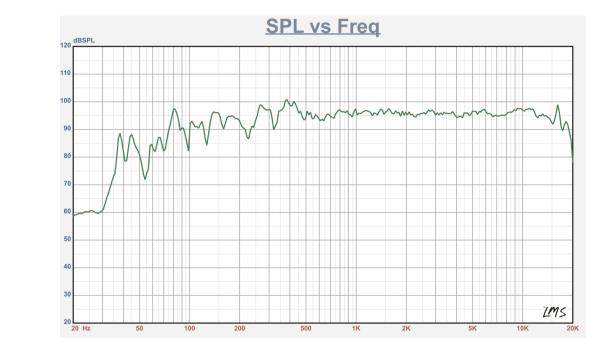
### Frequency response

## PL 115 A



System	Active 2-way speaker			
Configuration	1 × 15-inch woofer			
	$1 \times 1$ -inch compression tweeter driver			
Input connections	Line	$1 \times pair of cinch sockets (L/R)$		
	Microphone	$2 \times 6.35$ -mm jack socket		
		$2 \times XLR$ socket, balanced		
	USB port	1 × USB-A		
	Power supply	Rubber panel plug C14		
Output connections	Line	$1 \times pair of cinch sockets (L/R)$		
	Additional speakers	$1 \times Speaker Twist$		
Output power	RMS: 140 W			
	Peak: 600 W			
Frequency range	70 Hz 19 kHz			
Crossover frequency	3.0 kHz			
Sound pressure level (SPL), max.	116 dB			

Bluetooth®	Frequency range	2.402 GHz 2.480 GHz
	Max. transmission power	+2 dBm
	Standard	Version 5.0
	Bluetooth name	PL115A
Storage media	SD card, USB devices	
File system	FAT32	
Playback formats	MP3, WAV	
Number of files, max.	999	
Power consumption	215 W	
Supply voltage	230 V ~ 50 Hz	
Fuse	5 mm $\times$ 20 mm, 2 A, 250 V, slow blow	
Dimensions $(W \times H \times D)$	V×H×D)	
Weight		
Ambient conditions	Temperature range	0 °C40 °C
	Relative humidity	20%80% (non-condensing)



Frequency response

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## **Further information**

	PL 108 A	PL 110 A	PL 112 A	PL 115 A
Housing	Plastic			
Colour		Bla	ick	
Truss-capable		Ν	0	
Monitor inclination	Yes			
Ways	2-way			
Stand flange	35 mm			
Wall mount	No			
Protective cover	Optional (item no. 407135)	Optional (item no. 407136)	Optional (item no. 407137)	Optional (item no. 407138)

# 7 Plug and pin assignments

Introduction	This chapter will help you select the right cables and plugs to connect your valuable equip- ment 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 trans- mission	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 trans- mitted 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 conduc- tors '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.

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



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

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



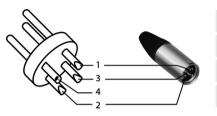
1	Signal
2	Ground, shielding

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



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

### XLR plug (balanced)



3 4

Ground, shielding
Signal (in phase, +)
Signal (out of phase, –)
Shielding on plug housing (option)

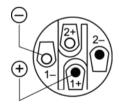
### **RCA connection**

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



1	Signal
2	Ground, shielding

## Speaker Twist connector



1+	Signal 1 (in phase)
1–	Signal 1 (out of phase)



# 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 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 <u>www.thomann.de</u>.

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.

Notes



Notes

Notes

