



furgeneration

PL 108 A / 110 A /
112 A / 115 A

active 2-way speaker

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1 General information

This user manual contains important information on the safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under www.thomann.de.

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.


Displays


Texts and values displayed on the device are marked by quotation marks and italics.

Examples: *'24ch'*, *'OFF'*.

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 signs	Type of danger
	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.



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!

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. Only operate the device within the ambient conditions specified in the chapter 'Technical specifications' of this user manual. Avoid heavy temperature fluctuations and do not switch the device on immediately after it was exposed to temperature fluctuations (for example after transport at low outside temperatures). Dust and dirt inside can damage the unit. When operated in harmful ambient conditions (dust, smoke, nicotine, fog, etc.), the unit should be maintained by qualified service personnel at regular intervals to prevent overheating and other malfunction.



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!

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!

Possible damage due to installation of a wrong fuse



The use of different types of fuses can cause serious damage to the unit. Fire hazard! Only fuses of the same type may be used.



NOTICE!

Possible staining



The plasticiser contained in the rubber feet of this product may possibly react with the coating of your parquet, linoleum, laminate or PVC floor and after some time cause permanent dark stains. In case of doubt, do not put the rubber feet directly on the floor, but use felt-pad floor protectors or a carpet.

3 Features

The mobile PA system is characterized by the following features:

- 2-way active speaker box for PA and DJ application
- maximum output power 240 W, 320 W or 600 W (depending on the model)
- 8", 10", 12 or 15" woofer (depending on the model)
- 1" compression driver
- 2-band equalizer
- built-in media player with display, SD card slot, USB port and Bluetooth receiver
- 1 × or 2 × MIC input (depending on the model, XLR)
- 1 × AUX IN (RCA)
- 1 × AUX OUT (RCA)
- 1 × lockable NL4 chassis connector for connecting an additional passive speaker box
- solid plastic housing with pole mount and handles

4 Starting up

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!

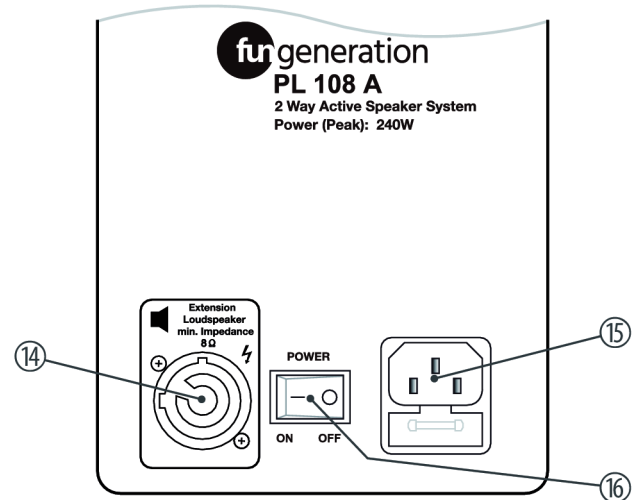
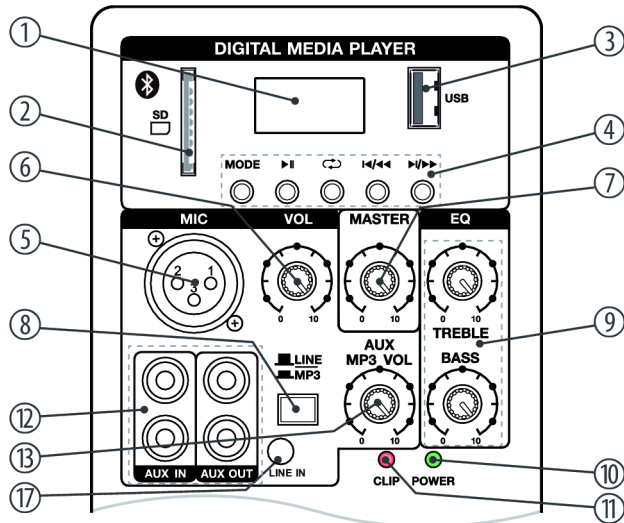
Possible property damage by magnetic fields

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.

The unit can be mounted on a stand or set up on the floor or a sufficiently sized and stable surface, e.g. a wall bracket.

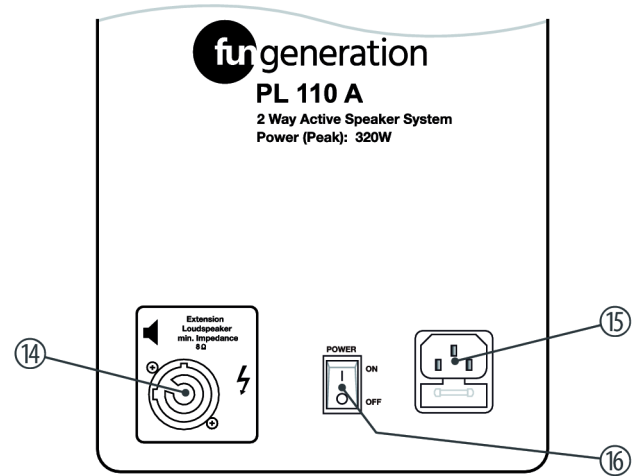
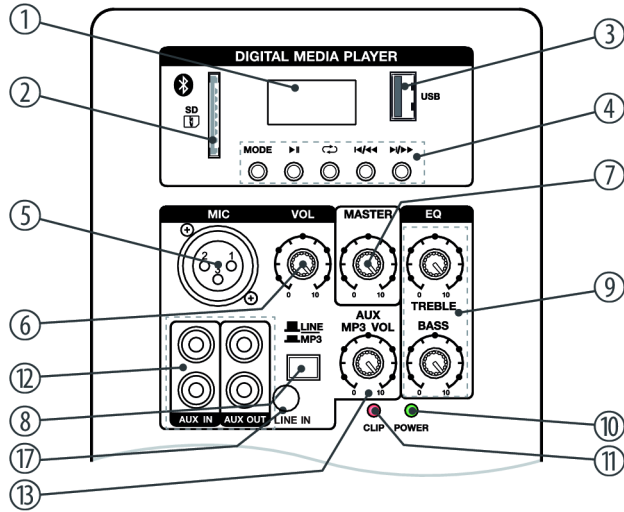
5 Connections and controls

Model PL 108 A

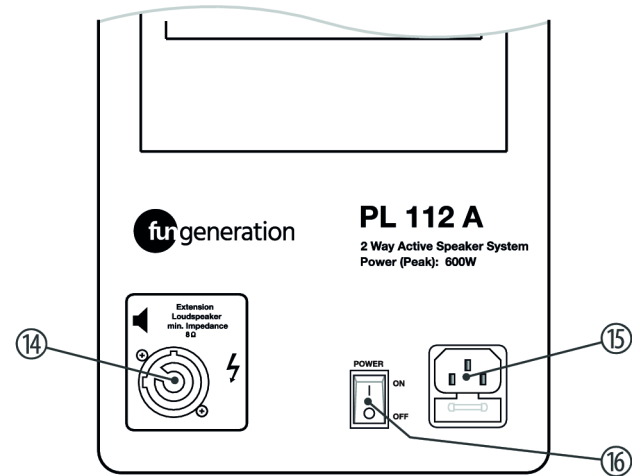
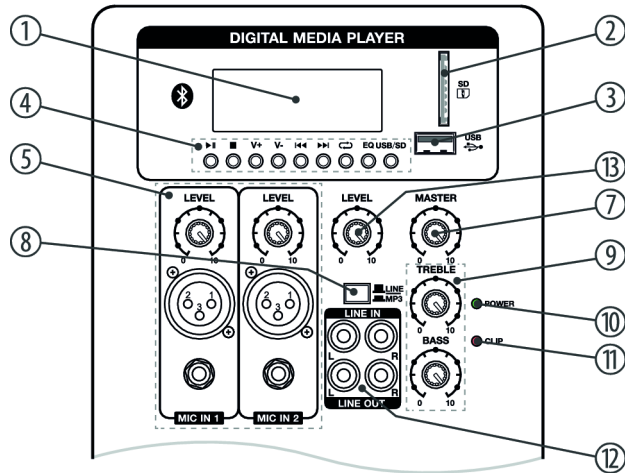


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Model PL 110 A

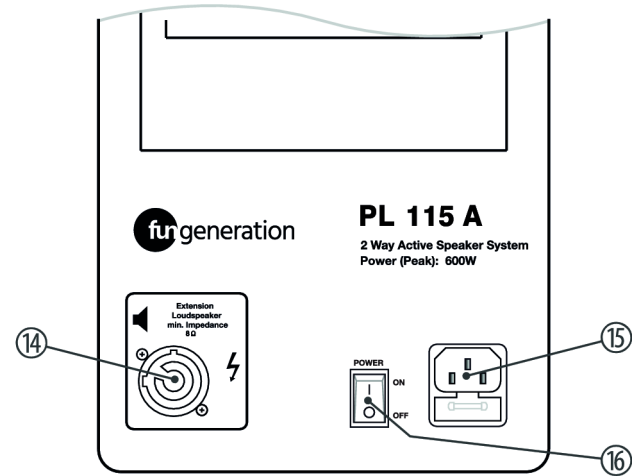
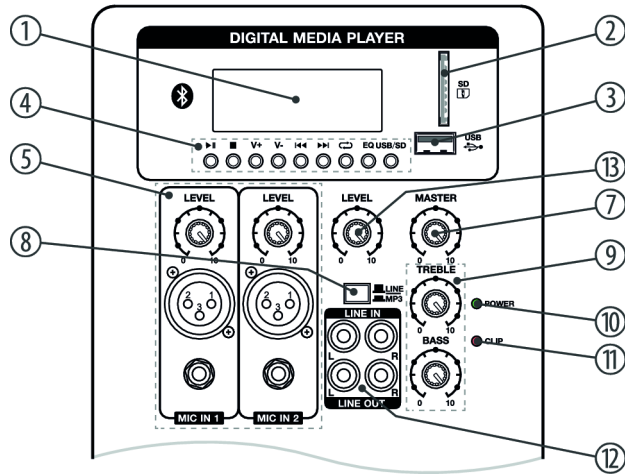


Model PL 112 A



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Model PL 115 A



1 Display of the built-in media player.

2 SD card slot.

3 USB port.

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



Play / Pause button to start / stop track playback.



Stop button to stop playback.



Selection button. Press the button repeatedly to activate a playback mode. The active mode and the title of the current track will appear on the display:

- 'NOR': normal playback, all tracks of the selected audio source are played one time in succession.
- 'RALL': standard setting, all tracks of the selected audio source are played 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.



Forward button. Press this button briefly to skip to the next track. Keep this button pressed to search forward for a specific part of the current track.



Backward button. Press this button briefly to skip to the previous track. Keep this button pressed to search backward for a specific part of the current track.

[V+|V-]

Buttons to increase or decrease the volume of the internal MP3 player (PL 112 A and PL 115 A).

[EQ]

Button for switching the equalizer on and off (PL 112 A and PL 115 A).

[USB/SD]

Switch button. Press this button to select an audio source directly: SD card, USB input or Bluetooth port. The active source is shown on the display.

5 *[MIC]*

3-pin balanced XLR input socket to connect a microphone (PL 108 A and PL 110 A).

	<p><i>[MIC IN 1] [MIC IN 2]</i></p> <p>Input channel 1 and 2, each with a 3-pin XLR balanced input socket for connecting a microphone and a 6.35 mm phone socket as well as separate volume controls <i>[LEVEL]</i> (PL 112 A and PL 115 A).</p>
6	<p><i>[VOL]</i> (PL 108 A and PL 110 A)</p> <p>Volume control. Use this control to adjust the volume of the MIC input signal.</p>
7	<p><i>[MASTER]</i></p> <p>Volume control. Use this control to adjust the overall volume of the device (sum of all input channels).</p>
8	<p><i>[LINE MP3]</i></p> <p>Input signal switch. Use this switch to toggle between external (line input <i>[AUX IN]</i>) and internal signal source (built-in audio player).</p> <p>When in the pressed state, <i>[MP3]</i>, the signal of the internal audio player is played. When in the not pressed state, <i>[LINE]</i>, the audio signal of an external audio player is played.</p>
9	<p><i>[EQ]</i></p> <p>2-band equalizer to adjust the high (<i>[TREBLE]</i>) and low (<i>[BASS]</i>) frequencies of the sum signal.</p>
10	<p><i>[POWER]</i></p> <p>Power indicator (green). This LED lights constantly during normal operation.</p>

11	<p><i>[CLIP]</i></p> <p>Overload indicator (red). This LED flickers or lights up once the box overdrives. In this case, turn the unit's master volume control (<i>[MASTER]</i>) down until the LED goes out or lights up only sporadically on signal peaks.</p>
12	<p><i>[AUX IN]</i></p> <p>Line input. RCA input sockets to connect an external audio device (mixer, CD or MP3 player).</p> <p><i>[AUX OUT]</i></p> <p>Line output. RCA output sockets to connect active speakers. The sum signal of all input sources is present here.</p>
13	<p><i>[AUX MP3 VOL]</i> (PL 108 A and PL 110 A)</p> <p><i>[LEVEL]</i> (PL 112 A and PL 115 A)</p> <p>Volume control. Use this control to adjust the volume of the LINE input signal.</p>
14	Lockable NL4 chassis connector output for connecting an additional passive speaker box
15	IEC chassis plug for power supply with fuse holder

16 *[POWER]*
On / off switch

17 *[LINE IN]* (PL 108 A and PL 110 A)
Line input. 3.5 mm input socket to connect an external audio device (CD or MP3 player).

6 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.

7 Technical specifications

PL 108 A

Inputs	1 × RCA socket pair, stereo 1 × 3-pin XLR socket, balanced
Outputs	1 × RCA socket pair, stereo 1 × NL4
Speaker	Two-way system with 1" compression driver and 8" woofer
Max. sound pressure level	107 dB
Frequency range	90 Hz ... 18 kHz
Storage media	SD card, USB devices
File system	FAT32
Playback formats	MP3, WAV
Max. number of files	999

PL 108 A / 110 A / 112 A / 115 A

Bluetooth®	Frequency of operation	2.402 GHz ... 2.480 GHz
	Max. transmission power	+2 dBm
	Standard	Version 5.0
	Bluetooth name	PL108A
Output power	240 W (peak)	
Operating supply voltage	230 V ~ 50 Hz	
Power consumption	140 W	
Fuse	5 mm × 20 mm, 1 A, 250 V, slow-blow	
Dimensions (W × H × D)	245 mm × 390 mm × 195 mm	
Weight	5.2 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non condensing)

PL 110 A

Inputs	1 × RCA socket pair, stereo 1 × 3-pin XLR socket, balanced	
Outputs	1 × RCA socket pair, stereo 1 × NL4	
Speaker	Two-way system with 1" compression driver and 10" woofer	
Max. sound pressure level	109 dB	
Frequency range	80 Hz ... 18 kHz	
Storage media	SD card, USB devices	
File system	FAT32	
Playback formats	MP3, WAV	
Max. number of files	999	
Bluetooth®	Frequency of operation	2.402 GHz ... 2.480 GHz
	Max. transmission power	+2 dBm

PL 108 A / 110 A / 112 A / 115 A

Technical specifications

	Standard	Version 5.0
	Bluetooth name	PL110A
Output power	320 W (peak)	
Operating supply voltage	230 V ~ 50 Hz	
Power consumption	160 W	
Fuse	5 mm × 20 mm, 1 A, 250 V, slow-blow	
Dimensions (W × H × D)	310 mm × 495 mm × 250 mm	
Weight	7.8 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non condensing)

PL 112 A

Inputs	2 × 1/4" phone socket 1 × RCA socket pair, stereo 2 × 3-pin XLR socket, balanced	
Outputs	1 × RCA socket pair, stereo 1 × NL4	
Speaker	Two-way system with 1" compression driver and 12" woofer	
Max. sound pressure level	114 dB	
Frequency range	80 Hz ... 19 kHz	
Storage media	SD card, USB devices	
File system	FAT32	
Playback formats	MP3, WAV	
Max. number of files	999	
Bluetooth®	Frequency of operation	2.402 GHz ... 2.480 GHz

PL 108 A / 110 A / 112 A / 115 A

Technical specifications

	Max. transmission power	+2 dBm
	Standard	Version 5.0
	Bluetooth name	PL112A
Output power	600 W (peak)	
Operating supply voltage	230 V ~ 50 Hz	
Power consumption	250 W	
Fuse	5 mm × 20 mm, 1 A, 250 V, slow-blow	
Dimensions (W × H × D)	375 mm × 585 mm × 295 mm	
Weight	11.5 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non condensing)

PL 115 A

Inputs	2 × 1/4" phone socket 1 × RCA socket pair, stereo 2 × 3-pin XLR socket, balanced	
Outputs	1 × RCA socket pair, stereo 1 × NL4	
Speaker	Two-way system with 1" compression driver and 15" woofer	
Max. sound pressure level	116 dB	
Frequency range	70 Hz ... 19 kHz	
Storage media	SD card, USB devices	
File system	FAT32	
Playback formats	MP3, WAV	
Max. number of files	999	
Bluetooth®	Frequency of operation	2.402 GHz ... 2.480 GHz

PL 108 A / 110 A / 112 A / 115 A

Technical specifications

	Max. transmission power	+2 dBm
	Standard	Version 5.0
	Bluetooth name	PL115A
Output power	600 W (peak)	
Operating supply voltage	230 V ~ 50 Hz	
Power consumption	250 W	
Fuse	5 mm × 20 mm, 1 A, 250 V, slow-blow	
Dimensions (W × H × D)	480 mm × 740 mm × 390 mm	
Weight	15 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non condensing)

8 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.

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)



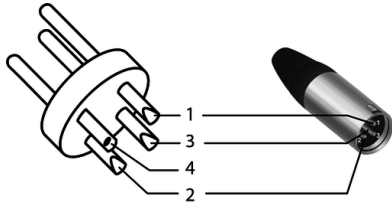
1	Signal
2	Ground, shielding

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



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

XLR plug (balanced)



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

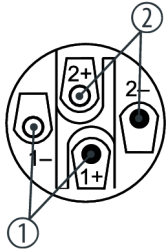
RCA connection



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

1	Signal
2	Ground, shielding

Speaker Twist chassis connector



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

PL 108 A / 110 A / 112 A / 115 A

9 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.

10 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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