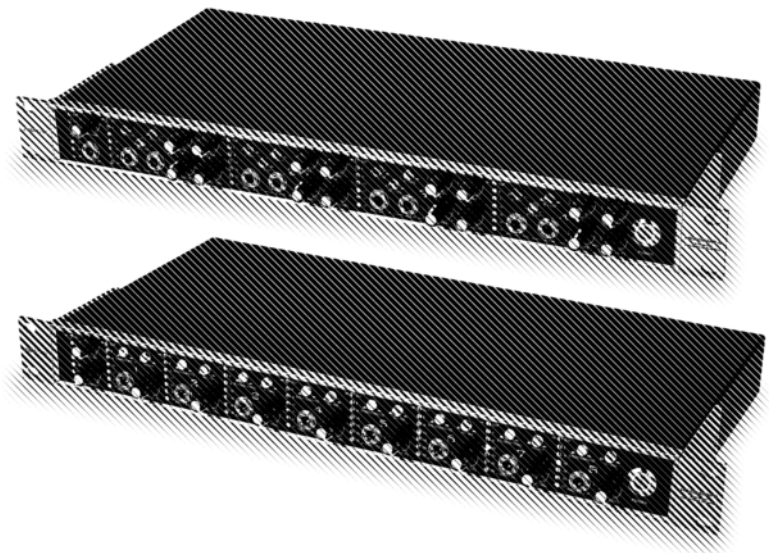

swissonic

Headamp 4,
Headamp 8

headphone amplifier

th•mann
MUSIC IS OUR PASSION

user manual

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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 for amplification and distribution of signals from audio devices and musical instruments to the connected headphones and audio devices. 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

With loudspeakers or headphones connected, the device can produce volume levels that may cause temporary or permanent hearing impairment.

Do not operate the device permanently at a high volume level. Decrease the volume level immediately if you experience ringing in your ears or hearing impairment.

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!

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

Headamp 4 (item no. 437349)

4-channel headphone amplifier

- Displays for input and output levels
- Inputs: 1 × Main In (XLR and 1/4" phone socket, stereo), 1 × Direct In (1/4" phone socket, stereo), 4 × AUX In (1/4" phone socket, stereo)
- Outputs: 1 × Main Out (XLR and 1/4" phone socket, stereo), 4 × headphones (1/4" phone socket, stereo, on front and rear side)
- Mute function, separately switchable for the left and right channel
- Each headphones channel separately switchable between stereo and 2-channel mode
- 4 × 2-band equalizer
- Installation in 19" racks (1 rack unit)

Headamp 8 (item no. 437354)

8-channel headphone amplifier

- Displays for input and output levels
- Inputs: 2 × Main In (1/4" phone sockets), 8 × Direct In (1/4" phone socket, stereo)
- Outputs: 2 × Main Out (1/4" phone socket), 8 × headphones (1/4" phone socket, stereo, on front and rear side)
- Switch for input selection for each output channel
- Each headphones channel separately switchable between stereo and mono mode
- Installation in 19" racks (1 rack unit)

4 Installation and starting up

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.

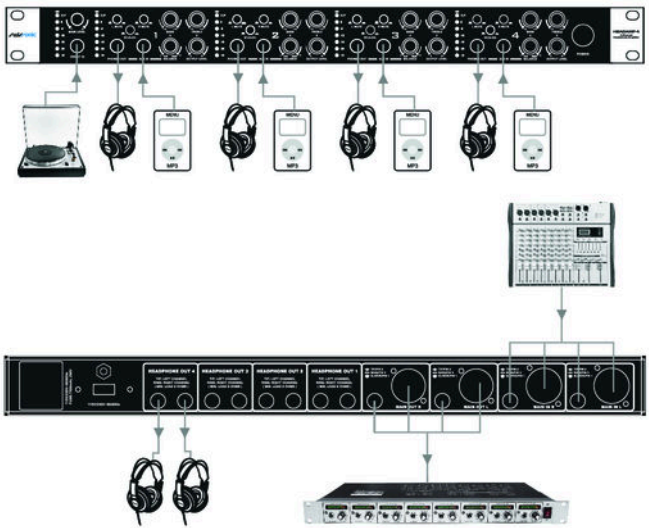
Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

Rack mounting

The unit has been designed for rack mounting in a standard 19-inch rack; it occupies one rack unit.

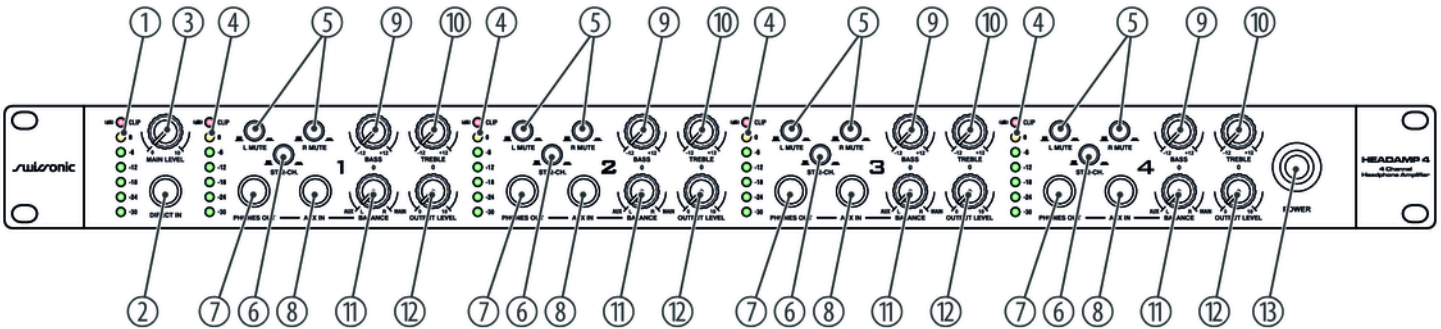
Connection example

The following overview symbolically shows how you can integrate the device in your setup.



5 Connections and controls

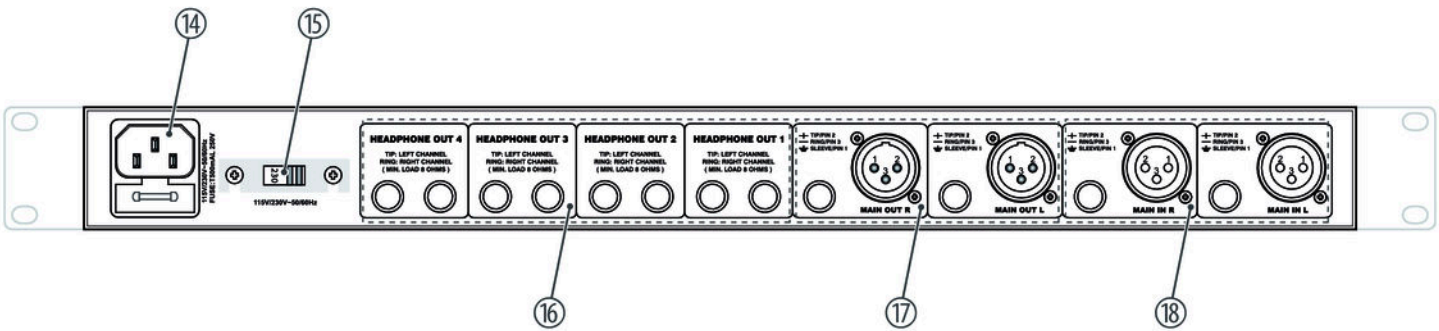
Headamp 4 (item no. 437349) – front side



1	*[dB]* Level display for the sum signal The LED *[CLIP]* (red) indicates overload (clipping). In this case the level of the input signal is too high.
2	*[DIRECT IN]* Additional audio input, the signal is mixed with the signal at the main input.
3	*[MAIN LEVEL]* Volume control for the signals at the inputs *[MAIN IN]* and *[DIRECT IN]*
4	*[dB]* Level display for each headphones channel The LED *[CLIP]* (red) indicates overload (clipping). In this case the level of the input signal is too high.
5	*[L MUTE]*, *[R MUTE]* Pushbutton for muting the left or right stereo channel at each headphones output
6	*[ST. / 2-CH]* Pushbutton for toggling between stereo and 2-channel mode

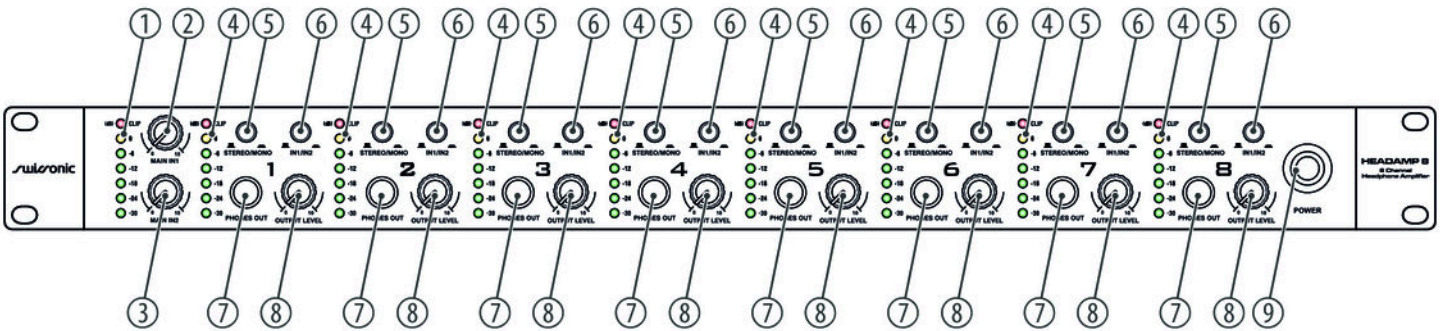
7	*[PHONES OUT]* Headphones outputs (1/4" phone socket, stereo).
8	*[AUX IN]* Additional audio input, the signal is mixed with the signal at each headphones output
9, 10	*[BASS]*, *[TREBLE]* Tone control for bass and treble for each headphones output
11	*[BALANCE]* Pan control for each headphones output
12	*[OUTPUT LEVEL]* Volume control for each headphones output
13	*[POWER]* Main switch. Turns the device on and off

Headamp 4 (item no. 437349) – rear side



14	Plug for mains cable with fuse holder
15	Selector switch for the supply voltage of the device (115 V or 230 V, factory-set value).
16	*[HEADPHONE OUT]* Two in parallel connected headphones outputs (stereo) for each channel, designed as 1/4" phone sockets
17	*[MAIN OUT R]*, *[MAIN OUT L]* Outputs for the sum signal, designed as XLR chassis plugs These outputs are suitable for connecting a further headphones amplifier.
18	*[MAIN IN R]*, *[MAIN IN L]* Inputs for audio signals in line level, designed as XLR chassis socket

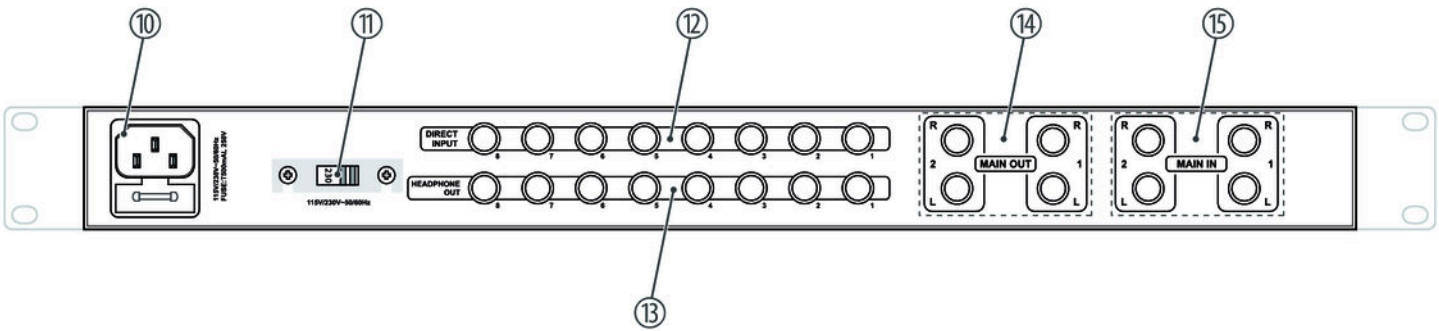
**Headamp 8 (item no. 437354) –
front side**



1	*[dB]* Level display for the sum signal The LED *[CLIP]* (red) indicates overload (clipping). In this case the level of the input signal is too high.
2, 3	*[MAIN IN1]*, *[MAIN IN2]* Volume control for the signals at the inputs *[MAIN IN1]* and *[MAIN IN2]*
4	*[dB]* Level display for each headphones channel The LED *[CLIP]* (red) indicates overload (clipping). In this case the level of the input signal is too high.
5	*[STEREO / MONO]* Pushbutton for toggling between mono mode (pressed) and stereo mode (not pressed)
6	*[IN1 / IN2]* Pushbutton for selecting an input signal for each headphones output: *[MAIN IN1]* (not pressed), *[MAIN IN2]* (pressed)
7	*[PHONES OUT]* Headphones outputs (1/4" phone socket, stereo).

8	*[OUTPUT LEVEL]* Volume control for each headphones output
9	*[POWER]* Main switch. Turns the device on and off

Headamp 8 (item no. 437354) – rear side



10	Plug for mains cable with fuse holder
11	Selector switch for the supply voltage of the device (115 V or 230 V, factory-set value).
12	*[DIRECT INPUT 1]…[DIRECT INPUT 8]* Additional audio input, the signal is mixed with the signal at each headphones output
13	*[HEADPHONE OUT 1]…[HEADPHONE OUT 8]* Headphones outputs (stereo) for each channel, designed as 1/4" phone sockets
14	*[MAIN OUT 1 R]*, *[MAIN OUT 1 L]*, *[MAIN OUT 2 R]*, *[MAIN OUT 2 L]* Outputs for the sum signal 1 or 2, designed as 1/4" phone sockets These outputs are suitable for connecting a further headphones amplifier or other audio devices.
15	*[MAIN IN 1 R]*, *[MAIN IN 1 L]*, *[MAIN IN 2 R]*, *[MAIN IN 2 L]* Inputs for audio signals in line level, designed as 1/4" phone sockets

6 Technical specifications

Headamp 4 (item no. 437349)

Audio inputs	XLR sockets, 1/4" phone sockets Impedance 40 kΩ (balanced), 30 kΩ (unbalanced) Input level: 16 dBu max.
AUX inputs	1/4" phone sockets Impedance 5 kΩ Input level: 22 dBu max.
Headphones outputs	1/4" phone socket (stereo) Max. output level: +24 dBm at 100 Ω, +21 dBm at 80 Ω Output impedance 8 Ω min.
Line outputs	XLR sockets, 1/4" phone sockets
Frequency range	10 Hz … 150 kHz (±3 dB)
Distortion	0,006 %, 4 dBu, 1 kHz

Signal-to-noise ratio (SNR)	> 110 dB (22 Hz … 22 kHz)
Operating supply voltage	115/230 V ~ 50/60 Hz
Power consumption	24 W
Fuse	230 V: 5 mm× 20 mm, 0.5 A, 250 V, slow blow 115 V: 5 mm× 20 mm, 1 A, 250 V, slow blow
Dimensions (W × H × D)	482 mm × 44 mm (1 rack unit)× 220 mm
Weight	4.5 kg

Headamp 8 (item no. 437354)

Audio inputs	1/4" phone sockets Impedance 40 kΩ (balanced), 20 kΩ (unbalanced) Input level: 16 dBu max.
AUX inputs	1/4" phone sockets Impedance 15 kΩ Input level: 22 dBu max.
Headphones outputs	1/4" phone sockets (stereo) Max. output level: +24 dBm at 100 Ω, +21 dBm at 80 Ω Output impedance 8 Ω min.
Line outputs	1/4" phone sockets
Frequency range	10 Hz … 80 kHz (±2 dB)
Distortion	0,006 %, 4 dBu, 1 kHz
Signal-to-noise ratio (SNR)	> 100 dB (22 Hz … 22 kHz)
Operating supply voltage	115/230 V ~ 50/60 Hz

Power consumption	11.5 W
Fuse	230 V: 5 mm× 20 mm, 0.5 A, 250 V, slow blow 115 V: 5 mm× 20 mm, 1 A, 250 V, slow blow
Dimensions (W × H × D)	482.6 mm × 44.5 mm × 217 mm
Weight	3.15 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.

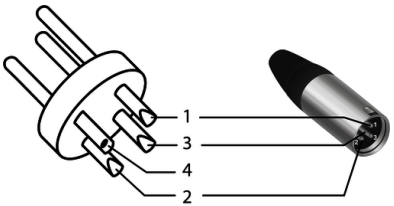
1/4" TS phone plug (mono, unbalanced)

1	Signal
2	Ground, shielding

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

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

XLR plug (balanced)



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

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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