



Z-Amp 4.250T

Mixer Amplifier

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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 intended to be used for amplification, mixing and playback of signals from musical instruments and microphones. 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!

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!

Risk of death from electrical current!

The output voltages of modern high-performance amplifiers may result in death or serious injury. Never touch the bare ends of loudspeaker cables when the amplifier is on.



DANGER!

Risk of death from electrical current!

Hazardous voltage may be present at cable ends and screw terminals. The connection of screw terminals and all maintenance and repair work on the electrical installation of the device may only be performed by a qualified electrician. Always perform maintenance and repair work when the device is free from voltage. Failure to comply may result in electric shock and risk of fire and loss of life. Always observe all electrical safety instructions applicable in the country of operation.



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 high volumes on speakers!

With loudspeakers connected, 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. 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. If this is not possible, keep a greater distance to the speaker 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 if 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.

3 Features

- 4-zone amplifier
- Class D amplifier
- Volume control on the front
- Zone selection
- 4 microphone/line inputs
- Media player for playing back audio files via USB or Bluetooth
- 18 V phantom voltage input
- Priority control
- Input for connecting an external audio device
- Screw terminals for connecting speakers, phone systems or amplifiers
- Includes 19-inch kit for rack mounting

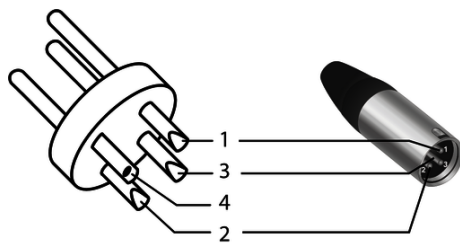
4 Installation and starting up

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.

4.1 Pin assignment

XLR connections for signal inputs

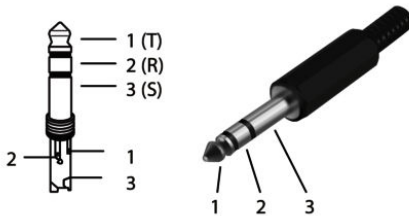


Balanced XLR panel sockets serve as signal inputs. The drawings and tables show the XLR pin assignment.

Balanced wiring:

1	Ground, shielding
2	Positive signal (+)
3	Negative signal (-)

Jack plugs for signal inputs



The figures and tables show the pin assignments of 6.35-mm jack plugs.

Balanced stereo jack wiring:

1	Positive signal (+)
2	Negative signal (-)
3	Ground, shielding

Cinch plugs for signal inputs



Drawing and table indicate the pin assignment of a cinch plug.

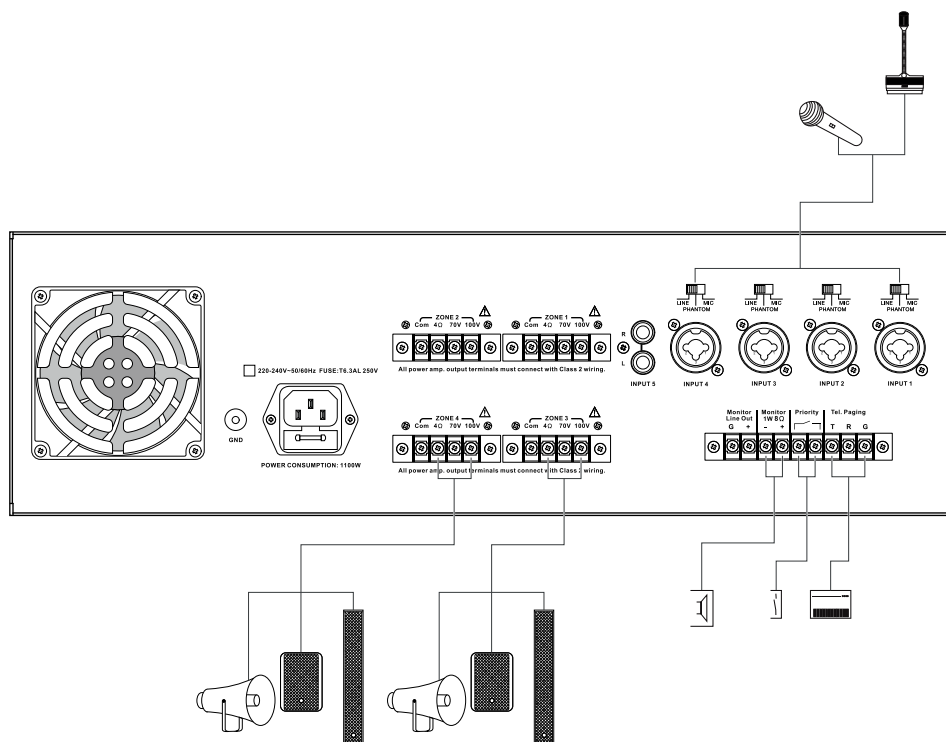
Unbalanced wiring:

1	Signal
2	Ground

4.2 Screw terminal strips

All speaker units and a phone system are connected via a screw terminal strip on the back of the device.

First detach the covers of the screw terminal strips using a suitable screwdriver. Loosen the required screw terminals (see connection diagram) and attach the necessary cables using a suitable screwdriver.



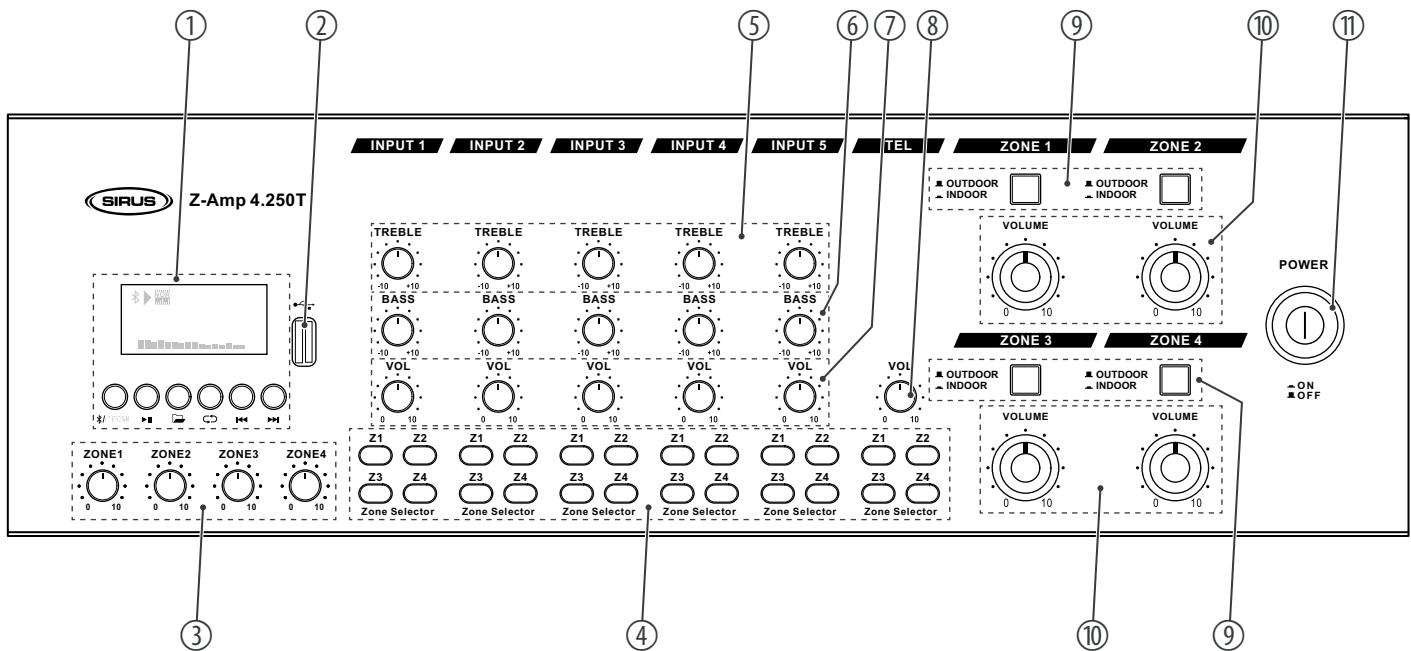
Finally check all cable connections for tightness and reattach the terminal screw strip covers to the device.

Rack mounting

The device has been designed for rack mounting in a standard 19-inch rack; it occupies two rack units.

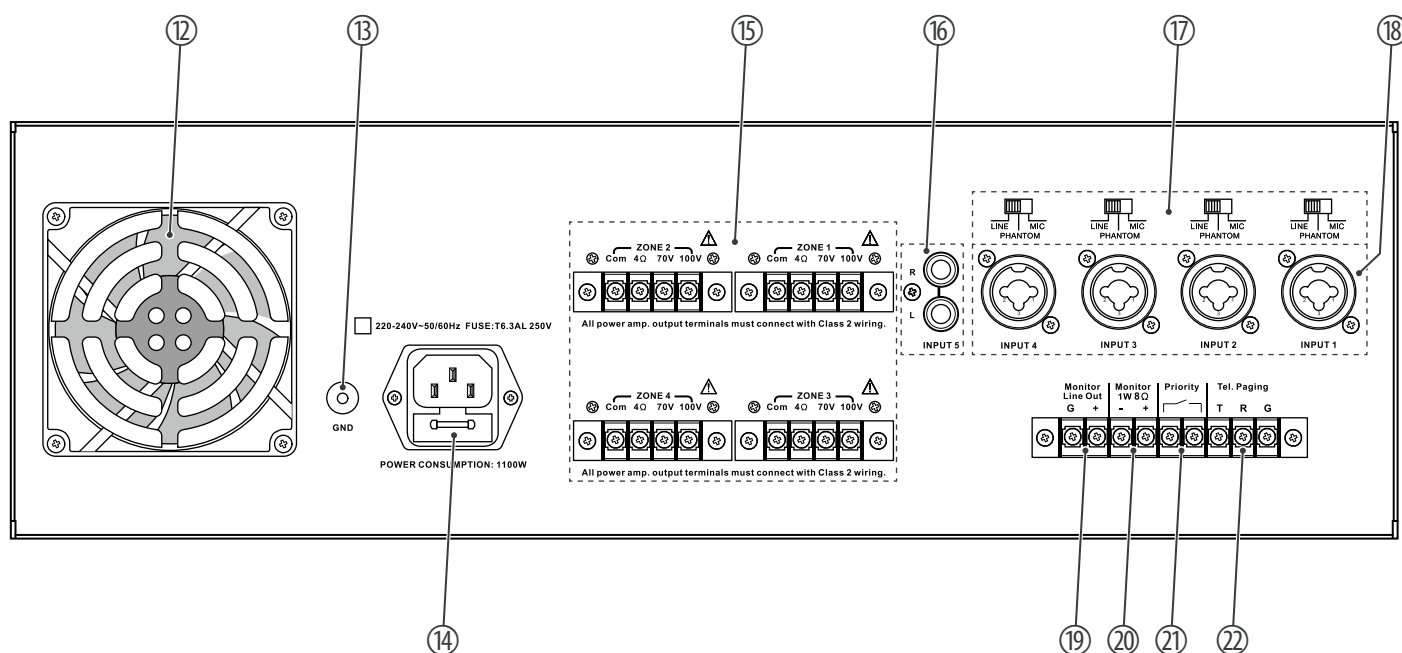
5 Connections and controls

Front



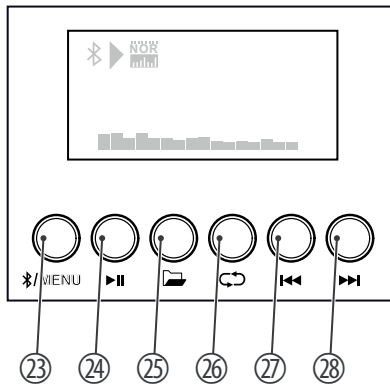
- | | |
|----|--|
| 1 | Display and operating buttons for the media player |
| 2 | • USB-A input for connecting external audio devices, e.g. an MP3 player |
| 3 | [ZONE 1]...[ZONE 4] Rotary control for adjusting the volume of zones 1 to 4 of the media player. |
| 4 | [Zone Selector Z1]...[Zone Selector Z4] Buttons for selecting zones 1 to 4
The signals from the [INPUT 1]...[INPUT 5] and [Tel. Paging] inputs are assigned to the selected zones. |
| 5 | [TREBLE] Rotary control for adjusting the high frequencies of inputs [INPUT 1]...[INPUT 5].
Starting from the neutral position, turn the control knob in clockwise or anti-clockwise direction to boost or cut the treble frequencies by up to ± 10 dB. |
| 6 | [BASS] Rotary control for adjusting the low frequencies of inputs [INPUT 1]...[INPUT 5].
Starting from the neutral position, turn the control knob in clockwise or anti-clockwise direction to boost or cut the bass frequencies by up to ± 10 dB. |
| 7 | [VOL] Rotary control for adjusting the volume of inputs [INPUT 1]...[INPUT 5].
Starting from the neutral position, turn the control knob clockwise or anti-clockwise to increase or reduce the volume. |
| 8 | [VOL] Rotary control for adjusting the volume of the input signal on the [Tel. Paging] input.
Starting from the neutral position, turn the control knob clockwise or anti-clockwise to increase or reduce the volume. When the [Tel. Paging] input is not in use, turn the volume to the zero position. |
| 9 | [OUTDOOR/INDOOR] Button for selecting the bandwidth of outputs [ZONE 1]...[ZONE 4] |
| 10 | [VOLUME] Rotary control for adjusting the volume of outputs [ZONE 1]...[ZONE 4].
Starting from the neutral position, turn the control knob clockwise or anti-clockwise to increase or reduce the volume. |
| 11 | ⏻ Main switch. Turns the device on and off. |

Back



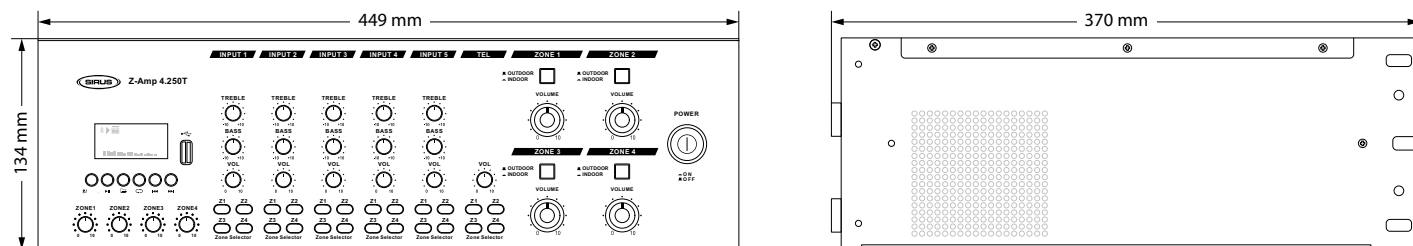
12	Fan
13	[GND] Connection screw for the ground cable
14	Rubber panel plug with fuse holder for the power supply
15	[ZONE 1]...[ZONE 4] Screw terminal strips for connecting the speaker system(s)
16	[INPUT 5] Cinch input sockets for connecting an external audio device
17	[LINE/MIC/PHANTOM] Signal level switch for inputs [INPUT 1]...[INPUT 4]
18	[INPUT 1]...[INPUT 4] Inputs 1 to 4, designed as XLR/jack combination sockets
19	[Monitor Line Out] Screw terminals for connecting an amplifier, recorder etc.
20	[Monitor 1 W 8Ω] Screw terminals for connecting a speaker that is supplied with a rated power of 1 W by an additional power amplifier.
21	[Priority] If these screw terminals are short-circuited (e.g. with an electric switch), the input signal of inputs [INPUT 2]...[INPUT 5] is attenuated.
22	[Tel. Paging] Screw terminals for connecting an AUX signal (e.g. phone system). The input is equipped with voice prioritisation that overrides all other input signals as soon as an AUX signal is transmitted.

Media player



	Button	Action	USB	Bluetooth
23	⌂/[MENU]	Press briefly	USB on	Bluetooth on
		Press and hold	USB off	Bluetooth off
24	▶	Press briefly	Play/pause	Play/pause
25	📁	Press briefly	Search for file	No function
26	↺	Press briefly	Repeat file (4 modes)	No function
27	⏮	Press briefly	Previous file	No function
		Press and hold	Increase volume	No function
28	⏭	Press briefly	Next file	No function
		Press and hold	Reduce volume	No function

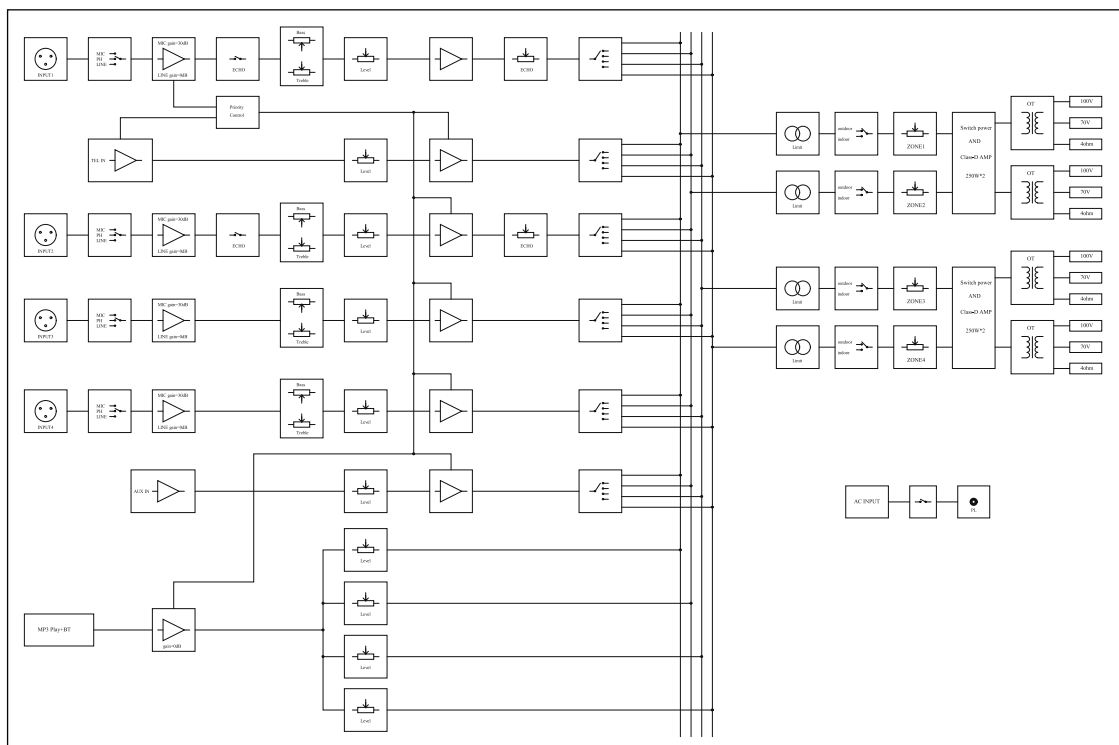
6 Technical specifications



Amplifier class	Class D	
Output power	4 Ω	4 × 250 W (RMS) @ 70 V/100 V
Frequency range	80 Hz ... 18 kHz (–3 dB)	
Bandwidth	MIC (outdoor)	178 Hz...7.96 kHz
	MIC (indoor)	132 Hz...7.96 kHz
	LINE (outdoor)	138 Hz...12.6 kHz
	LINE (indoor)	70 Hz...12.6 kHz
	AUX (outdoor)	144 Hz...17 kHz
	AUX (indoor)	76 Hz...17 kHz
Input sensitivity	MIC: –40 dBV, $\pm$ 2 dB (balanced) LINE: –5 dBV, $\pm$ 2 dB (balanced) AUX: –5 dBV, $\pm$ 2 dB (unbalanced) TEL: –15 dBV, $\pm$ 2 dB	
Sound control	Treble: $\pm$ 10 dB, 10 kHz Bass: $\pm$ 10 dB, 100 Hz	
Total harmonic distortion (THD)	$\leq$ 1 %	
Signal-to-noise ratio	MIC: > 65 dB LINE: > 75 dB AUX: > 75 dB	
Phantom power	18 V	
Output impedance	COM, 4 Ω	
LINE output voltage	COM, 70 V, 100 V	
Priority control	INPUT 1	
Priority sensitivity	MIC + TEL, –60 dBV/3S	
Bluetooth	Frequency range	2402 MHz...2480 MHz
	Max. transmission power	–4.07 dBm
	Standard	Version 5.0
	Name	Z-Amp 4.250T
Supply voltage	220 - 240 V ~ 50/60 Hz	

Power consumption, max.	1,500 W	
Rated power	1,100 W	
Fuse	220 - 240 V: 5 mm x 20 mm, 6.3 A, 250 V, slow blow	
Dimensions (W × H × D)	449 mm × 134 mm × 370 mm (without rack angle) 484 mm × 134 mm × 370 mm (with rack angle)	
Weight	17.6 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

Block diagram



7 Cleaning

Components

Clean the externally accessible parts of the device regularly. The frequency of cleaning depends on the operating environment: wet, smoky or particularly dirty surroundings can cause more dirt to accumulate on the device parts.

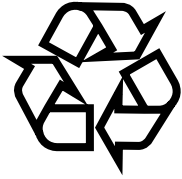
- Clean with a soft dry cloth.
- Stubborn stains may be removed with a slightly damp cloth.
- Never use cleaners containing alcohol or thinner.

Fan grids

The fan grids of the device must be cleaned of any contamination, such as dust, etc. on a regular basis. Before cleaning, switch off the device and disconnect mains-operated devices from the mains. Only use pH-neutral, solvent-free and non-abrasive cleaning agents. Clean the unit with a slightly damp lint-free cloth.

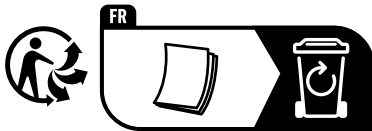
8 Protecting the environment

Disposal of the packing material



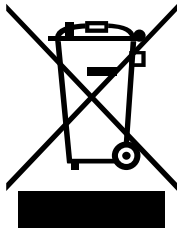
Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

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.

