



CL 105 A

Active Speaker

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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 as a PA system. The device is designed for professional use only and is not suitable for use in households. 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!

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!

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. 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). 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

Special features of the device:

- 5" full-range driver
- Built-in 150 W class D power amp
- 3-band equalizer
- Mic / line and AUX inputs
- Standby function
- Bluetooth and USB interface

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.

4.1 Tips on handling speakers

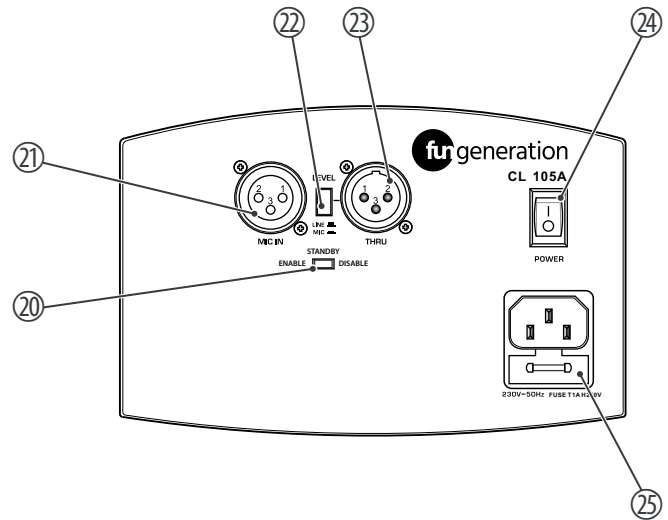
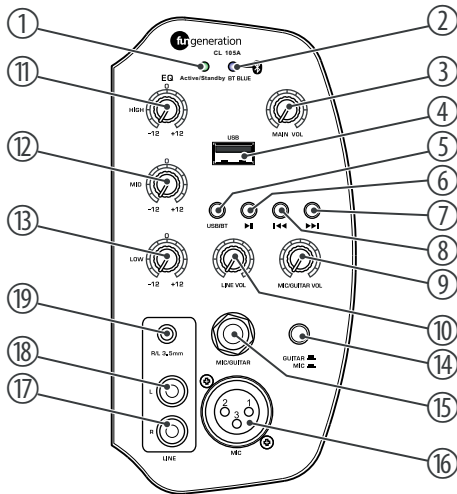
We recommend you to set up the speakers in a way, that the sound signals can reach the audience unobstructedly. It will often be helpful to mount the speakers on tripods. Thus, the sound will be evenly spread with maximum range throughout the audience area.

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



Connections and controls

1	<i>[Active/Standby]</i> This LED lights up green during normal operation. If the device does not receive any signal on the <i>[MIC/GUITAR]</i> microphone input for 30 minutes, it switches to standby mode if the standby function is activated, and the LED lights up red.
2	<i>[BT Blue]</i> Indicator LED for the Bluetooth connection. The LED flashes if the Bluetooth function is enabled.
3	<i>[MAIN VOL]</i> Master volume control
4	<i>[USB]</i> USB connection
5	<i>[USB/BT]</i> Button for switching between the USB and Bluetooth inputs
6	▶ Pressing once pauses playback. Pressing it again continues playback.
7, 8	▶▶, ◀◀ Forwards (skip to the next track) or backwards (skip to the previous track)
9	<i>[MIC/GUITAR VOL]</i> Control for adjusting the level for the instrument and microphone input
10	<i>[LINE VOL]</i> Control for adjusting the line input level
11,12,13	<i>[HIGH], [MID], [LOW]</i> 3-band equalizer with high, mid and low frequency controls (boost/attenuation by ± 12 dB)
14	<i>[GUITAR / MIC]</i> Toggles the sensitivity of the <i>[MIC/GUITAR]</i> instrument and microphone input.
15	<i>[MIC/GUITAR]</i> Instrument or microphone input, designed as a 6.35-mm jack socket
16	<i>[MIC]</i> Microphone input, designed as an XLR panel socket
17, 18	<i>[LINE R/L]</i> Line input, designed as pair of cinch sockets
19	<i>[R/L 3.5mm]</i> Line input, designed as 3.5-mm jack socket

20	<i>[STANDBY ENABLE DISABLE]</i> If this switch is in the <i>[ENABLE]</i> position, the device will turn off after approx. 30 minutes without an input signal. To turn it then back on again, turn the <i>[POWER]</i> switch off an on again.
21	<i>[MIC IN]</i> Microphone input, designed as an XLR panel socket
22	<i>[LEVEL]</i> Toggles the output level between microphone level (pressed) and line level (not pressed).
23	<i>[THRU]</i> Direct output of the microphone input. The level can be adjusted to the line or microphone level.
24	<i>[POWER]</i> Main switch. Turns the device on and off.
25	Rubber panel plug with fuse holder for the power supply

6 Technical specifications

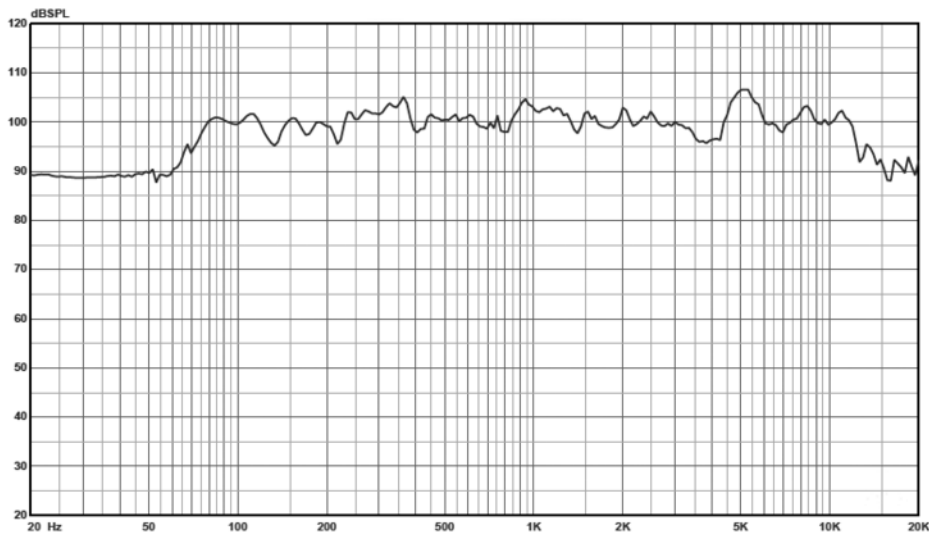
Configuration	1 × 5-inch full-range driver	
Amplifier	Class D power amplifier	
Input connections	Line in	1 × 3.5-mm jack socket
		1 × cinch socket
	Mic in	1 × 6.35-mm jack socket
		2 × XLR panel socket, 3-pin
	USB port	USB-A
Power supply	Rubber panel plug C14	
Output connections		1 × XLR panel plug, 3-pin
Output power	RMS: 50 W	
	Peak: 150 W	
Frequency range	40 Hz... 18 kHz	
Crossover frequency	60 Hz... 18 kHz	
Sound pressure level (SPL), max.	92 dB	
Bluetooth®	Frequency range	2.400 GHz

	Max. transmission power	10 mW
	Standard	Version 5.0
	Bluetooth® name	CL 105A
Playback formats	MP3	
Number of files, max.	64	
Power consumption	60 W	
Supply voltage	230 V ~ 50 Hz	
Fuse	5 mm × 20 mm, 1 A, 250 V, slow blow	
Dimensions (W × H × D)	285 mm × 210 mm × 195 mm	
Weight	2.3 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

Further information

Multifunctional housing	No
Configuration of the woofers	1 × 5 inch
Tweeter 1 inch and above	No
Microphone input	Yes
Line input	Yes
Bluetooth	Yes

Frequency response



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)



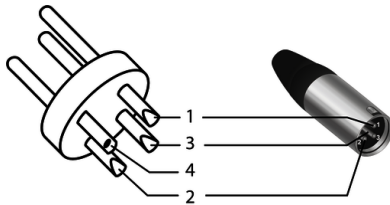
1	Signal
2	Ground, shielding

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)

RCA connection

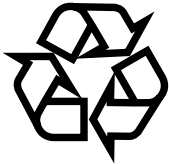


Drawing and table indicate the pin assignment of an RCA plug.

1	Signal
2	Ground, shielding

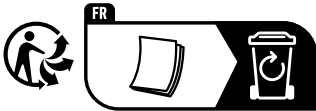
8 Protecting the environment

Disposal of the packing material



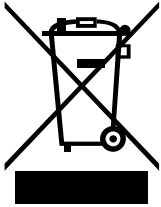
Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

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.

