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T204

User Manual

Active Studio Monitor

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27.04.2022, ID: 494898

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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.

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 primarily designed for monitoring during audio recording and mixing in the studio. 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

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!

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. 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!

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 surface and after some time cause permanent dark stains. In case of doubt, do not put the rubber feet directly on the surface and use a suitable underlay if necessary, i.e. felt-pad floor protectors or similar.

3 Features

Special features of the device:

- 2-way system: 2 × 4" mid / low speaker and 1.25" tweeter (silk dome)
- 2 × 5.25" passive membrane
- Inputs: XLR panel socket, ¼" jack socket, RCA socket
- Bi-amping amplifier (class D)
- Switch for adapting treble and bass to the room acoustics
- Switchable low-pass filter with selectable crossover frequency
- SigmaDSP processor
- MDF housing
- Protection circuits against radio interference, over temperature, on / off switching noise and to limit output current
- Standby function

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 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.

NOTICE!

Use of stands

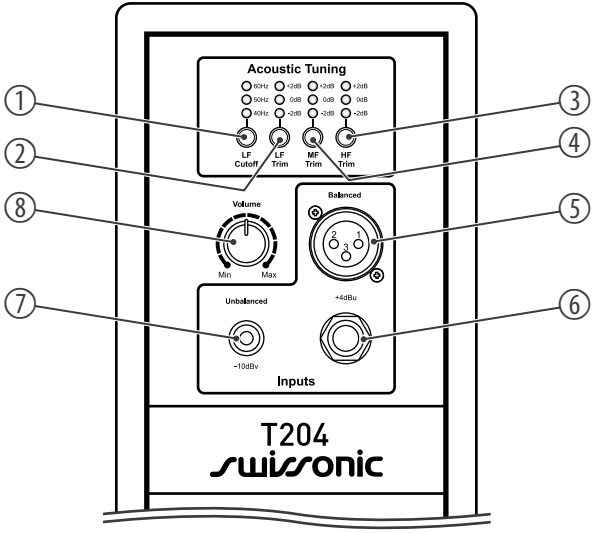
When mounting the device onto a stand, ensure that the stand is in a safe and stable position and that the weight of the device does not exceed the maximum permissible load capacity of the stand.

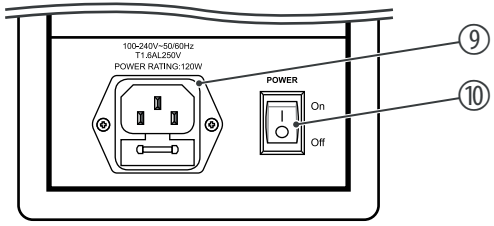
5 Connections and operating elements

Control LED on the front panel

If the speaker box receives no signal for 15 minutes, it switches to standby mode. The control LED on the front panel then lights up red. As soon as the speaker box receives a signal, it switches back to normal mode and the LED will turn blue.

Rear panel


Acoustic Tuning
60Hz
50Hz
40Hz
+2dB
0dB
-2dB
LF Cutoff
LF Trim
MF Trim
HF Trim
Volume
Min
Max
Balanced
+4dBu
Unbalanced
-10dBv
Inputs
T204
swissonic
1
2
3
4
5
6
7
8


100-240V~50/60Hz
T1.6AL250V
POWER RATING:120W
POWER
On
Off
9
10

1	*[LF Cutoff]* Button for adjusting the selectable crossover frequency for the switchable low-pass filter (40 Hz, 50 Hz, 60 Hz)
2	*[LF Trim]* Button to adapt the bass to the room acoustics (–2 dB, 0 dB, +2 dB)
3	*[HF Trim]* Button to adapt the treble to the room acoustics (–2 dB, 0 dB, +2 dB)
4	*[MF Trim]* Button to adapt the mids to the room acoustics (–2 dB, 0 dB, +2 dB)
5	Connection for a balanced input signal, designed as a XLR panel socket, 3-pin
6	Connection for a balanced input signal, designed as a ¼" jack socket
7	Connection for playback devices with line level (unbalanced), designed as a RCA socket
8	*[Volume]* Rotary control to adjust the overall volume

9	IEC chassis plug with fuse holder for the power supply
10	*[Power]* Mains switch. Turns the device on and off.

6 Technical specifications

Speaker	2 × 4" low / mid speaker 1 × 1.25" tweeter (silk dome) 2 × 5.25" passive membrane	
Input connections	LINE signal	1 × XLR panel socket, 3-pin (balanced)
		1 × RCA socket (unbalanced)
		1 × ¼" jack socket (mono, balanced)
	Voltage supply	IEC chassis plug C14
Input impedance	20 kΩ (balanced), 10 kΩ (unbalanced)	
Input sensitivity	320 mV pink noise 96 dB SPL in 1 m distance (volume control at 100 %)	
Output power	Bass / mid-range amp: 50 W Treble amp: 30 W	
Amp class	Class D	

Maximum SPL (in 1 m distance)	96 dB	
Frequency range	50 Hz … 20 kHz	
Crossover frequency	2.2 kHz	
Signal-to-noise ratio	>96 dB (typical, A-weighted)	
Power consumption	100 W	
Operating supply voltage	100 - 240 V ~ 50/60 Hz	
Fuse	5 mm × 20 mm, 1.6 A, 250 V, slow-blow	
Dimensions (W × H × D)	160 mm × 330 mm × 200 mm	
Weight	4.6 kg	
Ambient conditions	Temperature range	0 °C…40 °C
	relative humidity	20 %…80 % (non-condensing)

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.

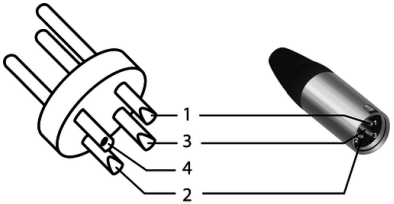
In a professional environment, therefore, the balanced transmission is preferred, because this enables an undisturbed transmission of signals over long distances. In addition to the conductors 'Ground' and 'Signal', in a balanced transmission a second core is added. This also transfers the signal, but 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" 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 Troubleshooting

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

Symptom	Remedy
The unit does not work	Check the power supply terminal and the position of the power switch.
No sound	1. Check the position of the volume control.
	2. Check the correct connection of the signal cables.
	3. Check the signal cables and / or the signal source.
	4. Try using another signal cable.
Once the music gets loud, the high frequencies slump	Maybe overheating is imminent. Provide better ventilation or reduce the volume.
Distortion is audible	Excessive input signal. Reduce the signal level.

Symptom	Remedy
Noise and hum occur	1. Make sure that only balanced cables are used.
	2. Make sure that all audio devices are connected to the same power circuit and thus share the same ground reference.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at *www.thomann.de*.

9 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.