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Audio 1

Audio Interface

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13.07.2022, ID: 541119

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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'*.

Instructions

The individual steps of an instruction are numbered consecutively. The result of a step is indented and highlighted by an arrow.

Example:

1. ▶ Switch on the device.

2. ▶ Press *[Auto]*.

   ⇨ Automatic operation is started.

3. ▶ Switch off the device.

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.
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 – danger zone.

2   Safety instructions

Intended use

This device serves to convert analogue audio signals to digital audio signals and vice versa. 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.

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!

Danger of short circuit

Switching on phantom power will damage the device if unbalanced XLR cables are connected. Only turn on phantom power when exclusively balanced XLR cables are connected.

!

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 pads or similar.

3   Features

- Receiver for the digital transmission of audio signals
- High conversion rate
- Resolution: 24 bit
- Sampling rate: 192 kHz
- Analogue microphone input as XLR socket with HI-Z switch
- Line / instrument input as 1/4" jack socket
- 2 × analogue line output as ¼" jack socket
- Headphone output as ¼" jack socket with volume control
- Smartphone connection as a 3.5 mm jack socket
- Direct monitoring options: Off / mono / stereo
- Recording source selection: Mix, CH1-2 or loopback
- Phantom power for using condenser microphones
- Master volume control
- supports Windows® 7, Windows® 8 / 8.1 and Windows® 10 with ASIO 2.0, MME, WDM and DirectSound
- supports macOS® via Apple's® native CoreAudio USB audio drivers (no driver installation required)
- Power supply via USB-C or USB-B port
- USB port for PC (2.0, B-type), USB bus-powered (cable included)

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.

> *Turn off phantom power before connecting the device or changing the wiring of the device.*
>
> *Only turn on phantom power when using a condenser microphone. Otherwise always leave the phantom power switched off.*

4.1 System requirements

To enable optimal use of the device, use one of the following operating systems:

- PC: Windows® 7 / 8 / 8.1 or 10 (32 and 64 bit)
- Mac: macOS® X / macOS® 10.7 or above

The PC must have at least one free USB 2.0 port.

4.2 Hardware installation

The device is connected to a USB port on the computer with the supplied cable and is directly supplied with power.

4.3 Driver and software installation

After connecting to the computer, the operating system will automatically detect the device and usually install the correct USB audio driver.

All applications that do not require a special, professional ASIO driver can already be used, e.g. B. DVD playback or DJ applications under Windows® or simple applications like Garageband on MacOS®.

4.3.1   Installation under Windows®

To use the applications to their full extent, install the USB audio driver as follows:

1. ▶ Disconnect the USB cable from the computer.

2. ▶ Download the driver from the product page of our homepage *www.thomann.de*.

3. ▶ Double-click *'Thomann GmbH USB Audio Drivers_setup_WHQL.exe'* to start the installation.

4. ▶ When the installation program starts, Windows displays a security warning. Click *[Weitere Informationen]* (more information) and then *[Trotzdem ausführen]* (run anyway) to allow the installation.

Der Computer wurde durch Windows geschützt

Von Microsoft Defender SmartScreen wurde der Start einer unbekannten App verhindert. Die Ausführung dieser App stellt u. U. ein Risiko für den PC dar.
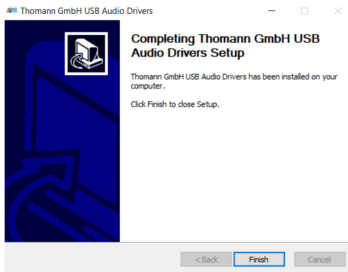Weitere Informationen

Nicht ausführen

5. ▶ Click *[Install]* to start the installation. The USB audio driver data is copied to the computer.
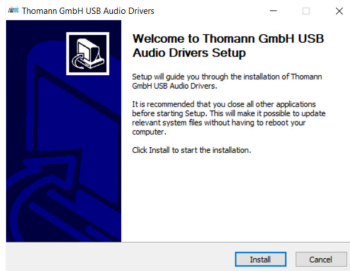
6. ▶ At the end of the installation, when prompted, connect the USB device and click *[OK]* to continue with the installation or *[Abbrechen]* (cancel) to abort the installation.
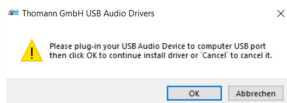
7. ▶ Click *[Finish]* to complete the installation.

⇨ The device is operational.

4.3.2 Installation under macOS®

macOS® supports native CoreAudio USB audio drivers, so no installation is required.

1. ▶ Connect the audio interface to the computer's USB port. Once connected, the USB audio driver will automatically detect the device and perform the necessary setup.

⇨ The device is operational.

2. ▶ Controlling some options of the device under macOS® is also possible via the macOS® Audio MIDI Configuration.

5 Connections and controls

Front panel
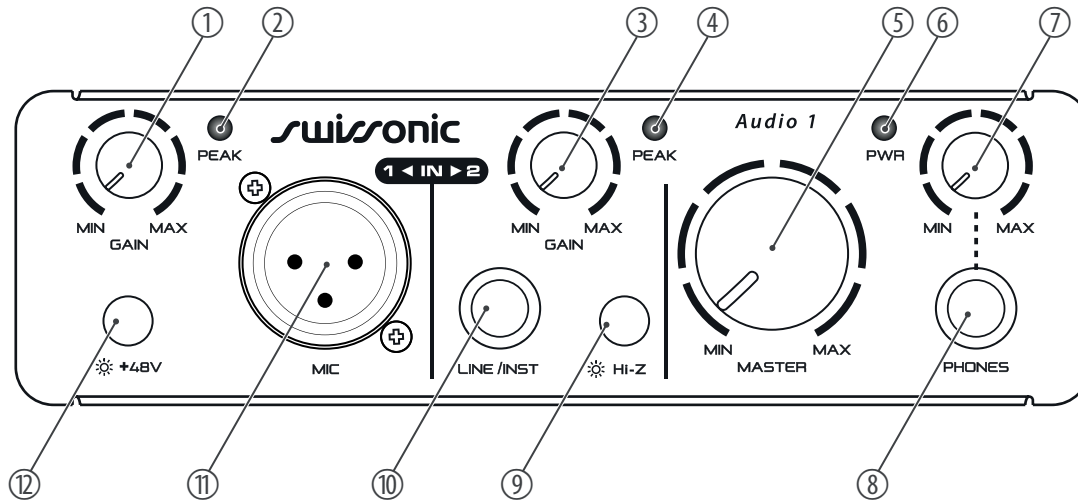
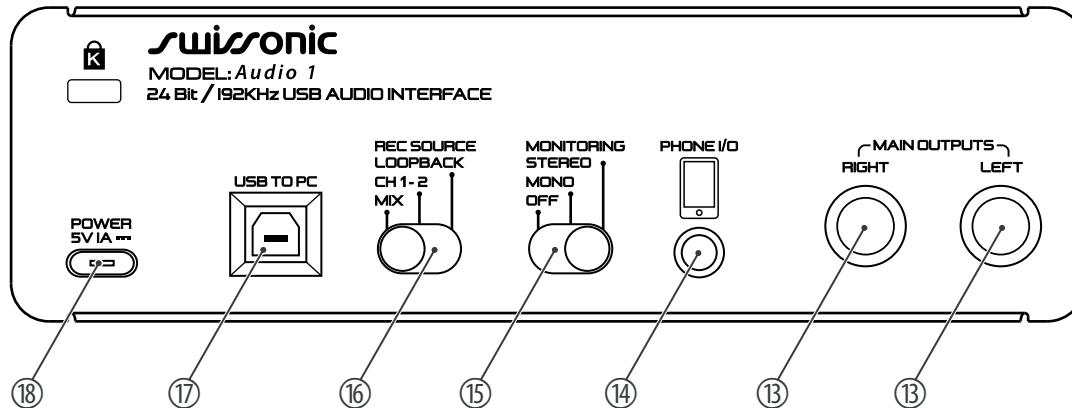| 1	*[GAIN] - [MIN] / [MAX]* | Setting the input level at the microphone input
2	*[PEAK]* | The LED lights up green when the input level at the mic input is sufficient and lights up red when the input level is too high. This can be set correctly with the *[GAIN]* controller.
3	*[GAIN] - [MIN] / [MAX]* | Setting the input level at the line / instrument input
4	*[PEAK]* | The LED lights up green when the input level at the line / instrument input is sufficient and lights up red when the input level is too high. This can be set correctly with the *[GAIN]* controller.
5	*[MASTER] - [MIN] / [MAX]* | Control for adjusting the master volume
6	*[PWR]* | The LED lights up green when the device is powered via the USB-C port.
7	*[MIN] / [MAX]* | Controller for adjusting the monitoring volume of the headphones
8	*[PHONES]* | Headphone output (stereo, ¼" jack)
9	*[HI-Z]* | Push button for setting the input sensitivity when an electric guitar or bass guitar with a passive pickup is connected to *[LINE/INST]*
10	*[LINE/INST]* | Line / instrument input e.g. for electric guitar, electric bass or other audio source with line signal, designed as a ¼" jack socket

11	*[MIC]*	Microphone input, designed as an XLR socket

12	*[+48 V]*	Turns the 48V phantom power supply for condenser microphones on (pushbutton pressed) or off (pushbutton released)

The phantom power leads to damage to the device if unbalanced cables are connected. Only switch on phantom power while exclusively balanced cables are connected.

Turn off phantom power when connecting a device to *[MIC]* that does not require phantom power. Turn off phantom power when making wiring changes. Before turning on phantom power, turn the *[GAIN]* control of the input to minimum.

Rear panel

| 13 | *[MAIN OUTPUTS]* - *[RIGHT]* / *[LEFT]* | Line outputs for connecting an amplifier or a powered speaker, designed as a ¼" jack socket (mono, balanced) for the left and right channel |

| 14 | *[PHONE I/O]* | Connection for the smartphone's headphone output, designed as a 3.5 mm jack socket (4-pin, stereo) |

The audio signals of the smartphone are output internally, the audio signals of the external microphone connected to the audio interface are transmitted to the smartphone via this socket. Signals coming in via this interface cannot be recorded.

When connecting a PC and a smartphone via which you are broadcasting live, set the *[REC SOURCE]* switch to *[CH1-2]* and the *[MONITORING]* switch to *[OFF]* to avoid feedback. The volume of signals transmitted through this connector can now be adjusted using the *[MASTER]* control.

If you only connect a smartphone and use it to broadcast live, set the *[REC SOURCE]* switch to *[CH1-2]* or *[MIX]* and the *[MONITORING]* switch to *[MONO]* or *[STEREO]* to enable normal broadcasting. The volume of signals transmitted through this connector can now be adjusted using the *[MASTER]* control.

| 15 | *[MONITORING]* | Switch to select the mode |

[STEREO] | Monitoring in stereo mode

[MONO] | Monitoring in mono mode

[OFF] | No direct monitoring

| 16 | *[REC SOURCE]* | Switch for selecting the recording source |

[LOOPBACK] | Recording of the incoming signals from the PC via the *[USB TO PC]* interface

[CH1-2] | Recording of the signals coming in via channels 1 and 2 (*[MIC]* / *[LINE/INST]*)

[MIX] | Recording of all incoming signals

		Turn off the DAW monitoring when using the loopback or mix function, otherwise unwanted feedback may occur.
17	*[USB TO PC]* USB-B connection for power supply and for importing digital audio signals with the supplied cable
18	*[POWER] - [5V 1A]* | USB-C port for power supply

6   Technical specifications

Input connections	Mic	1 × XLR / ¼" jack combo socket (balanced) with Hi-Z switch
		Input impedance: 33 kΩ…1 MΩ
	AUX	1 × USB port, 2.0, B-type
	Voltage supply	1 × USB port, C-type
	Phone I/O	1 × 3.5 mm jack socket, 4-pin, stereo
Output connections	Headphones	1 × ¼" jack socket, 3-pin, stereo
		Impedance: ≥32 Ω
	Line	2 × ¼" jack socket, mono, 3-pin, balanced
		Output impedance: <100 Ω
Frequency range		20 Hz…20 kHz ±1 dBu
Signal-to-noise ratio		>98 dB (A-weighted)
Total harmonic distortion (THD)		< 0.002 % (A-weighted)
Dynamic range		106 dBu (A-weighted)
Gain		50 dB
USB port		USB 2.0, B-type (compatible with 1.1)

Supported sample rates		44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
Resolution		16 bit, 24 bit
Phantom power		48 V
Voltage supply		USB-C (5 V ⎓ / 1000 mA)
Dimensions (W × H × D)		145 mm × 44 mm × 110 mm
Weight		0.54 kg
Ambient conditions	Temperature range	0 °C…40 °C
	relative humidity	20 %…80 % (non-condensing)

Further information

S-PDIF interfaces	no
ADAT interfaces	no
AES / EBU interfaces	no
MADI interfaces	no
Ethernet	no
MIDI port	no
USB bus-powered	yes
Includes power supply	no
USB version	2.0
Zero latency monitoring	yes

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

Three-pole 1/8" mini phone jack (stereo, unbalanced)

1	Signal (left)
2	Signal (right)
3	Ground, shielding

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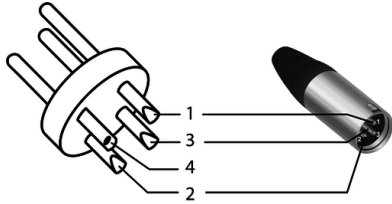
1	Ground, shielding
2	Signal (in phase, +)
3	Signal (out of phase, −)
4	Shielding on plug housing (option)

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.

Notes

Notes