the t.amp

PA 4080 Package

powermixer

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 General notes

This user manual contains important information on 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, include the manual for the next owner.

Our products are subject to a process of continuous development. We therefore reserve the right to make changes without notice.

Symbols and signal words

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3 Safety instructions

Intended use

This device is intended to be used for amplification and playback of signals from musical instruments and microphones. Use the unit only as described in this 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.

4 Features and scope of delivery

Special features of this four-channel power mixer:

- 80 watt RMS output power
- Built-in spring reverb
- 1 × MIC input (XLR, balanced) and 1 × MIC/LINE input (1/4" phone socket) per channel
- Volume, tone and reverb control per channel
- 2 additional Tape in and outputs
- Master section with 3-band EQ
- External effects loop
- 2 × speaker boxes, each with 1 × 10" speaker, tweeter and mounting flange

Standard accessory: 1 × dynamic microphone, 1 × mic cable, 2 × speaker cables

5 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.

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.

5.1 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.

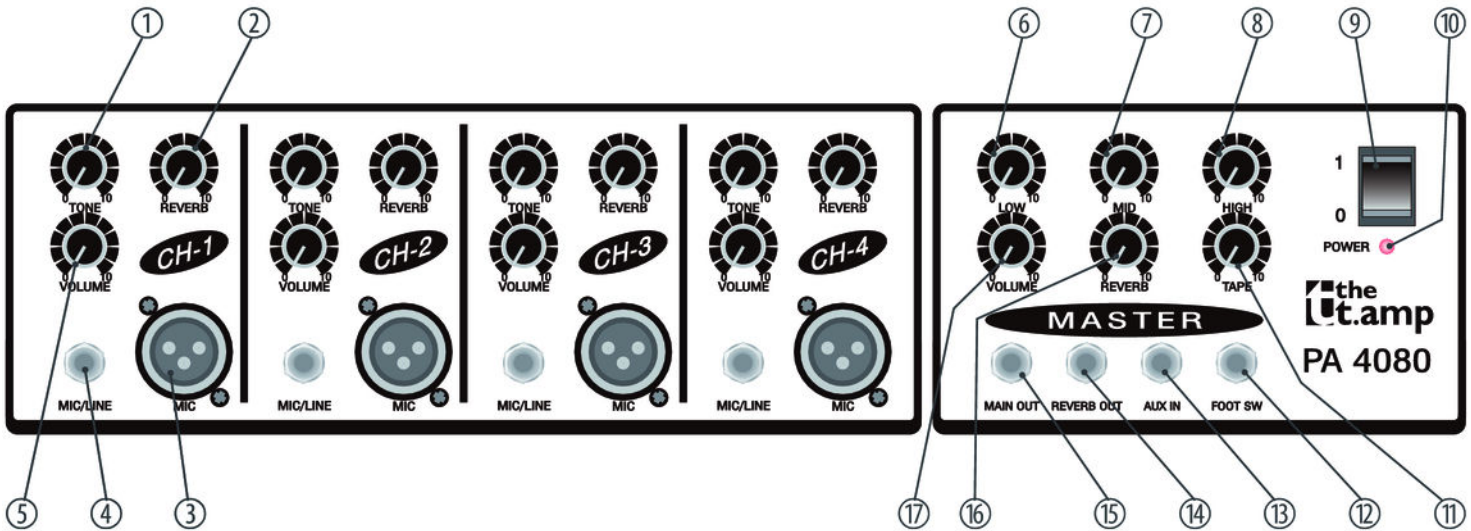
Always use high grade cable to connect your equipment. Otherwise you won't reach maximum sound quality.

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 deceed the minimum output impedance of the amp. The amps 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.

6 Connections and operating elements

Front panel

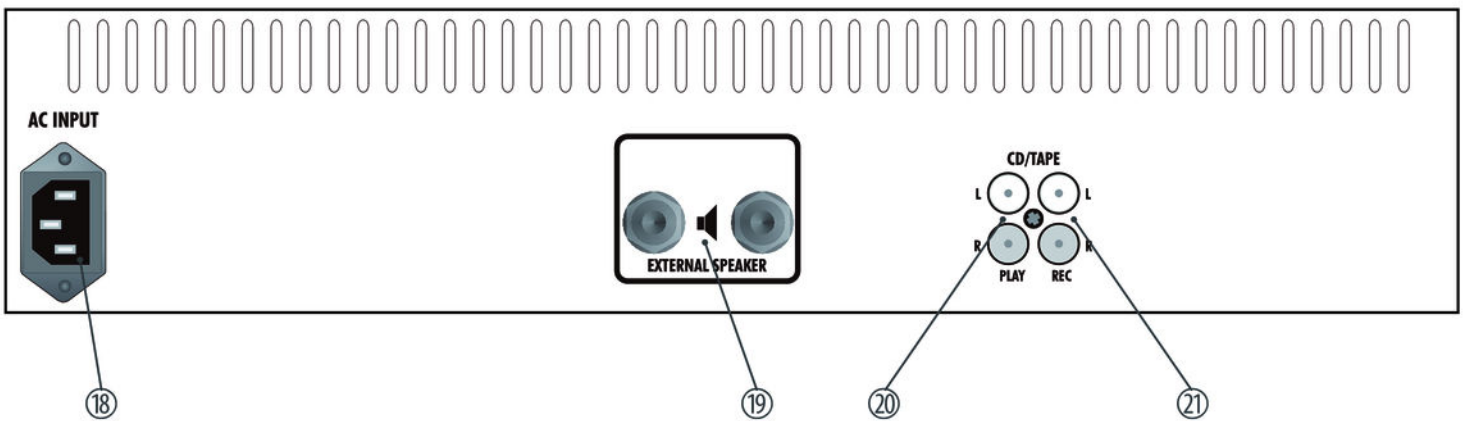


1	*[TONE]* Tone control to set the desired sound in the respective channel.
2	*[REVERB]* Reverb control to adjust the reverb level in the respective channel.
3	*[MIC]* Microphone input (for the respective channel), balanced. Use XLR cables to connect microphones to the MIC inputs.
4	*[MIC/LINE]* Microphone - / Line-input (for the respective channel), unbalanced. Use 1/4" cables to connect microphones or line level signals from musical instruments to the MIC/LINE inputs.
5	*[VOLUME]* Volume control to set the desired volume in the respective channel.
6	*[LOW]* Bass control of the 3-band master EQ.

7	*[MID]* Mids control of the 3-band master EQ.
8	*[HIGH]* Treble control of the 3-band master EQ.
9	Use this mains switch to turn the device on or off.
10	*[POWER]* This indicator lights up when the unit is switched on.
11	*[TAPE]* Use this control to set the playback volume for the TAPE input signals.
12	*[FOOT SW]* Here you can connect a foot switch (not supplied) with a 1/4" phone jack to switch the internal reverb function on or off.
13	*[AUX IN]* This AUX input can be used to feed additional signals. If you route the effect signal from the REVERB OUT (14) into an external effects device, connect its outlet to the AUX IN to lead the processed signal back into the signal path.

14	*[REVERB OUT]* This outlet provides the combined effect signal that is tapped from the channels with the *[Reverb]* controls.
15	*[MAIN OUT]* Use this outlet to feed the line level master signal to e.g. an external power amp.
16	*[REVERB]* Use this control to set the overall reverb level.
17	*[VOLUME]* Use this control to set the volume of the master signal.

Rear panel



18	*[AC INPUT]* IEC chassis plug for the power supply.
19	*[EXTERNAL SPEAKER]* Connect the speaker boxes to these 1/4" phone sockets. The impedance of the external speakers must be at least 44 Ω.
20	*[CD/TAPE PLAY]* Here you can connect the line output of tape devices, CD or MP3 players for additional audio input.
21	*[CD/TAPE REC]* Use this connection to record the line out signal of the device with a tape device or the like.

7 Operation

Wiring

Connect microphones to the low-impedance XLR inputs (MIC, 3) or the high-impedance 1/4" inputs (MIC/LINE, 4).

Connect musical instruments to the 1/4" inputs (MIC/LINE, 4).

Connect the speaker boxes via the supplied speaker cables to the *[SPEAKER OUT]* sockets (19) on the rear panel of the unit.

Use the RCA sockets *[TAPE PLAY]* (20) on the rear panel of the unit to connect CD player or tape devices for additional inputs.

Use the RCA sockets *[TAPE REC]* (21) on the rear panel of the unit to connect recording devices or the like.

The unbalanced *[MAIN OUT]* socket (15) provides the master signal with line level.

The unbalanced *[REVERB OUT]* socket (14) provides the combined effect signal that is tapped from the four channels Here you can connect an external effects device, which then takes over the signal processing instead of the built-in reverb function.

Use the unbalanced *[AUX IN]* socket (13) for additional inputs, or to lead the processed signal from an external effects device back into the signal path of the power mixer.

You can connect a foot switch (not supplied) to the two-pole *[FOOT SW]* socket (12) to turn the internal reverb function on or off.

Insert the plug of the mains cable (18) into an earthed mains wall outlet.

Turning on

When all connections have been established, turn on the device using the main switch (9). The power LED (10) lights up.

Adjusting sound and volume

You can adjust the volume of the individual signals with the *[VOLUME]* controls (5) in each channel. The overall volume is set by the *[VOLUME]* control (17) in the master section.

Turn the *[TONE]* control (1) to shape the sound of the individual signals in each channel. There is an additional 3-band EQ with *[LOW]* (6), *[MID]* (7) and *[HIGH]* (8) controls for the overall signal in the master section.

You can set the reverb level for each channel separately with the *[REVERB]* controls (2). The overall reverb level can be adjusted using the *[REVERB]* control (16) in the master section.

Use the *[TAPE]* control (11) to adjust the playback volume of the device connected to the *[TAPE PLAY]* sockets (20).

Turning off

If you no longer want to use the device, turn it off with the mains switch (9). The power LED (10) then turns off.

8 Technical specifications

Power consumption at 1/8 of the original output power (pink noise)	42 W	
Operating supply voltage	230 V~ 50 Hz	
Output power	80 mW (RMS), 160 W (Peak)	
Input impedance	MIC/LINE inputs	1 kΩ
	MIC inputs	10 kΩ
	TAPE input	10 kΩ
Maximum gain	MIC/LINE inputs	76 dB
	MIC inputs	56 dB
	TAPE input	42 dB
Channel tone control	±15 dB @ 5 kHz	
Master section EQ	Treble	±15 dB @ 10 kHz

	Mids	±15 dB @ 1 kHz
	Bass	±15 dB @ 100 Hz
Protection circuitry	Mute at powering on	2 seconds
Dimensions (W × H × D)	Mixer amp: Speaker box:	465 mm × 158 mm × 280 mm 348 mm × 467 mm × 235 mm
Weight	Mixer amp: Speaker box:	8.11 kg 9 kg

9 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

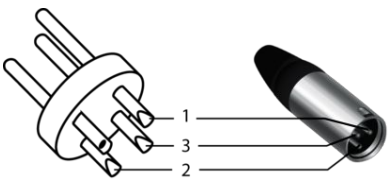
1/4" TRS phone plug (mono, balanced)

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

1/4" TRS phone plug (stereo, unbalanced)

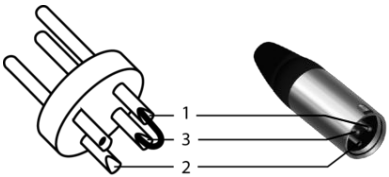
1	Signal (left)
2	Signal (right)
3	Ground

XLR plug (balanced)



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

XLR plug (unbalanced)



1	Ground, shielding
2	Signal
3	Bridged to pin 1

10 Cleaning

Device components

Clean the device components that are accessible from the outside regularly. The cleaning frequency depends on the operating environment: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the device components.

- Clean with a dry soft cloth.
- Stubborn dirt can be removed with a slightly dampened cloth.
- Never use solvents or alcohol for cleaning.

Fan grids

The fan grids of the device must be cleaned on a regular basis to remove dust and dirt. Before cleaning, switch off the device and disconnect AC-powered devices from the mains. Use a lint-free damp cloth for cleaning. Never use solvents or alcohol for cleaning.

11 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). 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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