

Proline 3000

Power Amplifier

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## **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 (<u>www.thomann.de</u>) 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
A	Warning – high-voltage.
$\triangle$	Warning – danger zone.

## 2 Safety instructions

#### Intended use

This device amplifies electric audio frequency signals to operate passive speakers. 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

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.



#### **CAUTION!**

### Risk of injury due to heavy weight

Due to the heavy weight of the device, at least two persons are required for transport and installation.



#### **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.

#### NOTICE!

#### Magnetic fields

The device generates strong magnetic fields that can interfere with the function of poorly shielded devices. The strongest magnetic fields are directly above and below the power amplifier. Therefore, never place sensitive devices such as pre-amplifiers, radio transmission systems, or tape decks directly above or below the power amplifier. When installing the power amplifier into a rack, you should place it in the lowest position, and further equipment such as pre-amplifiers in the highest position.

## 3 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.



#### **DANGER!**

## Electric shock caused by high voltages at the power amplifier output

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.



#### **CAUTION!**

## Risk of injury due to heavy weight

Due to the heavy weight of the device, at least two persons are required for transport and installation.



#### NOTICE!

### **Magnetic fields**

The device generates strong magnetic fields that can interfere with the function of poorly shielded devices. The strongest magnetic fields are directly above and below the power amplifier. Therefore, never place sensitive devices such as preamplifiers, radio transmission systems, or tape decks directly above or below the power amplifier. When installing the power amplifier into a rack, you should place it in the lowest position, and further equipment such as pre-amplifiers in the highest position.

## **Rack mounting**

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

### **Available operating modes**

Depending on the individual application, the amplifier can be used in different operation modes:

# Stereo mode Both power amp channels operate independently of each other, each input (A and B) is amplified by one channel, speakers are connected to both channels, the volume for both outputs can be controlled separately. Parallel mode The two amplifier channels receive the same input signal from channel A and loudspeakers are connected to each amplifier. The volume is controlled via the control knob for channel A. Bridged mode Both power amp channels are internally wired for providing double the output power. Only the signal from input A is amplified, speakers are only connected to the accordingly labelled output. The volume is controlled via the control knob for channel A.

On each output of the amplifier, the overall impedance resulting from the individual impedances of the connected speakers must not fall below the minimum allowable impedance of the amp's output. If you want to connect multiple speakers to one amplifier output, note the following:

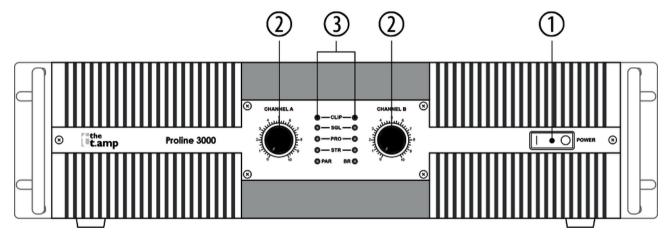
- when connecting speakers in series, the impedances add up.
- when connecting speakers in parallel, the reciprocal value of the total impedance is equal to the sum of the reciprocal values of the individual impedances.

This means, for example with two speakers with the same impedance: In series connection, impedance is doubled. In parallel connection, it's halved.

Detailed information on this topic can be found in our online guide 'Speakers' (www.thomann.de).

## 4 Connections and controls

## Front panel



- 1 [POWER] | Mains switch. Turns the device on and off.
- 2 [CHANNEL A] / [CHANNEL B] | Volume control for the respective channel
- 3 LED panel

## [CLIP] | Lights under the following conditions:

- Channel overload. The built-in limiter ist activated. Reduce in this case the volume until the LED goes out and the built-in limiter is deactivated.
- Output short circuit. Turn off the device immediately, correct the short circuit and turn on the device again.

[SGL] | Indicates the presence of an input signal.

## [PRO] | Lights under the following conditions:

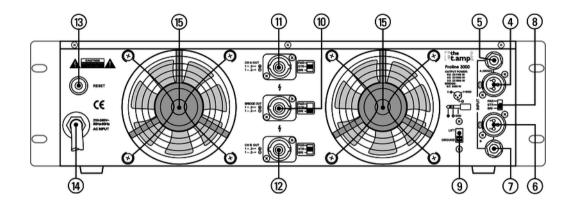
- Three to five seconds after switching on or off when the device is in an unstable condition.
- The temperature of the amplifier blocks has reached 85°C.
- One or more protection circuits have been triggered, or the device is faulty.

[STR] | Lights when the device is operated in stereo mode.

[PAR] | Lights when the device is operated in parallel mode.

[BRI] | Lights when the device is operated in bridged mode.

## **Rear panel**



- 4 XLR mounting socket for the input signal in channel A
- 5 1/4" phone socket for the input signal in channel A
- 6 XLR mounting socket for the input signal in channel B
- 7 1/4" phone socket for the input signal in channel B
- 8 Selector switch for operating mode
  - [PAR]: Parallel mode
  - [STR]: Stereo mode
  - [BR]: Bridged mode

9	Ground/Lift switch
	If hum is caused by a ground loop, you can use this switch to disconnect the connection between the earth pin of the device and the signal ground of the device.
10	Lockable chassis connector (Speaker Twist) for speaker output in bridged mode (1+, 2+: positive; 1-, 2-: negative)
11	Lockable chassis connector (Speaker Twist) for speaker output for channel A (1+, 2+: positive; 1-, 2-: negative)
12	Lockable chassis connector (Speaker Twist) for speaker output for channel B (1+, 2+: positive; 1-, 2-: negative)
13	[RESET]   Resettable fuse. The fuse switches off when the power consumption of the power amplifier is too high. Once the problem is resolved, the fuse is automatically reset and the device is ready for use again. The switch can be used to force a reset.
14	Power cable.
15	Fan

# 5 Technical specifications

Amp class	AB	
Input impedance	16.5 k $\Omega$ (balanced)	
	8.25 k $\Omega$ (unbalanced)	
Inputs	Input A	XLR socket, 3-pin
		1/4" jack socket (balanced)
	Input B	XLR socket, 3-pin
		1/4" jack socket (balanced)
Outputs	CH A OUT	Lockable chassis connector (Speaker Twist)
	BRIDGE OUT	Lockable chassis connector (Speaker Twist)
	CH B OUT	Lockable chassis connector (Speaker Twist)
Output power	Stereo, 8 $\Omega$ : 2 $\times$ 1100 W	
	Stereo, 4 $\Omega$ : 2 $\times$ 1500 W	
	Stereo, 2 Ω: 2 × 1800 W	

	Bridged, 8 Ω: 3000 W
	Bridged, 4 Ω: 3600 W
	Parallel, 8 $\Omega$ : 2 $\times$ 1100 W
	Parallel, 4 $\Omega$ : 2 $\times$ 1500 W
	Parallel, 2 $\Omega$ : 2 $\times$ 1800 W
Frequency response	20 Hz20 kHz
Signal-to-noise ratio	≥ 100 dB
Total harmonic distortion (THD)	< 0.6 %, @ 50 % of maximum output power
Slew rate	45 V/μs
Damping factor (1 kHz, 8 $\Omega$ )	> 700
Sensitivity	0.77 V
Crosstalk at rated power @ 8 $\Omega$ , 1 kHz	> 70 dB
Power consumption (at 50 % of rated output power @ 8 $\Omega)$	1550 W
Inrush current	15 A, 240 μs
Supply voltage	AC 230 V ∼ 50 Hz

## Technical specifications

Fuse	DC: 5 mm × 20 mm, 20 A, 250 V, slow-blow	
	AC: 5 A, 250 V, recoverable	
Cooling system	Temperature-controlled fan cooling	
Installation	3 RU, 19"	
Dimensions (W $\times$ H $\times$ D)	482 mm × 132 mm × 460.5 mm	
Weight	37 kg	
Ambient conditions	Temperature range	0 °C40 °C
	Relative humidity	50 %, non-condensing

## **Further information**

Channels	2
2 Ohm stability	Yes
DSP / crossover	No
Convection cooling	No

## 6 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)



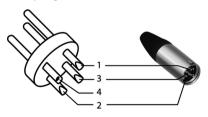
1	Signal
2	Ground, shielding

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



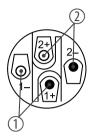
1	Signal (in phase, +)
2	Signal (out of phase, –)
3	Ground

## XLR plug (balanced)



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

## **Speaker Twist chassis connector**



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

# 7 Cleaning

## 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 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.