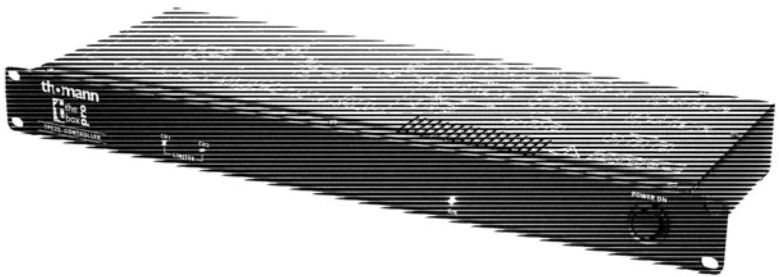

the box pro

TPC25

active crossover

thomann
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.
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 used for splitting an incoming audio signal into separate frequency bands, that are made available at the outputs. 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.

Completely disconnect the device from the power supply before you open or remove covers. Mount all covers and attach them firmly before connecting the device again.

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.

NOTICE!

Risk of fire

Do not cover the device nor any ventilation slots. Do not place 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.

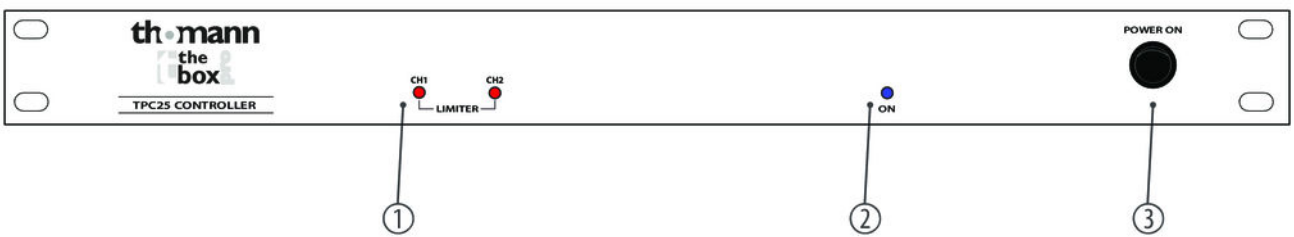
Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

3 Features

- Operating modes: 2-way stereo / sub mono
- 125 Hz high and low pass filter
- Crossover frequency configurable via internal jumpers
- Transition steepness 24 dB / octave (Linkwitz-Riley)
- XLR in and outputs electronically balanced
- Controllable limiter

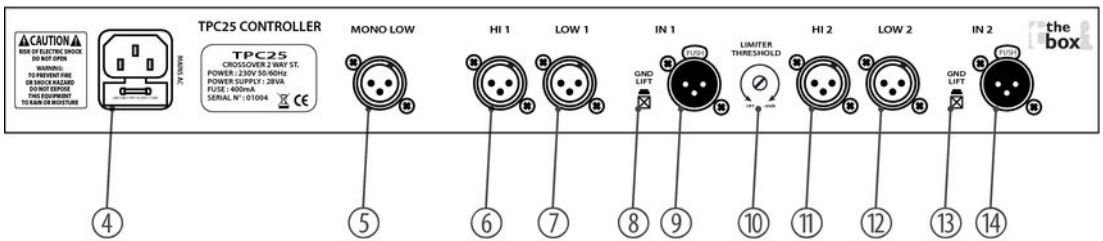
4 Connections and operating elements

Front panel



1	*[LIMITER]* Indicator LEDs *[CH1]* and *[CH2]* (red). If you overload one or both channels of the device by an excessive input signal, the associated LED flickers or lights up.
2	*[ON]* Power indicator. This LED lights up continuously during normal operation and turns off when the device is turned off.
3	*[POWER ON]* Main switch to turn the device on and off.

Rear panel



4	IEC chassis plug with fuse holder.
5	*[MONO LOW]* Crossover XLR output (low pass) to connect a subwoofer power amp for mono operation. The signals of both channels are present at this output.
6	*[HI 1]* Crossover XLR output (high pass) to connect a mid / treble speaker power amp for stereo operation. Channel 1 signal is present at this output.

7	*[LOW 1]* Crossover XLR output (low pass) to connect a subwoofer power amp for stereo operation. Channel 1 signal is present at this output.
8	*[GND | LIFT]* To avoid ground loops, you can use this switch to disconnect the earth pin of channel 1 and the signal ground in the device ('Lift' position / switch not pressed: no connection). 'Ground' position / switch pressed: Earth pin and signal ground are electrically connected).
9	*[IN 1]* Balanced XLR input to connect an audio device (e.g. mixer) to channel 1.
10	*[LIMITER THRESHOLD]* Rotary control for stepless threshold adjustment of the built-in limiter.
11	*[HI 2]* Crossover XLR output (high pass) to connect a mid / treble speaker power amp for stereo operation. Channel 2 signal is present at this crossover output.

12	*[LOW 2]* Crossover XLR output (low pass) to connect a subwoofer power amp for stereo operation. Channel 2 signal is present at this crossover output.
13	*[GND | LIFT]* To avoid ground loops, you can use this Ground / Lift switch to disconnect the earth pin of channel 2 and the signal ground in the device ('Lift' position / switch not pressed: no connection. 'Ground' position / switch pressed: Earth pin and signal ground are electrically connected).
14	*[IN 2]* Balanced XLR input to connect an audio device (e.g. mixer) to channel 2.

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.

Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.

Rack mounting

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

Device configuration

The device is configured by jumpers that are inserted in a particular schema on the internal circuit board. The following illustrations show the various configuration options.

DANGER!

Electric shock caused by high voltages inside

Within the device there are areas where high voltages may be present.

Completely disconnect the device from the power supply before you open or remove covers. Mount all covers and attach them firmly before connecting the device again.

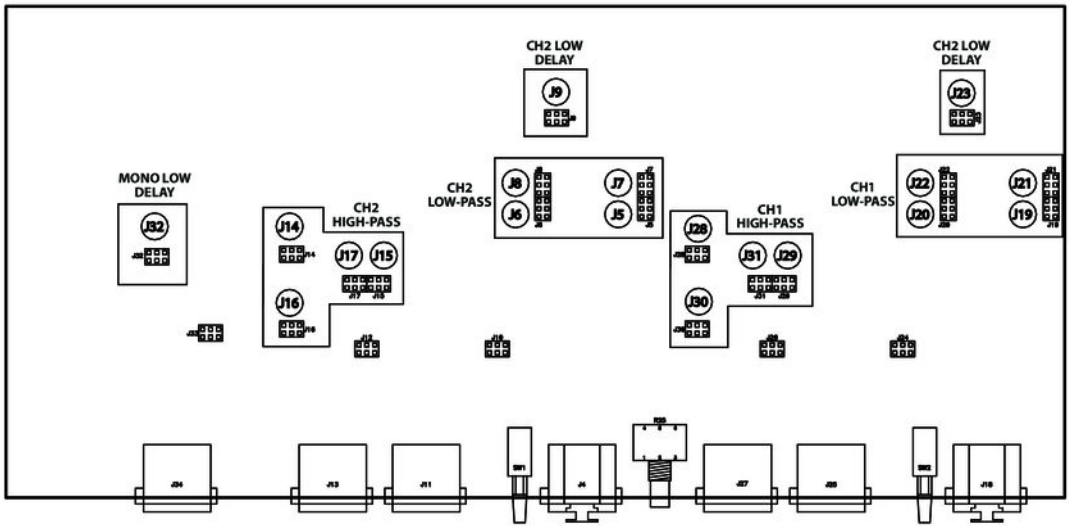
NOTICE!

Qualified personnel

The configuration of the device may only be performed by qualified personnel or an authorized service workshop.

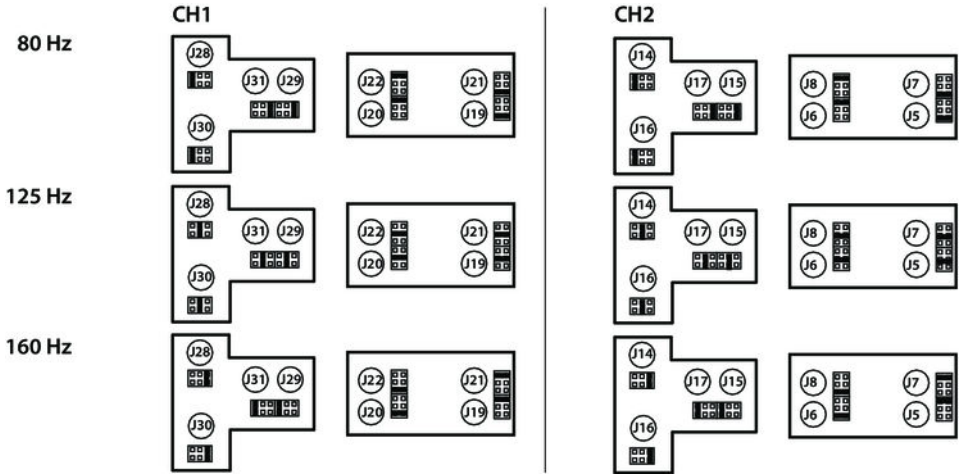
When removing and inserting the jumpers, be careful not to damage the PCB contacts.

Overview plug-in locations



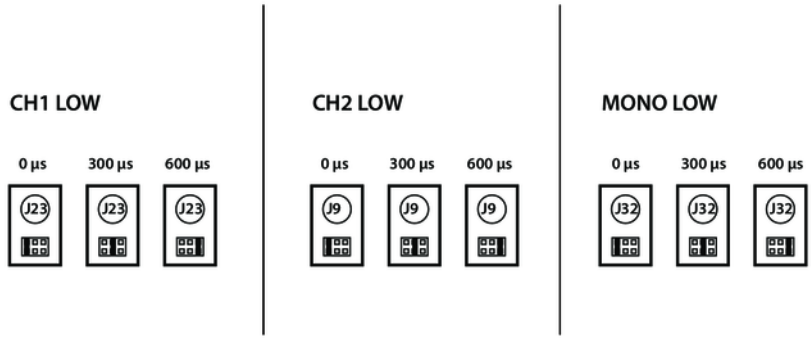
Crossover frequency configuration for CH1 and CH2

Set the crossover frequency for CH1 and CH2 to 80 Hz, 125 Hz or 160 Hz as shown in the illustration. The black bars mark the jumper positions. For example, to set the cut-off frequency of channel CH1 to 80 Hz, plug jumpers 28 and 30 left, jumpers 29 and 31 right, jumpers 20 and 22 at top and jumpers 19 and 21 at the bottom (all figures in reading direction).



Configuring the delay time

Set the delay time for the subwoofer outputs as shown in the illustration to 0 µs, 300 µs or 600 µs. The black bars mark the jumper positions. For example, to set the delay time of channel CH1 LOW to 0 µs, plug jumper 23 left (in reading direction).



6 Technical specifications

System	2-way stereo / sub mono
Filter type	Linkwitz-Riley, 24 dB / octave
Cut-off frequencies	80 Hz, 125 Hz, 160 Hz
Delay	0 µs, 300 µs, 600 µs
Frequency response	20 Hz…20 kHz
THD, noise	0.003 % at 100 Hz 0.004 % at 1 kHz
Crosstalk	> 110 dB at 20 Hz…1 kHz > 100 dB at 20 Hz…20 kHz
In / outputs	XLR, balanced
Power consumption	28 W
Operating supply voltage	AC 230 V ~, 50 Hz

Dimensions (W × D × H)	483 mm × 166 mm × 43.8 mm
Weight	2.5 kg

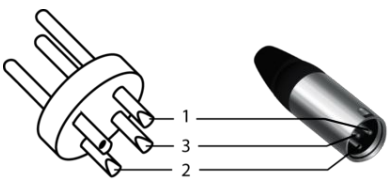
7 Plug and connection assignment

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!

XLR plug (balanced)



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

8 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.

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). 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.