

DESCRIPTION
REAL COMPETENCE

SINE PA 120

2 x 60 Watt Stereo Amplifier



SINE PA 200

2 x 100 Watt Stereo Amplifier



SINE PA 460

4 x 60 Watt Stereo Amplifier



TERRATEC PRODUCER/SINE PA 120, PA 200, PA 460

English Manual

Version 1.0, last revised: November 2003

CE Declaration

We:

TerraTec Electronic GmbH, Herrenpfad 38, D-41334 Nettetal, Germany

hereby declare that the products:

TerraTec Producer SINE PA 120, PA 200 and PA 460,

to which this declaration refers are in compliance with the following standards or standardizing documents:

1. EN 55013
2. EN 55020
3. EN 60065 / IEC 65

The following are the stipulated operating and environmental conditions for said compliance:

residential, business and commercial environments and small-company environments.

This declaration is based on:

Test report(s) of the EMC testing laboratory



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Important safety information

- Please read all instructions before using this device.
- Never use the device near water, i.e. next to a bathtub, sink, or drain, in a damp basement or near a swimming pool.
- Used in combination with an amplifier and headphones or speakers, this device can cause sound levels that may result in lasting hearing damage. Avoid long exposure to excessive or unpleasantly high volume levels. Consult an ear specialist immediately if you detect a loss of hearing or a ringing in your ears.
- Ensure adequate ventilation for the device when setting it up.
- Do not install it near sources of heat such as radiators, ovens or similar devices.
- Ensure that the device is connected only to a standard AC outlet.
- Position it in such a manner that no dust, liquids or foreign objects can enter the housing.
- Unplug the external power supply from the AC outlet if you do not intend to use the device for an extended period.
- The device must be serviced by trained personnel if:
 - the power supply is damaged,
 - objects or liquids have entered the device,
 - the device was left in the rain,
 - the device was damaged by dropping,
 - the device is malfunctioning.
- Do not attempt to repair the device yourself. Please consult a trained technician.
- Please ensure that all analog devices are turned off before plugging them in. This will protect you from any possible—albeit weak—electrical shocks, as well as protecting your speakers and your hearing from sudden peaks. For digital devices, be sure to at least lower the volume on your playback equipment.

Welcome!

We are pleased that you have chosen a TerraTec Producer rack power amplifier and would like to congratulate you on your decision. You've purchased a sophisticated product representing the state of the art of studio technology, and we're convinced that our product will prove extremely useful to you in the coming years and provide you with a great deal of entertainment.

This manual describes the SINE PA 120, SINE PA 200 and SINE PA 460 studio power amplifiers. It contains everything you need to know about the correct use of the systems, as well as a number of practical tips that will get you started right away.

We hope you enjoy your amplifier and would like to suggest that you browse this hopefully entertaining manual when you get the chance. In addition to the important information about its technology, we have outlined a number of typical applications as well as tips and tricks wherever appropriate. We're convinced that even experienced users will profit from this guide.

Thanks for your attention—and here's to your creativity.

Sincerely, Your TerraTec Producer Team

Scope of delivery

Start by making sure that the contents of the package are complete. The **SINE PA 120 / PA 200 / PA 460** power amplifier package should contain at least the following:

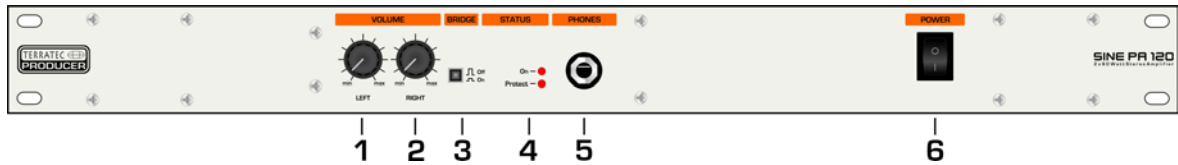
- SINE PA 120 or SINE PA 200 or SINE PA 460 19" rack power amplifier
- Power supply cable
- Customer service card
- Registration card with the serial number
- BeSonic Premium Account registration card
- This manual

Please return the enclosed registration card to us at the earliest possible opportunity or register online at <http://www.terratec.com/register.htm>. This is important for support and hotline services.

SINE PA 120

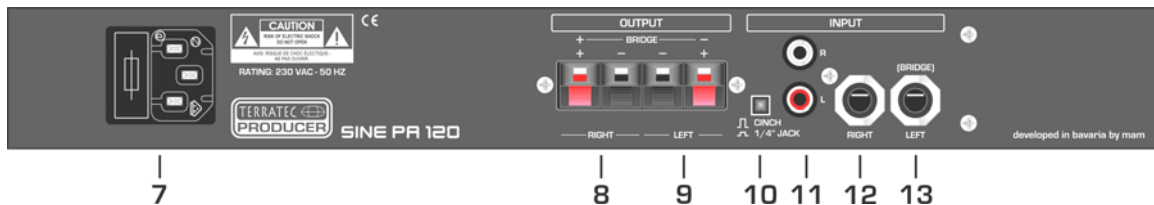
Connections and controls

The front panel:



1. VOLUME LEFT: volume control for left channel
2. VOLUME RIGHT: volume control for right channel
3. BRIDGE: switches the stereo power amplifier to mono mode
4. STATUS: operation and overheating protection LED
5. PHONES: headphone socket, 1/4" stereo jack
6. POWER: power switch

The rear panel:



7. AC IN: AC power input
8. OUTPUT RIGHT: right speaker connector
9. OUTPUT LEFT: left speaker connector
10. CINCH / 1/4" JACK: input selector, cinch or jack
11. INPUT 1/2: cinch input
12. INPUT 2: input 2 (right) 1/4" mono jack
13. INPUT 1 (1/2 BRIDGE): input 1 (left) 1/4" mono jack

Function

The SINE PA 120 studio power amplifier is designed for installation in 19" racks. Please ensure that it gets adequate ventilation.

Use the included power cable to connect the PA 120 to an AC power source. Connect both inputs to the outputs of your mixer and the outputs to your speakers (4-8 ohm). Turn both VOLUME controls completely down.

The "On" and "Protect" LEDs will light up when the power is switched on. The "Protect" LED will go out after 1 to 2 seconds.

The power-up delay needs around 10 seconds to become active after turning the amplifier off briefly. After turning off the amplifier's power, wait at least 10 seconds before turning it back on to prevent damaging your speakers (power-on click).

The amplifier's output power has not been limited in order to ensure its high pulse power. If the amplifier is overloaded for extended periods, the thermal protection circuit will cause the signal to be distorted continuously. Please turn down the volume if this occurs.

Technical data

Input impedance	22 kohm
Frequency range	20 Hz to 100 kHz
Signal-to-noise ratio	97 dB at 20 W at 4 ohms
Output power	2 x 60 watts at 4 ohms 2 x 40 watts at 8 ohms
Efficiency	55 % at 4 ohm 63 % at 8 ohms
Harmonic distortion	0.02 % at 0.1 kHz, 20 W, 8 ohms 0.01 % at 1 kHz, 20 W, 8 ohms 0.02 % at 1 kHz, 30 W, 4 ohms
Fuse	500 mA slow
Dimensions	482.6 x 175 x 44 mm (19", 1U)

SINE PA 200

Connections and controls

The front panel:



1. VOLUME LEFT: volume control for left channel
2. STATUS: operation, clipping and overheating protection LED
3. POWER: Power switch
4. VOLUME RIGHT: volume control for right channel
5. STATUS: operation, clipping and overheating protection LED

The rear panel:



6. INPUT RIGHT: right input, XLR
7. INPUT RIGHT: right input, 1/4" mono jack
8. INPUT SOURCE: applies the mono signal to both outputs
9. OUTPUT RIGHT: right speaker connector
10. AC IN: AC power input
11. OUTPUT LEFT: left speaker connector
12. INPUT LEFT: left input, 1/4" mono jack
13. INPUT LEFT: left input, XLR

Function

The SINE PA 200 studio power amplifier is designed for installation in 19" racks. Please ensure that it gets adequate ventilation.

Use the included power cable to connect the PA 200 to an AC power source. Connect both inputs to the outputs (balanced XLR or unbalanced jack) of your mixer and the outputs to your speakers (4-8 ohm). Turn both VOLUME controls completely down.

Both LEDs will light up when the power is switched on. The "Protect" LED will go out after 1 to 2 seconds.

The power-up delay needs around 10 seconds to become active after turning the amplifier off briefly. After turning off the amplifier's power, wait at least 10 seconds before turning it back on to prevent damaging your speakers (power-on click).

The CLIPPING LED will light up when the amplifier has reached its full output and is on the threshold of distortion. Please turn down the volume if this occurs.

The INPUT SOURCE switch applies the input signal of the left channel to both output channels.

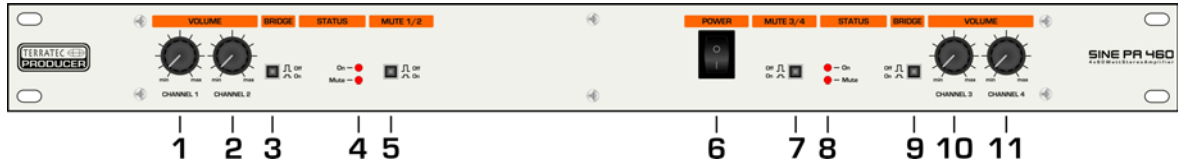
Technical data

Input impedance	100 kohm balanced 10 kohm unbalanced
Frequency range	20 Hz to 20 kHz
Signal-to-noise ratio	87 dB at 20 W at 4 ohms
Output power	2 x 100 watts at 4 ohms 2 x 70 watts at 8 ohms
Efficiency	55 % at 4 ohm 63 % at 8 ohms
Harmonic distortion	0.01 % at 1 kHz, 5 W 0.1 % at 20 Hz – 20 kHz, 50 W
Fuse	800 mA slow
Dimensions	482.6 x 175 x 44 mm (19", 1U)

SINE PA 460

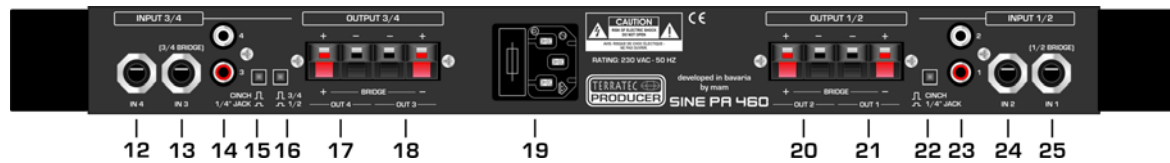
Connections and controls

The front panel:



1. VOLUME CHANNEL 1: volume control for channel 1
2. VOLUME CHANNEL 2: volume control for channel 2
3. BRIDGE: switches channels 1/2 to mono mode
4. STATUS: operation and mute LED
5. MUTE 1/2 mutes channels 1/2
6. POWER: Power switch
7. MUTE 3/4 mutes channels 3/4
8. STATUS: operation and mute LED
9. BRIDGE: switches channels 3/4 to mono mode
10. VOLUME CHANNEL 3: volume control for channel 3
11. VOLUME CHANNEL 4: volume control for channel 4

The rear panel:



- | | |
|-------------------------------|--|
| 12. INPUT 4: | channel 4 input, 1/4" mono jack |
| 13. INPUT 3 (3/4 BRIDGE): | channel 3 or 3/4 bridged input, 1/4" mono jack |
| 14. INPUT 3/4: | channel 3/4 input, cinch |
| 15. INPUT SOURCE: | input selector, cinch/jack |
| 16. OUTPUT SOURCE (3/4, 1/2): | switches signal from Input 1/2 to OUTPUT 3/4 |
| 17. OUTPUT 4: | speaker connection, channel 4 |
| 18. OUTPUT 3: | speaker connection, channel 3 |
| 19. AC IN: | AC power input |
| 20. OUTPUT 2: | speaker connection, channel 2 |
| 21. OUTPUT 1: | speaker connection, channel 1 |
| 22. INPUT SOURCE: | input selector, cinch/jack |
| 23. INPUT 1/2: | channel 1/2 input, cinch |
| 24. INPUT 2: | channel 2 input, 1/4" mono jack |
| 25. INPUT 1 (1/2 BRIDGE): | channel 1 or 1/2 bridged input, 1/4" mono jack |

Function

The SINE PA 460 studio power amplifier is designed for installation in 19" racks. Please ensure that it gets adequate ventilation.

Use the included power cable to connect the PA 460 to an AC power source. Connect both inputs to the outputs of your mixer and the outputs to your speakers (4-8 ohm). Turn all VOLUME controls completely down.

Both LEDs will light up when the power is switched on. The MUTE (Protect) LED will go out after 1 to 2 seconds. The power-up delay needs around 10 seconds to become active after turning the amplifier off briefly. After turning off the amplifier's power, wait at least 10 seconds before turning it back on to prevent damaging your speakers (power-on click).

The amplifier's output power has not been limited in order to ensure its high pulse power. If the amplifier is overloaded for extended periods, the thermal protection circuit will cause the signal to be distorted continuously. Please turn down the volume if this occurs.

The BRIDGE switch transforms the independent stereo amplifiers (channel 1/2, channel 3/4) each into a 120-watt mono amplifier. Use the 1/2 BRIDGE and 3/4 BRIDGE inputs and the OUTPUT BRIDGE (+ and -) outputs for the speakers when in bridge mode. VOLUME controls 1 and 3 then regulate the volume. The MUTE buttons on the front panel of the amplifier silence their respective channels. You can use this function to compare different pairs of speakers, for example.

The OUTPUT SOURCE switch on the rear panel switches the input signal from channel 1/2 to the outputs 3/4. Channel 3 then corresponds to the signal from channel 1 and channel 4 that of channel 2.

Technical data

Input impedance	22 kohm
Frequency range	20 Hz to 100 kHz
Signal-to-noise ratio	97 dB at 20 W at 4 ohms
Output power	4 x 50 watts at 4 ohms 4 x 35 watts at 8 ohms
Efficiency	55 % at 4 ohm 63 % at 8 ohms
Harmonic distortion	0.02 % at 0.1 kHz, 20 W, 8 ohms 0.01 % at 1 kHz, 20 W, 8 ohms 0.02 % at 1 kHz, 30 W, 4 ohms
Fuse	800 mA slow
Dimensions	482.6 x 175 x 44 mm (19", 1U)

Service at TerraTec Producer

Sometimes, no matter how good the weather is, things do not always work as they should. Problems can arise in the best studio systems. If this happens to you, the TerraTec Producer team is happy to offer its service and support.

Internet, Hotline

If you have a tough problem—where you cannot solve the problem yourself, the support in this manual doesn't resolve the problem, and your dealer can't fix it either—please contact us directly.

If possible, try our Internet support system first: under <http://www.terratec.com/> you will always find current answers to frequently asked questions (FAQ).

If these options do not provide the necessary help, please contact our phone hotline. You can also reach us online.

To do so, visit us at <http://supporten.terratec.net/>.

In either case, please have the following information handy:

- your registration number
- this documentation.

In addition, it would be helpful to our technicians if you are at your device during the phone call to directly carry out tips and tricks. Please do not forget to write down the name of the respective support technician if you contact our Support Team. You will need this name if a defect is present and your device needs to be mailed to us.