RITTER

USER MANUAL · ENGLISH

Camplifier *SHP*

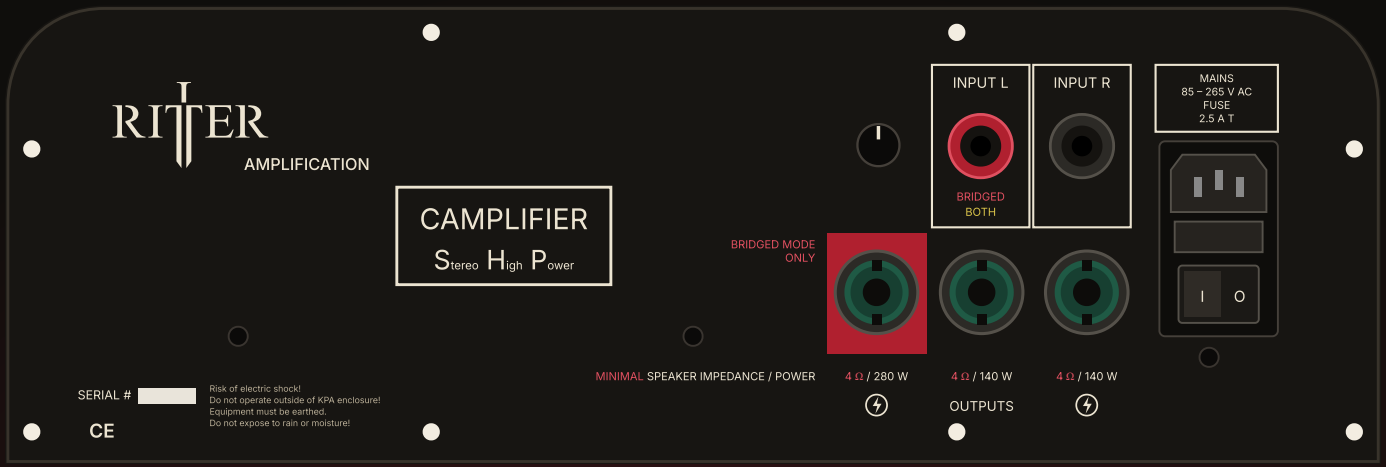
Stereo High Power add-on amplifier module for installation in the Kemper Profiling Amplifier™ (KPA)

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2 × 140 W
STEREO @ 4 Ω

1 × 280 W
BRIDGED @ 4 Ω

85–265 V
UNIVERSAL MAINS



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▲ CAUTION – RISK OF ELECTRIC SHOCK

Keep the device away from rain and moisture. Disconnect the mains cable before opening the KPA or touching the module. Never operate the Camplifier SHP outside the KPA enclosure.

01

Introduction

Thank you for choosing the Camplifier SHP. This compact stereo power amplifier fits into the open rear chamber of your Kemper Profiling Amplifier and turns it into a powered amp that can drive guitar cabinets directly. Hand-built in Dresden by RITTER Amplification.

Please read this manual completely before installing and using the module. It contains important information on safety, installation and operation. Keep it for future reference and pass it on to any subsequent owner. The latest version is available at **ritteramps.com**.

Anyone who installs, operates or services this device must

- be suitably qualified,
- follow the instructions in this manual,
- treat this manual as part of the product.

02

Safety instructions

The Camplifier SHP left our workshop in perfect condition. To keep it that way and to ensure safe operation, follow all safety instructions and warnings in this manual.

> ⚠ IMPORTANT
> Damage caused by not following this manual is not covered by the warranty. RITTER Amplification accepts no liability for resulting damage or injury.

2.1 Before first use

- Check the device and the mains cable for transport damage. If you find any damage, do not use the device and contact your dealer or RITTER Amplification.
- If the device has been exposed to large temperature changes (e.g. after transport in a cold car), do not switch it on immediately. Condensation could damage it. Wait until it has reached room temperature.

2.2 Mains connection and power cord

- This is a **protection class I** device. Only connect it to a properly earthed mains outlet. Mains voltage and frequency must be within the range printed on the device (85–265 V AC, 50–60 Hz).
- Connect the mains cable last, after all other connections have been made. Insert the plug without force and make sure it is seated firmly.
- Never touch the mains cable or plug with wet hands.
- Do not modify, kink, crush, pull or heat the mains cable, and keep it away from sharp edges. Inspect it regularly.
- Always pull the plug, never the cable. Disconnect the device from the mains when it is not in use and before cleaning.
- If you use an extension cord, its cross-section must be adequate for the device's power consumption. All notes on the mains cable apply to extension cords as well.
- Do not use the device during thunderstorms – disconnect it from the mains.

2.3 Liquids, foreign objects and dirt

- No liquids or objects – especially metal parts – may get into the device. If this happens, disconnect it from the mains immediately and have it checked by a qualified technician before using it again.
- Dust reduces insulation. If the device or the plug is dusty, disconnect it and clean it with a dry cloth. Heavier contamination inside the device must be removed by a qualified technician.

2.4 Connections

- Only make or change connections while the power is switched off.
- Never connect inputs or outputs to any power source (batteries, mains, etc.), and never connect an output to another output.
- Turn all volume controls on the KPA – and the volume control of the Camplifier SHP, if fitted – to minimum before switching on.

> ⚠ **NEVER CONNECT A SPEAKER OUTPUT TO A SIGNAL OUTPUT**
>
> Never connect a speaker output of the Camplifier SHP to any output of the KPA. This will damage both the KPA and the Camplifier SHP.

2.5 Service

- There are no user-serviceable parts inside, apart from the mains fuses. Repairs must only be carried out by RITTER Amplification or an authorised service partner.
- Unauthorised modifications void the warranty and may make the device unsafe.
- Do not remove the serial number label – doing so voids the warranty.

03

Hearing protection and liability

A guitar amplification system can produce sound levels high enough to cause **permanent hearing damage**. Hearing loss is irreversible – it can only be compensated by hearing aids, never healed.

- Rock concerts commonly reach 95–115 dB(A); peaks can exceed the pain threshold of 130 dB(A). Damage begins long before sound becomes painful.
- Doubling the amplifier power raises the level by only 3 dB, while the ear perceives roughly a doubling of loudness only at +10 dB – it is easy to underestimate how loud you really are.
- Ringing ears (tinnitus) or a “muffled” feeling after a gig are warning signs. Give your ears time to recover: ideally stay below 70 dB(A) for about ten hours afterwards.
- Use hearing protection on stage and in rehearsal.

Noise regulations for events and workplaces differ from country to country. The operator of the system and the event organiser are responsible for knowing and observing the applicable rules and sound level limits.

> **LIABILITY**
> RITTER Amplification cannot be held liable for damage caused by incorrect installation, improper use or excessive sound levels.

04

Intended use

The Camplifier SHP is an add-on power amplifier module designed exclusively for installation **inside the rear chamber of the Kemper Profiling Amplifier (KPA)**. The signal source must be the KPA.

> ⚠ DO NOT OPERATE OUTSIDE THE KPA
> Operating the Camplifier SHP outside the KPA enclosure is not permitted. It can damage equipment and cause a potentially fatal electric shock.

Power and speaker load

MODE	OUTPUT POWER (RMS)	SPEAKERS	MIN. IMPEDANCE	MIN. POWER HANDLING
Stereo / Mono-Both	2 × 140 W	one cabinet per output	4 Ω per output	140 W per cabinet
Bridged	1 × 280 W	one cabinet on the bridged output	4 Ω	280 W

- Cabinets with an impedance **below 4 Ω** can damage the Camplifier SHP or at least trigger the over-current / over-temperature shutdown.
- Cabinets rated for less power than shown above may be damaged by the amplifier's output.
- In bridged mode, no cabinets may be connected to the two stereo outputs.

Operating environment

Mains supply	85–265 V AC, 50–60 Hz
Use	Indoors only
Ambient temperature	−5 °C to +45 °C
Relative humidity	max. 50 % at 45 °C, non-condensing
Altitude	up to 2000 m above sea level
Pollution degree	1 (dry, non-conductive contamination only)

- Do not expose the device to rain, splash water, fog, high humidity, direct sunlight (e.g. in a car), heaters or heavy dust.
- Keep at least 0.5 m distance from fog / smoke machines and never place the device in the direct jet.
- Make sure the ventilation at the rear of the module is not obstructed.
- Avoid shocks and do not use force during installation or operation. Transport the KPA in a suitable case or the original packaging.
- Lay cables so that nobody can trip over them.

Any other use than described in this manual may damage the product and lead to hazards such as short circuits, fire, electric shock or hearing damage, and voids the warranty. When operating amplification systems in public or commercial venues, observe all applicable local safety regulations in addition to this manual.

05

Description

5.1 Features

- Stereo add-on power amplifier for the Kemper Profiling Amplifier – fits into the open rear chamber of the KPA
- 2 × 140 W stereo or 1 × 280 W bridged into 4 Ω
- Three operating modes: stereo, mono/both and bridged
- Signal inputs via 6.3 mm (¼") jacks
- Speaker outputs via Speakon / 6.3 mm combo sockets
- Universal power supply 85–265 V AC
- Full protection against short circuit, over-current, over-voltage and over-temperature

5.2 Rear panel

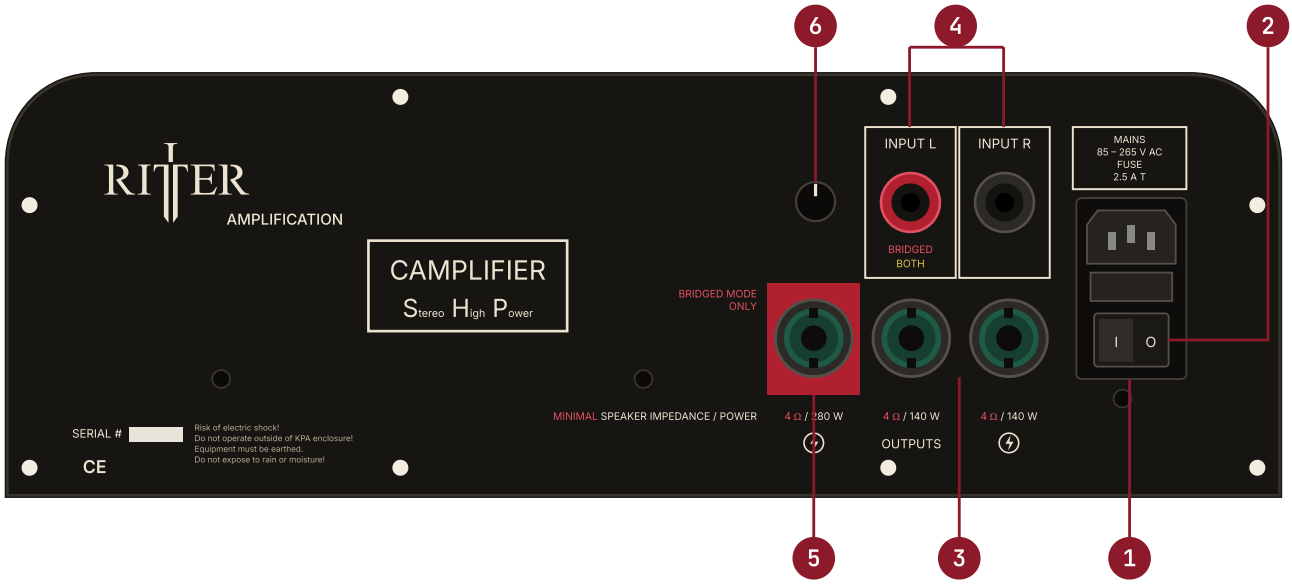


FIG. 1 · CAMPLIFIER SHP REAR PANEL

1. **Mains inlet with fuse holder.** Connect the supplied IEC mains cable here. The fuse drawer holds two 2.5 A slow-blow fuses (T2.5A, 5 × 20 mm). Only replace fuses with the device disconnected from the mains, and only with fuses of the same type and rating (see 12.1).
2. **Power switch.**
3. **Speaker outputs (stereo and mono/both).** Two Speakon / 6.3 mm (¼") combo sockets, one per channel, min. 4 Ω / 140 W each. Do not connect any cabinet here when using bridged mode.
4. **Signal inputs L and R.** 6.3 mm jacks for the left and right channel. If only INPUT L is used, its signal feeds both speaker outputs (mono/both mode). INPUT L is also the input for bridged mode.
5. **Bridged-mode speaker output.** Speakon / 6.3 mm (¼") combo socket for a single cabinet, min. 4 Ω / 280 W, fed from INPUT L.
6. **Volume / level control (optional).** Sets the volume of the Camplifier SHP. On units without this option, the opening is closed with a blanking plug.

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Installation

▲ NEVER CONNECT MAINS POWER BEFORE INSTALLATION IS COMPLETE
Only connect the mains cable once the Camplifier SHP is correctly installed and screwed into the KPA. Disconnect the KPA from the mains before you start.

If you have any difficulty installing the module, please contact our technical support (see chapter 14).

6.1 You will need

- Torx T10 screwdriver
- Phillips screwdriver suitable for the supplied screws
- The 8 screws and the mains cable supplied with the Camplifier SHP

6.2 Preparation

1. Disconnect the KPA from the mains and from all other equipment.
2. Check the open chamber at the rear of the KPA and remove any objects such as cables, paper, picks or strings.
3. Remove the 8 Torx T10 screws around the rear chamber of the KPA.
4. Make sure no packing material, tape or paper is still attached to the Camplifier SHP.

6.3 Installing the module

5. Insert the Camplifier SHP slowly and carefully into the rear chamber of the KPA. It can help to lay the KPA carefully on its front side. The module must slide in smoothly and without tension.

6. Align the 8 mounting holes of the Camplifier SHP with the threaded holes in the KPA's rear panel (Fig. 2).

7. Fix the Camplifier SHP with the 8 supplied screws using the Phillips screwdriver (Fig. 3). Do not overtighten.

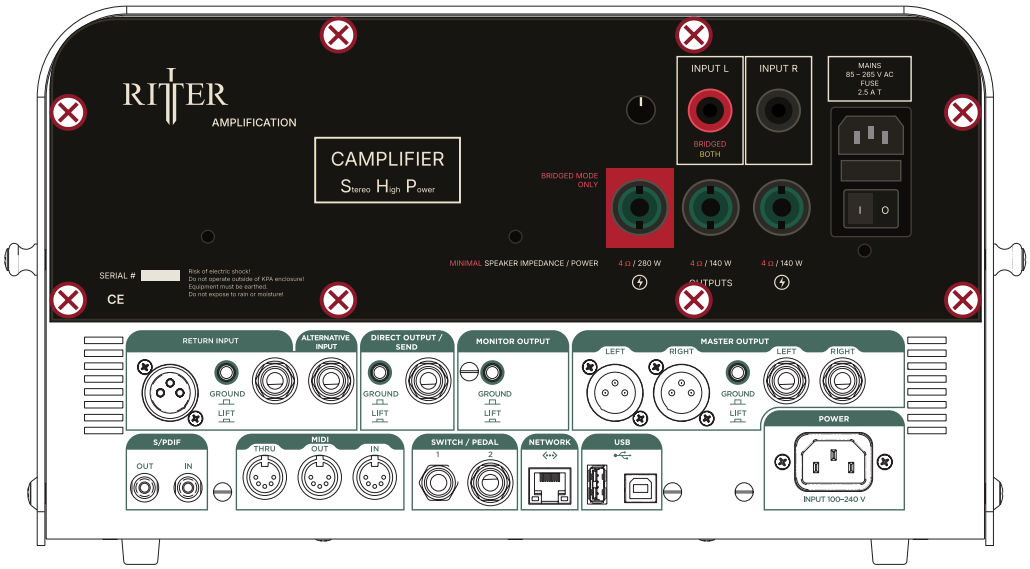


FIG. 2 · INSERT THE CAMPLIFIER SHP AND ALIGN THE 8 MOUNTING HOLES (MARKED RED)

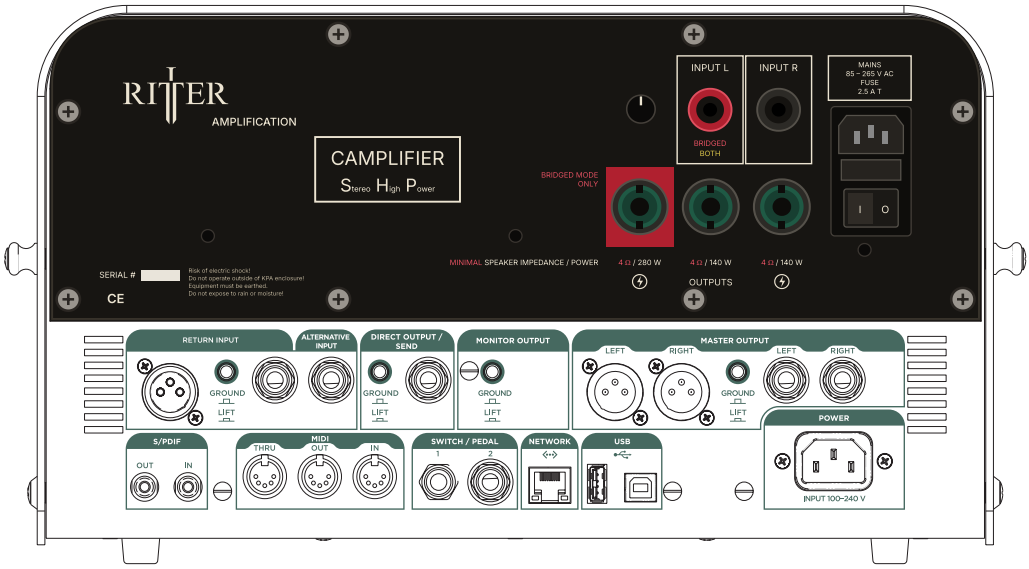


FIG. 3 · CAMPLIFIER SHP FIXED WITH THE 8 SUPPLIED SCREWS

Done – the Camplifier SHP is installed. Continue with the connections in chapter 7.

07

Connections

> ⚠ POWER OFF
> Only make or change connections while both the Camplifier SHP and the KPA are switched off.

7.1 Signal inputs

Connect a line-level output of the KPA to the INPUT jack(s) of the Camplifier SHP using standard unbalanced 6.3 mm (¼") mono jack cables (tip = signal, sleeve = ground).

- Keep input cables short. Unnecessarily long cables lose high frequencies and are more prone to hum and noise.
- Use straight (not angled) jack plugs.

> ⚠ KEEP INPUT PLUGS AND SPEAKER PLUGS APART
> There must never be an electrical connection between an input jack plug and a speaker plug. A metal jack plug touching a metal part of a speaker connector can trigger the protection circuit or cause damage. Use straight input plugs and Speakon speaker connectors (plastic housing).

7.2 Speaker outputs

All speaker outputs are combo sockets that accept either a **Speakon** plug or a 6.3 mm (¼") **jack** plug. To connect a Speakon plug, insert it and turn it clockwise until it locks; to unlock, pull back the release latch and turn the plug anticlockwise. We recommend Speakon: it locks and its plastic housing cannot touch the input plugs.

- Stereo and mono/both mode: one cabinet per stereo output, **minimum 4 Ω per output**.
- Bridged mode: one cabinet on the bridged output only, **minimum 4 Ω**.

7.3 Calculating the load impedance

SPEAKERS	WIRING	RESULTING LOAD	PERMITTED?
1 × 4 Ω	–	4 Ω	Yes
1 × 8 Ω	–	8 Ω	Yes
2 × 8 Ω	parallel	4 Ω	Yes
2 × 4 Ω	series	8 Ω	Yes
2 × 8 Ω	series	16 Ω	Yes (less output power)
2 × 4 Ω	parallel	2 Ω	**No – below 4 Ω**

Higher impedances are safe but reduce the available output power.

7.4 Speaker cables

- Use proper speaker cables – never instrument cables. Cables that are too thin heat up, waste power and degrade the sound, especially in the low end.
- Recommended cross-section: 2.5 mm² (approx. AWG 14); for runs longer than 10 m use 4 mm² (approx. AWG 12). Maximum cable length: 30 m.
- In stereo mode, use cables of the same type and length for both channels.
- Run cables directly without loops, and keep them away from mains cables (never run them closely in parallel).
- Do not place heavy objects on cables. Coil them loosely (20–30 cm diameter) – never wind them tightly around your elbow.
- Secure cables with suitable tape so that nobody can trip over them, and protect them from damage during transport.

7.5 Mains connection

Connect the Camplifier SHP to an earthed mains outlet using the supplied IEC mains cable – always as the **last** connection. The protective earth must be connected. If the mains cable is damaged, replace it only with an equivalent earthed IEC cable.

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Operating modes

Connect inputs and speakers according to the mode you want to use. The mode is determined only by how you connect the module – there is no mode switch.

8.1 Stereo

The most common setup: both channels work independently. Connect the left and right KPA outputs to INPUT L and INPUT R, and one cabinet to each stereo speaker output.

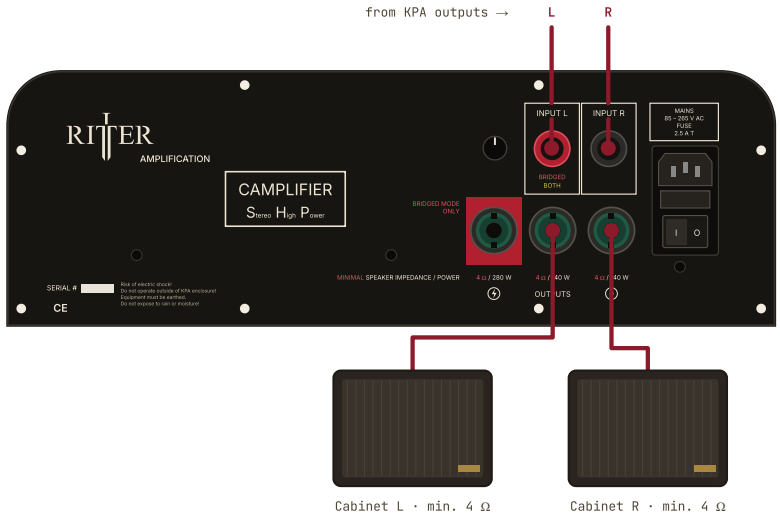


FIG. 4 · STEREO: TWO INPUTS, TWO CABINETS

8.2 Mono / Both

Both stereo outputs play the same signal. Connect only **INPUT L** (marked “BOTH”) and leave INPUT R empty. Connect one cabinet to each stereo speaker output.

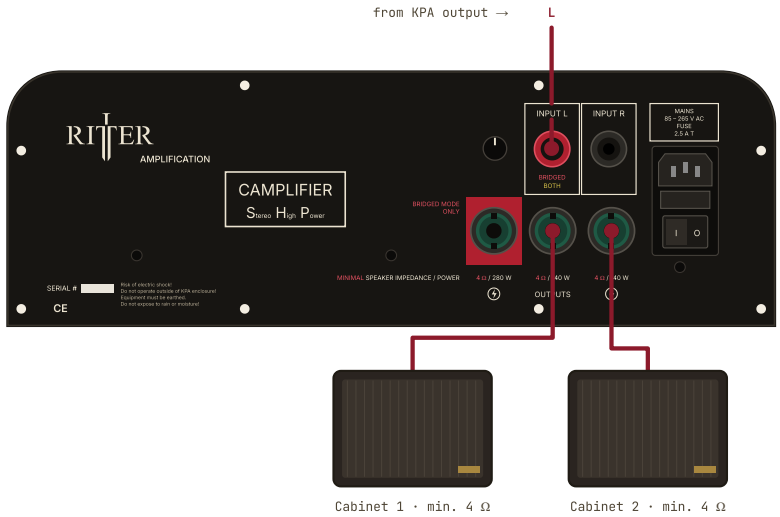


FIG. 5 · MONO / BOTH: INPUT L ONLY, TWO CABINETS

8.3 Bridged

Both channels are combined to drive a single cabinet with up to 280 W. Connect the KPA to **INPUT L** (marked “BRIDGED”) and one cabinet to the red **BRIDGED MODE ONLY** output.

> ⚠ **BRIDGED MODE RULES**
>
> - Minimum impedance on the bridged output: 4 Ω. The cabinet must handle at least 280 W.
> - Disconnect all cabinets from the two stereo outputs before using the bridged output.

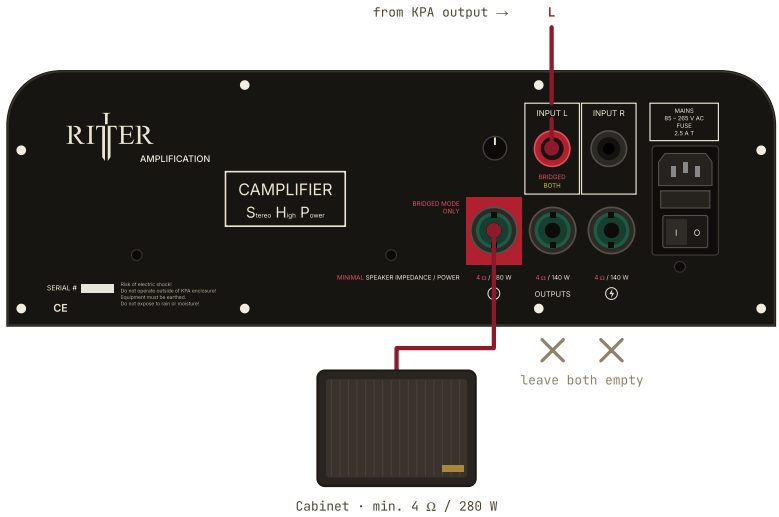


FIG. 6 · BRIDGED: INPUT L ONLY, ONE CABINET ON THE RED OUTPUT

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Operation

9.1 Switching on and off

To avoid loud switching noises: **switch the Camplifier SHP on last and off first.**

1. Turn the volume controls of the KPA – and the Camplifier SHP's volume control, if fitted – down to minimum.
2. Switch on the KPA and all other equipment in the signal chain.
3. Switch on the Camplifier SHP with its power switch. The switch has no indicator light.
4. When finished, switch off the Camplifier SHP first, then the rest of the system.

9.2 Setting the volume

If your Camplifier SHP has the optional volume control, set it to a medium position first. Then slowly turn up the volume on the KPA until you reach the desired level; use the Camplifier SHP's volume control to fine-tune the power amp level. There should be no noticeable hum. If hum occurs, switch everything off and check the cables between the KPA and the Camplifier SHP.

> **LISTEN TO YOUR SPEAKERS**
>
> If you hear distortion that is not part of your sound, the amplifier or the speakers are being overloaded. Reduce the volume immediately – overload can quickly damage amplifier and speakers. Speakers damaged by overload are not covered by the warranty.

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Protection circuits

Built-in protection circuits protect the amplifier and your speakers. When a protection circuit is triggered, the Camplifier SHP shuts down its power amplifier stage. Protection is triggered by

- overheating of the amplifier,
- a short circuit or excessive current at the speaker outputs,
- over-voltage.

If the Camplifier SHP shuts down during operation, switch it off and eliminate the cause before switching it on again. Possible causes: a damaged speaker cable or plug, a defective speaker, an impedance below 4 Ω, an input plug touching a speaker plug, or insufficient ventilation at the rear of the KPA.

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Troubleshooting

PROBLEM	POSSIBLE CAUSE	REMEDY
No power, no function	Mains cable not connected; mains fuse(s) blown	Check the mains cable and any extension cord. Check both fuses (see 12.1).
No sound	Input or speaker cable not connected or loose; dirty plugs or sockets; wrong input used for the selected mode	Check all plugs for a firm fit and clean if necessary. Check the wiring against chapter 8.
Shuts down during operation	Input plug touches a speaker plug (metal plugs)	Use straight input plugs and Speakon speaker connectors.
Shuts down during operation	Speaker impedance below 4 Ω; defective speaker or cable	Check impedance and wiring (see 7.3). Check cables and speakers.
Shuts down during operation	Overheating	Make sure the rear of the KPA is well ventilated.
Volume too low	Output volume in the KPA set too low; volume control on the Camplifier SHP (if fitted) turned down	Raise the output level in the KPA and turn up the volume control on the Camplifier SHP.
Hum	Faulty or poorly connected input cable; long input cables	Switch off, check and replace the input cables; keep them short.

12

Cleaning and maintenance

▲ DANGER TO LIFE
Disconnect the device from the mains before any cleaning or maintenance.

Clean the device regularly with a soft, lint-free, slightly damp cloth. Never use alcohol, solvents or aggressive cleaning agents.

Apart from the mains fuses there are no user-serviceable parts inside. All other maintenance and repairs must be carried out by RITTER Amplification or an authorised service partner. Use only genuine spare parts.

12.1 Replacing the mains fuses

The fuse drawer holds **two fuses**. Replace a blown fuse only with one of the same type and rating: **T2.5A (2.5 A slow-blow), 5 × 20 mm.** If a new fuse blows again, do not use the device – contact us.

1. Switch off the device and unplug the mains cable.
2. Open the fuse drawer below the mains inlet with a small flat screwdriver.
3. Check both fuses, remove the blown one(s) and insert new ones.
4. Push the fuse drawer back in until it clicks into place.

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Technical specifications

POWER	
Mains supply	85–265 V AC, 50–60 Hz
Mains fuses	2 × T2.5A (2.5 A slow-blow), 5 × 20 mm
AMPLIFIER	
Output power, stereo (RMS)	2 × 140 W into 4 Ω
Output power, bridged (RMS)	1 × 280 W into 4 Ω
Frequency response	25 Hz – 25 kHz (±0.5 dB)
Damping factor	> 350
Distortion (THD)	1 % at rated output power
Noise	< 40 µV RMS, unweighted
Channel separation	79 dB at 1 kHz, 1 W
INPUTS	
Input sockets	2 × 6.3 mm (¼") jack, unbalanced
Input sensitivity	0.77 V
Maximum input level	+15 dBu
Input impedance	20 kΩ
OUTPUTS	
Speaker outputs	2 × Speakon / 6.3 mm (¼") combo socket (stereo / mono-both) 1 × Speakon / 6.3 mm (¼") combo socket (bridged mode)
Minimum speaker impedance	4 Ω per channel (stereo), 4 Ω (bridged)
GENERAL	
Controls	Power switch; volume / level control (optional)
Protection circuits	Short circuit / over-current, over-voltage, over-temperature
Dimensions (W × H × D)	350 × 85 × 77 mm (13.8 × 3.4 × 3.0 in)
Weight	1 kg (2.2 lb)
Ambient temperature	−5 °C to +45 °C

Specifications are subject to change without notice.

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Disposal, support and contact

Disposal

The crossed-out wheeled bin symbol on the device means that it must not be disposed of with household waste. At the end of its service life, take it to a collection point for electrical and electronic equipment in accordance with local regulations, or return it to us.

Support and service

If you have questions about installation or operation, need spare parts or a repair, please contact us directly:

Company	RITTER Amplification · Tilman Ritter
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RITTER

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