

# **Warwick<sup>®</sup>**

*Basses, Amps & Rock'n Roll.*

## **OWNER'S MANUAL**

## **BASS AMPLIFIER HEAD**

### **LWA 1000**



Family Owned ♦ Solar Powered ♦ Sustainably Manufactured in a Green Environment

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# INTRODUCTION

**Congratulations!** on the purchase of your new Warwick LWA 1000 bass amplifier head. Two channels of true 1000 Watt power in a compact, lightweight design is now in your hands.

Our considerations in the design of this product were multifold and our objectives were to provide:

- An affordable amplifier for the discerning musician.
- A gigging amplifier for the seasoned professional.
- Transparent and noise-free sonic performance.
- Ultra-portable, lightweight design.

Here is a short description of the underlying design concepts:

## CLASS A OPERATION

Class A amplifiers are typically more linear and as such are less complex than other amplifier classes. In Class A amplifiers, the amplification circuitry is designed so that it is always conducting electrical current. This means that the active elements are always on, thus avoiding the problem of crossover distortion.

## LOW-Z CIRCUITRY

Thermal noise is a critical design issue when it comes to audio electronics. By lowering the impedance of components inside an electronic circuit, the overall thermal noise is substantially reduced. The Low-Z circuitry inside all of our amplifiers makes it possible to achieve consistently noise-free operation.

**We hope you enjoy your new bass amplifier as much as we enjoyed designing it!**

# SAFETY INSTRUCTIONS

Caution: To reduce the risk of electrical shock, do not remove the cover as there are no user serviceable parts inside. Refer servicing to qualified personnel.



This symbol, wherever it appears, alerts you to the presence of noninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Read the manual.




## WARNING!

This amplifier is capable of producing high sound pressure levels. Continued exposure to these high sound pressure levels can cause permanent and irreversible hearing damage. Ear protection is recommended if unit is operated at high volume for long period of time. If you experience any hearing loss or ringing in the ears you should consult a doctor.

## IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions
2. Keep these instructions
3. Heed all warnings
4. Follow all instructions
5. Do not use this apparatus near water
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacture's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug the apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.




15. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus.
16. Never set the amplifier on a support that might give out under its weight.
17. **WARNING:** The mains plug used as disconnect device, the disconnect device shall remain readily operable.
18.  Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.



19. Replace fuse with rated value, never bridge defective fuses. Before changing fuse disconnect power cable from unit!



20.  Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

### **PRODUCT SHOULD BE SERVICED BY QUALIFIED PERSONNEL WHEN:**

1. Unit has been dropped or the enclosure is damaged.
2. Mains switch has been damaged
3. Objects or liquids have penetrated the unit.
4. Unit does not operate normally and troubleshooting (last chapter of this manual) does not help.

# PROTECTIVE CIRCUITS

Your new Warwick LWA 1000 amplifier is equipped with a multitude of protective circuits to prevent it from malfunction under inappropriate operating conditions.

## Over current protection:

All amplifier channels are over current protected on outputs. Current clipping is engaged when the amplifier channels exceed its specified peak current output. This can be seen as the output voltage of the amplifier being clipped. If the current output of an amplifier channel exceeds its specified peak current output for a longer period of time e.g. in case of a short circuit of the output, the amplifier will be disabled (Muted) for 1000ms and automatically restart.

## DC current protection:

A built-in DC protection circuit will attenuate any DC signals on the power amplifier input, produced by a signal containing a DC signal. In case of a permanent DC on the output of the amplifier, the amplifier will latch and power must be removed for the product to restart.

## Over-/under voltage protection:

Power supply over- and undervoltage protection is implemented, which means that the power supply will enter a protection mode when the operational off-line voltage exceeds or drops below the specified upper and lower operational off-line AC voltages. However exceeding 265VAC for a longer period of time might damage the power supply primary side permanently.

## HF protection:

A high frequency protection is implemented in order to protect the power amplifier module filter components from overload. The high frequency protection algorithm has been implemented to protect the amplifier from excessive HF signals on the amplifier outputs.

## Excessive Temperature:

This circuit protects the power stages from malfunction by switching the device off if the temperature-regulated fan cooling proves to be insufficient and temperature of the unit is too high.

# PRODUCT FEATURES



**ARTICLE NUMBERS:** W A LWA 1000 SILVER  
W A LWA 1000 SIL UK

- 1000 Watt Bass Amplifier Head.
- Lightweight and ultra-portable.
- Class A preamp circuitry.
- Class D power amp section.
- Two independent channels.
- Channels can be selected remotely with footswitch.
- Separate Input Gain control for each channel.
- Mute function (separate for each channel)
- 4-Band equalizer (separate for each channel)
- Adjustable Compressor with bypass function (separate for each channel)
- Compression knob simultaneously controls the compression amount and make-up gain.
- Stereo auxiliary input jack for connecting MP3 player, CD player etc.
- Integrated stereo headphone amplifier.
- Serial FX Loop.
- Tuner Output
- Line Output
- Balanced DI output with Pre/Post and Ground Lift switches.
- Dual purpose 1/4" jack and lockable speaker connector.
- Internal temperature regulating fan control circuitry.
- Dimensions (W/H/D): 270mm x 98mm x 146mm (10.6" x 3.86" x 5.75")
- Weight: 2.75 kg (5.95 lbs.)



**ARTICLE NUMBERS:** W A LWA 1000 BLACK  
W A LWA 1000 BLK UK

## OPTIONAL ACCESSORIES

### LWA 1000 Rackmount Ears:

**ARTICLE NUMBERS:** W A LWA 1000 RE BLACK  
W A LWA 1000 RE SILVER

- Available in Black or Silver



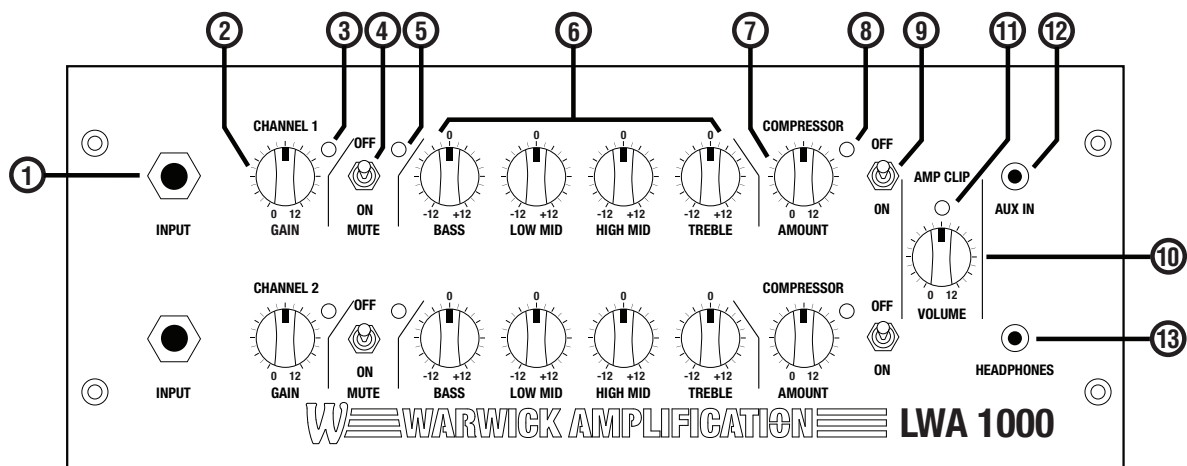
### LWA 1000 Amp Bag:

**ARTICLE NUMBER:** W A RB 23011 B

- 280mm x 120mm x 230mm (11.1" x 4.7" x 9.6")
- With strap



# FRONT PANEL DESCRIPTION

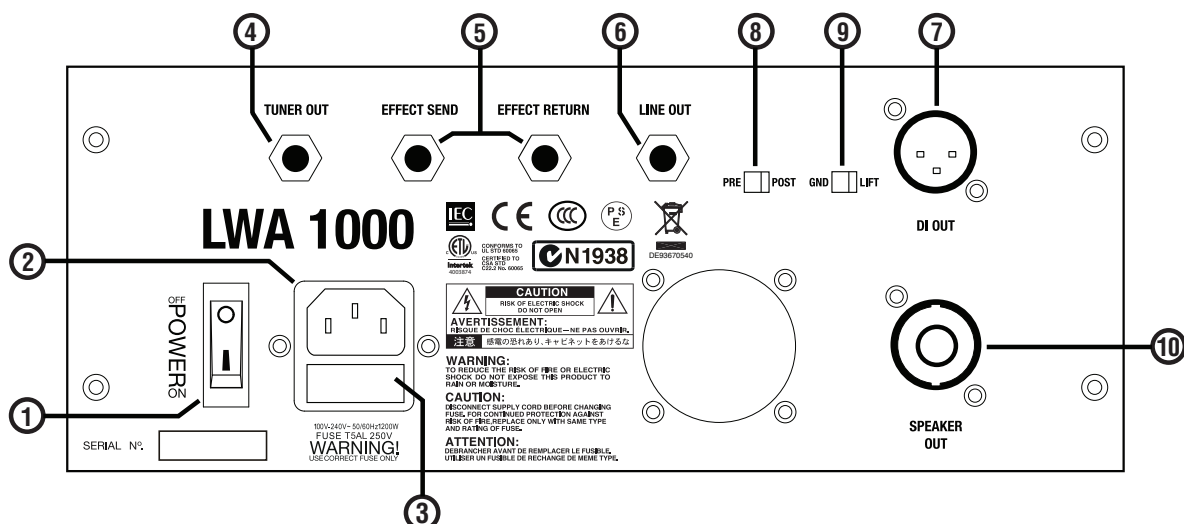


*(Indicators 1-9 shown only for Channel 1, Channel 2 has exactly identical corresponding functions)*

1. Input jack – Accepts a standard 6.25mm (1/4") audio jack for connecting active or passive basses using a properly shielded cable.
2. Gain – Adjusts the input gain of the preamp stage.
3. Signal Level LED – This LED, when green indicates that the input is at least 0dBu (0.77V RMS). When red, it indicates clipping in the preamp stage. If the preamp is clipping, turn down the gain on some of the preamp stage controls (Gain, EQ or Compression as applicable).
4. Mute ON/OFF – Engaging this switch will mute all outputs except for the Tuner Out. When not engaged, the respective channel is activated.
5. Mute LED – Indicates Mute status. Red indicates channel is muted (Mute ON), green indicates channel is active (Mute OFF).
6. Equalizer – 4-Band EQ provides +/- 12 dB of gain for each band.
  - BASS – 100Hz
  - LOW MID – 800Hz
  - HIGH MID – 3kHz
  - TREBLE – 10kHz
7. Compression Amount – This knob controls, as the name says, the amount of compression by providing simultaneous control over compression threshold and make-up gain. The Compression knob, whenever engaged should be used in conjunction with the Gain control. Settings of up to about 12 o'clock add a subtle compression. This setting will only compress the most aggressive transients in your signal. Setting the knob at around 3 o'clock yields a heavy compression effect, with more make-up gain. We designed our compressor to be completely transparent and to not color the signal in any way.
8. Compressor LED – When green, this indicates that the compressor is engaged. When orange, it indicates that the signal is getting compressed.
9. Compression ON/OFF – This switch engages/bypasses the compressor circuit.
10. Volume – This knob controls the master volume.
11. Amp Clip LED – This LED indicates that the output from the power amp module is clipping. If the power amp is clipping, turn down the master volume.
12. AUX IN jack – Accepts a standard 3.5mm (1/8") audio jack (stereo compatible) for connecting an auxiliary sound source. This can be used for connecting a CD, tape or MP3 player for practicing, rehearsing or for connecting another preamp into the system.
13. HEADPHONES – Accepts a standard 3.5mm (1/8") audio jack for connecting headphones.

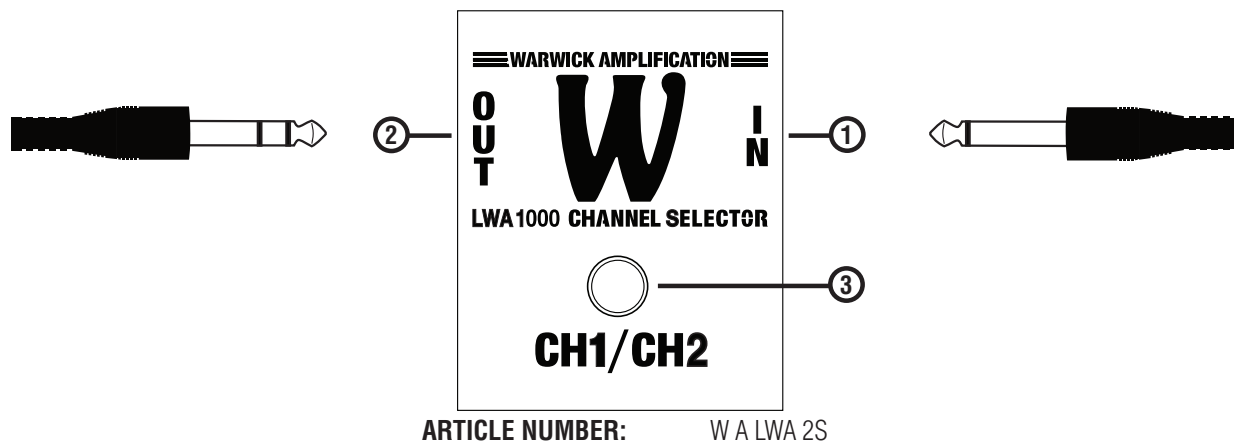


# BACK PANEL DESCRIPTION



1. Mains Power ON/OFF switch – For your safety remember to connect the power cord from the mains outlet to the amplifier BEFORE turning this switch on. Conversely, when disconnecting the amp, turn the switch OFF first, then disconnect cord from the outlet and finally disconnect the power cord from the amp.
2. AC Mains IN – Power socket for connecting the amplifier to the mains power supply.
3. Integrated Fuse compartment – To replace the fuse, first disconnect power cord from the AC Mains IN socket. Use a small screwdriver to remove the fuse compartment. Caution! Replace only with indicated size and type (T5AL 250V). Using a fuse with different rating than specified can cause damage to your amplifier.
4. TUNER OUT – Accepts a standard 6.25mm (1/4") audio jack for connecting amplifier to a tuner unit. Signal remains active on this output even when the Mute switch is ON, allowing for silent tuning.
5. EFFECT SEND/RETURN – Accepts standard 6.25mm (1/4") audio jacks for connecting an effects chain. The FX Loop in the LWA 1000 is of the serial type.
6. LINE OUT – Accepts a standard 6.25mm (1/4") audio jack. This is an unbalanced line level output for connecting to external devices (auxiliary power amplifier, FOH mixer etc.)
7. DI OUT – Balanced XLR output for connecting the amplifier to a PA or a mixing desk in the studio.
8. PRE/POST – This switch affects the DI OUT signal. In the "PRE" position the DI OUT is fed the signal before the EQ, Compressor and FX Loop from the preamp. Conversely, in the "POST" position, the DI OUT is fed the signal after the EQ, Compressor and FX Loop.
9. GROUND LIFT – This switch internally disconnects the chassis ground connection (essentially the Earth terminal of AC Mains) from the ground pin of the DI OUT. Use this functionality when there is excessive hum, possibly caused by a ground loop or bad earthing.
10. SPEAKER OUT – Lockable speaker connector for connecting the amplifier to a speaker cabinet. The minimum load for the amplifier is 4 ohm.

# CHANNEL SELECTOR FOOTSWITCH



Your new LWA 1000 comes with a footswitch and supplied cable provided for remote channel switching capability. Simply route your instrument through the footswitch and connect to one of the amplifier inputs.

1. IN – Use a standard guitar cable to connect your instrument to the input of this unit.
2. OUT – Use the provided TRS (tip-ring-sleeve) cable for connecting the footswitch to any of the two inputs on the LWA 1000. Any of the two inputs can be used to connect the footswitch and the choice of input does not affect functionality in any way.
3. CH1/CH2 – Toggles between Channel 1 and Channel 2.

## SETUP GUIDE

1. Unpacking – Carefully unpack unit from the carton box.
2. Powering up – Ensure the mains power switch is in "OFF" position and then connect the supplied power cord from the AC Mains socket of the amplifier to the mains power outlet. Now flip the power switch on the amplifier to the "ON" position.
3. Connecting speaker cabinets – Connect speaker cabinet(s) to the SPEAKER OUT using a compatible speaker cable. This minimum recommended speaker load is 4.
4. Connecting an instrument – Always mute the channel(s) you wish to plug in your instrument before inserting the input jack(s). Now connect your bass(es) to the appropriate input(s) on the front panel.
5. Adjust the input gain knob for a good signal level.
6. Adjust EQ/Compressor settings to your liking.
7. Set the Volume knob so that the output volume is at a reasonable level.
8. Rock out!

# TROUBLESHOOTING

We apologize if your new amplifier doesn't work as intended. We recommend this simple DIY troubleshooting because often the solution to the problem is most likely simpler than it seems.

- Amp does not power up.
  - Check whether the correct fuse is inserted in the fuse compartment and that it is intact.
- There is no sound from the amp and LEDs don't light up
  - Check your AC mains outlet.
  - Check power cord and power switch position.
- There is no sound from the amp but LEDs light up
  - Check amp Gain and/or Volume controls, check bass controls.

If the problem isn't covered above or if the troubleshooting tips does not help then contact Warwick for further service information.

**Due to our constant research and development efforts, product specifications are subject to change without prior notice.**

Das neue Warwick Bass Forum finden Sie auf: [www.warwick.de](http://www.warwick.de)  
Bei technischen Fragen wenden Sie sich bitte an [support@warwick.de](mailto:support@warwick.de)

Please see the new Warwick Bass Forum on: [www.warwick.de](http://www.warwick.de)  
For support information please refer to [support@warwick.de](mailto:support@warwick.de)

Visite por favor el nuevo forum Warwic de bajo en: [www.warwick.de](http://www.warwick.de)  
Para soporte técnico e información, dirigirse por favor a [support@warwick.de](mailto:support@warwick.de)

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Para mais informações escreva para [support@warwick.de](mailto:support@warwick.de)

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リニューアルしたワーウィックベースフォーラムをご覧ください。  
サポート情報などは HYPERLINK "<mailto:support@warwick.de>" へお寄せください。

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고객 지원을 받으시려면 [support@warwick.de](mailto:support@warwick.de)에 메일을 보내십시오.

请登录 HYPERLINK "<http://www.warwick.de>" 浏览握威贝司全新论坛  
有任何问题 请发邮件至 HYPERLINK "<mailto:support@warwick.de>"

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