peachtree

GaN 400

IMPORTANT SAFETY INSTRUCTIONS

❶ Read these instructions – All the safety and operating instructions should be read before this product is operated.

❷ Keep these instructions – The safety and operating instructions should be retained for future reference.

❸ Heed all warnings – All warnings on the appliance and in the operating instructions should be adhered to.

❹ Follow all instructions.

❺ Do not use this apparatus near water – The appliance should not be used near water or moisture – for example, in a wet basement or near a swimming pool, and the like.

❻ Clean only with dry cloth.

❼ Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

❽ Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifers) that produce heat.

❾ 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 ft into your outlet, consult an electrician for replacement of the obsolete outlet.

❿ 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.

⓫ Only use attachments/accessories specifed by the manufacturer.

⓬ Use only with the cart, stand, tripod, bracket, or table specifed by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

⓭ Unplug this apparatus during lightning storms or when unused for long periods of time.

⓮ Refer all servicing to qualifed personnel. Servicing is required when the apparatus has been damaged in any way such as the power cord or plug is damaged. Other damage may occur if liquid or objects have been dropped or spilled into the apparatus. Dropping the apparatus, exposure to rain, and excessive moisture may cause additional damage.

⓯ Please keep the unit in a good ventilation environment.

⓰ CAUTION: These servicing instructions are for use by qualifed service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualifed to do so.

⓱ WARNING: To reduce the risk of fre or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and objects flled with liquids, such as vases, shall not be placed on apparatus.

⓲ WARNING: The mains plug/appliance coupler is used as disconnect device, the disconnect device shall remain readily operable.

⓳ The lightning fash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of suffcient magnitude to constitute a risk of electric shock.

WARNING: To reduce the risk of electric shock, do not remove cover (or back), as there are no user-serviceable parts inside. Refer servicing to qualifed personnel.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.

⓴ No naked fame sources, such as lighted candles, should be placed on the apparatus.

㉑ WARNING: The terminals marked with symbol of "+/-" may be of suffcient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the use of ready- made insulated leads or cords.

㉒ 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 environmentally safe recycling.

Unpacking and Warranty

❶ Please keep all packing materials for any potential shipping needs.

❷ Please keep a copy of the sales receipt and note the serial number on it for warranty and insurance purposes.

❸ Please register your product online at www.peachtreeaudio.com.

CE Marking by the "CE" symbol (shown left) indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community.

FC Note: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

GaN400

INTRODUCTION

Thank you for choosing the Peachtree Audio GaN400. The GaN400 is a “class-D” stereo power amplifier that utilizes GaNFETs (Gallium Nitride Field-Effect Transistors), an 850-watt RMS regulated power supply, a fully balanced topology and a low global negative feedback design to achieve an astounding 400 watts-per-channel while achieving sound quality that is remarkably faithful to the input signal. It has balanced and unbalanced audio inputs, a trigger input, and is compatible with speakers that have nominal impedances from 2.5Ω to 16Ω. The GaN400 drives virtually any speakers, including low sensitivity (“less efficient”) speakers with the utmost ease and authority, while delivering a level of musicality and transparency that is extremely rare, especially in high output power amplifiers.

The GaN400 achieves new levels of performance and efficiency by utilizing GaNFETs instead of MOSFETs (Metal-Oxide-Semiconductor Field-Effect Transistors) that have been the industry standard for more than 50 years. MOSFETs revolutionized the electronics industry in the second half of the 20th century and have become the most common transistor in electronics and the most widely used semiconductor device in the world! Their significance in the electronics industry and the other industries that rely on them can’t be understated. However, over the years, the rate of MOSFET improvements leveled off as the performance got closer and closer to the theoretical limits of the materials and processes. The need for something better grew. Enter GaN.

GaNFETs started to gain attention over the last decade as audio engineers and designers realized that they were suitable for high frequency, high voltage, high temperature and high efficiency applications especially when compared to their MOSFET counterparts. GaNFETs turned-on ~4 times faster and turned-off ~2 times faster reducing switching distortion (ringing) by several orders of magnitude. This, in-turn, allowed designers to use much less global negative feedback to achieve excellent measured results. The result is an amplifier with exceptional musicality and excellent measured performance. In other words, an amplifier that provides wonderfully natural sounding music reproduction like the best tube amplifiers, yet retains the tight bass, extended frequency response and sheer dynamics of the best solid-state amplifiers. It really is the best of both worlds and all of this is accomplished in an amplifier that is also one of the most efficient designs in the market today converting ~96% of the electricity from the wall into usable power.

（To be continued）

INTRODUCTION

Every power amplifier is dependent on its power supply to provide the power reserves necessary to drive the loudspeakers at any volume level. The GaN400 is no different and it utilizes an impressive 850-watt RMS regulated power supply. This supplies the output modules with all the clean power they will ever need - even when things get really loud. The power supply uses the best parts available to ensure high performance, durability and long-term reliability.

The GaN400 represents a next step in the evolution of power amplifier design and manufacturing. It has exceptionally accurate waveform reproduction, amazing power and control, low global negative feedback and extremely efficient use of AC power. It provides the highest level of musicality without sacrificing the remarkable efficiency of a class-D design and is proudly assembled in the USA. The GaN400 is simply the best sounding power amplifier we have ever made and compares favorably to the world's best power amplifiers regardless of their topology. For the first time, class-D amplifiers have become state-of-the-art!

Please take the time to read this manual and visit www.peachtreeaudio.com to register your Peachtree Audio product. We will extend the standard warranty if you do and your information will not be shared. We will only contact you with updates that are relevant to Peachtree Audio!

We sincerely hope that you love your GaN400 and that it brings you many years of listening enjoyment. It represents the very best of what we do and if you have any questions or feedback please contact your reseller or Peachtree Audio directly. Thank you again for choosing Peachtree Audio and happy listening!

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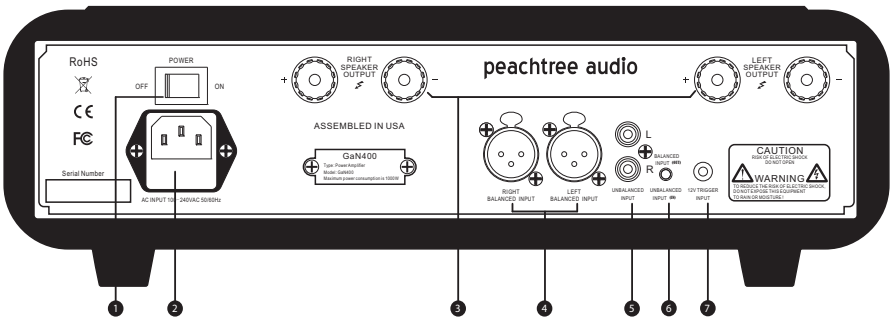
BACK PANEL



❶ **Power ON/OFF Switch**: Connects and disconnects AC INPUT to the unit when the power cord is connected between the AC input and a 100-240VAC 50/60Hz AC outlet.

❷ **AC INPUT** & **Fuse Holder**: For connection to a 100-240VAC 50/60Hz AC outlet using the included power cord. The fuse can be replaced after turning the POWER switch OFF and removing the power cord from the AC INPUT. See the SPECIFICATIONS section for the specific fuse values required for each GaN400 model. Caution: using an improper fuse value may cause damage to the unit. Peachtree Audio accepts no responsibility for any damage caused by the use of improper fuse values.

❸ **RIGHT** & **LEFT SPEAKER Outputs**: Speaker binding post outputs that accept banana connectors (insert into hole on back of the post), spade connectors (loosen, position spade around post, tighten), pin connectors (loosen, insert pin through hole on post, tighten) or bare wire connections (loosen, loop around post or insert through hole on the post tighten).

❹ **RIGHT** & **LEFT BALANCED INPUT**: XLR style input that accepts a balanced (differential) audio signal from a preamplifier equipped with a balanced audio output.

❺ **RIGHT** & **LEFT UNBALANCED INPUT**: RCA style input that accepts a standard audio signal from a preamplifier equipped with an unbalanced output.

❻ **INPUT SELECTOR**: Push in for UNBALANCED input and out for BALANCED input. Note: Do not changed the input selection while the unit is powered on.

❼ **12V TRIGGER INPUT**: Enables power on/off control from another product with a 12V trigger output. Insert one 3.5mm cable into this input and connect the other end to a 12V trigger output of the controlling product. Once connected, both products should power on and off when using the on/standby button on the front panel or remote control of the connected product.

FRONT PANEL

❶ **On/Standby Button**: With the AC power cord connected and the rear panel **POWER** switch set to **ON**, this button toggles the unit between On mode which lights the LED blue and Standby mode which lights the LED red.

TROUBLESHOOTING

ISSUE	SOLUTIONS
The GaN400 will not power on	Check that the power switch on the back panel is on. If it is, the on/standby LED on the front panel LED should be lit red. Check that the AC outlet is functioning correctly by plugging in a lamp or other device to confrm its operation. Check that the product controlling the GaN400 is turned on if using the 12V trigger input feature of the GaN500.
The GaN400 powers on, but there is no sound	Check that the INPUT SELECTION switch on the rear panel is set to the proper input: UNBALANCED OR BALANCED. Note: Do not change the input selection while the unit is powered on.

Interested in the Green Movement?

- The GaN400 meets European RoHS standards for non-hazadous metals.
- The GaN400 draws less than half a watt of power in standby mode.
- The 400w amps in the GaN400 are an industry leading 96% efficient and generate little heat as result.
- We are committed to cotinnue exploring additional methods for making our products even more environmentally friendly.

WARRANTY AND REPAIR

International Warranty
Peachtree Audio warrants this product for two (2) years, parts and labor, from the original date of purchase from an authorized Peachtree Audio re-seller. If you register your product online at www.peachtreeaudio.com/support/product-registration.html/, the warranty is extended to three (3) years, parts and labor.

Peachtree Audio reserves the right to refuse any warranty claims if coverage cannot be verifed by a valid proof of sale or serial number.

Peachtree Audio assumes no responsibility for product failures caused by accident, neglect, misuse, modifcation or unauthorized repair.

Warranty does not cover shipping costs.

Visit www.peachtreeaudio.com for complete warranty details.

Repair Process
In the event that a product fails, please repack it in its original carton and contact an authorized Peachtree reseller for further instructions. If the reseller is unable to assist, please contact Peachtree Audio directly at service@peachtreeaudio.com or +1-704-391-9337 to obtain a Return Authorization (RA) number prior to shipping the product.

Any products received without an RA number may be misdirected and repair delayed.

If an RA number is issued by Peachtree Audio, please ship the product using FedEx or UPS. Do not ship using a Postal Service.

Peachtree Audio assumes no responsibility for products in transit. Please insure the shipment for the product's replacement value in the unlikely event it is lost, stolen or damaged in transit.

US Shipping Address:

Peachtree Audio
13087 Bleinheim Lane
Suite C
Matthews NC 28105
USA
RA# _____

www.peachtreeaudio.com

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SPECIFICATIONS

Compatible Speakers	2.5-16Ω
Output Power	400w into either 8 or 4 ohms
Dynamic Range (A-weighted)	>112dB
Damping Factor (1kHz)	>245(8 ohms)
Frequency Response (20 - 20kHz)	<+/-0.4dB
Inter-Modulation Distortion (SMPTE)	>80dB below fundamental
Total Harmonic Distortion (AES17, 1kHz, 8Ω)	0.004 %
Channel Separation (1kHz, 8Ω)	>90dB
Balanced input impedance	100K ohm (across pins 2-3)
Unbalanced input impedance	100K ohm
AC power	100-240v 50/60 Hz
Fuse size for 115v	10 amp 250v slow-blow
Fuse size for 230v	5 amp 250v slow-blow
Standby power consumption	<0.5 W
Idle power consumption	32W
Maximum power consumption	1000 W (peak)
Height (including Feet)	111 mm | 4.37 inches
Width	356 mm | 14.02 inches
Depth (including power button and binding post)	343 mm | 13.50 inches
Weight	Unit only 6.917kg | 15.25lbs Shipping 8.732 kg I 19.25 lbs)

All specifcations subject to change without notice.

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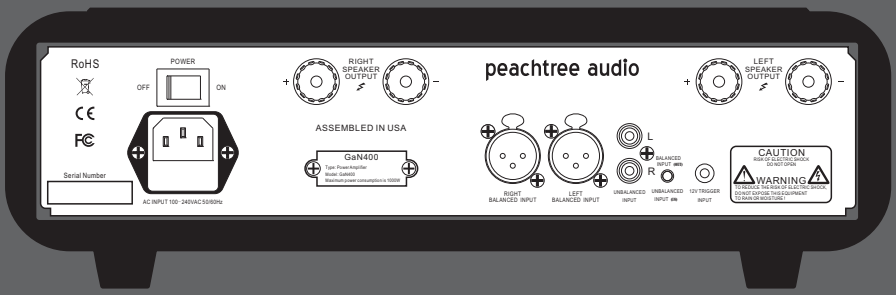

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