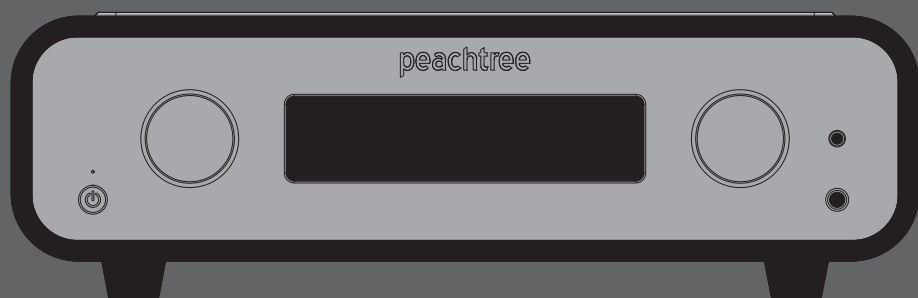# peachtree

Carina

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 fit 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 fire 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.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING
TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT EXPOSE THIS EQUIPMENT
TO RAIN OR MOISTURE !

⓳ The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to presence of on-insulated hazard voltage within the product's enclosure that may be of sufficient 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 flame sources, such as lighted candles, should be placed on the apparatus.

㉑ Batteries are included for the remote control. Do not expose these batteries to direct sunlight or excessive heat such as a fire. Care should be taken in the act of battery disposal as they include toxic materials that may harm the environment. Please refer to your local recycling and hazardous waste center for advise with battery disposal.

㉒ WARNING: The terminals marked with symbol of "+/-" may be of sufficient 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 the ready-made insulated leads of cords.

㉓ 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 retailers where the product was purchased. The 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.

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.

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

Carina

INTRODUCTION

Thank you for choosing Peachtree Audio Carina!

Carina is an integrated amplifier designed to please your eyes and ears. Housed in a beautiful chassis crafted of aluminum and wood, Carina is several audio components in one; Digital-to-Analog Converter (DAC), preamplifier, power amplifier and a premium headphone amplifier.

Carina includes several digital audio inputs for multiple sources; USB-B for a computer, Bluetooth for wireless devices, two coaxial inputs and one optical input for a streamer, CD transport or other legacy devices. And it even has an I2S input for devices that offer that type of output. Carina includes a variable stereo analog output for integration with subwoofer(s) or an external power amplifier. Additionally, a USB-C port is provided to power, or charge, an external device as needed.

Internally, Carina features a 32-bit architecture that is capable of handling all of the major digital audio formats available today including; compressed audio, uncompressed audio, high-resolution audio and ultra-high resolution audio all the way up to 24-bit/768kHz PCM and octuple rate DSD (DSD512)! Carina utilize two separate ESS 9068 DAC chips in "mono mode" with one dedicated to converting the left channel and the other the right channel. The 9068 is widely regarded as one of the best DACs available today and has an extremely neutral, transparent and musical presentation. By dedicating one DAC to each channel, the signal-to-noise ratio, dynamic range and channel separation of the system are maximized. Carina also offers DAC filter and other adjustments to fine-tune the sound to your system and liking.

The Hypex NCORE power amplifier section in Carina is one of the cleanest, neutral, and most powerful ones available today. It is capable of driving speakers with nominal impedances between 2.5Ω to 16Ω and delivers an impressive 300 Watts-Per-Channel (WPC) into 8 ohms. Carina has ample power to properly drive the majority of speakers available today to their full potential while delivering deep, tight bass and transparent, natural upper frequencies without inducing listener fatigue.

Carina features a premium-quality, fully-balanced headphone amplifier design that provides an exceptional listening experience when listening to headphones. It has an extremely low noise floor so the music comes through clearly and free from artifacts. The HP amplifier includes a traditional unbalanced output and a balanced output to drive headphones that can accept that type of drive. The headphone amplifier in Carina is designed to compare favorably to stand-alone headphone amplifiers.

Please familiarize yourself with all of the features of Carina to get the most out of your system. While enjoying Carina, please visit www.peachtreeaudio.com to register your unit. Your information will NOT be shared and we will only contact you with information that is pertinent to your purchase! If you have additional questions or feedback please contact your reseller or Peachtree Audio directly.

We sincerely hope that you love your Carina and that it brings you many years of listening enjoyment. It embodies the essence of Peachtree Audio products; timeless design, exceptional sound quality, and amazing value. Thank you again for choosing Peachtree Audio and happy listening!

- The team at Peachtree Audio

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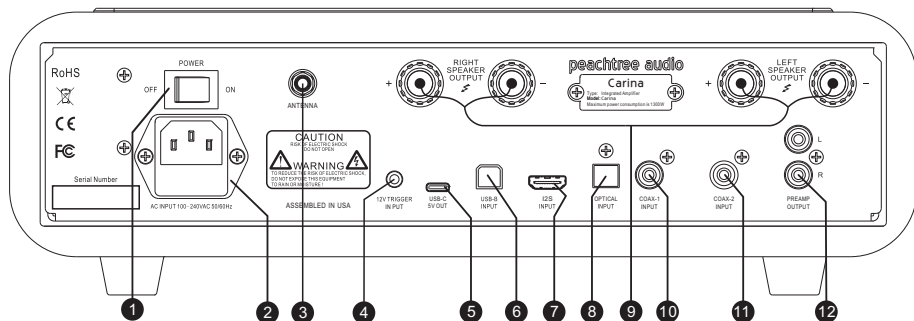
❶ POWER ON/OFF Switch
Connects and disconnects AC power to the unit when the power cord is connected between the **AC INPUT** and a 100-240VAC 50/60Hz AC outlet.

❷ AC INPUT & Fuse Holder
For connection to a 100-240 VAC 50/60 Hz AC outlet using the included power cord. The fuse should only 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. Caution: using an improper fuse value may cause damage to the unit. Peachtree Audio accepts no responsibility for any damage caused by use of improper fuse value.

❸ ANTENNA Connector
Provides an external antenna connection to maximize the reception range from Bluetooth enabled devices.

❹ 12V TRIGGER INPUT
Enables power on/off control from another product with a 12V trigger output. Insert one end of a 3.5mm cable into this input and connect the other end to a 12V trigger output of the product that will control it. Once connected, The unit should power on and off along with the product controlling it. The trigger can be configured in the **MENU** to function with specific input(s).

❺ USB-C 5V OUT
Provides a 5V DC output for powering or charging connected devices. This connection is NOT a full USB port capable of accepting digital audio input signals or any other type of USB functionality.

❻ USB-B INPUT

Accepts digital audio input up to 32-bit/762kHz PCM & octuple DSD (aka DSD512). Windows users note: to enable ASIO, WASAPI, or DSP playback, along with "exclusive mode", Please visit http://www.peachtreeaudio.com/usb-drivers-and-firware and download the latest version.

❼ I2S INPUT

Accepts digital audio input up to 32-bit/762kHz PCM & octuple DSD (aka DSD512). Please note: This is NOT an HDMI or eARC input! Please reference the I2S pinout diagram on the following page for compatibility with other I2S devices.

❽ OPTICAL INPUT

Accepts S/PDIF digital audio input from an optical (Toslink style) output up to 24-bit/192kHz PCM.

❾ RIGHT & LEFT SPEAKER OUTPUTS

Speaker wire 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 the hole on the post, tighten). See diagram on the following page.

❿ COAX-1 INPUT

Accepts S/PDIF digital audio input from a coaxial (RCA style) output up to 24-bit/192kHz PCM.
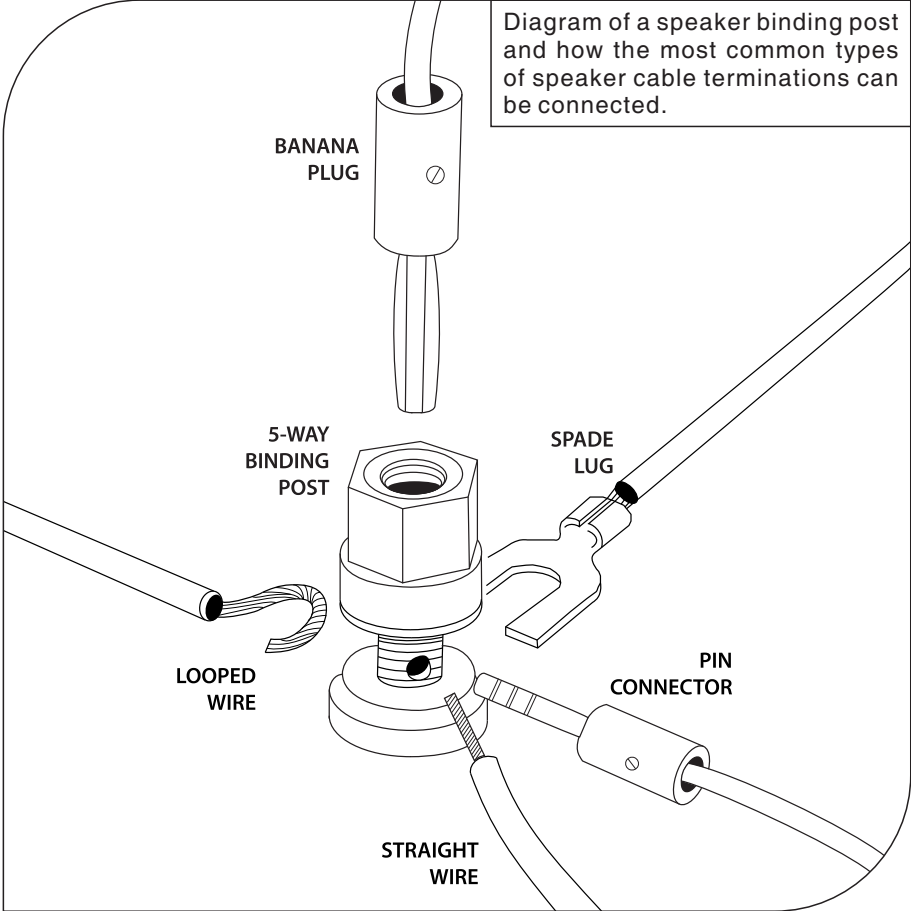
⓫ COAX-2 INPUT

Accepts S/PDIF digital audio input from a coaxial (RCA style) output up to 24-bit/192kHz PCM.

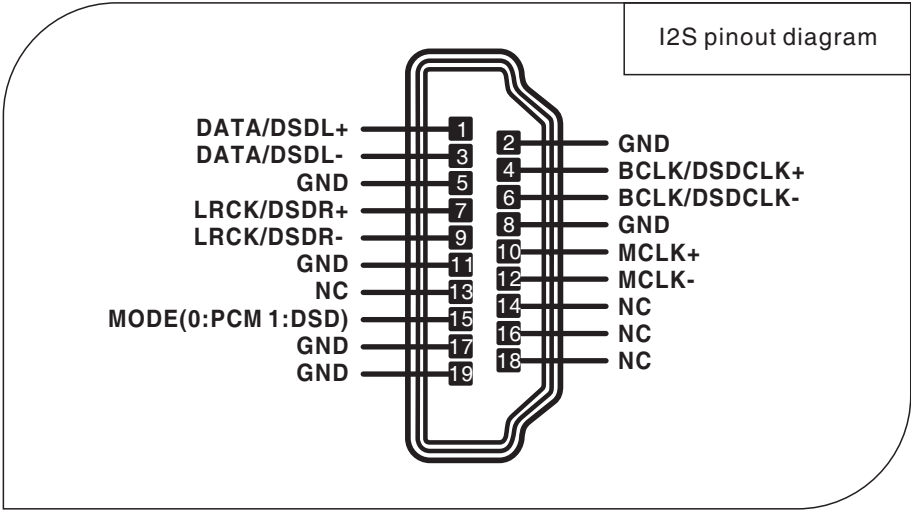### ⓬ PREAMP OUTPUT

Provides analog audio output to connect to a powered subwoofer or an external power amplifier. Note: the **RIGHT & LEFT SPEAKER OUTPUTS** remain active when the **PREAMP OUTPUT** is used and both sets of outputs are automatically muted when the mute function is engaged or when headphones are connected via the front panel.

Diagram of a speaker binding post and how the most common types of speaker cable terminations can be connected.

BANANA
PLUG

5-WAY
BINDING
POST

SPADE
LUG

LOOPED
WIRE

PIN
CONNECTOR

STRAIGHT
WIRE

I2S pinout diagram

DATA/DSDL+ — 1
DATA/DSDL- — 3
GND — 5
LRCK/DSDR+ — 7
LRCK/DSDR- — 9
GND — 11
NC — 13
MODE(0:PCM 1:DSD) — 15
GND — 17
GND — 19

2 — GND
4 — BCLK/DSDCLK+
6 — BCLK/DSDCLK-
8 — GND
10 — MCLK+
12 — MCLK-
14 — NC
16 — NC
18 — NC
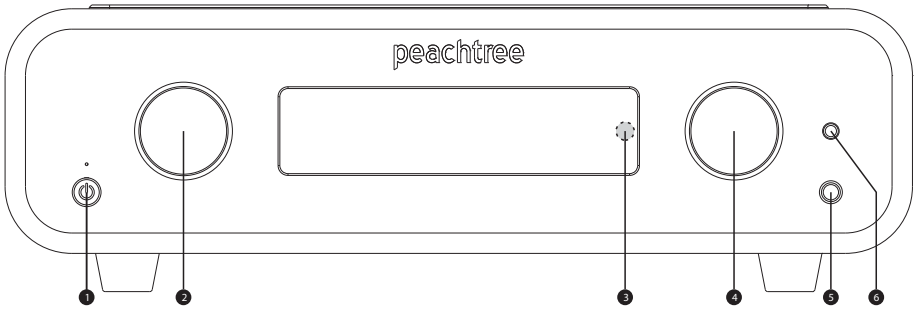
❶ On/Standby Button
Toggles the unit between on mode (green LED) and standby mode (red LED).
Note: AC power cord must be connected and rear panel **POWER** switch set to
ON for this button to function.

❷ Left knob
Rotate in either direction to select the desired input. Push and hold for ~3
seconds to enter the **MENU**. Rotate to move the option selection arrow up or
down. Rotate the **Right knob** to change the setting of the currently selected
option. To exit the **MENU**, press and hold this knob for ~3 seconds.

❸ IR Receiver (concealed behind the front panel display window)
For receiving Infra-Red(IR) commands from the included hand-held remote
control or third-party remote control system.

❹ Right knob
Rotate clockwise or counter-clockwise to increase or decrease the volume/
output level. Push and release to mute and unmute the output. When in the
**MENU**, rotate to change the setting of the currently selected option.

❺ 1/4" Unbalanced Headphone Output Connection
Inserting a headphone connection automatically mutes the **RIGHT & LEFT
SPEAKER** and **L & R PREAMP OUTPUTS**. Removing a headphone connection
automatically un-mutes the **RIGHT & LEFT SPEAKER** and **L & R PREAMP
OUTPUTS.** Caution**:** please lower the output level when inserting or removing
headphone connections as headphone sensitivity varies widely and a
comfortable speaker listening level may result in a significantly louder output
level when switching to headphones.

❻ 4.4mm Balanced T/R/R/S Headphone Output Connection
Inserting a headphone connection automatically mutes the **RIGHT & LEFT
SPEAKERS** and **L & R PREAMP OUTPUTS**. Removing a headphone connection
automatically un-mutes the **RIGHT & LEFT SPEAKERS** and **L & R PREAMP
OUTPUTS.** Caution: please lower the volume / output level when inserting of
removing headphone connections as headphone sensitivity varies widely and a
comfortable speaker listening level may result in a significantly louder output
level when switching to headphones.
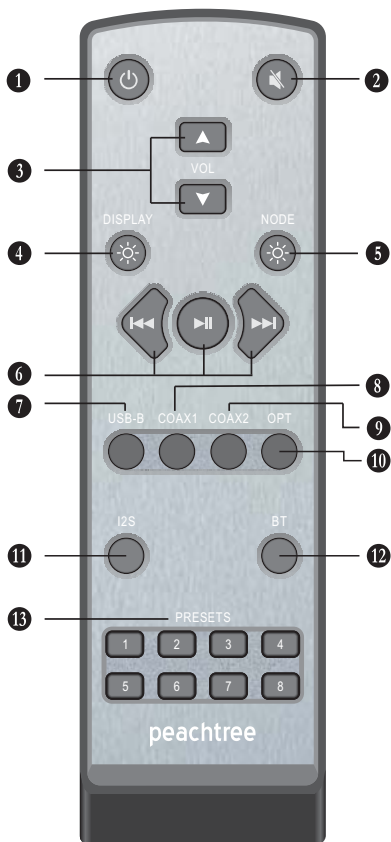
❶ **On/Standby Button**
Toggles the unit between on mode and standby mode.

❷ **Mute Button**
Toggles the mute function on and off.

❸ **Volume Up & Down Buttons**
Increase and decrease the volume / output level.

❹ **Display Brightness Button**
Steps the brightness of the front panel display through the available settings.

❺ **Bluesound NODE Display Brightness Button**
Steps the brightness of the lights on a Bluesound NODE/VAULT through the available settings.

❻ **Transport Control Buttons**
Controls compatible devices such as a Bluesound NODE , a computer connected via **USB-B INPUT** and mobile devices connected via **Bluetooth INPUT**.

❼ **USB-B Button**
Selects the **USB-B INPUT.**

❽ **COAX1 Button**
Selects the **COAX-1 INPUT.**

❾ **COAX2 Button**
Selects the **COAX-2 INPUT.**

❿ **OPT Button**
Selects the **OPTICAL INPUT.**

⓫ **I2S Button**
Selects the **I2S INPUT.**

⓬ **BT Button**
Selects the **Bluetooth INPUT.**

⓭ **Presets 1-8**
Selects preset 1-8 in a Bluesound NODE. See BluOS instructions online on how to set up the presets.

MENU

1 PCM filter
L-FAST is a **L**inear phase **FAST** roll-off filter. It is the most common type of digital filter and is the most accurate and neutral acoustically.
H-FAST is a **H**ybrid **FAST** roll-off filter. The length of the pre-ringing is shorter and more consistent than the length of the post-ringing which is more like musical instruments.
M-SLOW is a **M**inimum phase **SLOW** roll-off filter. It has smooth out-of-band attenuation characteristics, and because of its in-band attenuation characteristics, it has a smoother overall sound.

Each filter has an objective (measurable) and subjective (audible to most) affect on the sound. We encourage people to audition all three filters to determine the one that sounds the best to them. Most people will experience the differences in high-frequency reproduction where they are more readily heard. There is no "right" or "wrong" answer here, its all about personal preference, room acoustics and the characteristics of your speakers...

2 NOS MODE
ON bypasses the oversampling feature in the DAC, sending the original digital signal straight to the modulator. This mode is useful if you want to experiment with any software-based oversampling features in products like Roon, etc. **OFF** engages the 8x oversampling feature in the DAC.

3 BT POWER
BT INPUT powers up internal Bluetooth radio only when the unit is on and the Bluetooth input is selected. **ALWAYS** keeps the internal Bluetooth radio powered up regardless of input selection.

4 VOLUME
DIGITAL uses a high-quality digital audio volume attenuator.
HYBRID uses a high-quality analog resistor ladder in conjunction with a digital audio attenuator to ensure optimal performance over the entire volume range. There may be some clicking sounds from inside the unit when the relays switch as well as some audible noise through the speakers or headphones at certain level changes. This is normal and expected behavior for this type of volume control and will not cause any harm.

5 DISPLAY
ALWAYS keeps the display on whenever the unit is on.
AUTO OFF turns the display off after several seconds.

6 BRIGHTNESS
Sets the brightness of the front panel display. **8** is the brightest, **1** is the dimmest.

❼ TRIGGER SEL
INPUT & LAST
The 12V trigger can be set to select one of the specific **INPUTS** or to select the **LAST** input used when the unit was put into standby.

❽ [SOURCE] VOLUME
Sets the starting point for the volume / output level for each input independently. Push the right knob to select the input to affect. Rotate the right knob to change the initial volume / output level setting for THAT input. **LAST** sets the volume to the **LAST** level used when the unit was put into standby. -20, -35, -50 sets the volume level to these specific values. **FIXED** sets the unit to 0dB FS (Full Scale-zero attenuation). Please use this setting with extreme caution!

❾ INPUT I2S, COAX-1, COAX-2, OPT
These inputs can be renamed to: **CD, SACD, TV, STREAM,** or **AUX**. The **USB-B** and **Bluetooth** inputs can NOT be re-named.

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 https://www.peachtreeaudio.com/pages/product-registration 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 a 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.

www.peachtreeaudio.com

SPECIFICATIONS

Compatible Speakers	2.5-16Ω
Output Power (WPC, 8Ω ǀ 4Ω, <1% THD+N, AES 17)	300W/580W
Dynamic Range (AES-17)	116dB
Damping Factor (1kHz)	>625 (8Ω)
Frequency Response (20 - 20kHz)	<+/-0.3dB
Inter-Modulation Distortion (SMPTE)	-90dB below fundamental
Total Harmonic Distortion (AES17, 1kHz, 8Ω)	0.001%
Channel Separation (1kHz, 8Ω)	>95dB

PREAMP OUTPUT

Output Voltage (rms)	2.5V @ 0dBFS input
Output Impedance	100Ω
Signal-to-Noise Ratio (un-weighted)	114dB
Channel Separation (1kHz)	>116dB at 1 KHz
Frequency Response (8Hz-20KHz)	+/- 0.5dB
Total Harmonic Distortion	<0.0004 (2V RMS, 1KHz, unweighted)

HEADPHONE OUTPUT

	Unbalanced out @30 ohm	Unbalanced out @300 ohm	Balanced out @30 ohm	Balanced out @300 ohm
Output Impedance	30ohm	300ohm	30ohm	300ohm
Output Power	220mW	75mW	750mW	312mW
Signal-to-Noise Ratio(un-wieghted)	98dB	103dB	117dB	117dB
Dynamic Range(un-wieghted)	107dB ǀ 100dB	107dB ǀ 100dB	107dB ǀ 100dB	107dB ǀ 100dB
Channel separation (1KHz)	>100dB at 1KHz	>100dB at 1KHz	>100dB at 1KHz	>100dB at 1KHz
Frequency Response (8Hz-20KHz)	+/-0.8dB	+/-0.8dB	+/-0.87dB	+/-0.87dB
Total Harmonic Ditortion	0.001%	0.0005%	0.005%	0.005%

USB-B & I2S Inputs

PCM Sampling Rate and DSD Frequency Rate	PCM 16-24bit/44.1-768kHz, DSD, DOP64-256, NATIVE DSD64-512

COAX and OPT Inputs

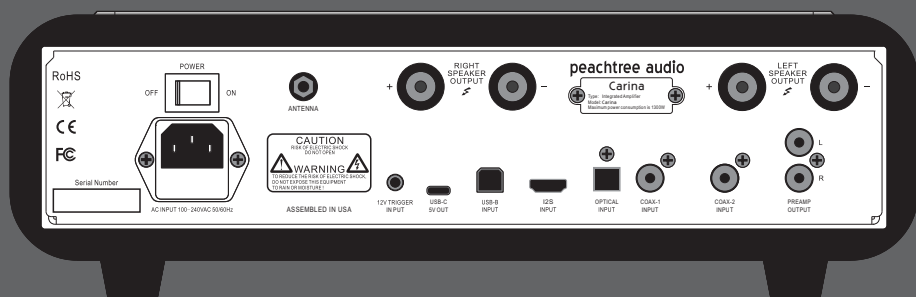|	
PCM Sampling Rate and DSD Frequency Rate	PCM 16-24bit/44.1-192kHz, DSD, DOP64

AC Power

AC Input	100-240VAC, 50/60Hz
Maximum Power Consumption	1000W
On Mode (Idle) Power Consumption	36W
Standby Mode Power Consumption	<0.5W
Fuse	100-120VAC: 8A/250V Medium Acting 220-240VAC: 4A/250V Medium Acting

Physical

Height (including feet)	111 mm ǀ 4.37 inches
Width	356 mm ǀ 14.02 inches
Depth (including volume knob and speaker binding posts)	361.95 mm ǀ 14.25 inches
Weight (shipping)	15 lbs (19 lbs) 6.8 kg (8.6 kg)

All specifcations subject to change without notice.

peachtree

RoHS

POWER
OFF | ON

ANTENNA

RIGHT
SPEAKER
OUTPUT
+ | −

peachtree audio
Carina
Type: Integrated Amplifier
Model: Carina
Maximum power consumption is 1300W

LEFT
SPEAKER
OUTPUT
+ | −

L
R

Serial Number

AC INPUT 100 - 240VAC 50/60Hz

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
⚠ WARNING ⚠
TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT EXPOSE THIS EQUIPMENT
TO RAIN OR MOISTURE

ASSEMBLED IN USA

12V TRIGGER
INPUT

USB-C
5V OUT

USB-B
INPUT

I2S
INPUT

OPTICAL
INPUT

COAX-1
INPUT

COAX-2
INPUT

PREAMP
OUTPUT

Carina