

peachtree



Carina GaN
Carina X
Carina 150X

IMPORTANT SAFETY INSTRUCTIONS

- ➊ Read these instructions—All the safety and operating instructions should be read before this product is operated.
- ➋ Keep these instructions—The safety and operating instructions should be retained for future reference.
- ➌ Heed all warnings—All warnings on the appliance and in the operating instructions should be adhered to.
- ➍ Follow all instructions.
- ➎ 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.
- ➏ Clean only with dry cloth.
- ➐ Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- ➑ Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- ➒ 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.
- ➓ 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.
- ➔ Only use attachments/accessories specified by the manufacturer.
-  ➔ Use only with the cart, stand, tripod, bracket, or table specified 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.
- ➔ Unplug this apparatus during lightning storms or when unused for long periods of time.
- ➔ Refer all servicing to qualified 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.
- ➔ Please keep the unit in a good ventilation environment.
- ➔ CAUTION: These servicing instructions are for use by qualified 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 qualified to do so.
- ➔ 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 filled with liquids, such as vases, shall not be placed on apparatus.

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



- 19 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 qualified 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.

- 20 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

- 1 Please keep all packing materials for any potential shipping needs.
- 2 Please keep a copy of the sales receipt and note the serial number on it for warranty and insurance purposes.
- 3 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.



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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. This 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 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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

Carina

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INTRODUCTION

Thank you for choosing Carina!

Carina is an integrated amplifier platform designed to please your eyes and ears. Housed in a beautiful chassis crafted from metal and wood, Carina performs several critical functions in an audio system; digital-to-analog conversion, volume control, phono pre-amplification and power amplification for both speakers and headphones. Carina also features a dual-knob user interface that provides a clean look and intuitive control. The front panel OLED display is large and bright and provides useful information at a glance including; the current input, the format of the incoming audio and the current volume level. A wireless remote control is provided for easy operation from your favorite listening position.

All Carinas include multiple digital audio inputs; USB-C for a computer or mobile device, Bluetooth v5 for wireless devices, two coaxial and one optical S/PDIF inputs for digital audio devices such as streamers or CD players. Carina also includes a multi-functional analog input with a built-in phono preamplifier custom designed for Moving Magnet (MM) cartridges. This input can be set to bypass the phono preamp when using an external phono preamp (turntables with built-in preamps or moving coil cartridges) or when using the input as a "Home Theater Bypass" for integration with an AVR or preamp/processor! A stereo analog audio preamp output is provided for integration with one or two subwoofers or a separate power amplifier if desired. A 12V trigger input and output allow for power on/off control to or from other devices.

Internally, Carina features a 32-bit architecture that is capable of handling all of the major digital audio formats available today from compressed audio all the way up to 24-bit/768kHz PCM and DSD512 (22.6MHz aka octuple rate DSD)! Carina utilizes two separate ESS 9068 DAC chips in "mono mode." One dedicated to the left channel and the other dedicated to the right channel to maximize the signal-to-noise ratio, dynamic range and channel separation of the audio signal. The menu provides easy access to the available DAC filters and over sampling functions for fine-tuning the sound even further. The internal architecture of Carina is differential (aka balanced) so external noise and interference, if present, are dutifully removed from the audio signal paths.

Carina offers three compelling amplifier options. The "top-of-the-line" Carina GaN utilizes a GaN (Gallium Nitride) "power DAC" amplifier and separate, regulated, power supply to achieve exceptional transparency and sound quality. It is driven directly by the digital output of the DSP and does NOT utilize a negative feedback loop which alters the signal driving the speakers. The audible improvement is immediately apparent and significant, even to a casual listener. The DAC section in Carina GaN provides the analog signals for the headphone amplifier and preamplifier outputs only. This novel implementation of a GaN power DAC in an integrated amplifier results in sound quality that was previously only attainable by much larger, heavier and costlier solutions. The Carina X utilizes a Hypex NCORE X power amplifier with a separate power supply. The Hypex NCORE X design is simply the best example of a silicon based (non-GaN) class-D power amplifier we have ever heard. It is tremendously powerful yet remarkably transparent and drives any speaker with ease, authority and finesse. The Carina 150.....

To be continued 

utilizes the critically acclaimed Hypex NCORE power amplifiers with integrated power supplies to achieve impressive sound quality and performance at a lower cost. The Carina 150 is a great option if your speakers have relatively high sensitivity (~88dB or above) or you have a smaller room.

All Carinas are capable of driving speakers with a nominal impedance between 2.5Ω to 16Ω and have ample power reserves to drive the vast majority of speakers available today to their full potential while delivering deep, tight bass and transparent, open and natural sounding midrange and high frequencies that do NOT induce listener fatigue over time. All of the power amplifier options in Carina represents a major step forward in sound quality from the past and compare favorably with amplifiers costing many times more. Combined with an audiophile quality DAC, volume control and phono preamplifier - Carina has more in common with premium quality separates than it does with the majority of integrated amplifiers available today.

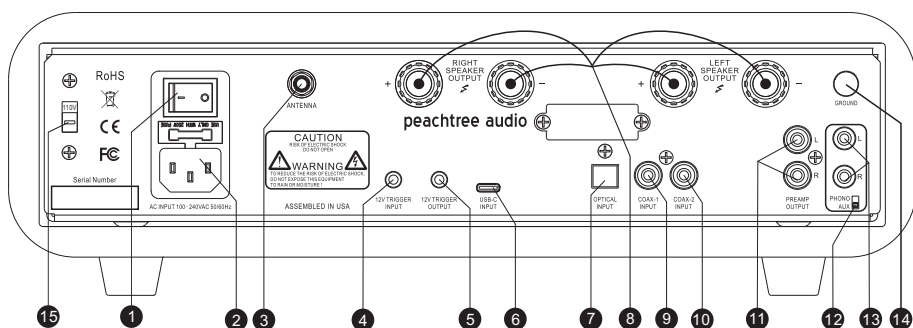
Carina also features a high-quality, fully-balanced headphone amplifier that provides an exceptional listening experience with headphones. It has an extremely low noise floor so music is reproduced cleanly and clearly. The headphone amplifier includes a traditional 1/4" unbalanced output and a 4.4mm T/R/R/R/S "pentaconn" balanced output for headphones that support it. Balanced is the preferred connection method if the option is available to you. The headphone amplifier is a high-performance internal component that compares favorably with stand-alone devices.

Please continue reading the manual and visit www.peachtreeaudio.com to register your unit to extend your warranty at no extra charge! Your information will NOT be shared or sold. We sincerely hope that Carina brings you many years of listening enjoyment.

Thank you again for choosing Carina!

- The Peachtree Audio Team

BACK PANEL



1 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.

2 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 does **NOT** accept responsibility for any damage caused by the use of an improper fuse value.

3 ANTENNA Connector

Provides an external antenna connection to maximize the reception range from Bluetooth enabled devices. Attached the supplied antenna and position the antenna for best performance. Try different angles for longer range, if desired.

4 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 input trigger can be configured in the **MENU** to power on the unit **AND** select specific input(s).

5 12V TRIGGER OUTPUT

Enables power on/off control to another product with a 12V trigger input. Insert one end of a 3.5mm cable into this output and connect the other end to a 12V trigger input of the product that will be controlled by it. Once connected, the unit can power on and off the product controlled by it.

6 USB-C INPUT

Accepts digital audio input up to 32-bit/768KHz PCM & octuple DSD (aka DSD512). Windows users note: to enable ASIO, WASAPI, or DSD playback, along with "exclusive mode", Please visit:

<http://www.peachtreeaudio.com/pages/usb-drivers-and-firmware> and download the latest version.

7 OPTICAL INPUT

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

8 RIGHT & LEFT SPEAKER OUTPUTS

Speaker wire binding post outputs that accept banana connectors (insert into hole on the 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 the diagram on the following page for more details.

9 COAX-1 INPUT

Accepts S/PDIF digital audio input from a coaxial (RCA style) output up to 24-bit/192kHz PCM. For best results, please use a 75 Ohm cable with RCA style ends designed for carrying digital audio or video signals. A regular audio cable (typically 50 Ohm) will work but it is not ideal for this type of connection.

10 COAX-2 INPUT

Accepts S/PDIF digital audio input from a coaxial (RCA style) output up to 24-bit/192kHz PCM. For best results, please use a 75 Ohm cable with RCA style ends designed for carrying digital audio or video signals. A regular audio cable (typically 50 Ohm) will work but it is not ideal for this type of connection.

11 PREAMP OUTPUT

Provides a variable 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.

12 SELECTOR SWITCH

PHONO utilizes the internal Moving Magnet (MM) phono preamplifier. AUX bypasses the internal MM phono preamp for use with an external phono preamp (required for a Moving Coil cartridge) or to use the input for Home Theater Bypass or other "line-level" analog input types. See the Home Theater Bypass section for more details on how to setup and use this feature.

13 ANALOG AUDIO INPUT

Accepts analog audio input from a turntable equipped with a Moving Magnet (MM) cartridge or other "line-level" analog audio sources. See the Home Theater Bypass section for more details on how to setup and use this feature.

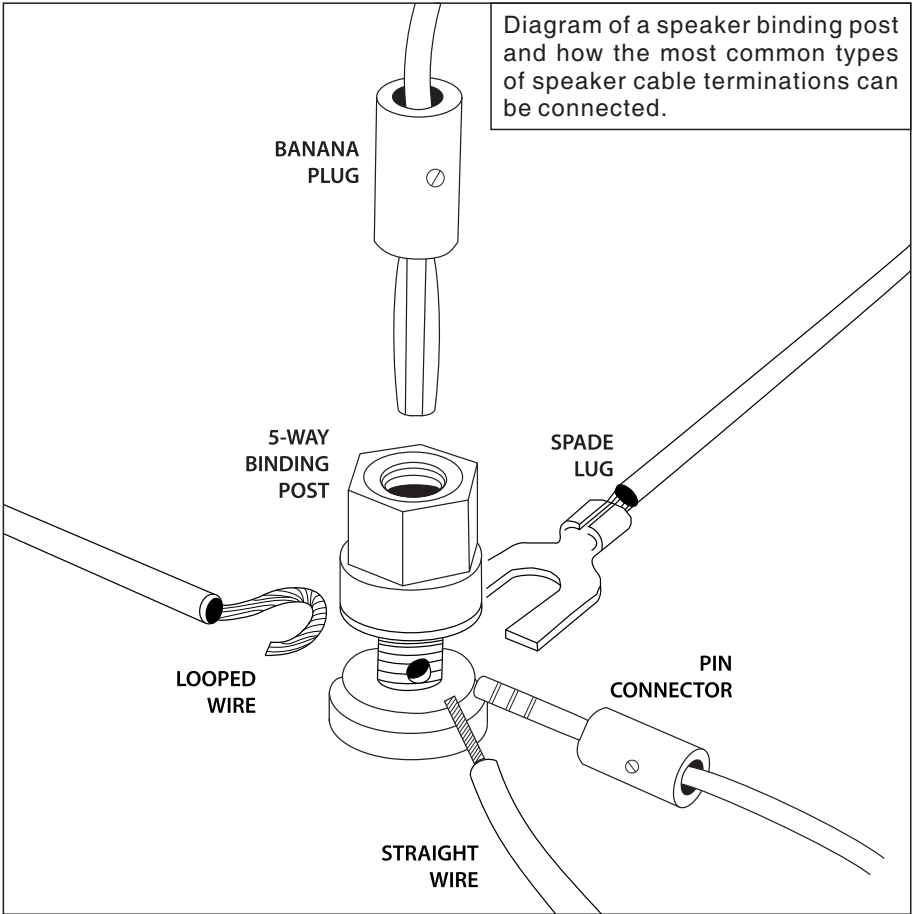
14 GROUND

Ground connection for a connected phonograph/turntable or REL brand subwoofer.

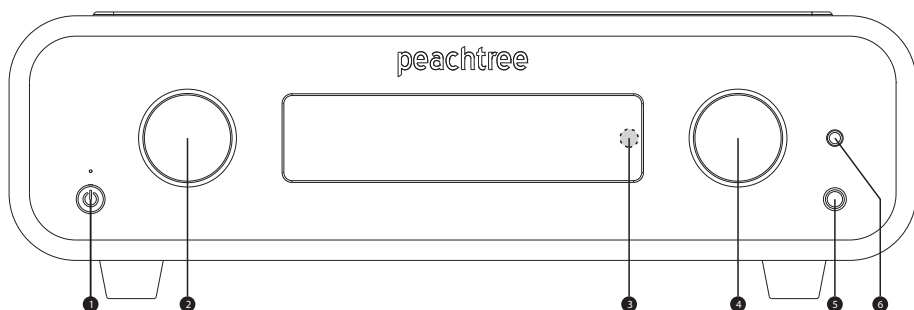
15 AC VOLTAGE SWITCH (Carina X only)

Switches between low voltage (110) and high voltage (220) AC power supply systems. This is set by the factory for the intended location of use. The value of the installed fuse is also matched to this setting. If the unit will be used at a different location that requires a voltage switch, please contact service@peachtreeaudio.com for detailed instructions before proceeding.

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



FRONT PANEL



① 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.

② 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.

③ 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 by attaching an IR transmitter on the display in front of the IR Receiver.

④ 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.

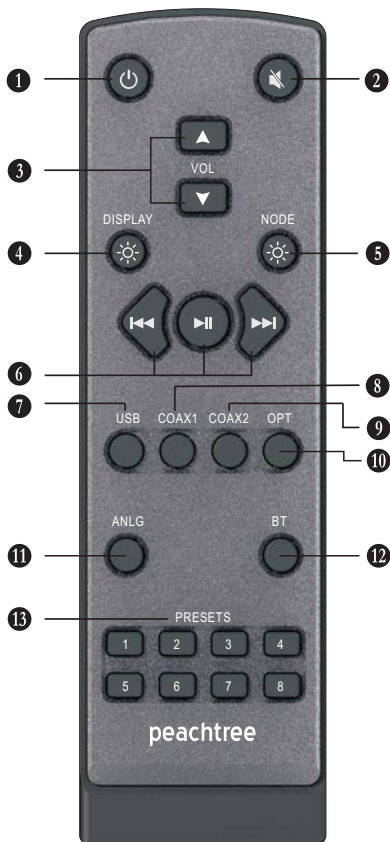
⑤ 1/4" Unbalanced Headphone Output Connection

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.

⑥ 4.4mm Balanced T/R/R/R/S (aka Pentaconn) 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 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.

REMOTE CONTROL



- 1 On/Standby Button**
Toggles the unit between on mode and standby mode.
- 2 Mute Button**
Toggles the mute function on and off.
- 3 Volume Up & Down Buttons**
Increase and decrease the volume / output level.
- 4 Display Brightness Button**
Steps the brightness of the front panel display through the available settings.
- 5 Bluesound Display Brightness Button**
Steps the brightness of the LEDs on compatible Bluesound products through the available settings.
- 6 Bluesound Transport Control Buttons**
Controls play, pause, forward and back functions on compatible Bluesound products.
- 7 USB Button**
Selects the **USB-C INPUT**.
- 8 COAX1 Button**
Selects the **COAX-1 INPUT**.

- 9 COAX2 Button**
Selects the **COAX-2 INPUT**.
- 10 OPT Button**
Selects the **OPTICAL INPUT**.
- 11 ANALG Button**
Selects the **ANALOG INPUT**.
- 12 BT Button**
Selects the **Bluetooth INPUT**.

- 13 Bluesound Presets 1-8**
Selects preset on compatible Bluesound products. Search "How to Create a Preset in BluOS" online for detailed instructions on how to set these up. This feature is incredibly useful for those that use a BluOS streamer!

MENU

To enter the MENU: Press and hold LEFT knob IN for ~3 seconds.

To change the settings: Rotate the LEFT knob to move the selection arrow (>) to the desired option. Then rotate the RIGHT knob to cycle through the available settings of the currently selected option.

To exit the MENU: Press and hold LEFT knob IN for ~3 seconds.

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 you to audition all three filters to determine the one that sounds the best to you. 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 **DACs**. This mode is **ONLY** recommend if **ALL** of your incoming digital audio is set to a sample rate of 176.4kHz or higher otherwise the high frequency output may be significantly reduced. Most computers and audio applications, such as **Roon**, offer the ability to set the sampling rate of the digital audio output.

OFF maintains the oversampling feature in the **DACs** and is recommended when **ANY** incoming digital audio has a sample rate **BELOW** 176.4kHz.

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 will 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.

7 TRIGGER SEL INPUT & LAST

The 12V INPUT TRIGGER can be set to select one of the specific INPUT(S) or to select the LAST input used when the unit was put into standby.

8 SET [INPUT] VOL

Sets the starting point, at power on, 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!

9 [INPUT] NAME—ANLG, COAX-1, COAX-2, OPT

The **ANALOG** input can be renamed: **PHONO**, **AUX** or **HTB**, the other inputs can be renamed: **CD**, **SACD**, **TV** or **STREAM**. The **USB-C** and **Bluetooth** inputs can **NOT** be renamed.

USING CARINA AS A POWER AMPLIFIER

Home Theater Bypass or Volume Control Bypass

Carina includes a "FIXED" volume input mode that is designed to send the incoming signal straight to the power amplifier. All of the inputs have this option but it is especially useful when integrating Carina with an Audio-Video Receiver (AVR) or Surround-Sound Processor (SSP) to create a "Home Theater Bypass." This allows the AVR or multi-channel amplifier to power the center and surround speakers while Carina powers the front left and right speakers. This should provide a significant improvement to the overall sound quality when watching movies and TV as the amplifier workload is distributed across two different amplifier power supplies and the amplifier in Carina is likely to be of higher quality. This feature is also useful if you would like to use the volume control in an app of a connected device to control the overall system volume for that input on Carina.

To setup Home Theater Bypass (please follow these steps in order):

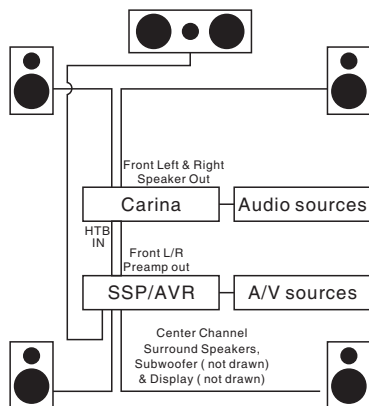
1. **Power off** the Surround-Sound Processor (SSP) or Audio-Video Receiver (AVR) and Carina
2. Connect the **front LEFT and RIGHT preamp outputs** from the SSP or AVR to the **ANALOG input** on Carina using a standard RCA style audio cable
3. On the rear panel of Carina, set the switch below the analog input to **AUX** (not PHONO)
4. If your AVR or SSP has a **12V trigger output**, connect it to the **TRIGGER INPUT** on Carina
5. Power on your AVR or SSP (and Carina if not using a trigger)
6. In the Carina menu set **TRIGGER SEL** to **ANALOG** (Skip this step if your AVR or SSP does NOT have a trigger output)
7. In the Carina menu set **ANALOG IN VOLUME** to **FIXED**
8. In the Carina menu set **ANLG NAME** to **HTB**
9. Exit the Carina menu and select the **ANALOG** input (Required if your AVR or SSP does NOT have a trigger output)
10. Power on the AVR or SSP and **re-calibrate the speakers** (this is necessary to establish the proper output levels, time delays and EQ for all of the speakers when watching movies or TV)

If you do NOT have a 12V trigger connected from the AVR or SSP to Carina, you will need to make sure Carina is powered on and set to the ANALOG input to use the Home Theater Bypass feature. If you have a 12V trigger connected, this will happen automatically whenever the AVR or SSP is powered on.

To setup Volume Control Bypass (please follow these steps in order):

1. Power on Carina
2. In the Carina menu set **[INPUT] IN VOLUME** to **FIXED** for the input you want to use the volume control bypass feature with

Caution: when any Carina input volume is set to "FIXED" in the menu, it is operating as a power amplifier (the volume control in Carina is bypassed) when that input is selected and the device connected to Carina determines the volume of the signal that is sent to the speakers. If this feature is NOT setup and used properly, significant damage to the system may occur. Peachtree Audio does NOT accept responsibility for any damage caused by the misuse of this feature.



Connect Line-level (RCA style) front left and right outputs from the AVR or SSP to the ANALOG input on the Carina.

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 source. If you register your product online at <http://www.peachtreeaudio.com/apps/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 verified by a valid proof of sale or serial number.

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

Warranty does not cover shipping costs.

Visit www.peachtreeaudio.com for complete warranty details.

Repair Process

In the event of a product failure, please pack the unit in its original carton and contact Peachtree Audio directly (service@peachtreeaudio.com or +1-704-391-9337) to obtain a Return Authorization (RA) number before shipping the product!

Any products received without an RA number may be delayed, misdirected, or lost.

After a RA number is issued by Peachtree Audio, please ship the product using FedEx or UPS. Do NOT ship using a Postal Service! Also, do not ship the unit in a carton with insufficient or loose packing material as the cabinet will get damaged in transit and is NOT covered by Peachtree Audio.

Peachtree Audio assume 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

Before contacting Peachtree, please try resetting the unit to see if the issue is resolved:

1. Place the unit in standby mode (red LED)
2. Press in and hold the right knob and keep it pressed in until told to release it in step 4.
3. Press the on/standby button and allow the unit to power up until "default setting" is shown in the left side of the display.
4. Now release the right knob. The unit should start up normally with USB as the source.

SPECIFICATIONS

All specifications (except for PHONO/AUX) utilize 24-bit / 96 kHz test signals through the COAX-1 input.

SPEAKER OUTPUTS	Carina 150X	Carina X	Carina GaN
Compatible Speakers (Nominal Impedance)	2.5-16 Ω		
Power (8 Ω 4 Ω, <1% THD + N, AES 17, 2 Chan Drive)	150 250	300 600	200 200 *
Dynamic Range (AES 17)	107 dB	>114 dB	
Frequency Response (20-20 kHz, 8 Ω)	< +/-0.2 dB		
Total Harmonic Distortion (AES17, 1kHz, 8 Ω)	<0.005%		
Inter-Modulation Distortion (SMPTE)	-90 dB		-70 dB**
Channel Separation (1 kHz, 8 Ω, Rated Output)	>90 dB	>100 dB	>70 dB

*The Carina GaN features a regulated power supply which achieves maximum output at 8 Ω and below. This is by design to achieve the purest sound quality from the GaN output devices.

** The Carina GaN does NOT use a global negative feedback loop so some specifications are adversely affected. This is by design to achieve the purest quality sound quality from the GaN output devices.

PREAMP OUTPUTS

Voltage (RMS)	2.4V @ 0 dBFS input
Impedance	100 Ω
Signal-to-Noise Ratio (Digital , un-weighted)	> 120 dB
Channel Separation (1 kHz)	> 130 dB
Frequency Response (20Hz-20kHz)	+/- 0.1 dB
Total Harmonic Distortion (2V RMS, 1 kHz, un-weighted)	< 0.0002 %

HEADPHONE OUTPUTS

Power @ 30 Ω (Balanced Unbalanced)	1900 mW 720mW
Power @ 300 Ω (Balanced Unbalanced)	305 mW 76mW
Signal-to Noise Ratio (un-weighted)	>120 dB (Balanced) 104dB, 108 dB (Unbalanced @ 300 Ω , 30 Ω)
Channel Separation (1 kHz)	> 120 dB
Frequency Response (20 Hz - 20 kHz)	+/- 0.87 dB
Total Harmonic Distortion	0.0003 % (Balanced) 0.0009% (Unbalanced 30 Ω)

PHONO/AUX SWITCHABLE ANALOG INPUT

PHONO THD + Noise	0.007 %
PHONO Impedance	47 k Ω (Suitable for MM Cartridge)
PHONO Preamplifier Notes	Passive RIAA EQ, No rumble filter used
AUX THD + Noise	0.0005 %
AUX Impedance	2.3 k Ω

COAX & OPT (S/PDIF) INPUTS

Formats supported	PCM 16-24 Bit, 44.1-192 kHz DSD Over PCM (DOP) 64
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USB-C INPUT

Formats supported	PCM 16-24 Bit, 44.1-768 kHz Native DSD 64-512, DOP 64-256
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All specifications subject to change without notice.

SPECIFICATIONS

AC POWER	Carina 150X	Carina X	Carina GaN
AC Input	100-240 VAC, 50/60 Hz		
Maximum Power Consumption	650 W	1470 W	520 W
On Mode (Idle) Power Consumption	34 W	36 W	31 W
Standby Mode Power Consumption	< 0.5 W		
Fuse (220-240 VAC) Lower Voltage AC Outlets	6.3 A / 250 V Slow Blow	12.0 A / 250 V Slow Blow	6.3 A / 250 V Slow Blow
Fuse (220-240 VAC) Higher Voltage AC Outlets	3.15 A / 250 V Slow Blow	8.0 A / 250 V Slow Blow	3.15 A / 250 V Slow Blow

CAUTION: Using an improper fuse value VOIDS the warranty and damage to the unit.

PHYSICAL

Height (including feet)	111 mm 4.37 inches		
Width	356 mm 14.02 inches		
Depth (including knobs and speaker binding posts)	362 mm 14.25 inches		
Weight (Shipping Weight) in pounds	12.5 lbs (17.0 lbs)	15.5 lbs (20.0 lbs)	14.5 lbs (19.0 lbs)
Weight (Shipping Weight) in kilograms	5.7 kg (7.7 kg)	7.0 kg (9.1 kg)	6.6 kg (8.6 kg)

All specifications subject to change without notice.

peachtree



Carina GaN
Carina X
Carina 150X