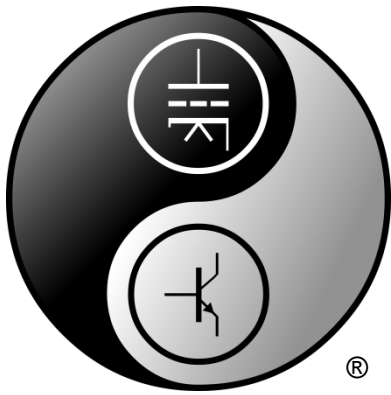


Liquid Carbon[®] Balanced Transportable Headphone Amplifier



cavalli audio

Congratulations! You're now the proud owner of the Cavalli Audio Liquid Carbon® Balanced Transportable Headphone Amplifier!

Amplifier Break-In

Your Liquid Carbon® amplifier has been tested before leaving the factory, but has very few hours on it. Most amplifiers need at least 150 hours of continuous use, playing music, to reach their full sound signatures. We recommend about the same for the Liquid Carbon®.

You can, when you're not listening, you leave the amp on continuously with your source in loop mode for enough hours to reach the 150 hour point. It is not necessary to leave headphones attached. In fact, **we recommend that you disconnect your headphones** when not listening during this break-in period.

At this point - and not before this point – will the amplifier reach the level of performance enabling you to accurately judge its sound quality and to determine whether it meets your critical listening standard.

Before you judge the sound quality of the amp please follow this procedure!

Return Policy

You may return your Liquid Carbon® amplifier within 30 days of delivery. Returning the amp within this time period will incur a 30% restocking fee.

Important points to remember about the Cavalli Audio Liquid Carbon[®] Balanced Transportable Headphone Amplifier

The Liquid Carbon[®] is a lightweight, small, transportable balanced solid state Solid State headphone amplifier. It is especially designed for handling a wide variety of headphones from IEMs to planar magnetics.

The amp has both balanced (XLR) and single ended (RCA + 3.5mm) inputs. The input type is selectable with a 2-position front panel pushbutton switch. The single ended input has an internal solid state buffered phase splitter to create a balanced signal to drive the amp fully balanced.

The amp has two gain settings to help with the wide range of headphone impedances and sensitivities. The high gain is 3X and the low gain is 1X. The Liquid Carbon[®] circuit allows you to hot switch the gain using the front panel switch.

The Liquid Carbon[®] has 3 outputs: 4 Pin XLR balanced, 4 Pin RSA (Kobiconn) balanced, and TRS (standard ¼" phone plug) single ended. Note that the SE output, which comes from half of each channel, only delivers ¼ the power of the balanced output.

The Liquid Carbon[®] is powered by a universal switch mode power supply (SMPS) which makes it operational in nearly every location globally using a standard power cord suitable to the local conditions with a standard IEC connection to the amp.

Operation

Your Liquid Carbon® amplifier operates over a wide variety of power conditions, 85-265VAC/50-60Hz.

- 1) Insert the proper power cord. Be absolutely sure that your power cord has an approved safety ground connection from the amp to the outlet.
- 2) The leftmost pushbutton is the power switch. Push this button in to turn on the amp. All three LEDs on the front panel should light.
- 3) The center pushbutton is the gain switch. Out is 1X and in is 3X. The LED indicator will be white for 1X and red for 3X. You can hot switch the gain while listening to music.
- 4) The right pushbutton is the input selector. Out is balanced and in is SE. The LED indicator will be white for balanced and red for SE. You can hot switch the input while listening to music.
- 5) We recommend that you let the amp warm up for about 15-30 minutes before connecting headphones and listening (although this is not required).
- 6) If there are any problems with the normal operation of your amp please contact Cavalli Audio at support@cavalliaudio.com.

 **CAUTION**

Please remember to turn down the volume (or power down completely) before plugging or unplugging any sources or headphones into or from your Liquid Carbon®.

Doing so will protect your both your hearing, and your equipment (headphones, Liquid Carbon®, etc.).

Please note that we are not responsible for any damage to your hearing, or damage to any equipment, due to a failure to lower volumes or power down before plugging/unplugging any sources or headphones.

Headphone Outputs

The Liquid Carbon® Balanced Transportable Headphone Amplifier is equipped with one 4 Pin XLR output, one 4 Pin RSA (Kobiconn) output, and one TRS (Phone). All three output jacks are on the front panel.

4 Pin XLR

This jack supports headphones wired with a 4 Pin fully balanced connector. This jack is labeled above the round jack with the letters “bal”.

CAUTION: do not connect headphones with a 4 Pin XLR which has a common ground (3 wire) connection to the headphones. This will absolutely damage the amplifier and void your warranty.

RSA (Kobiconn) Jack

This mini 4 pin balanced jack is located on the front panel to right of the TRS jack. The jack is also labeled “bal” with a headphone symbol above.

TRS Jack

One ¼” TRS jack is located on the front panel of the amp. This jack is labeled above with the letters “se”. Note that this output, using half of each amplifier, supplies only ¼ the power of the balanced output.

Recommended Mode of Operation

The Liquid Carbon amplifier can run with singled ended input and single ended output or a combination of single ended and balanced. However, to get the best performance from this amplifier we recommend that you operate in fully balanced mode from input to output.

Balanced vs Single Ended Outputs

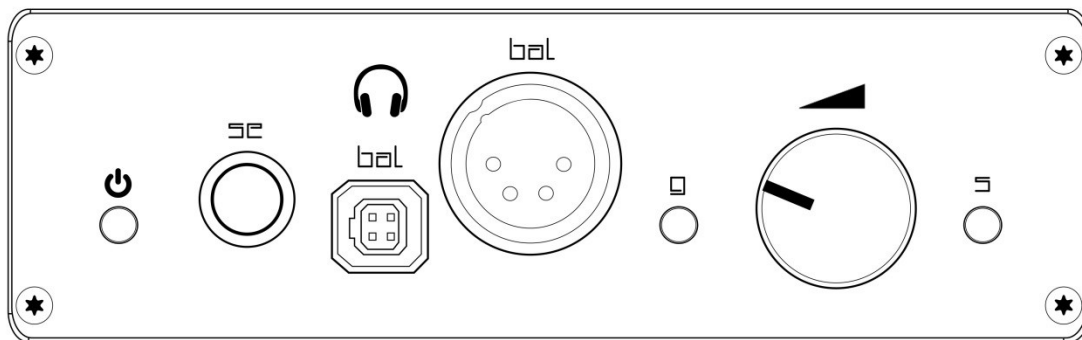
The Liquid Carbon® is a versatile balanced amplifier in that it can receive both Balanced and SE inputs, always working in balanced mode, and it offers both Balanced and SE outputs.

When using the Carbon, however, it is important to remember that the Carbon is designed to perform its best using the balanced output. Balanced output will maximize the power output you can get from the amp while minimizing the noise floor to the low noise levels available from the amp

We recommend that, if at all possible, you use headphones terminated with balanced connections.

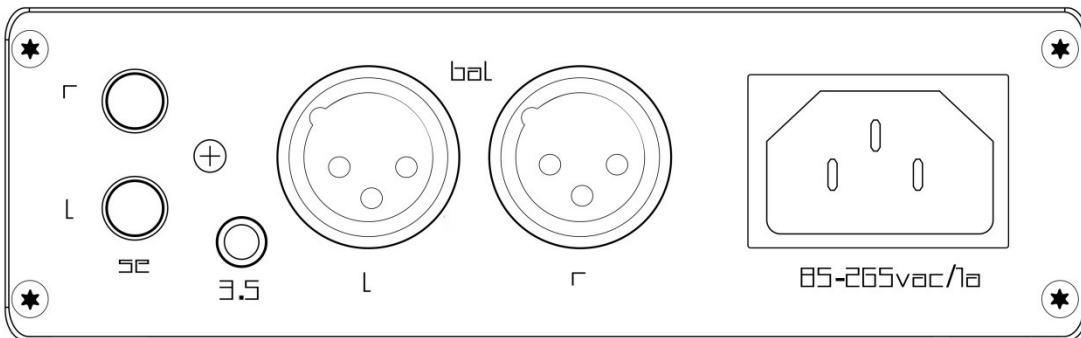
The SE output on the Carbon is provided for those who cannot, for various reasons, run in Balanced out mode. The SE output uses only half of each channel's amplifier. In this mode the Carbon cannot deliver as much power at any given volume setting. Also, because the SE out doesn't benefit from common mode type noise rejection, the noise floor from the SE output is higher than from the Balanced output. This is normal.

To get the best from your Carbon, whether you are using planars, dynamics, or IEMs, it will always be best to run from the Balanced outs.



Front Panel Controls and Jacks

This diagram shows the power button at left, gain button in center, and input selector button at right. There are two balanced outs, 4 Pin XLR and RSA. There is one SE out TRS jack.



Rear Panel Jacks and Power Inlet

This diagram shows the power inlet at right. There is one set of 3 Pin XLR jacks for balanced input. There are 2 RCA jacks and one 3.5mm TRS jack for SE input. SE input is phase split to create a balanced signal to the amplifiers.

Ventilation

The Liquid Carbon® dissipates about 8W of power. The Carbon is designed to run a little warm in a small enclosure, but it still needs good ventilation. Don't enclose it in a space with no air flow or on top of equipment which gets hot.

What about those tweaky things like cables, power cords, better feet and such that I've heard so much about?

Everyone has an opinion on this one, and we can say without a doubt that at this level of performance *every* change makes a difference. The extent to which this change is an *improvement* is, of course, the subject of much debate. Such is the nature of high-performance audio.

One of our closely-held opinions with regard to the entire matter of "What makes 'better sound' better?" can be summed up in a few short words – "if the musical result of the change MOVES YOU, then it is worth considering. If not, spend those discretionary funds obtaining more of your favorite music!"

OK, so now comes that time when we require you to read some verbiage written in legalese. If you understand all of it, you're probably an attorney. If you don't understand all of it, you're one of the rest of us who doesn't like reading this any more than we like requiring that you read it....but here it is.....

Warranty

This Cavalli Audio product has a 1-Year warranty for parts and labor. Warranty does not include fully insured shipping costs to Cavalli Audio. Warranties are not transferable unless pre-authorized in writing by Cavalli Audio. If the repair is due to customer damage or negligence, repairs will be charged as parts and labor, which will be quoted before work is performed. **For warranty support please contact support@cavalliaudio.com.**

Any modifications to this product which have not received written factory approval nullify all claims and void the warranty. Should a modified product be returned to the factory for repair the owner will be required to pay all necessary charges for the repair in addition to those charges required to return the product to its original configuration.

Removal or alteration of original Cavalli Audio serial numbers voids the factory warranty. **Product with altered or missing serial numbers will be considered counterfeit product.** Cavalli Audio will not repair or in any way indemnify any counterfeit or cloned product.

Now that you've read all that, and we assume that you have, in fact, read the above essential verbiage, we're hoping and trusting that you have found reading this owner's document to have been both useful and entertaining; enhancing your ability to enjoy your Cavalli Audio Liquid Carbon® headphone amplifier. Now, GET BACK TO ENJOYING YOUR MUSIC!

Standard Warranty Limitations

EXCEPT FOR THE EXPRESS WARRANTIES STATED HEREIN, CAVALLI AUDIO MAKES NO OTHER REPRESENTATIONS OR WARRANTIES AND CAVALLI AUDIO HEREBY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, SATISFACTORY QUALITY, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICE. IN ADDITION, CAVALLI AUDIO DOES NOT WARRANT THAT THE PRODUCT WILL SATISFY YOUR REQUIREMENTS, IS WITHOUT DEFECT OR ERROR, OR THAT THE OPERATION OF THE PRODUCT WILL BE UNINTERRUPTED. BECAUSE IT MAY NOT BE POSSIBLE FOR CAVALLI AUDIO TO KNOW THE EXACT PURPOSES FOR WHICH CUSTOMER ACQUIRED THIS PRODUCT, CUSTOMER ASSUMES FULL RESPONSIBILITY FOR CUSTOMERS INSTALLATION, USE AND THE RESULTS OF THAT USE.

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If you have any questions or comments, please contact us at sales@cavalliaudio.com or at info@cavalliaudio.com. We look forward to hearing from you!

For Your Protection

Water and moisture: **NEVER** use the Liquid Carbon amplifier near water. **NEVER** handle the amplifier while in contact with water. **NEVER** let the amplifier come into contact with water. **NEVER** spill water or other liquids into it.

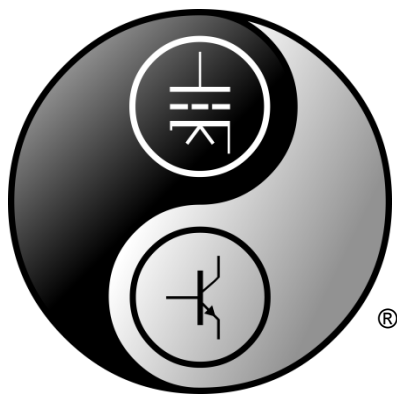
Power Sources: Make sure that the voltage/frequency stated on the back label on your amplifier is compatible the line/mains voltage in your location.

Grounding: The electrical ground in this amplifier is an important safety feature. **Do not defeat ground with special plugs, power cords, etc. Doing so will void your warranty.**

Power Cords: Use one that meets the standards of your location.

Power and Signal: Cables should never be connected or disconnected with equipment powered up. Failure to heed this warning may damage or destroy equipment.

Servicing: To reduce the risk of fire, electrical shock or other injuries, the user should not attempt to service the amplifier beyond what is described in this manual. All other servicing must be referred to **authorized** service personnel.



Cavalli Audio – 3300 Mossy Grove Court – Cedar Park, TX 78613