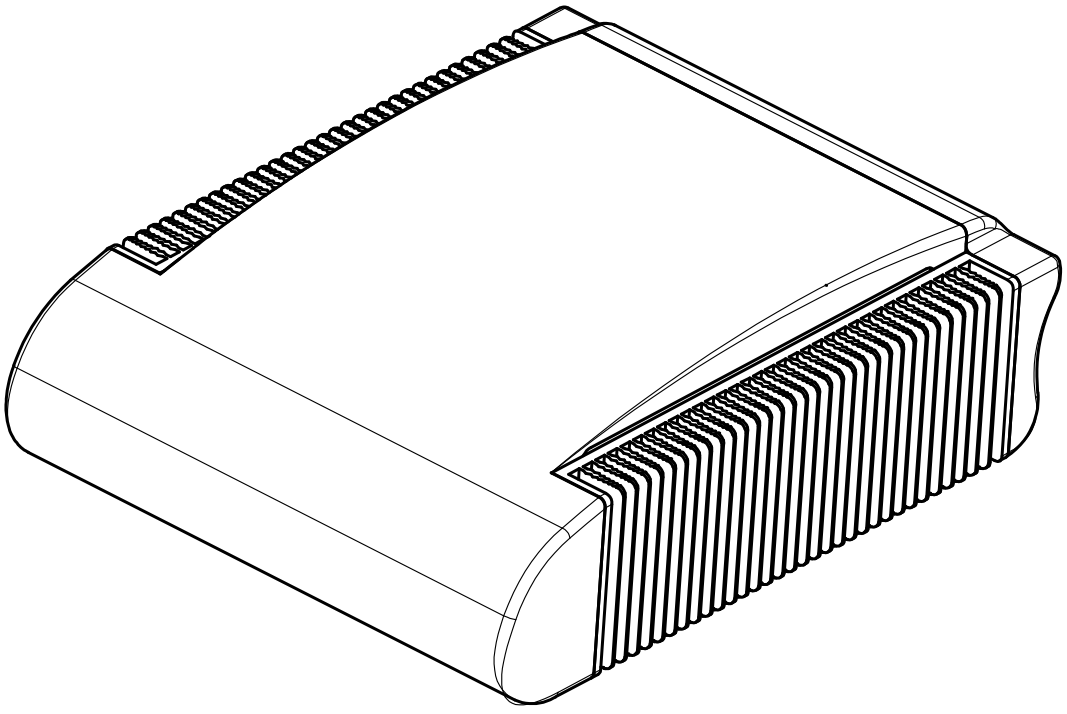
ASSOLUTA
SOUND AND SPACE

Tersicore
Stereo Power Amplifier

User Manual



Important Safety Instructions

1. Read these instructions.
2. Save these instructions.
3. Pay attention to all advice.
4. Always follow instructions.
5. Do not use this unit in presence of water.
6. Clean with a dry cloth only.
7. Do not obstruct venting holes and heat sinks. Install as indicated by the manufacturer.
8. Do not install near heat sources as heaters, heat pumps, stoves or other equipment which produces heat.
9. Do not alter the functionality of a polarized plug or of one provided with earth connection. A plug is polarized when it can be fitted in the mains socket in one way only. A plug provided with earth connection has two prongs for current and a third one for earth connection. The latter is provided for user's safety. If the plug provided doesn't fit your mains socket, consult a technician to obtain the replacement of the obsolete mains socket.
10. The mains cable represents the emergency detachment device for this unit. It's important to grant a quick access to this cable in every moment.
11. Protect the mains cable against trampling and mashing, particularly close to the plug and to the connector at the unit's input socket.
12. Only use connectors and accessories specified by the manufacturer.

13. Only use the cart, stand, tripod or table specified by the manufacturer or sold with the unit. When using a cart, pay attention while shifting the cart/unit ensemble to avoid harming people or flipping the cart upside down.
14. Isolate the unit from mains during lightning storms or when it's not operated for long.
15. Refer all servicing to qualified personnel. Servicing is required when the unit is damaged due to any reason, e.g. when mains cable or plug are damaged, when a liquid is spilled on the unit or when objects drop on it, when the unit is exposed to rain or moisture, or when it is not operative or when it has been dropped from whatever height. The replacement of the outer shell must be considered a service operation.
16. Venting must not be impeded by obstructing venting holes and heat sinks with objects like newspapers, towels, curtains and the like.
17. Do not place any free flame, like a candle or the like, on the unit.

18. Terminals marked with this label must be considered DANGEROUS and the connections external to these terminals require servicing by a TRAINED TECHNICIAN or the use of factory prepared cables.

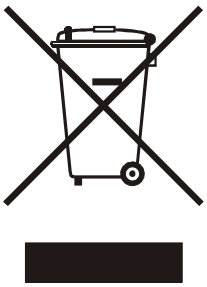
Warning!

To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture. Do not place objects containing liquids, like bowls or glasses, on this unit.

Warning!

Changes or modifications not authorized by the manufacturer can invalidate the compliance to CE regulations and cause the unit not to be suitable to use any longer. The manufacturer rejects any responsibility regarding damages to people or things due to the use of a unit which has been subject to unauthorized modifications or to misuse or to malfunction of a unit which has been subject to unauthorized modifications.

Instructions for Recycling



The label on the left, printed on the envelope of the product, indicates that the product, when no more usable, can't be treated as generic garbage, but must be disposed of at a collection point for recycling of electrical and electronic equipment, in compliance with the WEEE regulation (Waste of Electrical and Electronic Equipment).
By making sure that this unit is correctly recycled, you will help preventing potential damages to environment and to human health. Recycling helps saving natural resources. For more information about recycling this product, please contact Absoluta Sound and Space Srl.

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Safety Terms and Symbols

This document contains instructions on generic safety, installation and use for the Tersicore stereo power amplifier. It is important to read this document before trying to use this amplifier. Pay particular attention to safety instructions.

Appears on the unit to indicate the presence of uninsulated, dangerous voltages inside the enclosure - voltages sufficient to constitute a risk of shock.

Appears on the unit to indicate important operation or maintenance instructions included in the accompanying documentation.

CE

Appears on the unit to indicate compliance with the EMC (Electromagnetic Compatibility and LVD (Low-voltage Directive) standards of the European Union.

Warning! Calls for attention to a procedure, practice condition, or the like that, if not correctly performed or adhered to, could result in personal injuries, death or damages to the unit or to other objects.

Note Calls for attention to information that is essential to highlight

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Introduction

Special Design Features
Design Principles

Dear Customer, thank you for purchasing Tersicore stereo power amplifier. Tersicore combines the power and current delivery of larger high performance amplifiers with the small form factor of a small power amplifier. Tersicore delivers great sound which only the best product can deliver and has an original and captivating look.
Below you can find a description of all the features that make Tersicore a unique and valued product.

Customizable external shell

Tersicore, like all Absoluta products, features an external removable shell, that can be easily replaced, to adapt the look of the amplifier to the room's furniture style and to better match the owner's taste. The shell is available in various finishes, but the customer can require custom versions, choosing amongst several materials and colors.

Highest class components

Tersicore is made with first-class components, like the massive low stray flux and large bandwidth power transformers, the main reservoir capacitors with high capacity and low parasitic inductance, low tolerance polypropylene capacitors and special low noise resistors for audio use.

The double layer printed circuit boards are made with high thickness copper (105um in place of the usual 35um) to lower tracks resistance and inductance, particularly those which carry relevant current. The connections which carry the highest currents are made with suitable wires to reduce impedance to a minimum. This choice makes for a very low impedance supply capable to support the needs of the high current circuit of the amplifier, up to the upper frequency limit and at full power.

Current gain technology

Absoluta has chosen, for her power amplifiers, to adopt the current gain technology for the signal amplification chain, instead of the traditional voltage gain technology. The advantages of the choice made by Absoluta are numerous and can be read within Tersicore specs: a very large power bandwidth (That is the frequency response measured when the amplifier is delivering
the rated power), a reduced rise time, capable of supporting the

fastest transient at every listening level, and an intrinsic stability on every load.

The large use of output devices (two 16A Sanken BJT for each polarity) and the robustness of the power amplifier granted by the two 350VA transformers allow for an exemplar behavior of the Tersicore with every loudspeaker, even with impedances less than 2Ω. Actually, The output stage of Tersicore behaves as a real I-V converter, imposing to the load a faithful copy of the current signal amplified by the signal chain.

"Diamond" input stage

This sophisticated input stage is made following the "diamond" topology, which allows for a high input impedance, absolute linearity and intrinsic V-I conversion with nearly infinite bandwidth and absence of any slew-rate effect. The input stage offers both single-ended and balanced inputs.

In the case of the single-ended input both non-inverting and inverting nodes are accessible. It is then possible to choose the operation polarity of the amplifier following that of the preamplifier and of the loudspeaker. It is also possible to make a bridge connection of the two channels of Tersicore to obtain a monoblock power amplifier capable of 300W on 8Ω, without using inverting circuits.

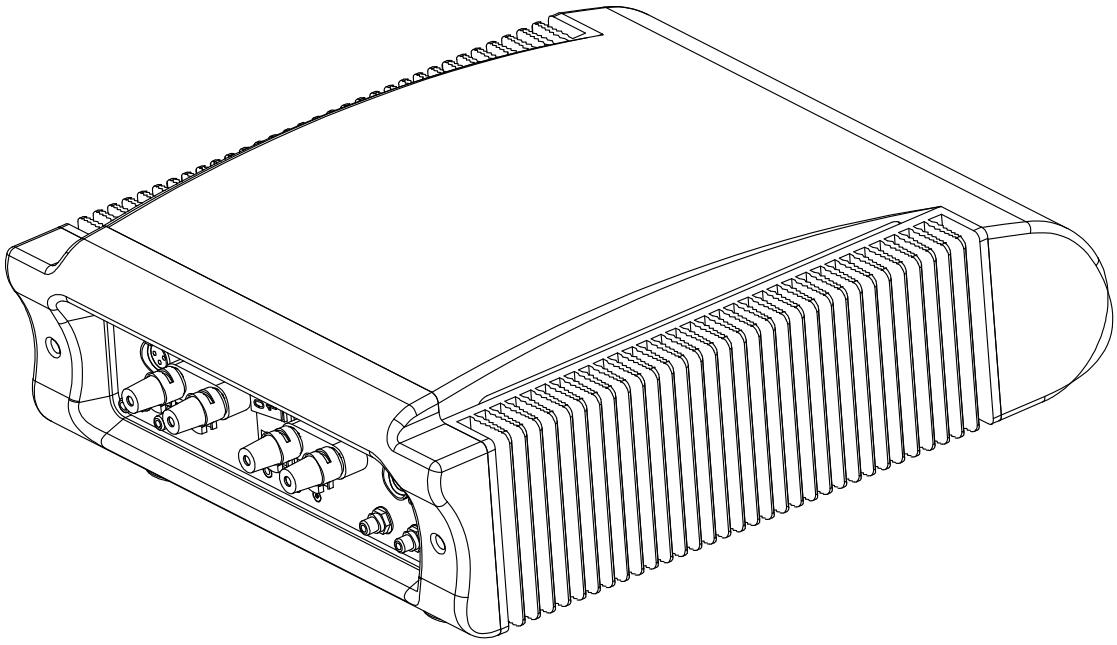
Sophisticated and non-intrusive protections

Tersicore is provided with an exclusive and refined electronic protection circuitry to grant the health of the output devices. Differently from most of other products the protection circuit of Tersicore is a sophisticated analog calculator that computes the Ic * Vce product, obtaining the instant power dissipated on each power transistor. With a bandwidth of 500kHz, the protection circuit continuously patrols the power transistor dissipation and activates only when the dissipation exceeds the borders of the dynamic S.O.AR. (Safe Operating ARea) for long. The collector current is monitored, too, to prevent it from exceeding its limit, no matter how much power is dissipated by the transistor.
The power capability of the output transistors is such that protections activate only in unlikely limit conditions (short-circuits on the output or strongly reactive loads with impedance module less than 1.5Ω). In the event of continuous overloads, the protection circuit disconnects the load from the amplifier, to guarantee amplifier's operation.

The loudspeakers' safety is guaranteed by a circuit which senses the offset (direct current) on the speakers output, disconnecting the load from the amplifier until the cause of the offset is removed. The same circuit immediately disconnects the load

when an abnormal dynamic condition occurs (for example, when a interconnect is inserted on the amplifier input when it is on).
The circuit is also effective when a fault or malfunction of the amplification circuit occurs.

As further safety guarantee of the amplifier, a specific circuit senses the temperature of the heat sinks and disconnects the load (thus reducing the power dissipated by the output devices to a minimum) when their temperature rises too much.



Unpacking

Warning!

DO NOT try to lift or move Tersicore without adequate assistance. Failure to follow the procedures included in this section may result in personal injuries and/or product damage.

Tersicore is a heavy and massive amplifier. Its weight is 23.5kg (52 lbs.) without packaging, 38kg (84 lbs.) with packaging. Don't get fooled by its small size: its weight is enough to cause injuries to your spine, more so when it's not possible to use a correct lifting technique. Two people are required to lift and shift Tersicore.

Warning!

DO NOT try to extract Tersicore from its packaging without help.

DO NOT try to lift Tersicore while bending on it. When lifting it, keep your back vertical as much as possible, using your legs to lift the amplifier.

When extracting Tersicore from its packaging:

- DO save all packaging materials for possible future shipping needs.
- Do inspect Tersicore for signs of damage during shipment. If damage is discovered, contact an Absoluta authorized dealer for assistance.

Installation Considerations

Tersicore requires special care during installation to ensure optimal performance. Pay particular attention to the precautions included in this section and to other precautions included throughout this owner's manual.

Placement

- DO review "Important Safety Instructions" and "Power Requirements" before installing Tersicore.
- Do place Tersicore on a solid, flat, level surface, such as a table, a shelf or the floor.
- DO position Tersicore close to the associated loudspeakers to keep loudspeakers wires as short as possible. Use longer interconnect cables between Tersicore and the preamplifier. This is preferable because interconnect cables pass low-voltage signals, which transmit over distances with greater accuracy than the high-voltage signals required by loud-speakers.
- DO allow at least 15cm clearance behind Tersicore for the power cord and other cables to bend without crimping or straining.
- DO see "Dimensions" for assistance with custom installation.
- DO NOT position Tersicore near low-level components. This amplifier is capable of producing massive output currents which could generate significant magnetic fields that could induce noise in some sensitive components.
- DO NOT place Tersicore on a windowsill or in any other location in which it will be exposed to direct sunlight. Solar radiations can damage it or alter its color.

Warning!

BEFORE moving Tersicore, make sure it is powered off using the power cocker switch on the back panel. Then, make sure that the power cord is disconnected from the AC mains connector and from the power outlet.

DO NOT attempt to move Tersicore without adequate assistance. Proper lifting requires at least two people.

Ventilation

Tersicore dissipates the heat produced during operation through two massive heat sinks placed laterally to the cabinet, and thanks to several venting holes located on the bottom and on the top of the cabinet. The hot air coming out of these holes finds it way thanks to a particular design of the external shell.

Installation Consideration (continued)

When Tersicore is placed in a position in which a correct air flow is provided, its proper operation is ensured at every listening level and with every loudspeaker.

Due to the high bias of output devices, Tersicore produces relevant heat even when idle. Heat sinks can become very hot during high volume listening. Please consider that a temperature of 60°C makes the heat sinks impossible to touch with bare hands. Thermal protection triggers when heat sinks' temperature reaches 85°C.

- DO select a dry, well-ventilated position, out of direct sunlight.
- DO NOT obstruct venting holes on the bottom and on the top of the
  cabinet or on the outer shell. Do not reduce air flow through the cabinet and around the heat sinks.
- DO NOT place Tersicore on a thick carpet. Do not cover it with a cloth, as this would impede proper cooling. If Tersicore is placed on the floor, use a thick tempered glass sheet to provide a stable base and to provide adequate venting.
- DO NOT expose Tersicore to high temperature, humidity, steam, smoke, dampness or excessive dust. Avoid installing Tersicore near radiators and other heat-producing appliances.

Power Requirements

Tersicore is configured to operate at the voltage present in the Country where it is sold. Before activating Tersicore, make sure that the label on the back panel indicates the right mains voltage.

Warning!

DO NOT attempt to adjust the operating voltage. Consult an authorized Absoluta dealer if the operating voltage is incorrect or if the operating voltage must be changed for relocation purposes.

BE ADVISED that different operating voltages may require the use of different power cords and/or attachment plugs. Contact an authorized Absoluta dealer for assistance.

Tersicore is capable of passing remarkable musical signals regardless of signal and of loudspeakers demands. On either an instantaneous or continuous basis, this amplifier is capable of driving exceptional power level into most of loudspeakers loads. Depending on listening habits, loudspeakers demands and on the number of power amplifiers present in the system – it is possible for the electrical service to become the limiting performance factor.

In this case, consider installing a dedicated AC circuit for the home entertainment system. Contact a licensed electrician for assistance. If more than one electric circuit is providing power to the system, contact a licensed electrician to ensure that all components are operating with the same, solid low-impedance round reference.

Note

Building regulations and electrical codes differ from location to location, making it impossible to anticipate the requirements of high-current AC circuits such as Tersicore is capable of using. Contact a local, licensed electrician for information.

Warm-up & break-in period

Although Tersicore delivers superior performance from the first time it's powered on, its performance will continue to improve as the power amplifier reaches its normal operating temperature and various components "break-in". The greatest performance improvements will occur within the first 100 hours of use. Sound quality will continue to improve for about 300 hours. After this initial period, Tersicore performance will remain consistent unless the unit is switched off. Once switched off, after the successive switch-on, nearly half an hour will occur before Tersicore will give the best performance again.

Operating modes

Tersicore has three operating modes:

1. Off

Power is considered disconnected from Tersicore (back panel Switch on “0” and trigger input not connected or power cord disconnected).

2. Standby

The back panel switch in on “0”, the power cord is connected to the power outlet and the trigger input is connected to the trigger output of another device, but it’s not active.
Tersicore is not operative but can be switched on activating the trigger output of the device to which the Tersicore trigger input is connected.

3. On

The power cord is connected to the mains outlet and the back Panel switch is on “1” and/or the trigger input is driven (active) by the trigger output of another device.

Note

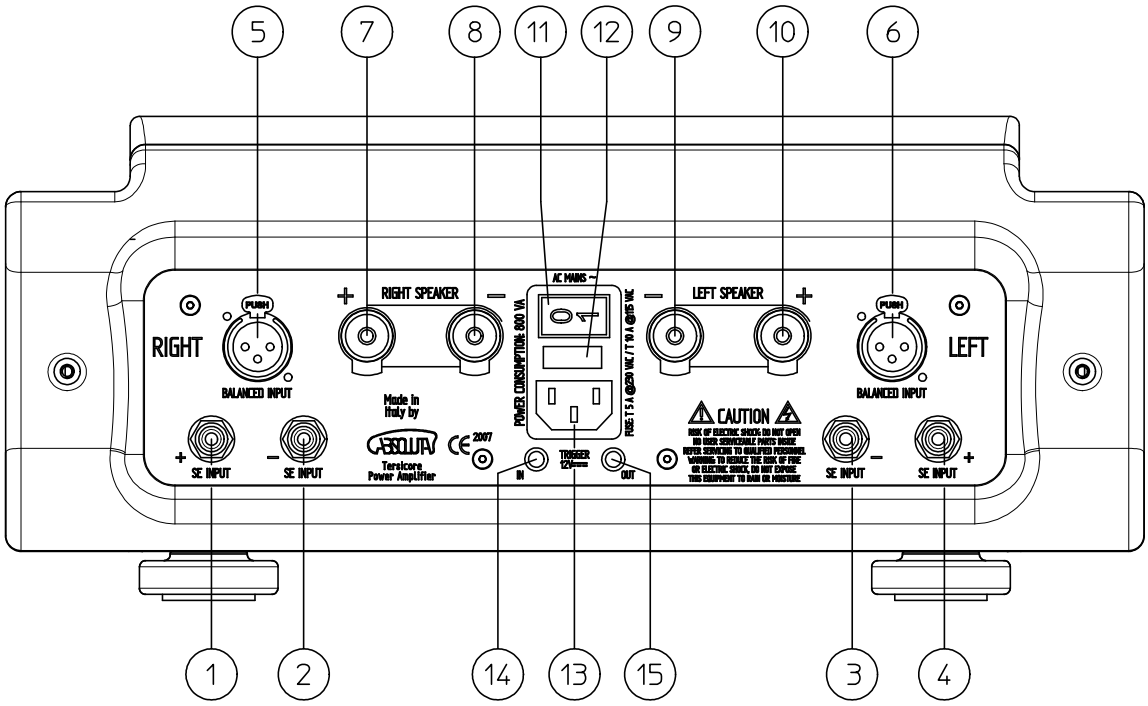
Tersicore is designed to operate with a high bias on the output stage, for this reason it generates relevant heat even when idle. Idle power consumption is 40W, which are dissipated as heat.

Continuous operation

Tersicore should be unplugged from the mains outlet during lightning storms and during extended periods of non-use. Otherwise, it is designed for continuous operation.

Although Tersicore reaches its best performance after half an hour of operation, it is better not to keep the unit continuously on in order to have the best sound always available. This would cause an unnecessary waste of electrical power, Tersicore would be exposed to unnecessary risks and some of its fundamental components would be subject to fast ageing.

Operation



Back Panel

The numbers in the back panel illustration shown above correspond with the items in this section.

1,4. Non-inverting single-ended input connector

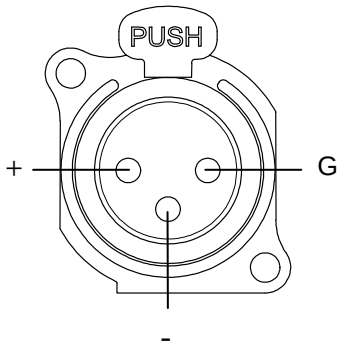
Non inverting unbalanced audio input. An RCA socket accepts single-ended signals from a preamplifier.
Signal phase is maintained from Tersicore input to output when using this connection. To minimize noise pick-up, when using the inverting single-ended input connector it's better to short-circuit this connector with a shorting plug

2,3. Inverting single-ended input connector

Inverting unbalanced audio input. An RCA socket accepts single-ended signals from a preamplifier.
Signal phase is inverted from Tersicore input to output when using this connection. To minimize noise pick-up,

when using the non-inverting single-ended input connector it's better to short-circuit this connector with a shorting plug.

5,6. Balanced input connector

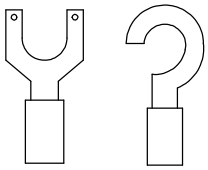


Balanced audio input. An XLR female connector accepts balanced signals from a preamplifier. Tersicore offers the highest level of performance whatever connection is used. Whenever the distance between Tersicore and the preamplifier is relevant (more than 5 meters or 15 feet) and/or whenever remarkable EMI disturbances are present in the room, the balanced connection provides superior rejection to electromagnetic interferences (EMI).

Note When using the balanced input, the shorting plugs MUST be removed from the two single-ended input connectors

Note Pay attention to the layout of hot and cold poles ("send" e "return") in the balanced output connector of the preamplifier used with Tersicore. Two standards can be found, one used in Japan and, sometimes, in the USA; the other used in Europe and, often in the USA. The two standards differ in which hot and cold poles are exchanged in the connectors. Absoluta products comply to European standards. Should your preamplifier adhere to Japanese standards, a phase reversal will result from connecting the preamplifier to Tersicore, one which can be recovered by inverting speakers cable polarity at Tersicore output posts.

7,10. Positive output post



Power output positive post. A gold plated connector accepts bare wire, bananas and spades lugs. Thanks to the presence of an axial hole it is possible to simultaneously connect two cables, one of which terminates with bananas, in order to implement bi-wiring connection of the loudspeaker. The large size of the connectors makes for best current transfer from amplifier to loudspeaker.

Warning! **NEVER connect the positive power output to any component other than to a loudspeaker**

NEVER short-circuit the positive output to the negative one or to any metal part of the amplifier.

8,9. Negative output post

Power output positive post. A gold plated connector

accepts bare wires, bananas and spades lugs. Thanks to the presence of an axial hole it is possible to simultaneously connect two cables, one of which terminates with bananas, in order to implement bi-wiring connection of the loudspeakers. The large size of the connectors makes for best current transfer from amplifier to loudspeaker.

For best performance, use high-quality loudspeaker cables. Use high quality terminations, soldered or accurately crimped at cables ends to connect these cables

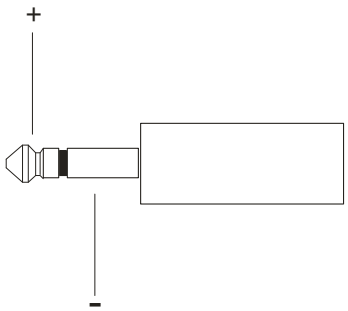
- Connect the positive output post of Tersicore to the positive input of the loudspeaker. This input is generally associated with red color.
- Connect the negative output post of Tersicore to the negative inputof the loudspeaker. This input is generally associated with black color.

Warning!

DO NOT OVER-TIGHTEN the binding posts. The specific contact surfaces allow for a good contact even when the posts are tightened by hand. No specific tool is required to increase the tightening. Whenever a better contact is required, please us expansion banana connectors.

DO NOT FORCE the posts to help the insertion of a connector if its size or shape doesn't fir the post: posts may be damaged.

15. Trigger output connector



3,5mm jack socket for trigger output. A 12V DC voltage is available on this output when Tersicore is on. Using this output it is possible to activate another component provided with a trigger input. For example, in a system in which two Tersicore are used, one can be activated by the other by connecting the trigger output of the first one to the trigger input of the second one.

As the voltage is available on the trigger output after some seconds from Tersicore activation, using the trigger to activate the second amplifier avoids that switch-on surges of the two units have place at the same time, reducing the risk for the mains protection to trigger

The trigger output is protected against short-circuits and Overloads by a polyswitch fuse. It's always better to check

the polarity of the connection and not to overload the output (refer to technical specs to find out the maximum output current delivered by this output).

14. Trigger input connector

3,5mm jack socket for trigger input. By applying a 12V DC voltage to this socket Tersicore is activated, no matter the state of the power main switch. The trigger input and the main power switch are in parallel, thus the trigger input is not operative when the main power switch in on "1" (that is, it's not possible to switch the amplifier off but triggering the main power switch)

Connect the trigger input of tersicore to the trigger output of a Preamplifier or of another Tersicore.

Warning! **PAY ATTENTION to the polarity of the voltage applied to the trigger input: it's protected against polarity inversions, but the trigger output of the driving unit could be damaged.**

11. Main power switch

Switches Tersicore on ("1" position) and off ("0" position) when the power cord is connected to a power outlet and the trigger input is not active. In this case the amplifier is always on regardless the switch's state.

Note The main power switch must be in "0" position (off) for the trigger input to be operative.

12. Fuse holder

The fuse holder contains the main power fuse. Internal circuits are already protected by other fuses located on the printed circuit board. The fuse container in this fuse holder only burns after critical events (huge amplifiers faults). Should this happen, disconnect the power cord from the outlet and contact an authorized Absoluta dealer for assistance.

Warning! **DO NOT try to replace the fuse.**

Warning! **Potentially dangerous voltages and relevant charge are present inside Tersicore even when the amplifier is off. DO NOT try to open the amplifier's cabinet to try servicing.**

Back Panel (continued)

For all servicing refer to your authorized Absoluta dealer.

13. Mains socket

The mains socket provides the main power supply to Tersicore when the power cord, provided with the amplifier, is connected to it.

Note

Before switching Tersicore on, make sure that the label on the back panel showing the operating voltage indicates the right voltage.

Warning!

Tersicore has been designed and tested to be used with a power cord provided with earth wire and with three prongs plug. Do not damage or detach the earth prong from the power cord plug.

Connections

Tersicore offers numerous options for connection to a preamplifier and to loudspeakers.

Absolute phase

The absolute phase of the signal (e.g. the relationship between the phase of the incoming signal from the preamplifier and that of the signal applied to the loudspeaker) can either be maintained or inverted depending on the input used and on the polarity with which the loudspeakers are connected to the output of the amplifier.

When using the non-inverting single-ended input or the balanced input (European standard), absolute phase is maintained by connecting the positive input of the loudspeaker (red) to the positive output post of the amplifier and the negative input of the loudspeaker (black) to the negative output of the amplifier. By inverting this connection, absolute phase is inverted, too (that is, your system becomes inverting).

Note

When using the inverting single-ended input or when driving the balanced input with a preamplifier which balanced outputs comply with the Japanese standard Tersicore becomes inverting, thus the absolute phase needs to be restored by exchanging the speakers cables' connections either at amplifier's outputs or at loudspeaker's inputs only.
The availability of an inverting input on Tersicore is useful when using an inverting preamplifier (as many tube preamplifiers are) because it allows for restoring absolute phase by introducing a second phase inversion in the power amplifier.

Bi-wiring

Many loudspeakers give better performance when driven in bi-wiring. This technique requires the use of a pair of cables to drive the low frequency section of the loudspeaker and another pair of cables to drive its mid-high section. To implement this technique it is necessary for the speakers to be provided with two pairs of binding posts.
As Tersicore is provided with a single pair of output binding posts, it is necessary to connect two cables to each post. It is advisable to choose cables with terminations that don't apply excessive strain to the posts of the amplifier. A good choice could be using bananas for one cable pair and spades for the other, such as to use both connection modes offered by the posts.

Warning!

Even if it's possible to connect bare wires to the posts, it is better not to choose this solution: chances are that some

conductors escape the tightenings and accidentally come into contact with the metal parts of the amplifier or other conductors from the other polarity cable, causing short-circuits.
ALWAYS PREFERE cables provided with suitable terminations.

Bridging

When a higher power than that provided by a single Tersicore is necessary, it's possible to connect two Tersicore channels in bridge mode, obtaining a monoblock amplifier capable of 300Wrms continuous @ 8Ω and 600Wrms continuous @ 4Ω.

Connect the two Tersicore channels as follows:

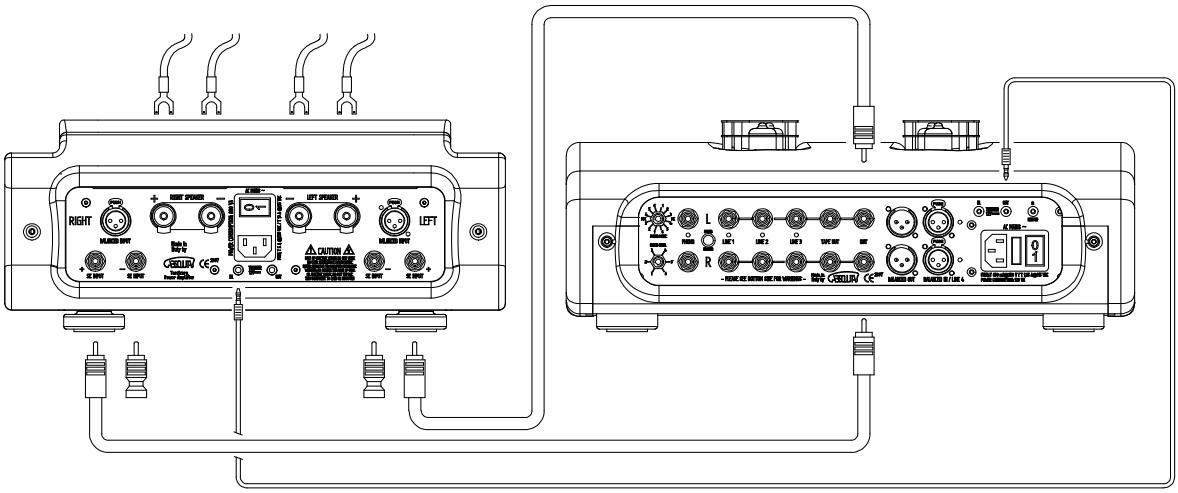
- Connect the non-inverting input of the first Tersicore channel to the output of the preamplifier.
- Connect the inverting input of the second Tersicore channel to the same preamplifier's output (a suitable splitter must be used) or to a second output of the preamplifier on which the same signal as the first output is present.
- Connect the positive input of the speaker to the positive output of the first Tersicore channel.
- Connect the negative input of the speaker to the positive output of the second Tersicore channel.
- Connect the two negative output posts of the two Tersicore channels each other.

Note

If, by mistake, the same input (non-inverting or inverting) is used on both channels of Tersicore, they will operate with the same phase and the resulting signal on the loudspeakers posts will be virtually zero. This will not damage either the loudspeakers or the amplifiers.

Warning!

DO NOT use loudspeakers with impedance less than 4Ω with bridged Tersicore: in this set-up each channel "sees" a load with impedance equal to half the impedence of the loudspeakers and it's required to supply twice as much current than when it's operating "alone". This implies a greater load on the output stage and could lead to protection activation during music climaxes.

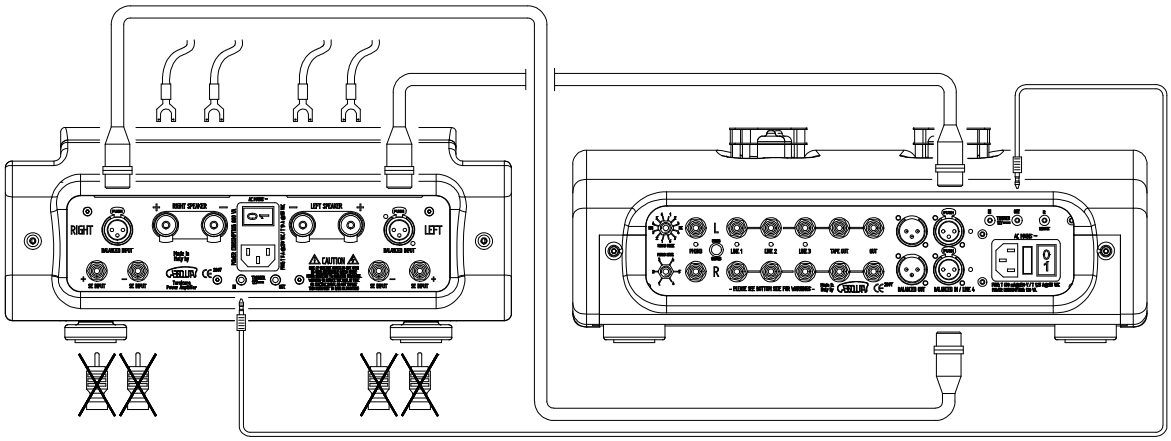


Base Connection Set-up

The basic connection configuration of Tersicore requires using one Tersicore and one preamplifier (for example, Talia).
Connect the non-inverting input of each Tersicore channel to one of the pre outputs of the preamplifier, one to the Left output and one to the Right output using shielded cables with RCA termination.
Connect the cables from each loudspeaker to the power output of each channel of Tersicore, paying attention to the polarity.
If the trigger function is to be used, and when the preamplifier is provided with a suitable output on a 3.5mm jack socket, connect the preamplifier trigger output to the trigger input of Tersicore using a interconnect provided with 3.5mm jack (mono or stereo).

Note To use Tersicore in inverting mode, connect the preamplifier outputs to the inverting inputs of Tersicore.

Note Short the unused inputs connector with the shorting plugs provided with the amplifier. This reduces to a minimum the noise pick-up from the unused input.



Base Balanced Connection

When the preamplifier is provided with balanced outputs with XLR connections, it is possible to connect it to Tersicore in balanced mode using balanced cables with XLR plugs.

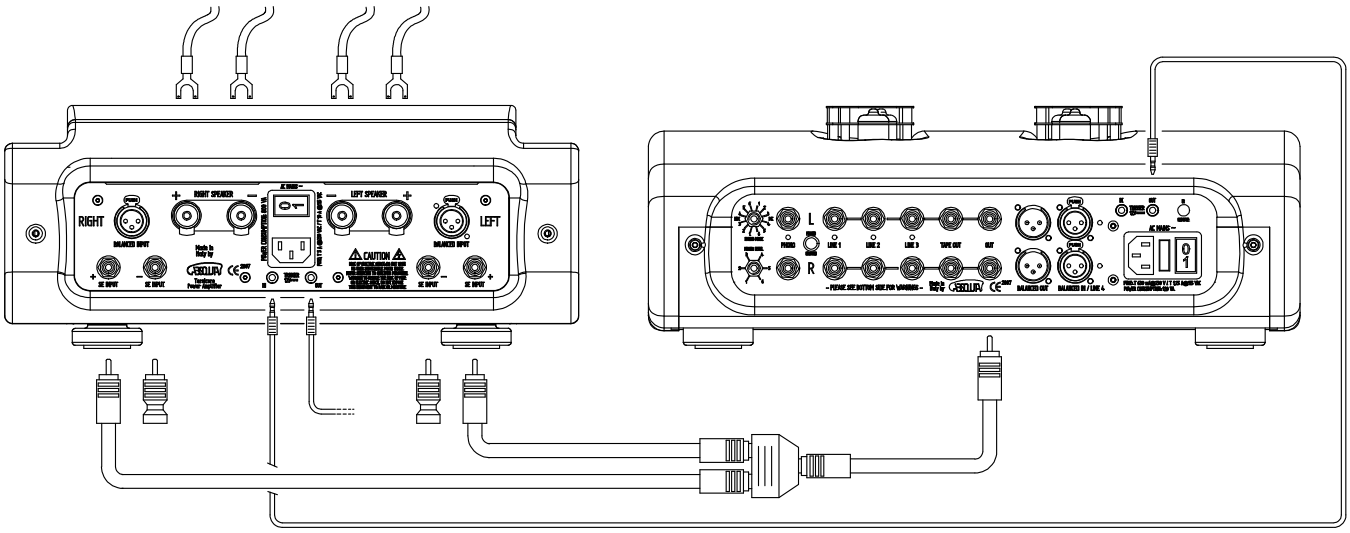
This connection option is to be preferred when the power amplifiers are far from the preamplifiers (more than 5m or 15ft) and/or when the system is located in a room in which strong electromagnetic disturbances are present.

Note When using the balanced connection, the two single-ended input connectors (RCA) must be left open.

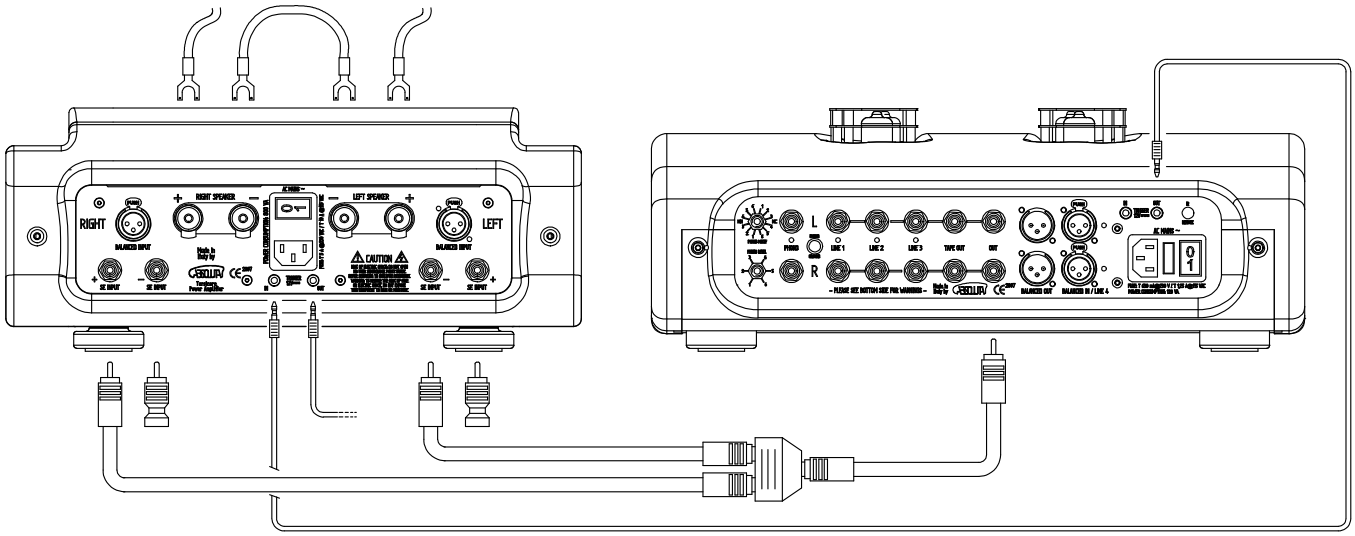
Note Depending on the standard of the preamplifier output XLR connectors (European or Japanese), the signal phase may result inverted at the input terminals of the loudspeakers. In this case, it's possible to restore the absolute phase either by inverting the connection of the speakers cables at the amplifiers or loudspeakers posts only or using the phase switch of the preamplifier, when available.

Passive Bi-amping Connection

When the loudspeakers are provided with separate inputs for low frequency and high frequency drivers, it is possible to implement a passive bi-amping connection. This connection mode requires one Tersicore per channel, driven by the same output connector of the preamplifier (Left or Right) by a suitable splitter, or by two different Left or Right outputs they be available.



It is possible to make single-ended connections (using coax cable and RCA connectors) or balanced connections (using balanced cable and XLR connectors). For the specific connections the previous indications hold true.



Bridge Connection

When speakers sensitivity and/or the size of the listening room call for a higher output power than that delivered by a single Tersicore, it is possible to use two connecting them in pair in bridged mode. This set-up allows for three times as much power as a single Tersicore, with a net gain of 5dB SPL.

By using Four Tersicore it is then possible to make a passive bi-amping bridged configuration, following these indication together with the previous ones (“Passive Bi-amping Connection”).

Troubleshooting
Maintenance

Troubleshooting

A wrong use is sometimes mistaken for malfunction. Should problems occur, refer to this section for troubleshooting. If problems persist, contact your authorized Absoluta dealer.

1. The amplifier does not turn on (turn-on is indicated, a few seconds after activation, by a "click" from each internal output relay).

- Check for mains power cord correct insertion in the Tersicore mains socket.
- Check for mains power cord plug correct insertion in the mains outlet.
- Check for power cord integrity.
- Make sure that the main power switch is on "1" or that the trigger input is driven with a 12 V DC voltage with the correct polarity.
- Check for mains fuse integrity.
- It is possible that one of the internal fuse is s blown. In this case, disconnect the unit from the power outlet and contact your authorized Absoluta dealer. **DO NOT try to replace any fuse. Nor any other serviceable parts inside the unit.**

Warning!

Potentially dangerous voltages are present inside Tersicore, even when the unit is off. DO NOT try any servicing inside the unit. DO NOT open the unit. Contact your authorized Absoluta dealer for servicing.

2. The amplifier turns on (turn-on is indicated, a few seconds after activation, by a "click" from each internal relay but no sound comes from the loudspeakers.

- Make sure that the cables of the loudspeakers are correctly connected to

the output posts of Tersicore.

- Make sure that the interconnect cables are correctly connected to the input of Tersicore and to the preamplifier output.
- Make sure that the preamplifier is on.
- Check for integrity of all interconnect and power cables used with Tersicore.
- It is possible that Tersicore goes into protection right after activation due to a short-circuit on output of the speakers. It is possible to check this by carefully listening to the relay "clicks": if more clicks are heard right after the first two, chances are that the protection circuit of the amplifier has sensed a short-circuit on the output of the amplifier. Remove the short-circuit.

Warning!

When discovering that one of the cables (interconnect or power) is not correctly connected, switch Tersicore off before completing the connection. NEVER connect or disconnect a cable when Tersicore is on! This could damage the amplifier or the loudspeakers.

3. The output relays disengage every time the preamplifier is turned on or when a certain source is selected, to re-engage after a few seconds.

- DC offset is present on preamplifier or source output. Tersicore is able to null this offset, but its presence at the input of the amplifier may result in a reduction of the quality of the sound and in excessive heating of Tersicore. Contact the dealer who sold the preamplifier or the source for servicing.

4. The amplifier doesn't turn on by the trigger input.

- Check for correct connection and polarity of the cable between the trigger output of the preamplifier and the trigger input of Tersicore.

5. The voltage at the Tersicore trigger output doesn't reach the component to which the output is connected.

- Check for integrity of the cable used to take the trigger voltage from Tersicore to the input of the component.
- Check for magnitude and polarity of the voltage required to activate the component to be activated by Tersicore.

Troubleshooting (continued)

6. The sound produced by Tersicore is distorted at high levels.

- The loudspeakers used with Tersicore and/or the size of the room require more power than that delivered by Tersicore. Use two Tersicore in bridged set-up or try bi-amping.

7. Tersicore overheats and/or thermal protections engages frequently.

- The unit is not properly ventilated or it's placed in an excessively hot room. Allow for more free room around, over and under the unit to increase ventilation and/or move it to a cooler place.
- The unit is constantly overdriven on a very difficult load. Reduce listening level or add a second Tersicore (in bridged or bi-amp set-up)
- A relevant DC offset is present on Tersicore input (see item 3 to solve this problem).
- The unit is damaged. Switch Tersicore off and contact your authorized Absoluta dealer.

8. A light electric shock is perceived when touching the exposed metal parts of Tersicore when it is connected to the mains.

- Tersicore earth connection is faulty. Switch the unit off, disconnect it from mains and contact your authorized Absoluta dealer.
- Your house mains network is not provided with safety earth, or the mains outlet you're using is not provided with earth connection. Contact a licensed electrician to solve this problem.

Warning!

DO NOT, for any reason, disconnect or eliminate the earth connection of mains outlets, power distributors of power cords. Tersicore has been designed to provide top performance and safety with an earth connection. Using the unit without an adequate earth connection may result in damage to the unit or to other components connected to it. It may harm or cause the death of whoever gets in touch with the unit metal parts!

In all other cases not covered by this section, switch unit off and disconnect from mains outlet and from all other components of the system. Contact your authorized Absoluta dealer for assistance.

Maintenance

Tersicore has been designed to give his owner years of trouble-free use. The unit doesn't require any maintenance on a regular basis, nor adjustments of any kind.

The only maintenance operation to be done on a regular basis is the one required by outer shell, to remove dust and fingerprints.

Failing to follow the indications in this section may result in damages to the unit and warranty voiding.

- Use a feather duster or a low pressure blower to remove dust from the surface and from the heat sinks.
- Use a soft, lint-free cloth to remove dirt and fingerprints from the surface. DO NOT use a cloth made with steel wool or metal polish.
- When needed, the cloth can be dampened with isopropyl alcohol to clean metal parts. DO NOT use acetone, benzene and other commercial cleaners.
- The outer shell must be treated, depending on the material it's made of and depending on its finish, with the cleaner recommended by the manufacturer (the indication is given together with the shell, on a separate sheet).

Warning!

DO NOT drop or apply liquids directly onto the unit, because this could damage the internal components and impede the unit's proper operation.

Specifications

Rated Output Power	• 100Wrms p.c. @ 8Ω • 200Wrms p.c. @ 4Ω • 350Wrms p.c. @ 2Ω *All rated power values are 10Hz to 200kHz, with a THD less than 0.1% e at nominal mains voltage. Any load phase.*
Measured Ouput Power	• 126Wrms p.c. @ 8Ω • 210Wrms p.c. @ 4Ω *Power measured @ 1kHz, on resistive load, with THD less than 0.1% at nominal mains voltage.*
Peak Current	• 32A (10ms)
Frequency Response	• 20Hz to 20kHz +/-0,1dB • 10Hz to 250kHz +/-3dB
Signal-to-Noise Ratio	• 85dB not weighted • 88dB “A” weighted (ref. nominal output voltage)
THD + N	0,04% (@ 2,83Vrms output)
Input Impedance	• 47kΩ (unbalanced) • 100kΩ (balanced)
Gain	• 26dB
Sensitivity	• 1,41Vrms for rated output power

Power Consumption

- 700VA (+/-5%) max. output power
- 40VA (+/-5%) idle

Mains Voltage

- Fixed as indicated by the label on the back panel

Size

- 270 x 144.5 x 429.8 mm (see “Dimensions”)

Weigth

- With packing: 38kg
- Net: 23.5kg

Connectors

- 4 gold plated output binding posts for loudspeaker
- 4 gold plated RCA input connectors
- 2 female XLR balanced input connector
- 2 mini-jack (3.5mm) connectors for triggers
- 1 IEC mains socket

Dimensions