Owner's manual

Reference collection
Didascalìa

DIAPASON
Audio Technologies Development
Since 1987

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1 General Information

1.1 User Information and an introduction to Diapason loudspeakers

Dear Customer,
First of all, we would like to thank you and congratulate you on choosing a **Diapason** loudspeaker system to enjoy your favorite music.
Our main attitude - from which all **Diapason** loudspeakers spring - is the strongest love for music, therefore we aim for the listener a deep involvement of emotions, the ones only music itself can provide.
The means to achieve such a result are certainly sought in creative technical solutions and in a "no compromise" approach but, more than everything, in staying faithful to our core philosophy:
"We are not producing loudspeakers systems designed by computers for computers, we are manufacturing handcraft creations conceived by human beings for human beings"
Diapason was born because of a recording engineer quest for a very good mixing and mastering monitor: such a heritage drives us designing loudspeaker systems characterized by neutrality and transparency in first place. We believe those features are the corner stone of a loudspeakers capable to recreate the full spectrum of information recorded during a musical event, capable of recreating the listening experience of a live performance.
Authentic traditional Italian craftsmanship is another pillar of the **Diapason**'s identity.
Your new **Diapason** loudspeaker is the result of a union between solid wood, other hi-tech materials (Depending on the model) and the most advanced technology applied to the science of acoustics.
Our cabinets are always based on solid hardwood staves hand worked, glued and CNC machined by our skilled craftsmen. They are assembled cross graining each stave in order to keep the structure extremely rigid, stable and resonance free.
The solid wood employed in our manufacturing process come from managed plantations where environment and nature are fully respected. Moreover, in the finishing process water-based paints are used, which give a very pleasing and natural effect to the wood, both from a visual and tactile point of view.

The high gloss lacquered versions of our models, when available, are based on various sandwich multilayered hi density wood constructions, optimized for the specific application.
At the basis of every **Diapason** project is the study of form, whether in the search for an elegant and refined appearance or for solutions in the quest for perfect acoustic reproduction. Particularly, we focused over the years in managing cabinets diffractions and more recently, in properly using the cabinet surfaces for a well-tempered loading of the transducers' emissions. The same care is taken with the cabinet interior, which is designed to avoid resonances and manage standing waves.

Our crossover circuits are all – from Micra to Dynamis - hard-wired with high end Van den Hul oxygen-free silvered copper cable.
The x-over architecture characterizing the **Diapason Reference** collection is characterized by balanced or semi-balanced circuitry: this means placing some reactive components on the negative rail of the circuitry, allowing to avoid interferences due to radio-frequencies pollution and managing the so called "look back impedance" (The load represented by the amplifier as seen from the speakers' perspective) allowing for a better coupling with the electronics. Of course this is a very expensive solution and just one example of the no compromise approach represented by the **Diapason Reference** collection. Here only the best of the best in terms of components are used: Mundorf Supreme Capacitors and Resistors, Jantzen inductors.
Another design characteristic of every **Diapason** loudspeaker is the management of the impedance curve, we care a lot our speaker being an easy load for any kind of amplifier, whether valve or solid-state.

Our exquisite speakers are designed to provide you with maximum immediate satisfaction, but since it is in our best interest to ensure you get the best possible listening experience, we invite you to carefully read this instruction manual before installation. If you have any questions or concerns, we recommend that you contact the technical staff at your point of sale, the official **Diapason** distributor in your country, or contact **Diapason** directly at info@diapason-italia.com. Finally, we strongly recommend that you register online at www.diapason-italia.com: this way, you will be informed of all **Diapason**'s latest news, initiatives, and promotions.

Enjoy the music!

1.2 Warranty and After-Sales Service

Diapason speakers are designed and manufactured to the highest quality standards: Each speaker is rigorously tested before packaging, to avoid any fault in production. However, in the unlikely event of a fault or malfunction, the speakers are still covered by 2 years warranty but if you register your Diapason speaker in the reserved area of our website (Sarebbe opportuno mettere il link) then you'll get a warrany extension of addictional 5 years, bringing the overall warranty covering to 7 years."
In this case, we invite the owner to contact the **Diapason** retailer from whom they made the purchase or the official **Diapason** distributor in their country; all distributor contact details are available on our website http://diapason-italia.com
Furthermore, in your interest, we would like to point out the following:
The speaker warranty covers any manufacturing defects;
1. Please retain your proof of purchase so you can show it to the retailer if necessary;
2. Please retain the speakers' original packaging so they can be transported without damage if sent to an authorized service center;
3. The speakers must be accompanied by a description of any malfunction or defect encountered.

The following conditions will void the product warranty:
4. The product has been disassembled or modified by anyone other than an authorized **Diapason** service center;
5. The product has been used in a manner not described in this manual.

1.2.1 In case of damage on the loudspeaker drive units

In the case of damage to one or more of the loudspeaker drive units (no sound or distorted sound) the cause is most likely to lie with the amplifier. A loudspeaker drive unit is a passive component which responds to an electrical signal provided by an amplifier, and as such it cannot damage itself.
Therefore, please make sure, before connecting the loudspeakers to your system, that the amplifier is working correctly and it is set to the correct voltage according to your local voltage network. The most common loudspeaker damages are either caused by too high mains voltage (including unstable peaks in power supply) or an amplifier which is driven beyond its capability. This latter condition produces a distorted signal and quickly damage the voice coils of the loudspeaker drive units. If you hear distortion, turn down the volume!

Please note: The warranty does not cover this type of damage.

1.2.2 A note

Diapason strives to manufacture the very finest possible equipment, and therefore reserves the right to make changes in design and improvements upon its products, without necessarily assuming an obligation to retrofit such changes upon previously manufactured models.

1.2.3 Service

Your loudspeakers will need to be serviced by authorized **Diapason** service personnel in the case of:

1. Spillage of liquids or objects on or into the loudspeaker
2. Rain damage to the loudspeaker
3. Noticeable changes in the performance of the loudspeaker
4. Shock damage or physical damage to the cabinet
5. Electrical or mechanical damage to a drive unit

Since the loudspeakers are supplied in closely matched pairs, in order to maintain their original sound signature we strongly recommend the use of **Diapason** original selected spare parts.
A final kind reminder: attempted repairs by unauthorized persons may nullify your rights under warranty.

1.3 Declaration of Conformity

Diapason by Sound Center Srl, with registered office at Via Fura, 40 - 25125 Brescia (BS), Italy, declares under its sole responsibility that this passive loudspeaker to which this declaration refers complies with:

1.3.1 Directives:

2014/30/EU (EMC) Electromagnetic Compatibility.
2011/65/EU (RoHS) Restriction of the use of certain hazardous substances in electrical and electronic equipment.
2012/19/EU (WEEE) Waste electrical and electronic equipment.
2006/1907/EC (REACH) Registration, Evaluation, Authorization and Restriction of Chemicals.

1.3.2 Standards:

CEI EN 60065:2016
Audio, video and similar electronic equipment; Safety requirements.
IEC EN 55013:2014
Radio and television receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement.
IEC EN 55020:2016
Radio and television receivers and associated equipment;
Immunity characteristics - Limits and methods of measurement.
IEC EN 61000-6-1:2013
Electromagnetic compatibility (EMC) Part 4-3: Testing and measurement techniques;
Immunity testing to radiated radio-frequency electromagnetic fields.
IEC EN 61000-6-3:2014
Generic Standards; Immunity for residential, commercial, and light-industrial environments.

Brescia, 01/09/2025

Alessandro Schiavi
President

2 Safety Information

1. Read this instruction manual and keep it handy for future reference.
2. Anytime it is possible adjust the speaker/stand feet for optimal stability.
3. Avoid placing foreign objects on the speaker that could compromise its stability.
4. If placing the speaker on a floating surface (e.g., mezzanines, wooden raised platforms, etc.), first check that the load-bearing capacity is sufficient to support the weight of the speakers. Also, ensure that there is sufficient friction to prevent the speaker from shifting due to vibrations during operation.
5. Avoid placing objects containing liquids or flammable or liquefying substances on the speaker.
6. Follow one of the connection diagrams indicated in this instruction manual. Connecting two or more speakers in parallel may damage your amplifier. If in doubt, contact your dealer.
7. While the audio system is operating, avoid listening at high volumes or near the speakers. This can cause permanent hearing damage. Keep children at least 50 cm away from the speaker.
8. The speakers produce an electromagnetic field around them that is harmless to humans and animals, but may interfere with the operation of electronic devices such as monitors and CRT televisions if placed in the immediate vicinity of the speaker. If this occurs, increase the distance between such devices and the speakers. Do not place credit cards or similar magnetic cards on the speaker.
9. The speaker technology relies on the principles of electromagnetism; therefore, users should avoid using devices that generate strong electromagnetic fields, which could interfere with the speaker. Avoid placing transceiver devices such as cell phones, cordless phones, intercom systems, etc., on the speaker cabinet.
10. Do not connect the speakers directly to a constant voltage sound system (100 V, 70.7 V, or similar). This can overload the system, potentially damaging the speaker and/or amplifier.
11. Do not run audio cables and power cables close to each other. There is an electro magnetic field near power cables that can cause an annoying hum. If this occurs, separate the audio cables and power cables.

3 Installation

3.1 Unpacking

Do not wear watches, bracelets, rings, etc., to avoid scratching the speakers and their finishes. Equal care should be taken to protect clothing from any metal elements such as zippers, buttons, buckles, rivets, etc.

Packaging materials can be polluting.
Do not dispose of these materials as household waste but take them to a waste collection and recycling center.

Do not leave packaging materials within reach of children!
Potential for poisoning or suffocation if swallowed.

The packing materials of your **Diapason** speakers has been designed to protect the loudspeakers from any damage due to rough handling during shipment.
We recommend you to retain the packaging for later transportation and to keep a note of the serial numbers for care service.
The bag containing the speakers are made of velvet or of recycled material (Depending on the model). We recommend you to cover the speakers with their bags when you leave them unused for long time

The speaker – no matter if "floorstanding" or placed in its stands - may fall if tilted excessively.
Gradually and slowly lift the speaker equally on all four sides to avoid unbalancing it.

3.2 The speaker in the Listening room

Correct placement in the room is of paramount importance in order to get the best listening results from your sound system. The experience and sensitivity of a qualified dealer/installer should be able to help you with advices regarding the best placement, in first place we suggest to experiment with various positions as all rooms have their own acoustic peculiarities.

3.2.1 Speaker Placement

It is clear that the choice of listening room itself (together with the one relative to the speaker placement) influence the performance of the entire reproduction system. It is preferable to choose an irregularly shaped room, as this can improve the room's response by limiting the formation of standing waves.
Carpets and curtains, if used sparingly, positively influence the acoustic response, helping to absorb reflections and standing waves generated in the listening room.
As mentioned above there are no fixed, universally valid rules for every room. However, a good approach to the problem of speaker placement in a dedicated room is to begin by ideally dividing the listening room's floor plan into three equivalent surfaces, as shown by the dotted lines in **Figure 1**.

It is advisable, at this point, to position the speakers on the first of the lines thus identified (A), well away from the side walls, and position the listening position on the second line (B).
This ensures that there is a good amount of air around the subjects involved in the stereophonic reproduction, allowing the speakers to work in total freedom and protecting the listener from the acoustic reflections that are generated near the walls and corners of the room.

Figure 1 shows how the speaker axes should converge toward the listening point, crossing over it, thus creating the classic "isosceles triangle" configuration. This arrangement, which consists of orienting the speakers so they are literally aimed at the listener's ears, significantly improves the focus of the stereo image.
Recognizing that the procedure outlined above, aimed at creating listening conditions close to ideal, will not be applicable to all our customers due to objective issues related to the livability of home environments, we recommend positioning the two speakers at a distance of no less than 1,8/2 meters from each other as well as between each individual speaker and the listening point while keeping them at least 50 cm from the side and back walls. The listening point should be approximately 1.1 meters above the ground. Stand mount speakers should be placed roughly at the same height, using one of our optional dedicated stands: placing a "bookshelf loudspeakers" too high or too low on a shelf will seriously compromise the sound outcome.
After the first few listening sessions, it may be necessary to adjust the distance between the speakers, between each of them, the listening point and the side/back walls.

3.3 Connections

The **Diapason Reference** collection loudspeakers are fitted with 4 terminals. These connectors are designed and manufactured by **Diapason**. Best conductive materials are used to ensure an excellent durable contact and will accept connections with cables terminated with spades, stripped wires, or banana plugs.
Before connecting the amplifier to the loudspeakers ensure that the amplifier is switched off and that the mains power cable is disconnected.

Connections must be made with the devices switched off!

Good quality loudspeaker cables are vital to obtain good sound quality. Using poor quality cables will cause unsatisfactory results, notably a vague three-dimensional positioning of the bass register and a loss of transparency in the mid and high-range. Never join two short speaker cables to make a long one, never use cables of different length/quality for the left channel and the right channel.
The speaker terminals feature hi quality jumper wires that allow speaker connections as described below.

The connection methods are listed in ascending order according to the quality of reproduction they can achieve, in terms of definition, control, and detail. Prior to that it is important to understand how the frequencies are subdivided in the **Diapason Reference collection**

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HF (HIGH FREQUENCIES) Connecting the tweeters

LF (MID-LOW FREQUENCIES) Connecting the mid-woofer

DYNAMIS

HF (MID-HIGH FREQUENCIES) Connecting the tweeter and the midrange

LF (MID-LOW FREQUENCIES) Connecting the woofer

Carefully tightening the terminals and checking them periodically helps improve performance.

3.3.1 Standard Connection

Use a single stereo amplifier or two mono amplifiers and a pair of speaker cables. Make the connections as shown in **Figure 2**.

Connection to the loudspeaker terminals:

1. Leave the jumper wires in position as supplied.
2. Connect the two cables from the amplifier outputs to the two lower terminals on each loudspeaker, respecting the polarity.

Connection to the amplifier:

3. Connect the two cables to the amplifier output terminals, positive and negative for each channel.

3.3.2 Bi-wiring

Use a single stereo amplifier or two mono amplifiers and two pairs of speaker cables. Make the connections as shown in **Figure 3**.

Connection to the loudspeaker terminals:

1. Remove the jumper wires from the terminals.
2. Connect the first pair of cables to the HF section and the second pair of cables to the LF section, respecting the polarity.

Connection to the amplifier:

3. Connect the two pair of cables used for each channel in parallel to the amplifier output terminals of the relative channel, positive and negative for each channel.

3.3.3 Bi-amping

Use a pair of stereo amplifier or four mono amplifiers and two pairs of speaker cables. Make the connections as shown in **Figure 4**.

Connection to the loudspeaker terminals:

1. Remove the jumper wires from the terminals.
2. Connect the first pair of cables to the HF section and the second pair of cables to the LF section, respecting the polarity.

Connection to the amplifier:

3. Connect the two pair of cables used for each channel to the corresponding stereo amplifier's channels output terminals or to the corresponding mono amplifiers output terminals, the ones used for that specific channel, positive and negative for each channel.

Generally speaking, check that amplifier's channel outputs (+ and -) are correctly wired to the corresponding loudspeaker input terminals. (Note: if the connections are inverted e.g. positive output to negative input on one channel, the sound will be out of phase, lacking in bass and soundstage focus.)

Before switching on the amplifier please double check:

1. That there are no bare wires of opposite polarity (+and-) in contact (short-circuit).
2. That there are no bare wires in contact with the case of the amplifier.
3. That all polarity (+and-) connections from amplifier to loudspeaker are correct.

After switching on, check with a familiar music track that both loudspeakers are operating and that the stereo image is correct. In case of any doubt at this stage, switch off the amplifier and re-check all connections.

4 Maintenance and Cleaning

Diapason speakers only requires periodic general cleaning. To preserve the finish of the speakers, cover them with the supplied fabric protector, especially if the speakers will not be used for an extended period of time.

Risk of damage to the appliance cabinet!
Do not use cleaning products, furniture wax, cleaning fluids, or alcohol.
Do not use rough cloths.

Your loudspeakers are made from solid hardwood, and will benefit from periodical cleaning. We recommend you to dust them from time to time, using a soft non-abrasive cloth (such as a microfiber one); again, do not use products such as wax or detergents that could stain or damage both the wood or the speakers.

Solid hardwood is a natural, living material and therefore very sensitive to atmospheric conditions. Little movements of wooden staves are normal and show that the cabinet of your **Diapason** speaker is still "alive", the same way an ancient musical string instrument, like violin or cello, is.

Take care not to expose your loudspeakers to draughts, sources of cold or heat, to direct

sunlight - especially during the summer months. Do to place them near windows or in humid conditions. Such conditions over time can also have an adverse effect on the rubber suspension of the loudspeaker drive units.
To care for metal and stone surfaces, use the same kind of cloth and a glass cleaner.
Dust on the loudspeaker drive units will not affect the sound quality but it doesn't look good: so, only when strictly necessary, the cone units should be cleaned. This requires a very soft brush, taking great care not to damage the delicate speaker diaphragms, operating with a gentle concentric motion, taking also care not to press down on the central dust-cap. Please take particular care that the dome of the treble unit is extremely delicate and can easily be damaged.
This care will keep your speakers in tip-top condition for many years to come.

4.1 Running in

Your loudspeakers will need a period of running-in before they can provide their best performance. A time ranging from 100 to 300 hours of operation, depending on the musical genre and the listening volume level, will help improve the sound due to the running-in of the moving parts (membranes and suspensions). Also the acoustic chamber will respond better and better the more it is used: these are the same rules that apply to stringed musical instruments! We recommend that any adjustments to your audio system be carried out after completing this initial run-in period.

5 Disposal

Appropriate separate waste collection for subsequent recycling, treatment, and environmentally compatible disposal of the decommissioned appliance helps prevent potential negative impacts on the environment, on human health and promotes the recycling of the product's materials.
The disposal of electrical and electronic equipment is regulated by the WEEE Directives 2012/19/EU - RoHS 2011/65/EU
The crossed-out wheeled bin symbol on the appliance indicates that the product, at the end of its useful life, must be disposed of separately from household waste.
The user is responsible for disposing of the appliance at the end of its life to the appropriate collection facilities.
For more detailed information on available collection systems, contact your local waste disposal service or the store/retailer where the product was purchased.

This appliance contains materials that may pollute the environment if disposed of.
Deliver the appliance to a recycling center for disposal.

6 Illustrations

6.1 The Speaker in the listening room

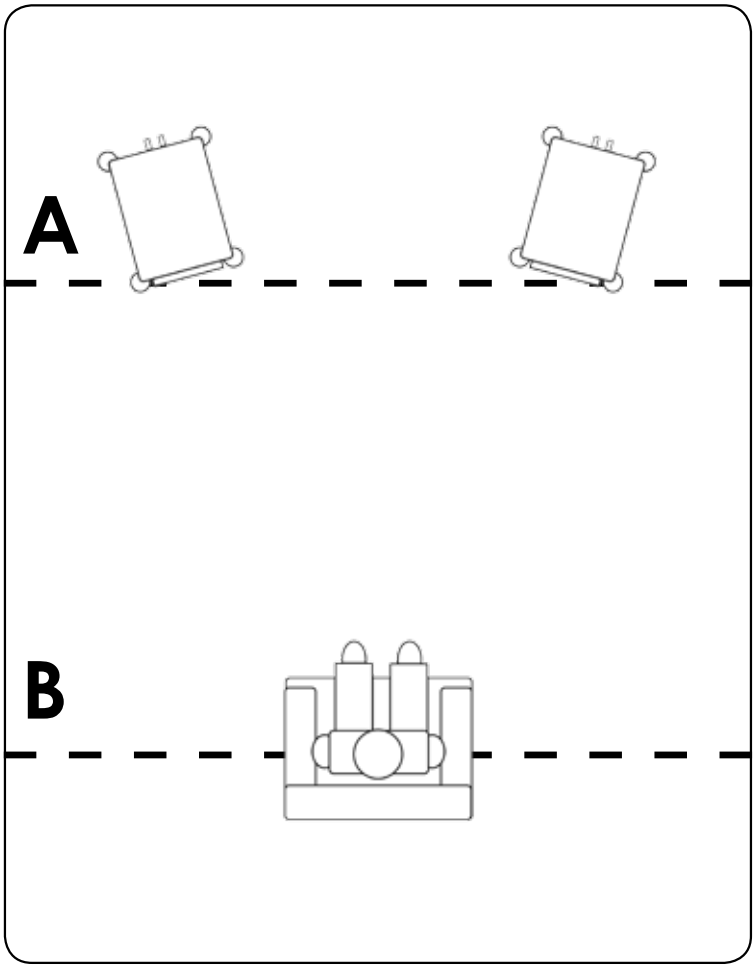

Fig. 1

6.2 Connections

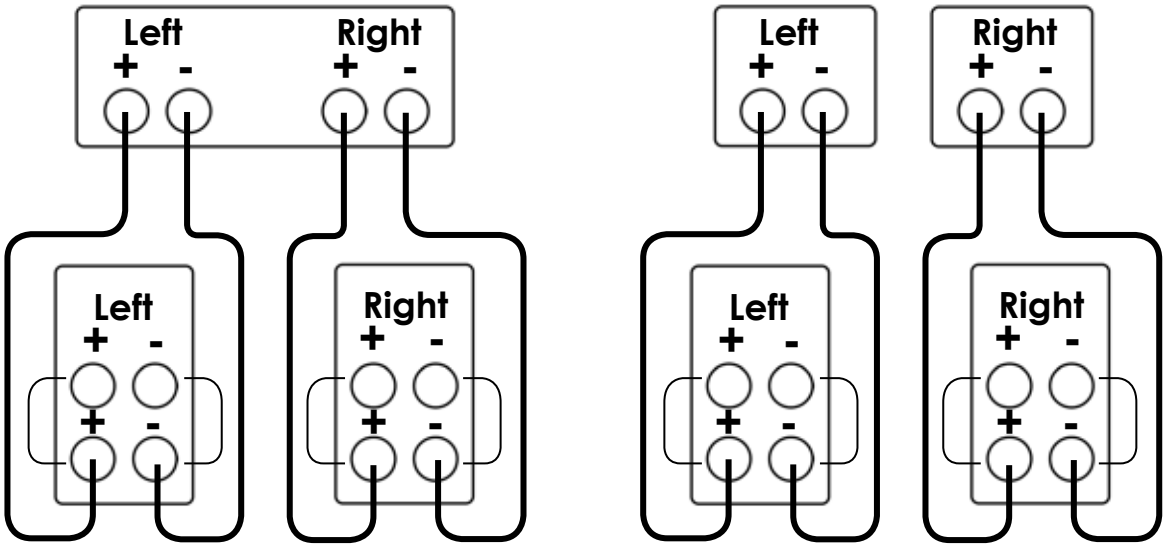

Fig. 2

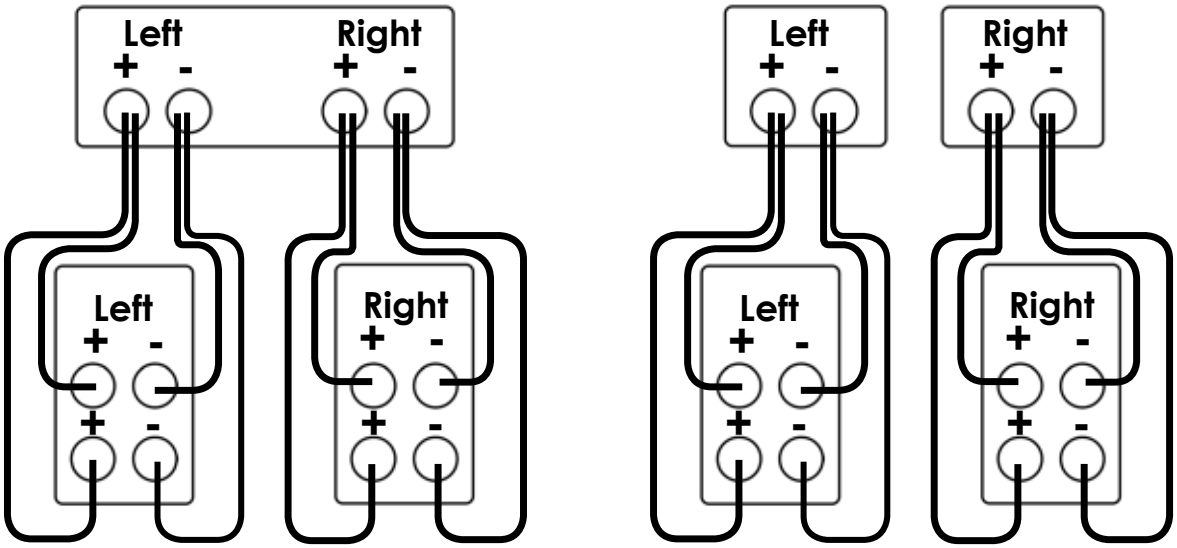

Fig. 3

Fig. 4

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TYPE	Standmount 2 way, 2 speakers
SOUND EMISSION	Direct
ACOUSTICAL LOADING	Passive radiators, side emission
CABINET	Constrained layer damping mode construction, obtained by means of a main body equipped with "panzerholtz" sub-structural ribs coupled with CNC machined solid walnut slab/HDF sandwich construction outside wings. Internally carved, providing a portion of the loading volume. Aluminum CNC machined damp-shelves create an exo-skeleton, further optimizing the cabinet damping stiffness ratio. Virtually a resonance free construction. Solid walnut or black laquer finish.
DRIVERS/INTERNAL WIRING	Tweeter: 29 mm mechanically decoupled, dispersion optimized, silk dome hand coated diaphragm, non-resonant Alu rear Chamber, symmetrical Drive (SD-2) motor large ring Neo Magnet. Diapason design, manufactured by Scan speak. Mid-woofers: 180mm air dried hand coated paper/nylon fiber pulp cone, copper rings reduce non-linear and modulation distortion and increase overload margin neodymium SD AirCirc magnet system, absolutely free compression. Diapason design, manufactured by Scan speak. Passive Radiators: 220 x 260 mm "racetrack" shaped diaphragm, sandwich construction paper/foam/paper for excellent pistonic behavior. Diapason design, manufactured by Scan speak. Van den Hul CS12 Halogen Free
CROSSOVER	2500 HZ "Point to point" hardwired. Balanced circuitry. Jantzen C-Coil inductors, Mundorf Supreme EVO silver/gold Capacitors. Mundorf Supreme M-Resist
FREQUENCY RESPONSE	35 Hz – 30,000 Hz
SENSITIVITY (2.83 V @1 m)	90 dBSPL
NOMINAL IMPEDANCE	8 ohm
WIRING OPTIONS	Bi-wiring
SUGGESTED AMPLIFIER POWER OUTPUT/LONG-TERM MAX INPUT VOLTAGE (IEC 268-5)	50W – 250W, without clipping/25V rms

DIMENSIONS INCLUDING (WxHxD)	534 x 1245 x 552,3 / 600 x 1350 x 620 (mm)
WEIGHT	62 Kg each Net Weight, 74 Kg Shipping Weight 65 Kg each Net Weight, (Lacquer Black) 77 Kg Shipping Weight (Lacquer Black)
PACKAGING CONTENT	LOUDSPEAKER BOX: 1 Manual 2 Fabric dust guards 3 Van den Hul jumper wires
SPECIAL FEATUIRES	Passive units adjustable excursion