



true and long-lasting listening experience


100% MADE IN ITALY

rainbowaudio
High Fidelity

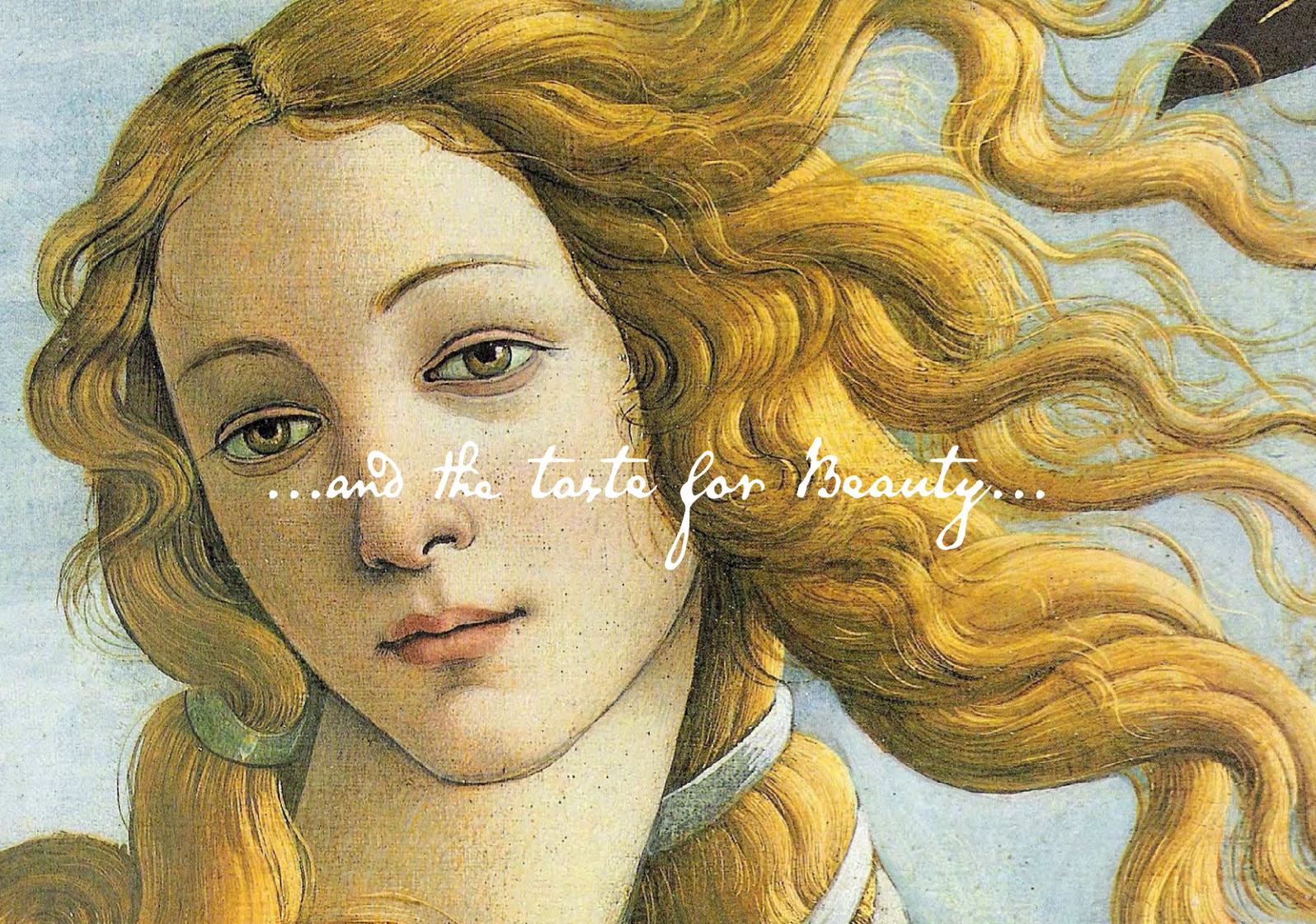
*The dawn of a new
Renaissance*



Thanks to our History...



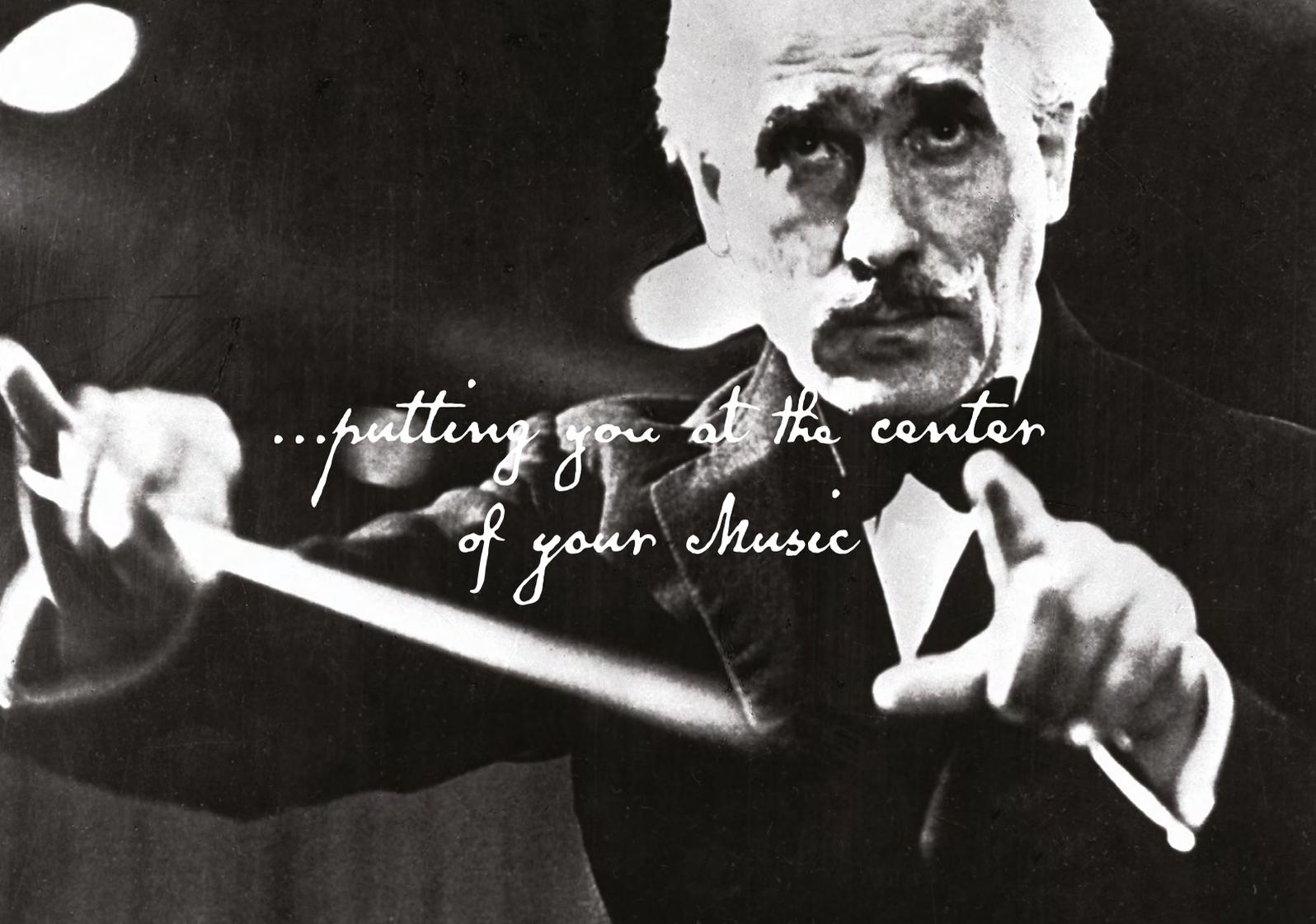
...now we have the Technology...



...and the taste for Beauty...



...to create unusual Wonders...



*...putting you at the center
of your Music*



this is the new Renaissance.

rainbowaudio
High Fidelity



Rainbow Audio is the agent for those Italian firms, whose design and production are entirely **made in Italy**. Thanks to their excellent design, precise construction and sound performance, we believe they are superior when compared to any other brand.

Our philosophy

When you go on listening to your Hi-Fi equipment as long as you want without fatigue, that means your equipment is well balanced, and music flows as smoothly as if real instruments were playing in your room.

This is a natural sound. This is what we require from our devices.

The aesthetics of your devices should be as pleasing and attractive as possible, since their appearance should match the excellence of their sound; so you can enjoy just looking at them.

Each one of our devices is required to have a stunning look.

You also need reliable devices, that will work for many years without any problem. It should be both possible and easy to service your equipment, to preserve your valuable investment for a long time.

Reliability is the key feature of our devices.

To have all these features in each device, we turned to Italy, the country where technology and art have been merging for centuries creating masterpieces; and where we selected designers and craftsmen capable of combining natural sound and amazing shape and reliability in the devices we proudly offer you.

Natural sound, amazing shape and reliable construction are the elements that allow music lovers and Hi-Fi enthusiasts an enjoyable and on-going "live listening experience".

ÅNGSTROM
a u d i o l a b

MARCO
SERRI
DESIGN


ARIAMATERIA

ÅNGSTROM audiolab

All the devices by Angstrom Audio Lab begin with outstanding design and are hand manufactured in our Italian laboratory with the care usually reserved for an object of art, using the best components on the market.

ABOUT DESIGN

The all-tube amplifier stage is based on a **"CIRCLOTRON"** design, with two toroidal output transformers, and is supported by a **double-stage power supply**, which is filtered against DC current pollution for maximum current cleanliness.

Thanks to this arrangement, the signal is completely free from spurious: the result is a clear sound, consistent performance and complete absence of hum, even in the presence of dirty household electrical lines.

ABOUT CONSTRUCTION

From the integrated stereo amplifier of the "Stella" series, which is the first step in our production, up to the huge and gorgeous four-chassis preamplifier of the Quantum series, all our products are assembled by hand in our Italian laboratory, and the wiring of each piece is in full view. Therefore, it could be always, and easily repaired, any failure would happen. The complete separation of the circuits of each channel is strictly observed in stereo-like integrated products, and generates a signal marked out by an unsurpassed dynamic range. The frame of all our items is Aluminum "AVIO", and the front and back panels are 10 mm. thick. Lateral panels are in Italian Olive Wood.

ABOUT COMPONENTS

Sound quality and equipments reliability are highly affected by the quality of the components. All the resistors and the cabling wires used in our products meet military standards (cables: MIL-16878, wired in copper and silver, insulated with extruded TEFLON supporting temperatures higher than 300°C; VISHAY CPF resistors: MIL-R-10509, MIL-R-10512). More details in the following "In-depth" sections. Our transformers exemplify another characteristic of our amplifiers: all the transformers for the output stage, as those for the high voltage supply to the tubes, are of our own make and design, and use of High Density Cores (HIB). The binding post used in our products are WBT 0702 Gold.

All the Angstrom AudioLab products are planned, designed and made in Italy, where handiworks become works of art. Thanks to their outstanding design, absolute care in construction and choice components, you can say they are real masterpieces of arts and crafts, which achieve excellence in sound reproduction.

ÅNGSTROM

audiolab

IN-DEPTH

More about CIRCLOTRON Circuit

The original "Circlotron" electronic circuit was first developed and registered by "Electrovoice" in 1956. Its unique characteristics are the floating power supply, and the low impedance output (cathode), in comparison with the high impedance output of most electric circuits. In our design we developed a new version of the classical circuit. Instead of a single transformer, commonly used in amplifiers, including the original "Circlotron" brand, we use two custom-made transformers, which are connected in "Circlotron": one working in low impedance (cathode); the other in high impedance (anode). Thus, there is no floating power supply, i.e. no signal passes through the capacitors. This arrangement has the advantage that the power supply capacitors can easily be replaced, should they fail. If that were to happen in the original "Circlotron" circuit, it could be difficult to find a spare capacitor of the same quality (ultra-low ESR/ESL), if they are out of production, a potential weak point in the legacy design. The output in current offers an additional improvement in sound reproduction that is applied to all our amplifiers and preamplifiers. In such configuration no signal is brought back to the "driver" tube, so our circuits have no feedback.

Common Characteristics

Double-Stage Power Supply: the use of two transformers, at power supply entrance, allows for the removal of any DC current pollution. As a consequence, the electrical current supplied to the whole circuit is completely free from spurious and absolutely clean: the result is a clear sound, consistent performance and complete absence of hum, even in the presence of dirty household electrical lines.

Each tube heater (for both power supply stage and audio stage) is serviced by one dedicated toroidal transformer. This configuration allows for greater electrical stability, lower induced electrical noise and greater efficiency of each transformer, thus avoiding the frequent balance and power losses when one only transformer services all the circuits.

The power supply transformers and the output transformers have toroidal cores in HIB (Grain Oriented).

The entire wiring is in air, according to military standards with teflon-insulated silver-copper wire. Example of cables: MIL-16878, wired in copper and silver, insulated with extruded TEFLON supporting temperatures higher than 300°C.

Only VISHAY CPF resistors according Military Standards are installed, as resistors MIL-R-10509, MIL-R-10512, MIL-R-49465 TYPR RLV.

All the electrolytic capacitors have a very low ESR and ESL (Electrical Serie Resistor and Electrical Serie Inductor) at a working temperature of 105°C.

All the inputs are insulated with TAKAMISAWA double relays.

More about the "STELLA" Stereo and Integrated Amplifier

The grid bias, for the EL34 power tubes, is completely separate with two independent toroidal transformers.

We wish to point out the unique design of the output stage made with two toroidal transformers, one for high voltage and one for low voltage, operating in a distinctive "CIRCLOTRON" arrangement.

More about the "STELLA" Preamplifier

The preamplifier's electric circuit is "pure balanced"; and furthermore it has a phase splitter that allows for the use of two unbalanced inputs in balanced mode, in CIRCLOTRON OPERATION.

More about MONOBLOCK POWER AMPLIFIERS

Our Stella Monoblock Amplifiers are "pure mono", because unlike most other mono amplifiers, they have a double power supply, rather than a stereo bridged circuitry.

Two transformers, instead of just one, ensure higher speed in power supply and better driving capacity of low impedance loudspeakers.



Dual Monoaural Preamplifier "Stella" Angstrom Audiolab

The preamplifier is completely hand crafted. Pure symmetric Balanced Line Preamplifier.

Tube power supply

2 x 6AX4 half wave rectifier dumper diode;
4 x 6V6 or 5881 tube Darlington active
high voltage filter;
2 x 6080 double triode regulated power
supply;
2 x EL34. • 2 x OA2wa reference voltage
diode;
n. 6 independent power supplies.

Line Stage

8 x ECC82/12au7;
2 x ECC82/12au7;
5 inputs per channel: 3 balanced; 2 single
ended (RCA);
remote control volume and input selector.

Output Efficiency

Frequency response: 10hz to 150Khz;
Frequency response: 10hz to 150Khz;
Distorsion: less then 0.5% at 2V Rms
output;
Input impedance: balanced 200 KOhm
balanced 1.5nf Max. capacitance;
Rated output: 2V Rms 5hz to 100 Khz
balanced loads;
Gain control: +/- 40db;
Noise: 18mv residual rated balanced
4 separate toroidal transformers;
Dimensions: 17.91" x 6.30" x 16.14" (W x H
x D);
Weight: 55.11 lb (25 Kg);

Monoblock Power Amplifier "Stella"

Angstrom Audiolab

The amplifier is completely hand crafted.

Technical data sheet

Output power: 100Watt in pure Class A;
Push Pull configuration with triode tubes;
Two output toroidal transformers per channel in "Circlotron" connection;
Transformers total output power: 370 Watt;
Pure symmetric balanced circuit;
Zero feedback;
n. 6 independent power supplies;
Output tubes: n. 12 EL34/channel;
Input/Driver stage: n. 6 ECC82/channel;
Gain: 24 dB;
Slew rate: 20 V/ μ s;
Rise time: 1.9 μ s;
Frequency response: 16hz to 120khz;
Power Supply energy storage: 300 Joule;
Point to point wiring with Mil-16878 Litz silver/copper wire with high temperature Teflon insulation;
Vishay/Rodenstein capacitors MKT1813, MKP1840, MKP1841 series;
All resistors VishayCPF &RN65d series;
Power consumption at max power: 500 Watt at rated output; 900 Watt at max. power (370 in idle);
Dimensions: 17.71" x 7.87" x 16.34" (W x H x D);
Weight: 99.20 lb (45 Kg).





Integrated Stereo Amplifier "Stella"

Angstrom Audiolab

The amplifier is completely hand crafted.

Technical data sheet

Output power: 100Watt in pure Class A;
Push Pull configuration with triode tubes;
Two output toroidal transformers per channel in "Circlotron" connection;
Transformers total output power: 370 Watt;
Pure symmetric balanced circuit;
Zero feedback;
n. 6 independent power supplies;
n. 2 amorphous high current choke (one per channel);
Output tubes: n. 6 EL34/channel (12 in total);
Input/Driver stage: n. 4 ECC82/channel (8 in total);
Input impedance: balanced 1M Ω m; single ended 470 K Ω m;
Hum & noise: less then 2.0 mV rms 88dB rated output at 20Khz unweighted;
Rise time: 2.5 μ s;
PS energy storage: 280 Joule.



Stereo Power Amplifier "Stella"

Angstrom Audiolab

The amplifier is completely hand crafted.

Technical data sheet

Output power: 100Watt in pure Class A;
Push Pull configuration with triode tubes;
Two output toroidal transformers per channel in "Circlotron" connection;
Transformers total output power: 370 Watt;
Pure symmetric balanced circuit;
Zero feedback;
n. 6 independent power supplies;
n. 2 amorphous high current choke (one per channel);
Output tubes: n. 6 EL34/channel (12 in total);
Input/Driver stage: n. 4 ECC82/channel (8 in total);
Input impedance: balanced 1M Ω m; single ended 470 K Ω m;
Hum & noise: less then 2.0 mV rms 88dB rated output at 20Khz unweighted;
Rise time: 2.5 μ s;
PS energy storage: 280 Joule;
Point to point wiring with Mil-16878 Litz silver/copper wire with high temperature Teflon insulation;
Vishay/Rodenstein capacitors MKT1813, MKP1840, MKP1841 series;
All resistors Vishay CPF &RN65d series;
Power consumption at max power: 1000 Watt (370 in idle);
Dimensions: 17.9" x 7,87" x 16.14" (W x H x D);
Weight: 90,39 lb (41 Kg).

MARCO SERRI DESIGN

Loudspeakers to fall in love with

The Cabinet

To make them as inert as possible at any audible frequency, each cabinet of our loudspeakers has a sandwich structure with several layers of woods, of various types, and resins, spiked with aluminum and glass powder. To better control resonances, the sandwich structure has variable stiffness, while more stiffeners are placed inside.

Resonance chambers have been designed inside the loudspeaker, for preventing internal echoes and for leveling the frequency response of the drivers.

The crossover channels are totally separated in all our loudspeakers, to prevent distortion and magnetic modulations. Chokes and all other components are adequately separated to prevent mutual electromagnetic interferences.

The crossover of the Venezia loudspeaker is outside the cabinet, in a dedicated aluminum case, and fastened with special dumping feet.

Our Tweeters

All our tweeters are home-made by our craftsmen at MSD facility.

Domes of our dynamic tweeters are made out of two different materials:

- pure, high quality silk, charged with special resins to control stiffness;
- ultra thin titanium, obtained with a very accurate processing.

A lot of care has been dedicated to the choice of the coils, made with several layers, to make them as light as possible.

Very thin films, but strong and durable indeed, are selected for our ribbon tweeters, to afford the maximum tonal neutrality throughout all the audible frequency range.

Another objective we pursue is also the correct choice for the ribbon wire: it could be either aluminum or copper, depending on the length of the ribbon itself and its film characteristics.

Only magnets of the best Neodymium N52 are accepted in all our tweeters: it is very difficult to handle, due to its extremely high magnetic force, discouraging many manufacturers from using it. Anyway, thanks to the design of the tweeters and to the geometrical configuration of the magnets optimizing their magnetic flux, we get excellent, and even magnificent, performances from our drivers.

As for tweeters, so in our magneto-planar drivers neodymium N52 magnets have a specific positioning, ensuring the maximum concentration of the magnetic field, while following the conductor path as well.

MARCO SERRI DESIGN

Loudspeakers to fall in love with

Our Cone Woofers

All the MSD cone woofers are original in-house design, and are made under Marco Serri's strict control.

The quality and size of the rear magnet coil, coupled with the very stiff material of the cone itself, and exclusively made for the MSD branded woofers, ensure enthusiastic performances in the low frequency range.

Among other materials, there are sandwiches of kevlar and pulp, or kevlar and carbon, or aluminum and carbon; all of them have different stiffness and frequency response, and are therefore used for different purposes.

Our Aesthetics

The aesthetics and finishing of our loudspeakers should be as pleasing and attractive as possible, since their appearance should match the excellence of their sound.

The finest natural woods are worked by the skilled hands of our craftsmen, to create woodwork masterpieces.

And all the paintings, with their several layers of the finest enamels and varnishes worked by hand, give you the subtle sensation of the highest refinement.

From the very first moment you look at one of our loudspeakers, then you listen to it, a feeling of something special will be born out that will stay with you forever.



Loudspeaker "Venezia"

Marco Serri Design

Each "Venezia" loudspeaker is made with innovative technical and designing features, to give the highest listening pleasure and the highest fidelity to recorded music.

Each detail, each component of the "Venezia" was studied to obtain a fantastic and exciting sound reproduction, approaching a live listening.

Intended as a no compromise loudspeaker, Marco Serri designed the "Venezia" beyond the limits of well-established techniques, with innovative ideas, new components and new construction solutions, all manufactured in his own laboratory.

His choice and challenge, too, was to combine magneto-planar speakers in a "dipole" configuration for medium and high frequencies, with a wide cone woofer for low frequencies, to enjoy the typical soundstage of the former, and the full body of low frequencies of the latter. In the past this configuration has always had problems with the faithfulness of tone reproduction of mid-high frequencies, and for redundancy and sluggishness of the bass region.

The solution was found in designing both new magneto-planar speakers and new cone woofers, both made with new materials and new techniques, and entirely manufactured within his own laboratory.

These new planar speakers can reproduce musical signal very naturally and with an incredible tone fidelity that extends beyond the audible frequency range.

The woofer has a very light and stiff cone, made with new materials created in his labs specifically for this purpose, and made possible thanks to their patented innovative technique. Moved by several small magnets, much lighter in total weight than a single large magnet, this cone allows powerful and fast bass response, that is perfectly tuned with mid and high frequencies of the planar speakers.

Featuring the curved shape of the cello, and the black lacquer finish of the piano, the "San Marco" introduces music before the listening begins, since the form itself is a visual introduction to the music that will be.

System Configuration

"Dipole" for medium-high frequencies and "bass reflex" for low frequencies; possibility of Bi-Amplification and Three-Amplification;

Frequency response: 24 Hz to 25 KHz at +/- 3dB;

Sensitivity: 92 dB/1Watt/1m;

Input Impedance: 8 ohm almost resistive up to 250 Hz;

Low Frequency Transducer: 1 Cone Woofer Ø 34cm. (12.8");

Mid Low Frequency Transducer: 4 Multi Coil Mid Woofers x 16.5x16.5 cm. (6.5"x6.5");

Mid High Frequency Transducer: 3 Planar Mid Tweeters;

High Frequency Transducer: 1 Ribbon Super Tweeter x 68 cm. (26.5");

Dimensions: cm. 175H x 40L x 55P (68,8"H x 15,8"W x 21,6"D);

Weight: 70 Kg. (155 lb) each;

Finishing: Deep Black Metal Resist; On Request: Silver Leaf/Gold Leaf.



Loudspeaker "Arena"

Marco Serri Design

Even though smaller than the big "Venezia" series, the Arena loudspeakers are in a category of their own. They share the same design as the bigger "brother", albeit in a smaller cabinet, better suited in most rooms. Arena has a bass reflex configuration in a lute shaped cabinet; it is deeper than usual to enhance spatial sensation. The cabinet has a stiff wooden structure, and new materials are placed inside to reduce reverberations and improve sound quality. The woofers and magneto-planar elements differ from those in the "Venezia" in dimension only, as they come from the same production line, with the same quality construction and tone. The twin curved sides are finished in staves of two alternative types of wood, layered in different heights to render the effect of a sound wave. A super-tweeter gently rests on top of the cabinet, as if it were rising from it, the way sound rises above all the others elements to improve general tone.

System Configuration

3 way in "bass reflex" configuration; Possibility of Bi-Amplification;
Frequency Response: 29 Hz to 22 KHz at +/- 3 dB;
Sensitivity: 90 dB /1Watt/1m;
Input Impedance: 8 ohm;
Low Frequency Transducer: 1 Cone Woofer Ø 22 cm. (8,6");
Mid Low and Mid Frequency Transducer: 1 Circular Planar Ø 17 cm. (6.7");
High Frequency Transducer: 1 Titanium Dome Tweeter;
Dimensions: cm. 122H x 28L x 52P (48"H x 11"W x 20"D);
Weight: 57 Kg. (125 lb) each;
Finishing: Mahogany-Oak; Walnut-Ash; Italian Cherry-Maple; Ebony-Birch.
On Request: Silver Leaf/Gold Leaf.

Although Arena is only smaller in size, its sound reproduction is in no way inferior to bigger loudspeakers. You'll be amazed how long you'll enjoy listening to your favorite music with your Arena.



Loudspeaker "Shoe Box" & Subwoofer "Boot"

Marco Serri Design

"SHOE BOX" Loudspeakers technical features

System Configuration: 2 way in "bass reflex" configuration;

Frequency Response: 58 Hz to 22 KHz at +/- 3 dB;

Sensitivity: 89 dB /1Watt/1m;

Input Impedance: 8 ohm;

Mid Low and Mid Frequency Transducer: 1 Kevlar Cone Woofer Ø 13 cm. (5,12");

High Frequency Transducer: 1 Soft-Dome Tweeter Ø 2,5 cm. (1");

Dimensions: cm. 30H x 21L x 16,5P (11,8"H x 8,3"W x 6,5"D);

Weight: 4,50 Kg. (10 lb) each;

Finishing: "Decoupage", "Rust Iron", "Brushed Iron", "Graffiti".

"BOOT" Subwoofer technical features

System Configuration: 1 way symmetric double load with exponential duct;

Frequency Response: 38 Hz to 70 Hz at +/- 3 dB;

Sensitivity: 91 dB /1Watt/1m;

Input Impedance: 8 ohm;

Low Frequency Transducer: 1 Cone Woofer Ø 22 cm. (8,7");

Dimensions: cm. 54H x 27L x 30P (21,2"H x 10,6"W x 11,8"D);

Weight: 15 Kg. (33 lb) each;

Finishing: "Decoupage", "Rust Iron", "Brushed Iron", "Graffiti".



Loudspeaker "Gran Torino"

Marco Serri Design

System Configuration

System Configuration: 3 way in "bass reflex" configuration;

Frequency Response: 27 Hz to 24 KHz at +/- 3 dB;

Sensitivity: 91 dB /1Watt/1m;

Input Impedance: 6 ohm;

High Frequency Transducer: 1 Soft-Dome Tweeter Ø 28 mm. (1.1"); 3000-24000 Hz;

Mid High Frequency Transducer: 1 Cone Woofer, made of preliminary treated pulp, Ø 17 cm. (6.70"); 150-3000 Hz;

Mid Low Frequency Transducer: 1 Cone Woofer, made of preliminary treated pulp, Ø 17 cm. (6.70"); 150-900 Hz;

Low Frequency Transducer: 1 Cone Woofer, a sandwich of polypropylene and other natural fibers, Ø 27 cm. (10.63"); 28-150 Hz;

Dimensions: cm. 110H x 22L x 45P (43.3"H x 8.66"W x 17.7"D);

Weight: 30,0 Kg. (66 lb) each;

Finishing: "Deep Cosmic Blue", "Starry Garnet Red".



ARIAMATERIA

Air is the vehicle for the sound that comes from materials assembled and shaped by man.

We use traditional and modern materials and make them interact with air to eliminate any damaging vibration on your hi-fi equipment, as naturally as possible. The result is a sound that is closer to the original recording, more natural, thus more involving; in one word, more exciting.

Vibrations reach your hi-fi equipment through its supports and negatively affect sound reproduction. Our purpose is to provide the best vibration de-couplers to restore the original sound and let you completely enjoy your equipment's potential.

After a careful research for the best materials, critical studies and lab tests for optimal combination and design, we proudly present our system for minimizing vibrations.

We call it "system" because more elements contribute to the final result: materials are as important as design and theory. Indeed, lab tests confirm that our vibration control system is highly effective.

A large mass is needed to best minimize vibration, such as a massive stone, which unfortunately is not practical for our purpose. However, some kinds of rocks still keep their damping characteristic even when crushed into small grains and bound with specific synthetic resins. In this manner a significant amount of air still remains trapped with the grains. Thus, vibrations absorbed by solid matter, stone grains and resin, can therefore be damped through the surrounding air.

For certain air plus matter, bring out the best in your hi-fi equipment.





De-Coupling Feet

Ariamateria

Suitable for both electronics and loudspeakers

Our de-coupling feet, shaped as cylinders, have different height, according to the weight to support: the higher the weight the higher the height.

They are made out of a mixture of crashed Italian marbles (porphyry and basalt from the Alps) with organic resin as binder.

To have a better de-coupling effect, a special mono-component polymer disc is interposed at 9 or 13 mm. from their top base.

Two thin neoprene discs are placed on top and bottom bases to prevent damages to other surfaces.



Table Reference HD 300

Ariamateria

The Table

The table is a stackable modular structure, made of multilayered wooden frame, that is painted in standard RAL colors;

Overall dimensions: mm. 730W x 640D x 300T (28³/₄" W x 25¹/₄" D x 11³/₄" T);

Leg height: mm. 180/210/250 (7"/8¹/₄"/9³/₄");

Shelf thickness: mm. 30 (1¹/₄");

De-coupling is ensured by TEFLON structural elements, lathe-cut from solid raw materials;

The rear leg point is lathe-cut from cast stainless steel;

The legs are de-coupled by enclosing our "ARIAMATERIA" compound.

The Shelf

The shelf is made of "ARIAMATERIA" compound, bound by a multilayered wooden frame painted in standard RAL colors. De-coupling is ensured by cones, lathe-cut from cast TEFLON.

Overall dimensions: mm. 530W x 430D x 20T (20³/₄" W x 17" D x ³/₄" T).



Rack "Sonar 300" - "Sonar 700"

Ariamateria

The racks SONAR 300 and SONAR 700 are made of multilayered wooden frame, that is painted in standard RAL colors.

The rack SONAR 300 has only one shelf, with an 11 $\frac{3}{4}$ " height.

The rack SONAR 700 is offered with 2 or 3 or 4 shelves for a maximum height of about 39".

See the data sheet for detailed dimensions.

De-coupling is ensured by TEFLON structural elements, lathe-cut from solid raw materials.

The rear leg point is lathe-cut from cast stainless steel or TEFLON.

The legs are de-coupled by enclosing our "ARIAMATERIA" compound.



Loudspeakers stand Bookshelf Ariamateria

The base plate and the shelf are cut out of thick MDF slabs; and the column has two MDF bars connected with our Ariamateria compound that allows a perfect vibration damping. Four of ours De-Coupling feet are placed underneath the base to improve the insulation of the all assembly against the vibrations coming from the floor.

Our Loudspeaker stands are painted in standard RAL colors as all our other products. Standard height is 70 cm. (27"1/2).





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