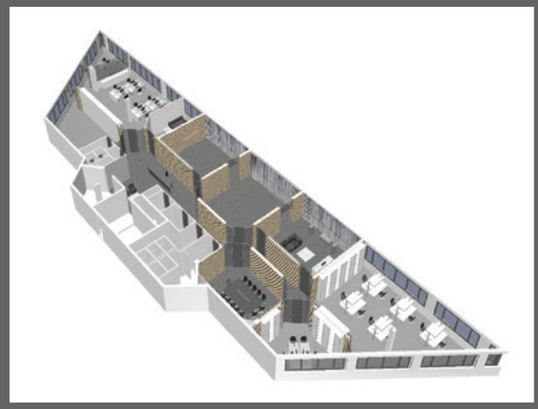

Thrax
Spartacus
S/N 112110
Thrax

Thrax*

Is a Bulgarian company based in Sofia. The company is a complete in house operation including manufacturing, asembly, testing and demo facilities. Affiliation with numerous instiutes and research scientists gives Thrax the advantage of KNOWLEDGE and Experience embedded in the products.



meaning “Tracian” *

Thracians were people that enjoyed life and appreciated art, wile being renowned as the best fighters. Wine making facilities and exquisite gold and silver artifacts attest to the taste for luxury and art of this ancient civilization.

For Thrax – the best is just a starting point

Motivation

I have spent many years of exploration in the world of high quality audio listening, recording and comparing the results. Searching for ways to improve the experience of listening to reproduced music. As many have done I took the easy path of just "buying the best". In the search for the solution I was exposed to numerous high-end products that promised the world, but told a different story upon auditioning. Many products carried true innovation but these innovations were usually limited to one part of the whole making it no better than the average. For others the biggest achievement was in their marketing campaign.

My team and I listened and researched – it was a strenuous 2 year R&D project in our own lab evaluating amplification topologies and circuits and their behavior. We were systematically quantifying and cataloging the artifacts that they produce and trying to understand the mechanisms that create them.

This was followed by yet another year of hands-on research and tests on how to influence the sonic qualities, of designs we regarded as reference. Involving thousands of man-hours of auditioning and comparisons.

During our research we have not discovered a loophole in the laws of physics.

What we found is that people quickly forget the achievements of times past; just to "discover" them again at a much later date.

> "It is all out there; you just have to put it together."

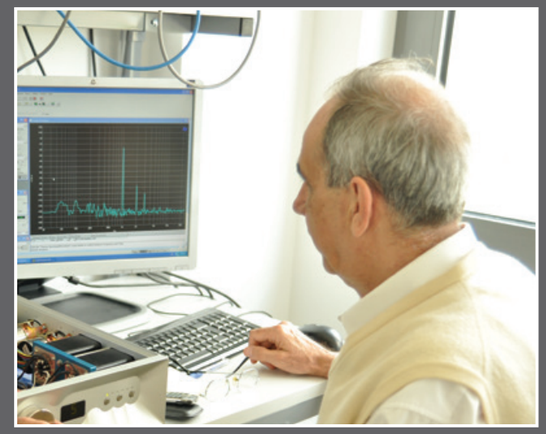
It is all out there; you just have to put it together. We looked for the simplest meaningful legacy solution, found its flaws and limitations and improved on them by taking advantage of the available 21st century technologies and materials achieving what early designers would call fiction.

It does not matter how much better a "modern" solution is if it is based on flawed assumptions distributed by modern books who's authors just copied from earlier works without even understanding them and preach the same fundamental errors just more convincingly. This is why we had to start from the beginning of it all. No assumptions,just plain piece of paper.

Actually, there is no trick, no magic. It is a complex function of knowledge, attention to detail, common sense and an open mind that gets you there.

I hope what we came up with pleases your senses and sets you on a quest to seek those qualities in all other products.

Enjoy!



"We listened - we researched"

The design team leader and founder of the company Mr. Rumen Artarski, studied electronics and acoustics in the Danish Technical University in Copenhagen prior to moving to London to complete his studies as a recording engineer/producer, reverting later to engineering by doing high level system design and integration and building some of the most advanced broadcast facilities in the early 2000's.

Serenity and expressiveness come to mind when you experience it.

Concepts

Human vision, hearing and other senses are not absolute measurement devices. They compare the difference between a reference and the tracked signal changes over time.

When hearing system registers sounds, it requires some time to assess what they are. It then starts to track the changes giving less importance (losing interest) to long and sustained signals with no change.

The hearing adapts to the surrounding (residual) background and concentrates on the constant changes in signal properties. Motion or flashing lights attract your vision in this exact same way. A moving object always gets more attention than a static one.

This phenomenon allows you to follow a conversation between two people in a noisy environment or listen to the voice of a singer undisturbed by a busy piece of music. In your office you realize how noisy it is only when the noise stops because your brain adapts to the surrounding automatically.

If the background is quiet the following sound appears louder and clearer. Anything different from the pitch-black background attracts your attention. Or if your hearing has adapted to a residual noise you start losing information (your brain does not pay attention to it). To make an analogy it is like increasing the contrast in a picture by darkening the background instead of increasing the brightness. The bright light will blind you and you will not see better, but removing the strenuous light makes your reference (black) stable and the picture becomes more vivid and sharp. Like staring at the stars at night, the clearer and darker the sky, the more stars you see. Let us put this in the context we are interested in. Music is written with notes and pauses that represent sounds and SILENCE.

> “The quality and quantity of silence in between notes is just as important as the pitch and timbre in the notes themselves.”

The world’s engineering efforts until now have been to improve on the sounds quality, leaving the silence to the assumption that it will improve as well. Unfortunately while reproducing the sounds all devices contaminate the silence with multiple artifacts.

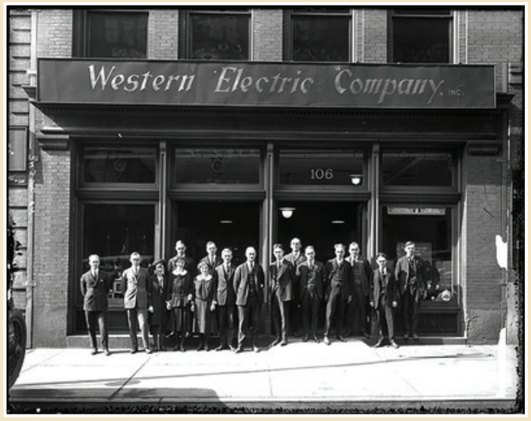
It is rather complex why we have all those artifacts in our precious music through the reproduction chain but it is immediately apparent when they are reduced, and simply amazing when they are almost gone.

Serenity and expressiveness come to mind when you experience it.

It just sounds right.

Inspiration

The time spent with the works of Japanesetube gurus is a source of inspiration forus. Nobukazu Shishido designs with large transmission triodes manifested trough Yuzuru Ito's Wavac Audio HE series and Hiroyasu Kondo silver creations at Audio Note Japan are the most famous examples



of the Japanese vacuum tube art currently in production and the different approaches taken to achieve the same goal.

> Their attention to detail and manufacturing quality inspired us to try and do better.

But the works and concepts of another Japanese designer came closest to the direction in which we were heading. Never implemented commercially, however, the designs of Susumu Sakuma are a tough example to follow. Directly heated triodes with inductive loads driven by the same seemed to deliver the effortlessness and tonal richness we are after. Later we would realize that the root of it all was Western Electric and their creations from almost a century ago. Their amplifiers and speakers are something like Adam and Eve for the high-end audio.

Through those simple designs, music flowed seamlessly but with quite some shortcomings.

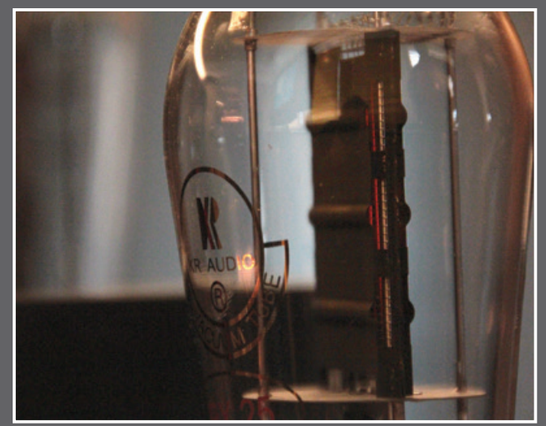
Many designs were improved on through the years, getting rid of most problems by better material quality and craftsmanship.

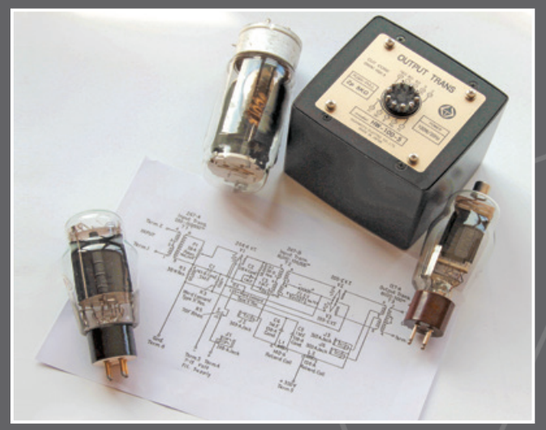
"Compared to tubes, transistors can last forever". We were often hearing this statement back in the and 70's. It was a lie. I am now using tubes made in the 50's that work fine. None of my electronics from the 80's still work! But some idiots still believe this lie.

While Western Electric equipment laid hidden from the public, the goal for improved music reproduction mutated into marketing and engineering competition to achieve meaningless target figures in areas alien to music and it's reproduction. We are here to start the renaissance of audio reproduction.

Western Electric

"Truly captivating sound"

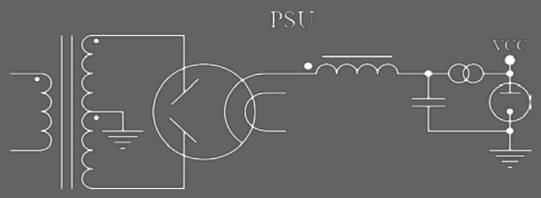




Our Technology

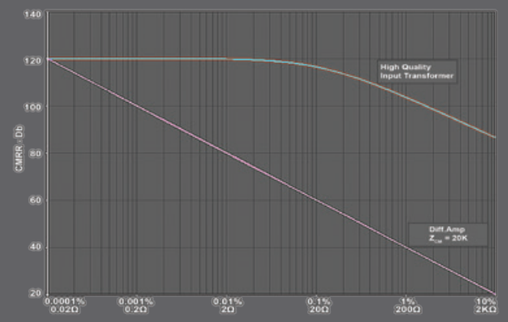
Modular constructions has been applied here breaking each unit into functional blocks and designing each one of those blocks to deliver maximum performance and its operation to be independent of all other modules.

• Advanced power supply with constant current consumption - no dynamic load variation means no modulation of the supply voltage and no AC in the power supply paths! No need for large capacitor banks introducing artefacts.

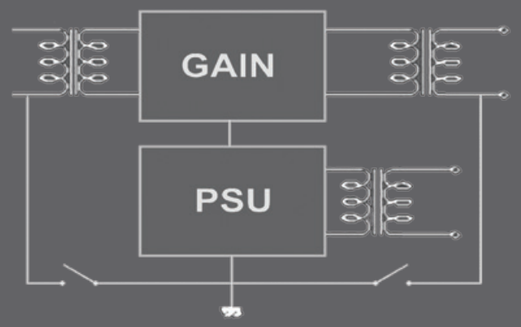


We achive this using a device that passes the exact same amount of current no matter what happens on either end by varying it's voltage toghether with a shunt regulator that will try and keep a constant voltage across itself by changing its conductivity no matter what follows this.

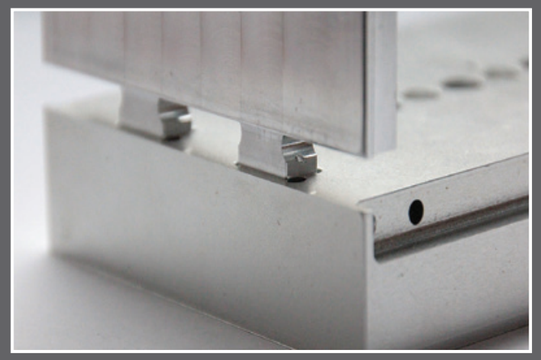
• Transformer inputs and outputs - fully isolated circuitry and true balanced interface. Each stage is an island unaware of what happens outside the box. No interference and predictable performance.



• Simplest possible signal path - minimum number of signal handling stages. No buffers, level shifters, feedback, feedforward or any other type of unnecessary complication.

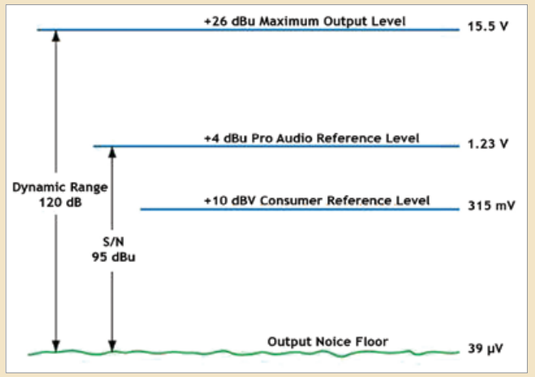


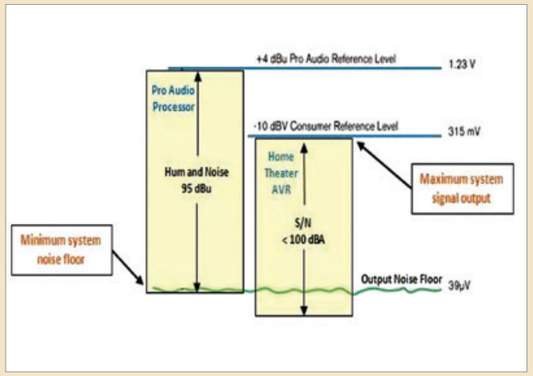
• Floating inputs and outputs - suitable for large systems powered from different outlets. Programmable ground connection between units and ground plane switching on inputs and outputs.



• Unequaled mechanical construction - beauty to last. Enclosures machined from solid pre-stressed aircraft certified aluminum alloy.

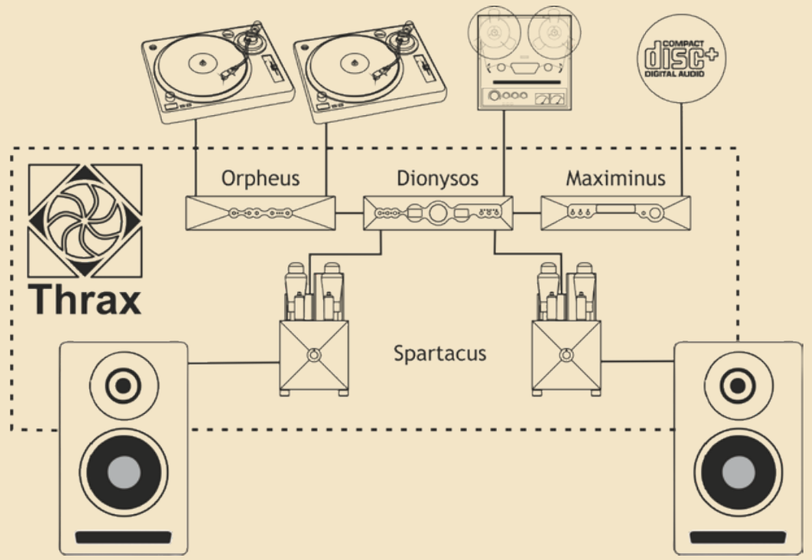
• Our products retain value - it is unlikely for product containing vast amounts of manual labor and complex mechanical construction to ever be made more cost effectively in the future.





- Our units use optimal (higher) interface levels between the components allowing for higher system signal to noise ratio. and not loosing your signal to noise.
- Flexibility - all products are designed to be integrated in any audio system. Multiple interface levels and connector types. Advanced features and microprocessor control.
- Family styling - sonically and aesthetically. Matched to each other for best performance and looks. Signature sonic character.
- Only one level of performance - maximum. No low cost, entry level or premium versions, we make only the best we can.

- Future proof - our products are ready for the upcoming hi-resolution formats. Firmware updates will be provided when needed.
- Vibration absorbing carbon doped plastic feet to prevent static electricity and not to scratch your furniture
- Clean lines and superb craftsmanship giving the units timeless design and identity
- Built to last using extra long life components and internally designed for serviceability.



Dionysos

Control Amplifier with remote

Dionysos is a remote controlled single triode transformer coupled line level amplifier.

The control amplifier is still the centerpiece of each high-end audio system. It is responsible for source selection, signal conditioning and volume control. It has to match the output of your source to the input of your power amp. It's output stage must be able to drive any power amplifier through any length of cable with optimal quality via balanced and unbalanced lines.

Dionysos features:

- Accepts both balanced and unbalanced input signals on RCA and XLR connectors.
- Switches ground plane with input selection preventing ground loops.
- Programmable ground arrangement for large systems.
- Dual balanced and unbalanced output for bi-amp
- Buffered Tape output isolating the tape machine from the source
- Home Theatre bypass feature for integration in Home Cinema systems
- Programmable absolute phase per input and accessible via remote control
- Stepped volume control for perfect repeatability of level setting
- Inductive volume control for best sound quality
- Shunt regulated constant current PSU for lowest noise and best dynamic behavior
- Choke input tube rectifier for lowest switching noise
- Custom vacuum encapsulated signal relays for ultimate sound and reliability
- Modular construction
- Microprocessor controlled
- Interlocking solid aluminum chassis.
- High reliability and MIL spec parts

Dionysos

The input of our pre-amplifier provides optimal loading for the source component to develop its full potential, allowing it to extract the maximum amount of information while keeping all noise picked up on the way out of the signal chain.

During our research and evaluation of the various approaches we settled for a transformer. It provides complete isolation from the rest of the system. Rejects common mode signals much better than any active solution, stops EMI/RFI and ensures truly balanced differential input. All while being a very low DC resistance for the source.

The volume control of a pre-amplifier has to adjust the level of the input signal to the value required by the power amp without burying in noise the low level information and transferring enough power to properly drive the amplification stage without affecting it's operation.

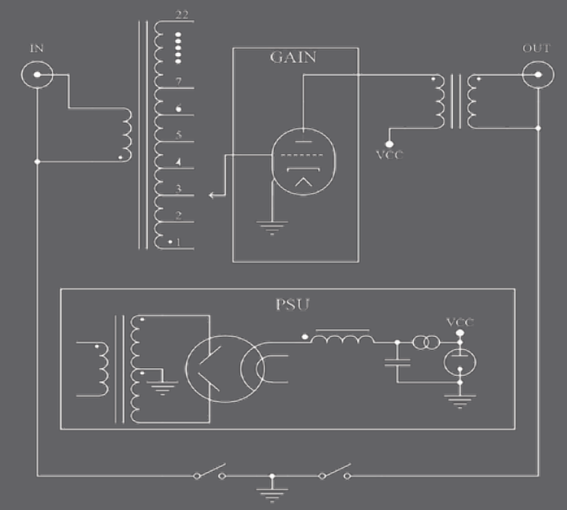
Potentiometer and resistor ladders, as sophisticated as they might be, have a fundamental flaw. They operate by unnecessarily dumping the signal across a resistor. It is like driving a car with fixed engine power (signal) and adjusting the speed with the brakes (resistor)!

Our solution is fundamentally different and as simple as it gets. We use transformer with various winding ratios and we switch between them. In the above example it will operate as a gearbox, transferring all the power of the engine at all speeds. In other words CONTROL.

Our gain stage is realized by the use of a single low noise tube loaded with a step down transformer.

Making the output of the control amplifier low impedance, DC free, truly balanced, isolated from noise sources and decoupled from the other components in the system. Providing an absolute optimum driving signal for the following power amplifier's input stage.

To further reduce the vanishingly low noise floor of the unit below certain volume setting the active circuit is disabled and the attenuator is connected directly to the output providing low impedance noise free signal.

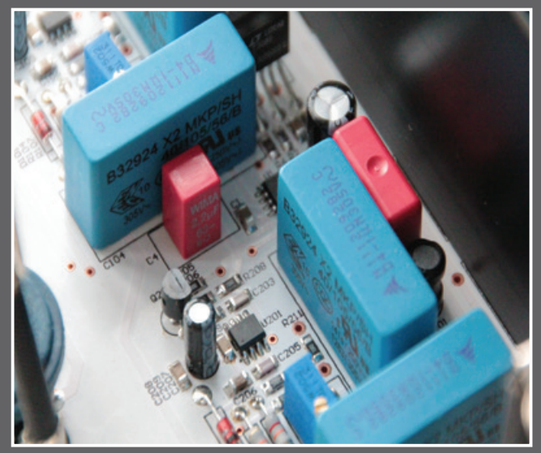


The power supply of Dionysos uses a choke input full wave tube rectifier arrangement. This eliminates switching noise and any other disturbance that comes before the choke. The other benefit of this topology is that the choke keeps the voltage on the capacitor bank constant. In our case, this allows for a capacitor bank made with vibration resistant military paper in oil capacitors to last a lifetime.

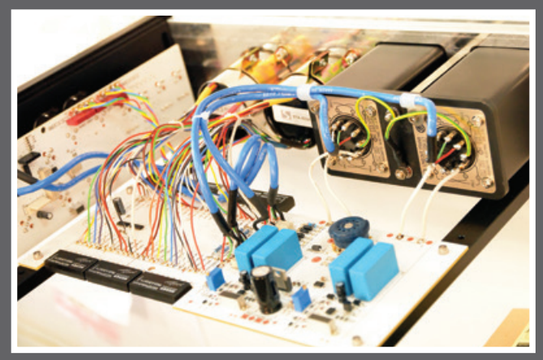
All this is governed by a microprocessor switching the apropiate combination of relays and monitoring the status and incoming command.

The chassis is milled in house from solid plates of different thickness aluminum that are interlocked together to form a ring like structure.

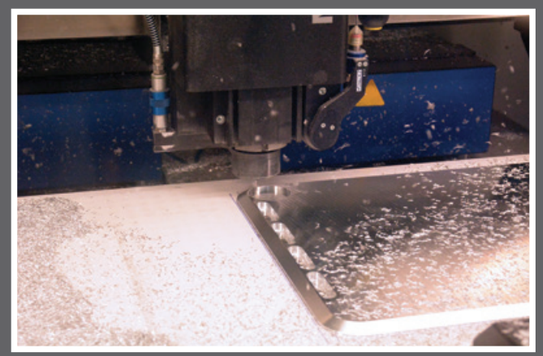
We have the power supply mounted on the left sidewall of this structure and the signal transformers on the right side.



Two semi-flexible bars on which the motherboard and its heat sink are attached, which then support this ring. The top and bottom plates link all sides of the ring with the flexible bars and the feet made from

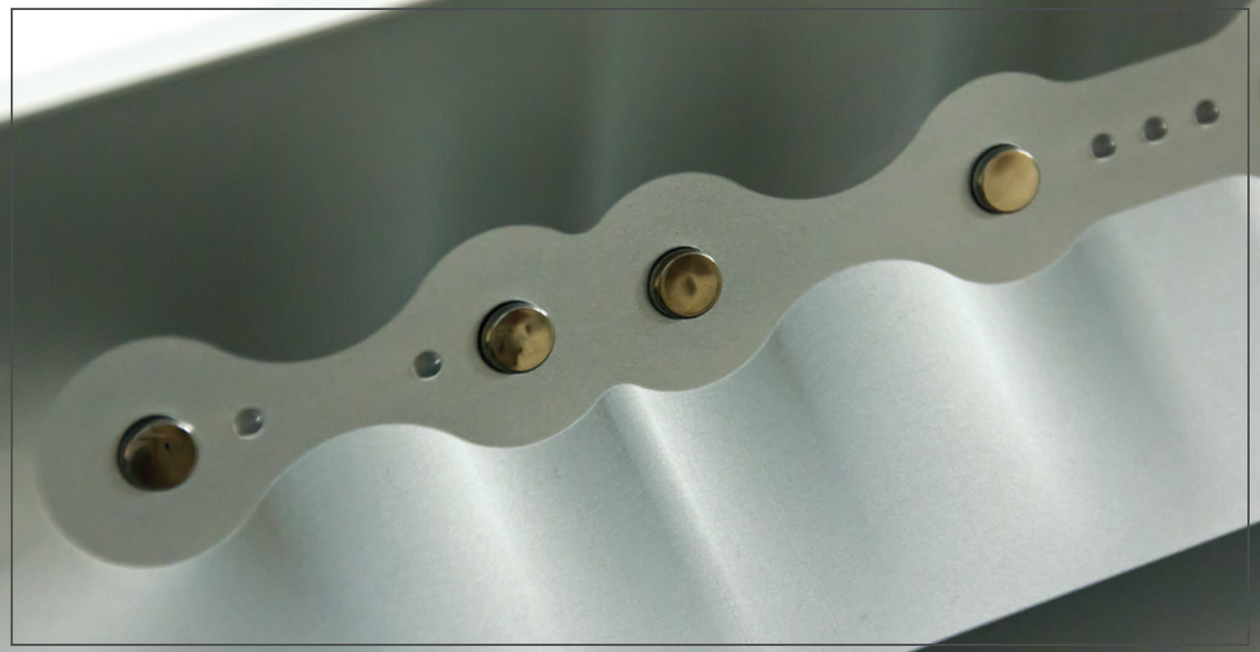


carbon doped plastic on flexible screws. There are no screws visible anywhere on the chassis. And the chassis feels like a solid block.



Specification

- Inputs
  - 4 pair unbalanced RCA connectors
  - 2 pair balanced XLR connectors
- Output
  - 2 pair unbalanced RCA connectors
  - 2 pair balanced XLR connectors
  - 1 pair unbalanced RCA connectors – tape out
- Attenuation steps 32
- Volume Control Rang
  - Minimum gain ..... -46dB
  - Maximum gain ..... +18db
- Power supply ..... 115 or 230 V
- Power consumption 45W
- Dimensions ..... 432W x 400D x 120H mm
- Weight 15Kg
- Finish ..... Black or Silver anodized aluminum
- Tube compliment :
  - 1 x 6H6П amplification
  - 1 x 6Ц4П rectifier



Orpheus

Phono Pre Amplifier with LCR RIAA equalizer

The phono preamplifier is responsible for extracting the last bit of information from the cartridge by providing optimal loading while maintaining very high noise immunity. After vastly amplifying the input signal and applying the standard RIAA equalization it interfaces at line level with the rest of the system via balanced or unbalanced lines. The LCR method used to apply the RIAA correction is very rare due to complexity and cost.

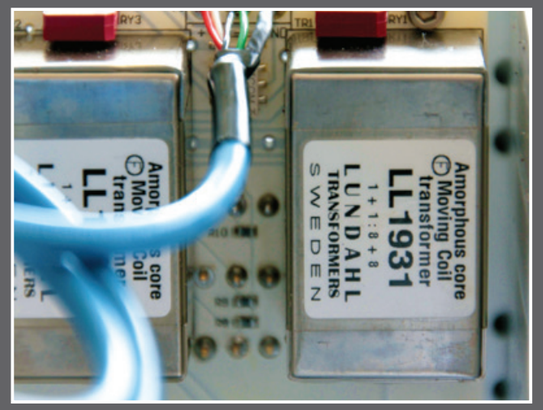
Features:

- Built in step up transformer
- Programmable gain and loading
- Accepts both balanced and unbalanced input signals on RCA and XLR connectors.
- Switches ground plane with input selection preventing ground loops.
- Programmable ground arrangement for large systems.
- Balanced and unbalanced output
- Programmable absolute phase per input
- Shunt regulated constant current PSU for lowest noise and best dynamic behavior
- Choke input tube rectifier for lowest switching noise
- Custom vacuum encapsulated signal relays for ultimate sound and reliability
- Modular construction
- Microprocessor controlled
- Interlocking solid aluminum chassis.
- High reliability and MIL spec parts

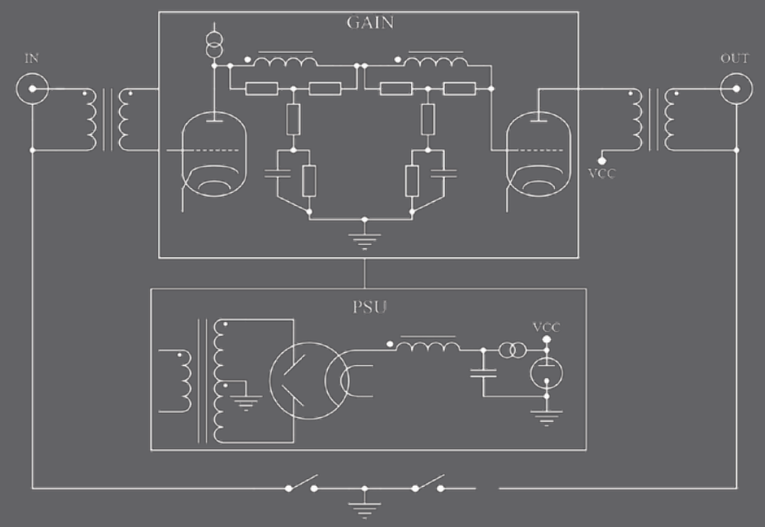
Orpheus

Orpheus uses two tube gain stages with zero feedback and passive LCR equalizer with 2 inputs on RCA and one on XLR connectors. All inputs are balanced differential unless the grounding option is engaged on the RCA inputs. As we switch the ground plane when switching inputs there are no hum loops and induced ground noise

The input stage is a super low noise D3a German Post tube used as a triode. Loaded by a constant current cascode it provides the necessary gain and output impedance to feed the custom passive LCR RIAA correction following it.



The switchable input transformer interfaces to MC cartridges and has selectable gain and loading impedance. The equalization is passive and the next stage is another super low noise tube loaded by a transformer to bring the signal up to the necessary level and provide complete isolation of this sensitive circuit from the following components. The filter is out of any gain loops and sits between the two gain stages protected from any unpredictable influences.



The equalization is realized through the use of constant impedance LCR filters using coils wound with OFC wire and BeeWax impregnated paper capacitors.

This way that the input stage sees a constant load, making its behavior predictable at any signal level.

The power supply of Orpheus uses a choke input full wave tube rectifier arrangement. This eliminates switching noise and any other disturbance that comes before the choke. The other benefit of this topology is that the choke keeps the voltage on the capacitor bank constant. In our case, this allows for a capacitor bank made with vibration resistant military paper in oil capacitors to last a lifetime.

All this is governed by a microprocessor switching the appropriate combination of relays and monitoring the status and incoming command.

The chassis is milled in house from solid plates of different thickness aluminum that are interlocked together to form a ring like structure.

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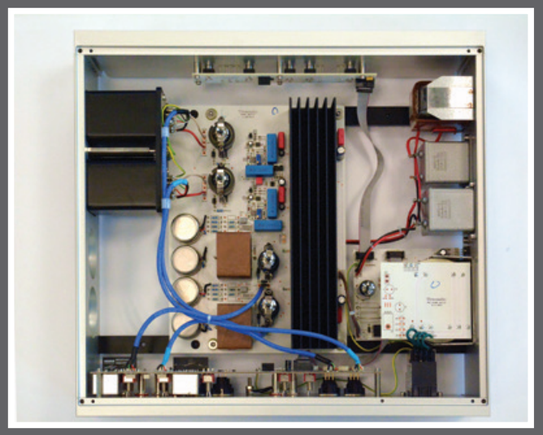


The top and bottom plates link all sides of the ring with the flexible bars and the feet made from carbon doped plastic on flexible screws.

There are no screws visible anywhere on the chassis. And the chassis feels like a solid block.

Specification

- Tube compliment :
  - 2 x D3a amplification
  - 2 x 6C4П amplification
  - 1 x 6Ц4П rectifier
- Inputs
  - 2 x RCA or XLR – MM or MC phone cartridges
- Output
  - RCA or XLR
- Power consumption: 50W
- Dimensions: ..... 432W x 400D x 120H mm
- Weight: ..... 15 kg

Maximinus

Universal DSP controlled discrete resistor ladder 32bit/384kHz audio DAC

This is the original multibit DAC concept with the most sophisticated implementation and highest precision.

We based the solution on the best technology available and applied our knowledge and experience taking the design to the extreme.

Features:

- Multibit conversion
- 25 bit resolution
- 4 quadrant sign magnitude operation
- 8 inputs (6 +2 optional)
- Balanced outputs on RCA or XLR (selectable)
- Transformer output
- No I/V conversion or output buffers
- No filtering after dac
- Total galvanic isolation of internal circuits from outside world
- Operates at 32bit/384khz
- Internal clock generators
- Selectable recklocking
- Selectable upsampling
- Selection of 4 digital filters
- Firmware upgradable
- modular design for field upgrades
- 32/384 Asynchronous USB interface (option)
- Sealed solid aluminium enclosure

Maximinus

Maximinus uses a concept called R2R ladder. This is a resistor matrix that is switched for the various output levels outputting a fraction of an internal reference (much like a volume control).

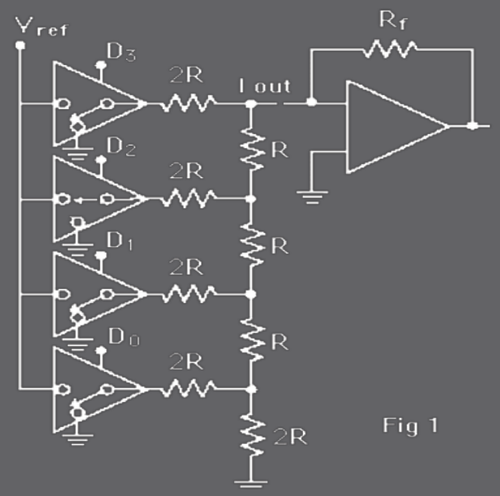
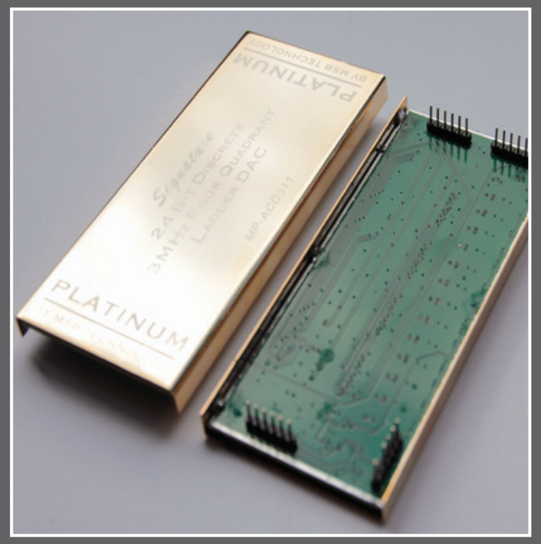
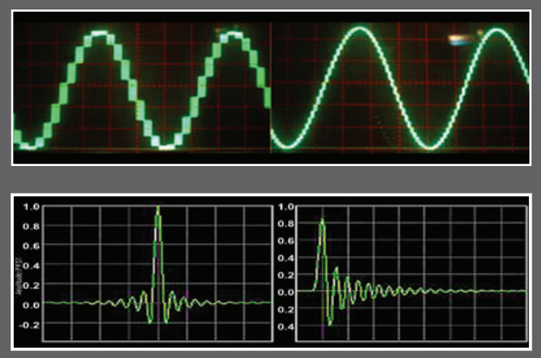


Fig 1

In order to bring the performance of multibit DAC's to new levels the only solution is to build them from discrete components as there are no off the shelf chips good enough. This involves the selection of ultra precision resistors, thermally coupling them and building a very fast and sophisticated switching logic to control them. The result is an order of magnitude better performance than what is achievable by IC based solution.

To take advantage of the available resolution and bandwidth we had to implement a state of the art digital pre-processing. This is a suite of algorithms that would apply digital filtering and up sampling to the incoming data stream. After processing a 16bit 44.1kHz CD data stream it is converted to 32bit 352.8kHZ data fed directly to the DAC. This greatly improves low-level resolution and the sense of space. The process is all user controllable and defeatable for purist and non-oversampling use.

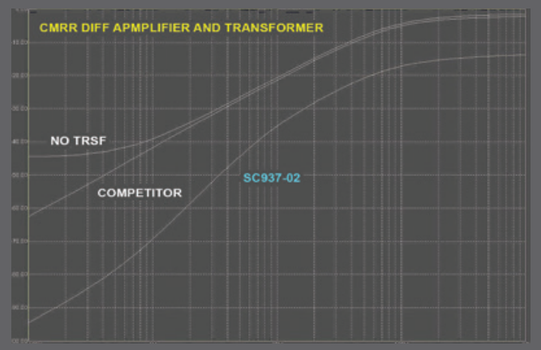




Apart from taking the uncompromising approach of using discrete ladder technology we have taken exceptional care with the construction and operation of each circuit within the DAC.

To keep up with tech development we have 2 internal slots for options to be used when the time calls for it.

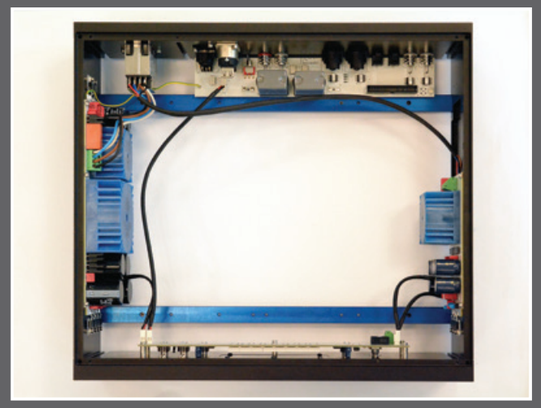
We use transformer or optical decoupling of all inputs, meaning that contaminated ground connection and other interfering signals don't make it to the inside of the unit.



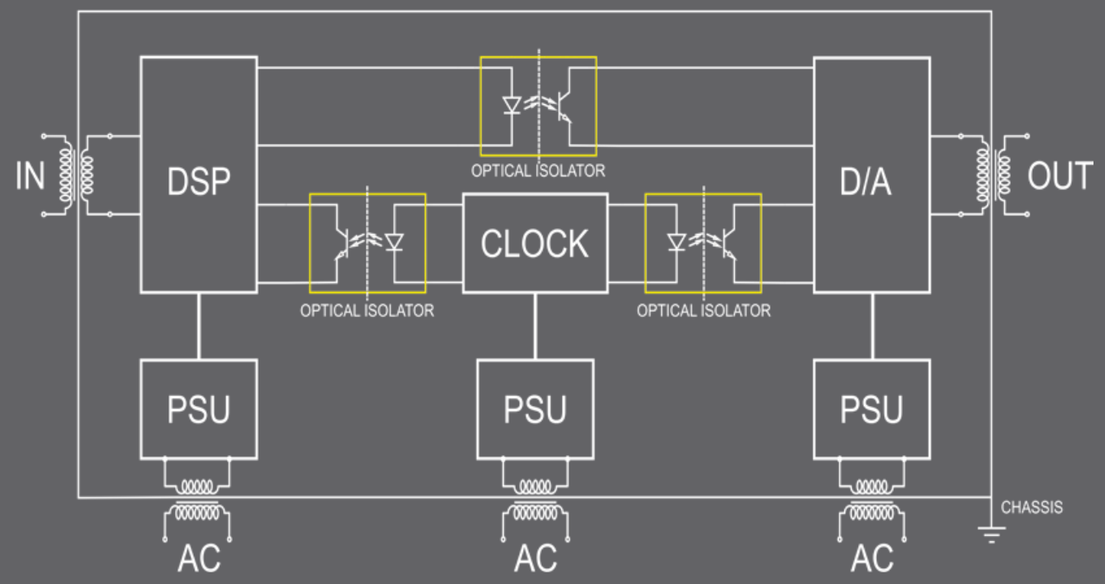
We have no output buffer or filter at the DAC output providing the cleanest possible output signal, just a transformer matching the impedance of the converter resistors to the outside world and isolating them from external infruence.

We use completely separate power supplies for each block in the DAC: the Converters, Clock, DSP and Control logic all with floating ground planes and our unique constant current regulator technology.

Then the whole assembly is mounted in a solid aluminum case for vibration damping and EMI/RFI screening following the same construction concept as our preamplifiers.



It's a different league from all currently available high end DAC's hence the name of a Roman Emperor.



Specification

- Inputs
  - 2 x COAX (RCA) connectors. Limited to 384 kHz, 24 bit data
  - 2 x AES/EBU (XLR) connectors
  - 2 x TOSLINK (optic) connectors. This format has limited bandwidth and works for maximum sample rates of 192 kHz
  - 1 x USB (optional)
- Output
  - 1 pair unbalanced RCA connectors
  - 1 pair balanced XLR connectors
- Power supply ..... 115 or 230 V
- Power consumption 30W
- Dimensions ..... WxDxH - 432x400x120 mm
- Weight 12Kg
- Finish ..... Black or Silver anodized aluminium

Heros

Class A Hybrid - tube/fet amplifier

Heros is a very unusual two stage hybrid transformer loaded amplifier marrying old concepts with latest technology.

The numerous benefits from using an output transformer are usually ignored mostly due to cost reasons. Yet when done correctly the result speaks for itself.

Features

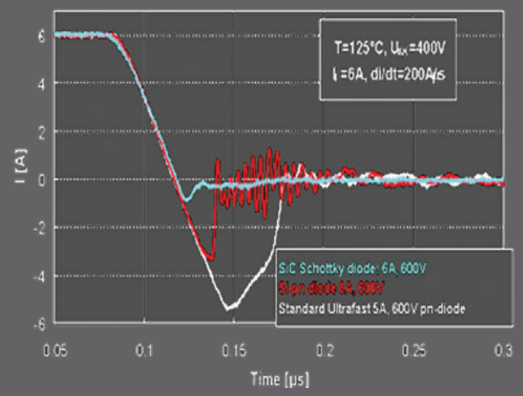
- Tube amplifier architecture with simplest signal path
- Transformer coupled input and output
- JFET/MOSFET cascode output devices
- Silicon Crbide diodes in power supply
- Microprocessor control
- Selectable gain
- Selectable speaker impedance
- Audiophile 5687wa tube used
- Fully balanced differential operation
- Both RCA and XLR inputs
- Compact chassis built like a tank
- 100W ClassA power

Heros

Based on a standard cathode follower push pull output stage but modified with our design concepts and experience it features a tube input stage providing the necessary voltage amplification. Followed by transformer loaded cascoded jfet/mosfet output stage instead of the usual tube taking care of current gain much better.

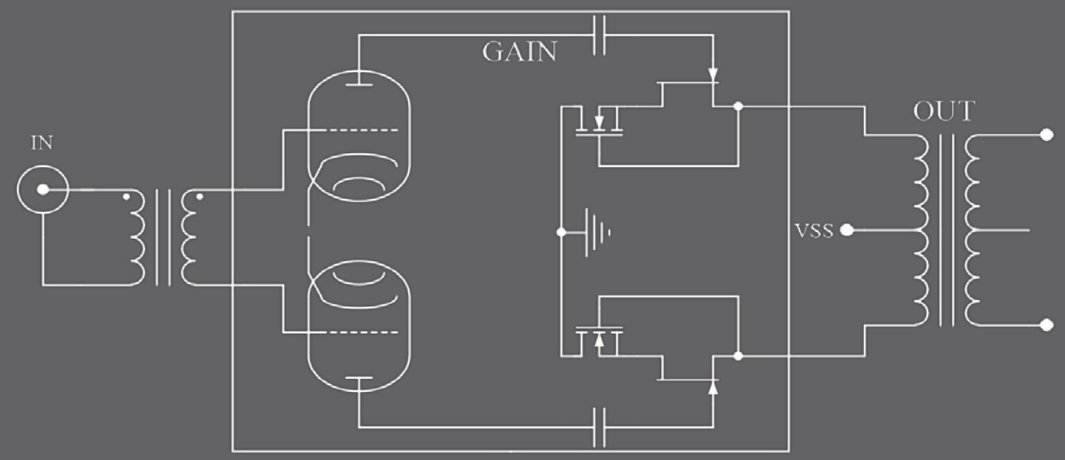
Almost double the efficiency of a normal Solid State Class A design, no DC on output and many other benefits are taken advantage of in our implementation. A fully differential architecture using an input phase splitting transformer and summing back at the push pull output transformer. This solution completely floats the inside of the amplifier isolating it from any external influences.

The design being fully differential is immune to power supply noise.



The power supply for the output stage uses a new breed of rectifier diodes made of a new material called Silicon Carbide. They have no reverse current and switching loses.

When properly applied the rectifier produces no EMI/RFI in the chassis. The result is an amplifier free of grain and frizziness, giving new meaning to transparency and tone.

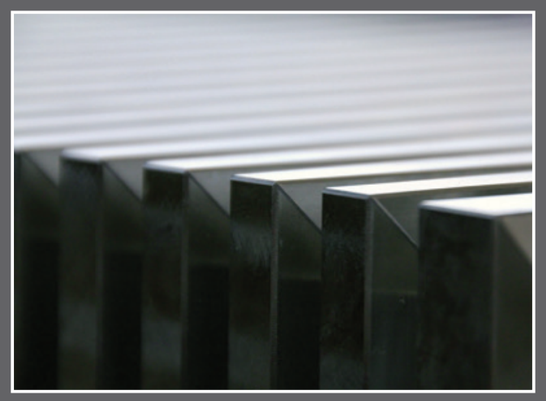


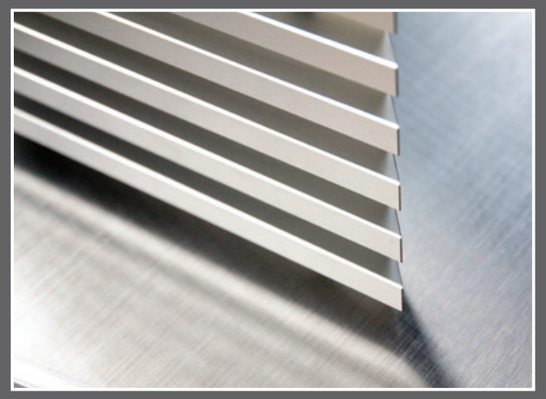
We use the well known 5687WA audiophile tube. and the highest grade audio transformers

The whole chassis is a heatsink. It is the most compact 100 watt class A solid state amplifier available.

Operating all devices in class ‘A’ produces a fair amount of heat. The chassis is designed to cope with the heat produced by the components and provide a vibration free structure to house the components. All the electronics are enclosed in separate compartments to stop interference between components.

Blending this with stylish aesthetics produced a beautiful sculpture - To be known as Heros.





Specification

- Inputs
  - 1 unbalanced RCA connector
  - 1 balanced XLR connector
- Output ..... 100W in 4Ω/8Ω
- Power supply ..... 115 or 230 V
- Power consumption 230W
- Dimensions ..... 210W x 400D x 230H mm
- Weight 30Kg
- Finish ..... Black or Silver anodized aluminum
- Tube compliment :
  - 1x 5687 amplification

Spartacus

Directly Heated Triode power amplifier

Spartacus is a statement. Demonstrating what can be achieved with modern Directly heated triodes, advanced magnetic materials and the application of 21st century technology to a classic concept. It is an engineering overkill in all aspects understated by the slim chassis. A rebel in the world of “good enough”

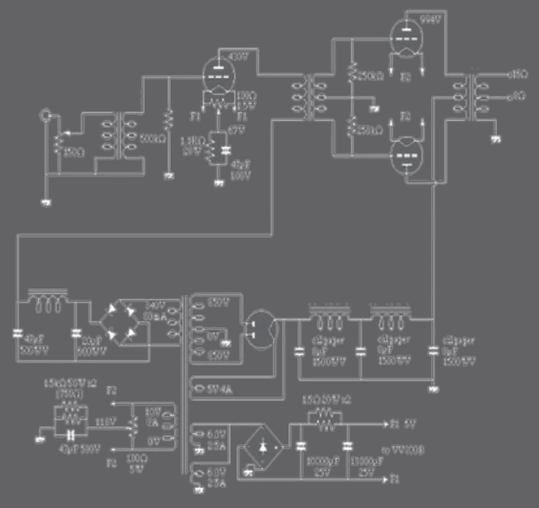
Features:

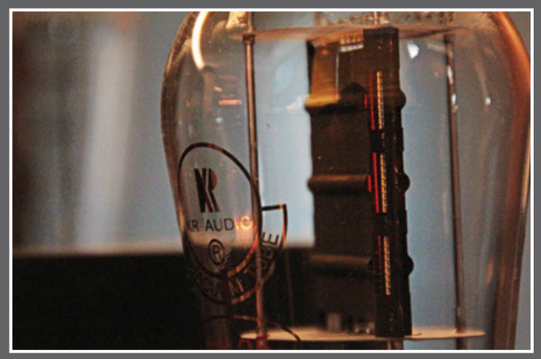
- Custom current production tubes for long life
- KR PX25 input/driver tube
- EML 520v3 output tubes
- 70w for ample power reserves
- Low noise for subtle dynamics
- Current sourced Shunt regulators on output and driver for stable power alowing explosive dynamics and transparency even on the hardest loads
- Transformer input and output for galvanic isolation
- Auto bias for compensation of tube ageing and correct operation
- Microprocessor controlled operation for safety
- Special filament heating circuit for harmonic richness and tube protection
- Selectable gain and speaker impedance for interoperability
- Highest quality torque binding posts protecting your cables
- No electrolytic capacitors in power supply for no ageing
- made in Bulgaria of all places - to puzzle the world - inexplicable!

Spartacus

Spartacus features one of the simplest possible signal paths with absolute zero feedback (wire-vacuum-wire-vacuum-wire). To achieve simplicity while delivering exemplary performance, each device in the signal path had to be the best possible.

Emission Labs and KR Audio manufacture a special breed of tubes called Directly Heated Triodes. They are the most linear amplifying devices and some of the very best audio tubes ever made. It is a fact that the distortion of triode vacuum tubes compared to solid-state devices is orders of magnitude better. Apart from the low distorion level, the type of distortion they produce is 2nd harmonic.





To go further we employ a technique to cancel the negligible distortion they would generate by running two of them out of phase to cancel each other’s distortion.

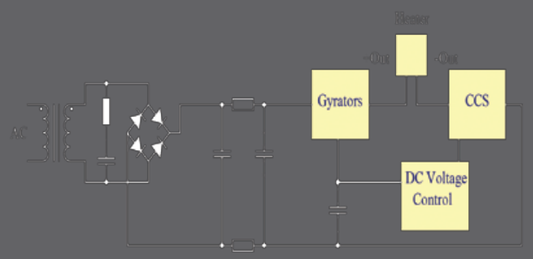
For this to work we designed a driver stage that would supply the two output tubes with exactly the same signal in phase for one and out of phase for the other by using another super linear DHT the PX25. It is loaded with a perfectly symmetrical phase split transformer with independent windings providing separate bias to the output tubes. Not a popular approach to design, at the voltage and currents involved, as it is extremely difficult to produce. But rewarding when done.

The most linear DHT tubes have considerably low voltage gain and require high input voltage for full power. Again we implemented an input solution with the cleanest possible voltage gain – a step-up transformer with switchable ratio.

Spartacus has one of the most sophisticated power supplies. To reduce power supply noise we use a choke input full wave tube rectifier arrangement. This eliminates switching noise and this topology keeps the voltage on the reservoir capacitor bank constant. In our case, this allows for a considerably smaller capacitor bank using of the highest quality film capacitors.

Power supplies operate best when the load presented is constant – namely, the constant current sourced shunt regulators. A constant current source is a device that passes the exact same amount of current no matter what happens on either end by varying it's voltage and a shunt regulator that will try and keep a constant voltage across itself by changing its conductivity no matter what follows this. At the voltages we operate it, this has become possible only very recently.

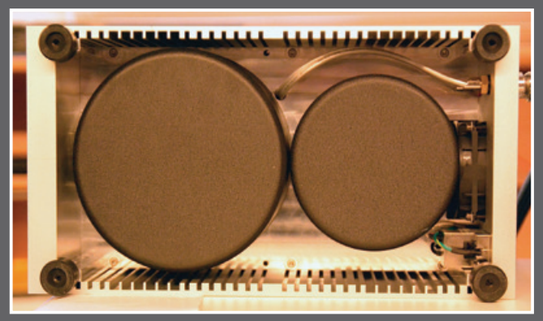
We use a special technique to supply the heaters (filaments) of the tubes. Following a separate winding, rectifier and capacitors is a voltage regulator supplying an electronic choke isolating the filament from the DC source and counteracting modulation of the heater current by signal going through it. It is complicated but small things make the big difference.



As tubes age and cannot stay perfectly matched we designed a servo circuit that keeps the current in both output tubes constant and matched to a predefined refference.

We use microprocessor control to make sure all is switched in the right sequence and that all separate systems function as expected. In case of misbehavior of any of the subsystems the amplifier shuts down to protect the tubes.

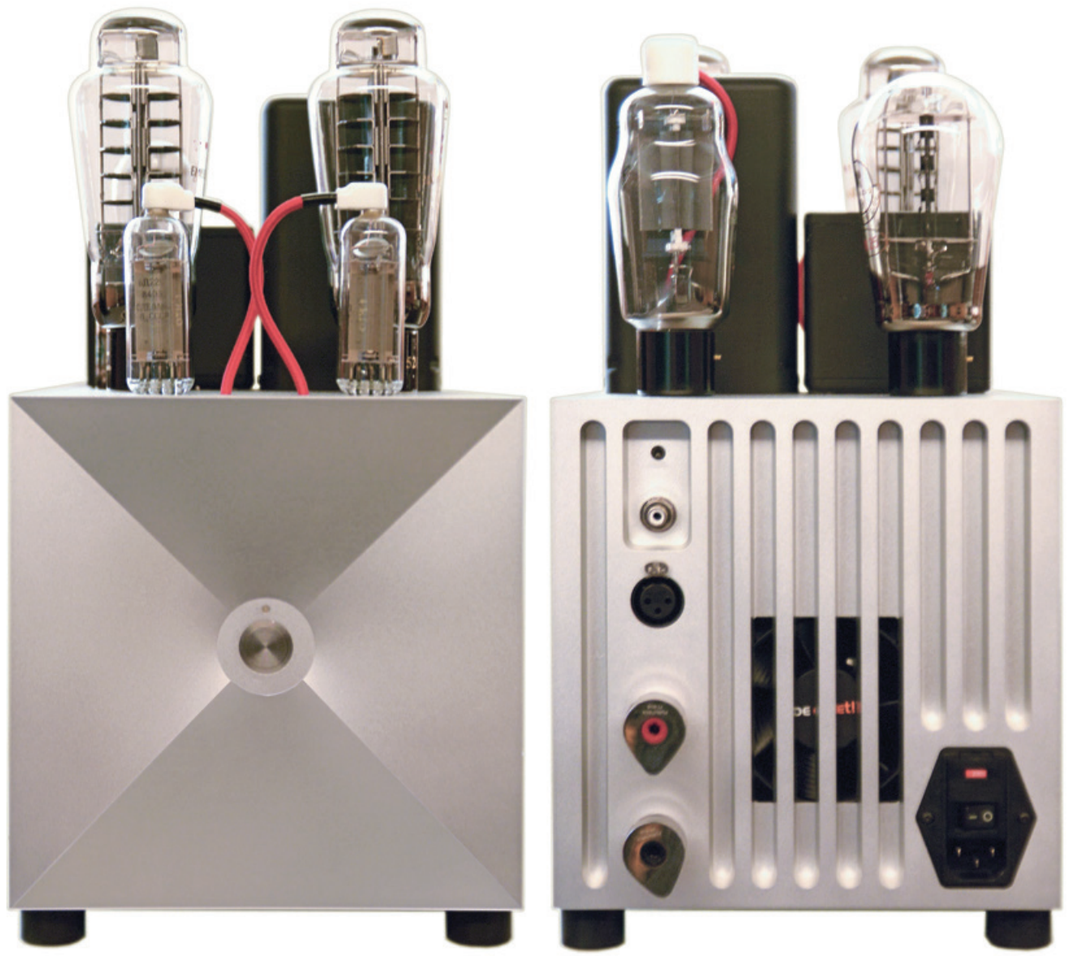
The chassis to house all of the above had to be a masterpiece itself. Milled from solid aluminum billets.



We have the power supply mounted on a mid level plate of this structure with the control board on top and the transformer and choke hanging below bringing the center of gravity low enough so the signal transformers can be mounted on the top plate to avoid magnetic interference. The top and mid plates link the front and back plates forming a protected cavity housing for all the sensitive electronics. There are no screws visible on the chassis. And the chassis feels like a solid block.

Specification

- Inputs
  - 1 unbalanced RCA connector, 1 balanced XLR connector
- Output ..... up to 70W in 4 Ω or 8 Ω
- Power supply ..... 115 or 230 V
- Power consumption 380W
- Dimensions ..... 210W x 440D x 420H mm
- Weight 35Kg
- Finish ..... Black or Silver anodized aluminum
- Tube compliment :
  - 1x PX 25 amplification, 2x EML520B-V3 amplification
  - Г- 811 shunt regulator, СГ-13П voltage reference
  - 2 x 6Д22С rectifier



Reviews

Stereophile
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AUDIO
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Stereophile
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SixMoons.com
Mar/2013

HIFICRITIC
Oct-Dec/2012

HIFICRITIC
July/Aug/Sept/2012

Audio Beat
Top Audio Video 2010

Ultra High-End
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The Absolute Sound
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