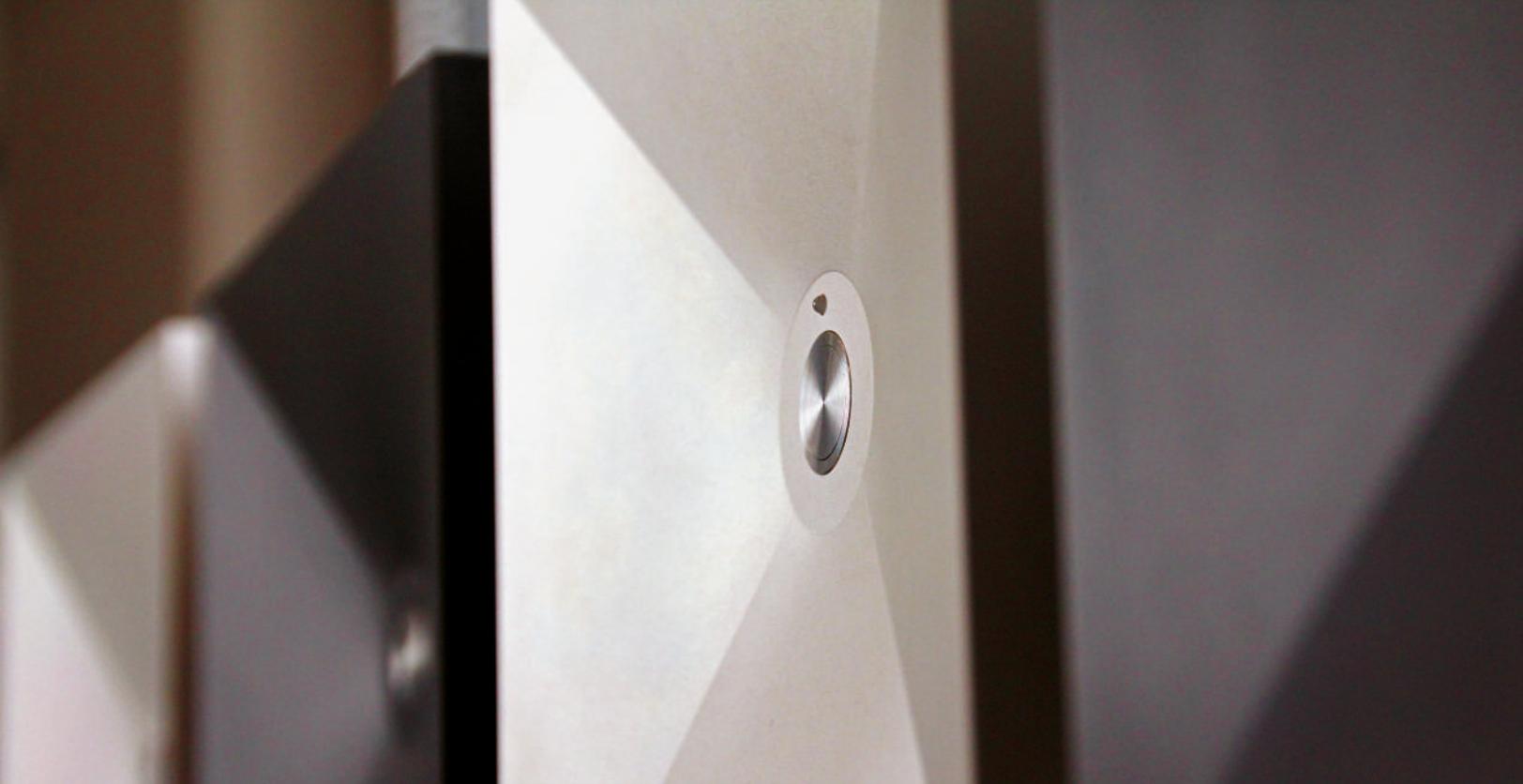




# Thrax

Audiophile Products





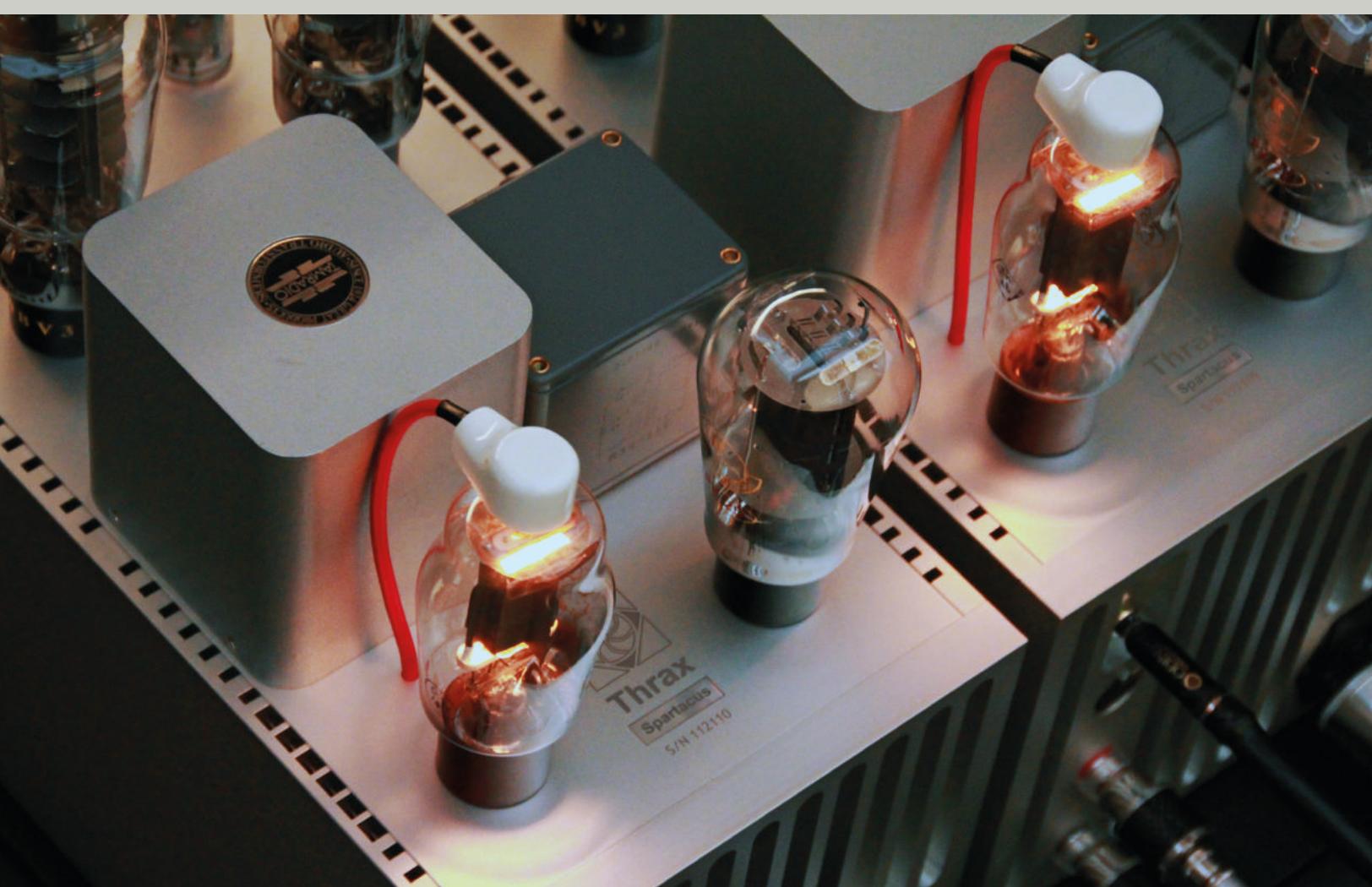
**Thrax is a specialist audiophile systems manufacturer.**

Purveyor of the finest sounding components for any setup.

Each component has been conceived to perform a particular task in the overall system and is executed to deliver performance above expectations, setting a benchmark for others to aspire to.

Thrax is a zero compromise company, we firmly believe there can be only one level of performance worth pursuing - true reference level. We don't make a version of what is already on the market, all our solutions are non standard and original in every respect. So why we have multiple amplifiers if there can be only one? Simple - to drive optimally different types of loudspeakers. Loudspeakers vary vastly in their optimal drive method and we have developed the best match for each, covering all from electrostats to horns. No universal solution exists.

True to our beliefs we use the works and experience of the very best in each field and implement that knowledge in our products. It took us a lot of time and many tests to determine where the truth lies, now is your turn. 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.



## Our Technology

**Modular constructions** - 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 design with constant current consumption** - no dynamic load variation means no modulation of the supply voltage and no AC in the power supply path. No need for large capacitor banks introducing unwanted artifacts.

**Ultra low noise voltage references** used in our signal shunt regulators.

**Separate PSU for each subsystem** - complete isolation.

**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, feed forward 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.

**Unique compound silicon devices** for high voltage operation coupled with vacuum tubes for linearity.

**Vibration control of all parts in the assembly** with interlocking plates and absorbing material to kill any unwanted resonances in the chassis.

**Microprocessor controlled reed relays** for signal switching and function selection.

**Simple high visibility displays and intuitive user interface.**

**Constant impedance equalization** - provides uniform loading to preceding stage preventing coloration and timbre shift of original sound.

**Custom ring diaphragm drive units and ultra short horn system** - unprecedented resolution and clarity at very high levels.

**Special Nickel and Cobalt alloys** used for screening and isolation of critical parts.

**Our units use optimal (higher) interface levels between the components** allowing for higher system signal to noise ratio and not losing 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.

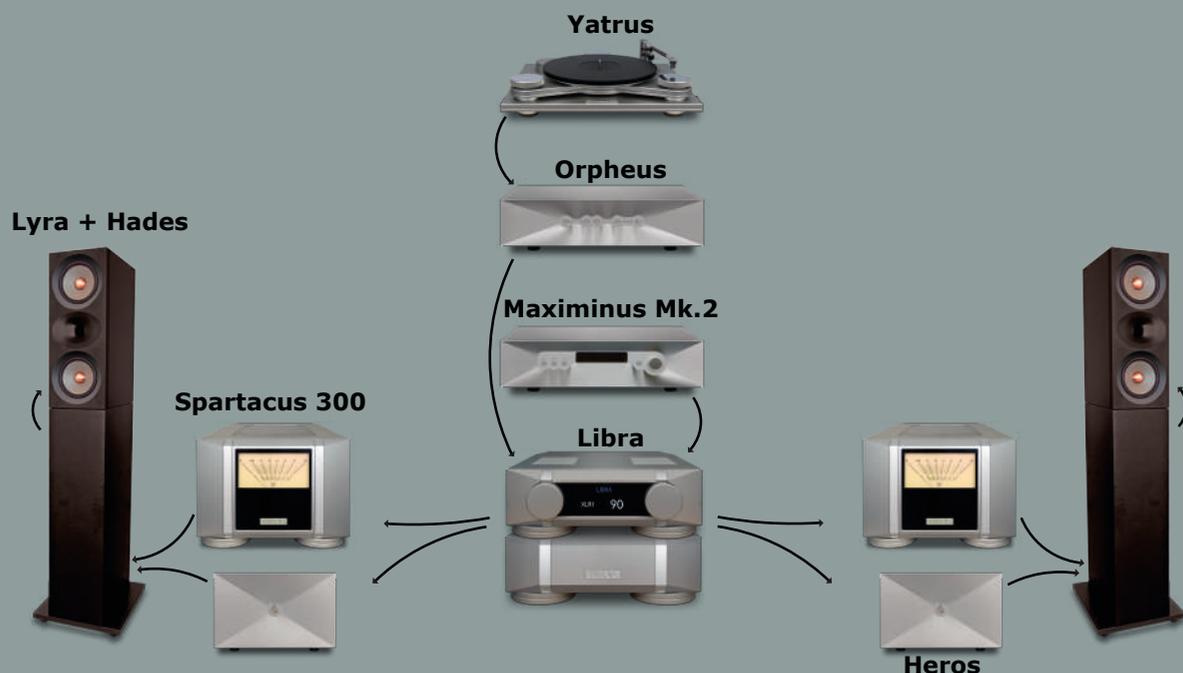
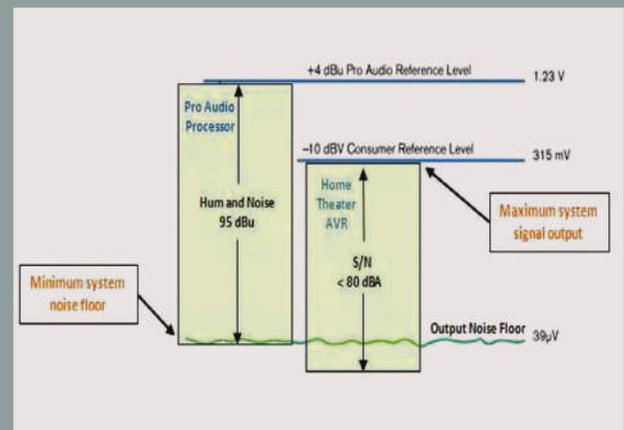
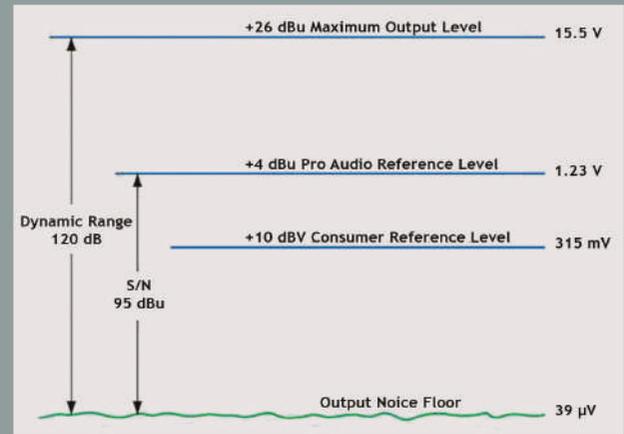
**Family styling** - sonically and aesthetically. Matched to each other for best performance and outlook. Signature sonic character.

**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.



# Thrax Dionysos

## Vacuum Tube Control Amplifier



The control amplifier is the centerpiece of each high-end audio system. Being responsible for source selection, signal conditioning and volume control. It matches the output of your source to the input of your power amp.



### Features

- Accepts both balanced and unbalanced input signals on RCA and XLR connectors.
- Switches ground plane with input selection preventing ground loops.
- Programmable grounding arrangement for large systems.
- Dual balanced and unbalanced output for bi-amp
- 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 rectifier for no switching noise
- Custom vacuum encapsulated signal relays for ultimate sound and reliability
- Modular construction
- Microprocessor controlled
- Interlocking solid aluminum chassis.

## Technology

The input of our pre-amplifier uses a transformer providing optimal loading for the source component to develop it's 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.

The input transformer provides complete isolation of the source components from the system. Rejects common mode signals much better than any active solution, stops EMI/RFI and ensures truly balanced differential input. All while being the optimal load 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. Our solution is fundamentally different and as simple as it gets. We use the same input

transformer with various winding ratios and we switch between them. Instead of throwing away part of the signal our solution behaves like an audio gearbox, transferring all the power of the incoming signal at the desired level.

The 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.

## Specifications

### Inputs

- 4 pair unbalanced RCA
- 2 pair balanced XLR

### Output

- 2 pair unbalanced RCA
- 2 pair balanced XLR

### Attenuation steps

- 32

### Volume Control Range

- Minimum gain -46dB
- Maximum gain +18db

### Power supply

- 115 or 230 V

### Power consumption

- 45W

### Weight

- 15Kg

### Dimensions

- 432Wx400Dx120H mm

### Finish

- Black or Silver anodized aluminum

### Tube compliment

- 1 x 6H6П(6N6P)



# Thrax Orpheus Mk2

## Phono Preamplifier with LCR RIAA Equalizer



The phono preamplifier's task is 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.



### Features

- Built in step up transformer
- Constant impedance LCR equalization
- 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 rectifier for no switching noise
- Custom vacuum encapsulated signal relays for ultimate sound and reliability
- Modular construction
- Microprocessor controlled
- Interlocking solid aluminum chassis.

## Technology

Orpheus uses two tube gain stages with zero feedback. Each gain stage operates on it's own and there are no feedback loops enclosing them. To guarantee the highest performance we take care of a number of things often overlooked.

At the RCA input we switch the ground plane when switching between inputs so there are no hum loops and induced ground noise for the D3a input tube.

The D3a is loaded by the custom passive LCR RIAA correction. This arrangement combined with constant current source guarantees long term stability during the service life of the tube and isolates any noise that might have made it's way through the power supply.

The use of LCR equalization is vastly different from the often used equalization networks in the feedback loops or the plain passive RC networks.

The LCR filter being a constant impedance to the

source allows the input stage to behave the same way at low and high frequencies and at any level.

All other solutions have varying impedance. LCR has unmistakable sonic purity and textural richness. The equalization in Orpheus is taken to the extreme by being executed with custom coils wound with OFC wire and silver foil capacitors.

The output 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 the sensitive LCR circuit from the following components. The EQ filter is out of any gain loops and sits between the two gain stages protected from any unpredictable influences at it's input and output.

Orpheus is one of the quietest tube phono pre-amplifiers and the fact that this is achieved in a single chassis is remarkable.

## Specifications

### Inputs

- 3 x RCA

### Output

- RCA or XLR

### Gain

- 40/60/66db

### Power supply

- 115 or 230 V

### Power consumption

- 50W

### Weight

- 15Kg

### Dimensions

- 432Wx400Dx120H mm

### Finish

- Black or Silver anodized aluminum

### Tube compliment

- 2 x D3a amplification
- 2 x 6C4 amplification



# Thrax Maximinus Mk2S

## Universal DSP controlled R2R ladder DAC



This is the original multi-bit 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
- 1ppm resolution
- DSD64 and DSD128 support
- Balanced outputs on RCA or XLR (selectable)
- Silver Transformer isolated output
- No I/V conversion
- No filtering after DAC
- Built-in streaming client
- Internal clock generators
- ROON Ready
- Selection of 4 digital filters
- Firmware upgradable
- Modular design for field upgrades
- 32/384 Asynchronous USB interface
- Sealed solid aluminum enclosure





## Technology

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). The resolution achieved is 1ppm. This is immediately audible in the low level texture and tone of instruments. 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 is converted to 32bit 352.8kHz data fed directly to the DAC. This further improves low-level resolution and the sense of space. The process is all user controllable and defeatable for purist and non-oversampling use. The integrated DSP supports DSD stream decoding.

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 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 influence.

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 pre-amplifiers.

## Specifications

### Inputs

- 1 x COAX (RCA)
- 1 x AES/EBU (XLR)
- 1 x TOSLINK (optic)
- 1 x USB (optional)

- 1 x Ethernet
- 1 x Bluetooth

### Output

- 1 pair unbalanced RCA
- 1 pair balanced XLR

### Power supply

- 115 or 230V

### Power consumption

- 30W

### Weight

- 12Kg

### Dimensions

- 432Wx400Dx120H mm



# Thrax Heros Mk2

## Class A Hybrid - tube/fet Amplifier



Heros is a very unusual hybrid amplifier marrying old concepts with the latest technology.



### Features

- Tube amplifier architecture with the simplest signal path
- Transformer coupled input and output
- MOSFET output devices
- Silicon Carbide diodes in power supply
- Microprocessor control
- Silver input transformer
- Presettable speaker impedance
- Our favorite 6N6P tube used
- Fully balanced differential operation
- RCA and XLR inputs
- Compact chassis built like a tank
- 100W Class A power output
- DC-coupled, no capacitors in signal path
- Choke filtered power supply
- Modular design



## Technology

Heros is like no other amplifier ever made as it has a single differential DC coupled FET/Tube stage working like a single super tube. This DC coupled cell is loaded by a low impedance push-pull transformer helping improve the efficiency to almost double that of a normal Solid State Class A designs. The output transformer blocks DC on the output and presents many other benefits by isolating EMI/RFI, scaling down the output voltage (reducing residual noise) and protecting the output from any power supply noise by canceling it by the nature of it's differential operation.

To guarantee a fully differential architecture we split the phase with the input transformer and sum it back up with the push-pull output transformer. This solution completely floats the the gain cell between the two transformers isolating it from any external influences making Heros immune to the influences of its environment.

The power supply uses high voltage Silicon Carbide diodes followed by a filter choke preventing any switching noise from reaching the output stage. The result is an amplifier free of grain and fizziness or screaming intermodulation, giving new meaning to transparency and tone density. We use our beloved 6N6P as the base for the proprietary DC gain cell, a recognized audiophile performance tube. To keep all at this level we chose a silver wire permalloy input transformer and the highest grade custom toroidal output and power transformers.

Operating all devices in class 'A' produces a fair amount of heat, so to handle that the Heros' chassis itself is a heat sink. It is still the most compact 100-watt class A solid state amplifier available today. The chassis is designed not only to cope with the heat produced by the components but to provide a vibration-free structure to house them. Heros can handle any speaker giving it a new voice.

## Specifications

### Inputs

- 1 unbalanced RCA
- 1 balanced XLR

### Output Power

- 100W

### Max. input level

- 4V

### Gain

- +18 db

### Input impedance

- 0.3k Ohm

### Output impedance

- 0.5 Ohm

### Signal to Noise

- 118db

### Frequency response

- 20-20,000Hz +/- 1db

### Power

- 260W 115/230V
- 50/60Hz

### Weight

- 35kg

### Dimensions

- 340x450x230mm



# Thrax Teres Mk2

## Transformer Coupled Hybrid Power Amplifier



Teres delivers tube clarity and tone with real might and power.  
Unusual but true...



### Features

- Tube/Fet hybrid architecture with simplest signal path
- Interstage transformer coupled
- Extra long life input tube
- Shunt regulated constant current power supply
- JFET/MOSFET cascode output modules
- Solar cell based bias control of output stage
- Silicon Carbide diodes in power supply
- Special lower inductance screened power transformer
- Microprocessor control
- Both RCA and XLR inputs
- Solid chassis built like a tank
- Available as Monoblock or Stereo



The output stages power JFET cascodes form a bridge that when unbalanced by the input signal via the 2 transformer windings restores balance by adjusting current conduction through the load. The 2 output stages actually enclose the load in their control loops and try to correct each other's errors reducing the distortion to negligible amounts. Leaving only the "character" of the input stage while being able to drive any load.

Not sharing a common reference point apart from the load itself makes the output stage self correct for any error produced. Result is an amplifier capable of extreme power handling while delivering exquisite smoothness and low level resolution.

The driver stage being isolated by the interstage transformer is not influenced in any way by the output stage behavior maintaining tone color and resolution at all powers and loads consistent.

Having the output stages floating around the load prompted for the use of a unique biasing technique powered by solar cells. This was the quietest galvanically isolated power we could come up with. Using opto-electrical conversion we control the bias by adjusting light intensity in the control circuit.

Teres is an example of modern technology solving age old problems allowing us to go a step beyond.

## Technology

Single ended tube input stage loaded with a phase splitting transformer controlling 2 separate single ended amplifiers running out of phase for output. There is no output transformer in our arrangement but the output signal sums in the connected load.

The tube handles all the voltage gain needed. It uses a new generation or our choke rectified shunt regulated power supply ensuring optimal and stable noise free operating point.

## Specifications

### Inputs

- 1 unbalanced RCA
- 1 balanced XLR

### Outputs

- 250W in 8Ω
- 350W in 4Ω

### Power supply

- 115 or 230 V

### Power consumption

- Max.700W

### Weight

- 35Kg

### Dimensions

- 340Wx400Dx230H mm



MONO



STEREO

# Thrax Libra

## Differential Balanced 300B Tube Preamplifier



Statement differential balanced 300B tube preamplifier of the 21st century.

### Features

- Post amplification volume control for lowest noise
- External dual mono power supply with choke input rectifier for lowest switching noise
- Programmable Balanced Tape loop
- Stepped volume control for perfect repeatability of level settings
- Interlocking solid aluminum chassis
- RCA and XLR inputs with adjustable sensitivity controls
- Highest quality long life 300B tubes
- Single gain stage
- Dual balanced output for bi-amping with offset adjustment
- Home Theatre bypass feature for integration in Home Cinema systems
- Microprocessor-controlled operation for safety
- Special filament heating circuit for harmonic richness and tube protection
- Current sourced regulator for stable power-allowing explosive dynamics and tonal purity
- DC-coupled input and output for ultimate transparency
- Auto-bias for compensation of tube aging and correct operation of any 300B



LIBRA

THRAX



## Technology

Libra employs two 300B tubes per channel in true dual mono differential pure class A triode operation to form a gain stage so unique that presents a tonal spectrum that is dense and clear revealing extra layers of unexpected information in the recordings. Libra paired with the Thrax Spartacus 300 allows users to experience a full 300b signal amplification path for the first time and be stunned by it.

Libra features two independent outputs that can be offset from each other to allow for bi-amplification with different amplifiers for mid/hi and bass. For example a single-ended triode amplifier for mid/hi and a powerful push-pull amplifier for the Low frequencies. The offset lets you adjust for the different gain of the amplifiers and keeps their volume levels in sync.

Another unique feature of Libra is the fully balanced Tape Loop allowing the use of professional tape recorders like Studer, Ampex and many others so you can take full advantage of the quality of your master

tapes.

A home cinema bypass is also available for those wishing to integrate the stereo system in a media room. A "trigger out" function is provided for turning amplifiers in hard-to-reach places on or off automatically when powering on your preamp.

Our goal was to create a pre-amplifier worthy of driving the Spartacus 300 power amplifiers known for their ability to preserve the signal's tone and texture at all levels, not constraining the dynamic expression or imposing any coloration to it. Libra had to be at the uncompromising level of the 300b input stage of Spartacus 300 or better in order not to affect its sound. But we already use one of the most linear tubes there, so the choice was an inductively loaded heavy class-A differential stage canceling out the Libra's 300b's negligible 2nd harmonic leaving the spectrum absolutely clean.

Libra should not be talked about but listened to.



## Specifications

### Max. input level

- 5V Rms

### Max Output level

- 10V Rms

### Gain

- +12db

### Input impedance

- 90k Ohm

### Output impedance

- 80 Ohm

### Signal to Noise

- 90db

### Power consumption

- 80W 115/230V 50/60Hz

### Weight

- Main 26kg, power 34kg

### Dimensions

- 430x450x150mm



# Thrax Spartacus 300

## Pure 300B Power Amplifier



Spartacus 300 is a statement.

A masterpiece demonstrating how modern thinking applied to Directly Heated Triodes with advanced magnetic materials and a classic concept eclipses all other approaches. It is an engineering overkill in all aspects based on the legendary Western Electric 300B tube. It used six 300B tubes in 2 stages to deliver 50W of pure class A triode sound.

### Features

- Custom current production tubes for long life
- 50w for ample power reserves
- Low noise for subtle dynamics
- Current sourced 300B Shunt regulator for stable power allowing 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 of any 300B
- Microprocessor controlled operation for safety
- Special filament heating circuit for harmonic richness and tube protection
- Highest quality torque binding posts protecting your cables





## Technology

The input is a 300B tube driving 4x300B tubes in the output stage and a shunt regulator based on yet another 300B tube makes sure all signal currents go through 300B tubes with no capacitor in sight.

Now for the first time you can actually hear what a 300B really sounds like and prepare to be amazed. Complimented by the finest nano-crystalline core output transformer, nano-crystalline choke power supply it really redefines tube amplification.

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.

The legendary 300B tube was chosen. 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 lower. Apart from the low distortion level, the type of distortion they

produce is a consonant 2nd harmonic only. To go further we employ a technique to cancel the negligible distortion they would generate by running two of them out of phase effectively canceling 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 300B. It is loaded with a perfectly symmetrical phase split transformer with independent windings and screening providing separate bias to the output tubes preventing any interaction. Our proprietary ultra low noise current sourced shunt regulator makes sure nothing moves unless it is supposed to. Not a popular approach at the voltages and currents involved as is extremely difficult to make. But infinitely rewarding when done. The most 300B tubes have considerably low voltage gain, so a step-up input transformer takes care of that. Look no further as there is no commercially available product coming close to Spartacus 300.



## Specifications

### Inputs

- 1 balanced XLR

### Output Power

- 50W pure class A

### Power supply

- 115 or 230V

### Power consumption

- 450W

### Weight

- 55 Kg

### Dimensions

- 440Wx540Dx300H mm

### Tube compliment

- 6x EML300B

# Thrax Ares Mk2

## Modular Audiophile System



A single chassis audiophile system  
with the sound you want and the features you need.  
ARES is a complete solution for your home audio needs, just add speakers.



### Features

- Two true mono power amplifiers with independent power supplies
- Unique non switching output stage behaving like Class A
- Single ended Class A driver delivering liquidity and texture associated with the best of tube amplifiers.
- Absence of global feedback
- Regulated supplies of the drivers maintaining exemplary transparency and speed at all levels.
- In basic configuration ARES could be used as a power amplifier
- Digital input board supporting ALL current digital interfaces
- Built-in RIAA for MM/MC cartridges
- Transformer-coupled input



## Technology

ARES is built with the building blocks of the last high-end audio systems. All sharing the same chassis. No cables, no component mismatch, no lack of synergy, no multiple remotes.

With analog replay growing in popularity the addition of our new RIAA connector to the ARES input board converts the first RCA input to a Moving Magnet and Moving Coil phono stage with gain settings in the configuration menu. The RIAA board has it's own dedicated analog power supply making it an absolutely independent component. Pretty much like a stand alone phono preamplifier but sharing the same case and user interface.

The Digital input board adds 6 inputs accommodating all modern digital interfaces. AES, SPDIF, Toslink, USB,

Ethernet and Bluetooth. This input module has the ability to apply different filters and to upsample the signal for the DACs keeping it always with the optimal data rate and format making it the truly universal digital input module. All data is re-clocked to the high precision internal clock generator. The DAC is realized as a separate card allowing upgrades when new technologies become available. The integrated network player board supports DLNA, Roon and DSD and is software upgradable on it's own.

ARES has separate power supplies to power the digital and analog circuits independent from each other and completely separate from the power amplifiers.

The modularity of the system let's you grow as you need and to keep it current for long time to come.

## Specifications

### Inputs

- 2 x RCA connectors
- 1 x Phono
- 1 x AES/EBU (XLR) (optional)
- 1 x TOSLINK (optic) (optional)
- 1 x USB (optional)

- RJ45 Ethernet (optional)

### Outputs

- 120W/8Ohm 200W/4Ohm

### Power supply

- 115 or 230V

### Power consumption

- 500W max

### Weight

- 23 Kg

### Dimensions

- 432Wx400Dx120H mm



# Thrax Enyo Mk2

## Modular Audiophile System



ENYO is a reference integrated vacuum tube amplifier with a digital subsystem. It is a complete solution for your home audio needs, just add speakers.

### Features

- ENYO features two pure tube power amplifiers developed from the ground up using our long experience designing tube circuits.
- The amplifier is fully differential push pull design with a special cathode feedback ultra linear output stage.
- In the design we use custom double C core output transformer of the highest quality
- Vibration proof military transmission pentodes.
- The amplifiers are powered by choke filtered power supply with silicon carbide rectification.
- The absence of global feedback contributes to the exemplary transparency and speed.
- In it's most basic configuration ENYO could be used as a power amplifier in an existing system.
- Input is fully balanced via a transformer and uses switched resistor volume control
- RIAA connector for MM/MC cartridges.
- Digital input board supporting ALL current digital interfaces





## Technology

Enyo brings pure vacuum tube amplification that has a musical quality unmatched by any other technology to the connected digital age.

The level of integration is unprecedented having all possible digital and analog inputs optimized to feed directly reference class tube power amplifiers making component mismatch a thing of the past while removing all cables and boxes around the living room.

The RIAA connector is the first RCA input incorporating a Moving Magnet and Moving Coil phono stage, allowing you to connect your turntable directly.

Enyo's digital input board accommodates all modern digital interfaces: AES, SPDIF, Toslink, USB, Ethernet and Bluetooth inputs. This input module features different filters and upsampling algorithms to supply the DACs always with the optimal data rate and format making it the truly universal digital input module.

All data is re-clocked to the high precision internal clock generator. The DAC is realized as a separate card allowing upgrades when new technologies become available.

The integrated network player board supports DLNA, Roon and DSD streaming via Ethernet and is upgradable on its own.

So you get a DAC, an Up-sampler, a Network player, a Phono preamplifier and tube power amplifier in a single box. All designed to work with each other in the most optimal way. Getting rid of cables multiple remotes and boxes scattered across the room.

The modularity of the system let's you grow as you need and to keep it current for long time to come.

## Specifications

### Digital Inputs

- 1x RJ45 Network (LAN)
- 1x COAX (RCA),
- 1x Toslink
- 1x AES (XLR)

- 1x USB
- Wireless Bluetooth 4.2

### Analog Inputs

- 2x RCA (unbalanced),
- 1x XLR (balanced)

- 1 x Phono

### Outputs

- 4 and 8 Ohm

### Power supply

- 115 or 230V

### Power consumption

- 300W

### Weight

- 30 Kg

### Dimensions

- 440Wx480Dx190H mm



# Thrax Yatrus

## Direct Drive Turntable



The analog source you have been waiting for is here today.  
Yatrus is the turntable to challenge the dynamics of any digital source.  
The extraordinary low energy reflection reveals a new layer of Information.

### Features

- Unique vibration-free direct drive brushless DC motor with integrated bearing for the smoothest possible motion
- Electronically controlled hyper stable speed for extremely steady motion
- Multilayer platter with special damping for best record interface and vibration control
- Fully integrated all in one piece - no external boxes and controls
- Ultra low-resonance adjustable suspension system isolating the table from its environment
- Support for all common speeds 33/45/78 rpm
- All anodised aluminium construction with constrained layer damping





## Technology

The steady growth of Analog replay and the introduction of ever more complicated replay systems set us on a task to pack all the performance achievable today with a most desirable quality called user friendliness.

Turntables are often set in sub-optimal conditions lacking purpose-built racks and vibration-free supports, so we implemented a high loss low-resonance integral support system in the Yatrus allowing you to use it on any furniture in your home while still preventing vibrations from reaching the platter/cartridge interface.

Yatrus uses a maintenance-free drive system. No need for regular speed adjustments, belt replacements

and so on. It is made to run forever. By the use of a direct-drive motor we eliminate multiple noise sources like belt knock and jitter, high speed motor vibration, multiple bearings chatter and so on. The result is a stunningly quiet drive system mounted on an inert rigid body with dampened rigid coupling to the arm-board manifesting as the most explosive dynamics and clean textures.

The Yatrus is designed for use with a single 9" tonearm.

The analog source you have been waiting for is here today.

## Specifications

### Support

- Single 9" tonearm

### Weight

- 24Kg

### Available Finishes

- Silver or Black Aluminum

### Dimensions

- R450W x 400D x 100H mm

### Power

- 24V Power Supply
- 36W Power Consumption



# Thrax Lyra

## Two Way Loudspeaker System



Lyra is a unique 2-way speaker system. It features a new breed of high frequency driver loaded with a very special horn system, complimented by 2 magnesium diaphragm mid/bass drivers in a all aluminium ported enclosure.

### Features

- Two way passive loudspeaker system
- Based on d'Apollito MTM configuration
- Extremely solid entirely aluminum enclosure
- Internal bracing and damping
- A custom ring diaphragm compression tweeter
- A proprietary ultra short horn with shaped directivity
- 1500Hz crossover point
- Two low distortion magnesium cone mid/woofers
- Wax impregnated foil wound inductors in crossover
- Silver capacitors on tweeter
- Sealed and potted crossover assembly
- Furutech binding posts
- Dedicated stand

## Technology

Lyra features a solid aluminum carved front panel incorporating a horn with specific directivity and frequency response as to perfectly match the directivity of the adjacent woofers. The geometry of the front plate is such that it is time aligned between the tweeter and woofers.

Thrax uses a custom designed ring diaphragm compression driver with lower than usual compression ratio. The combination features 112db/Watt/1m sensitivity and a very low resonance allowing the effective use to below 1500Hz. This driver/horn implementation allows for very high sound pressure levels with extremely low distortion without any spurious noises. Being capable of handling extreme power and unprecedented sound pressure levels without compression reveals the true dynamics and texture of the music.

The magnesium diaphragm woofers chosen are able to match the speed and clarity of the tweeter at

the expense of a cone break-up mode in the upper midrange, so utmost care has been taken to ensure this resonance never gets excited.

The speaker system features an uncommonly high sensitivity of 90db/Watt/1m making it usable with lower power amplifiers or in very big rooms.

Bass extension is very generous considering the size of the speaker and it's efficiency. It is able to sustain severe power levels without compression.

The filters are potted in special resin to prevent vibration and are constructed using resonance free foil wound inductors and premium Polypropylene capacitors.

The all aluminum body is internally damped for vibrations and resonance.

Lyra is clearly styled as a Thrax family product with a dedicated stand developed for optimum performance and appearance.

**Hades is a low frequency extension add-on for the Lyra speaker system that doubles as a floor stand.**



## Specification

- Impedance : 4Ω
- Max Power Handling: 250W
- Sensitivity: 90db/1m/2.83V
- Frequency band: 34~20 000Hz
- Dimensions: 210Wx385Dx520H mm
- Weight: 35Kg

# Thrax Basus

## Motional Feedback Bass System



Basus - universal active subwoofer system for music.



### Features

- Custom 15" Driver with 2 separate magnetic systems
- Motional feedback via magnetic sensor
- 1kW ClassD power amplifier
- Built in line level crossover
- Adjustable via Switches for perfect repeatability
- Supporting XLR and RCA I/O
- Adjustable slope
- Adjustable Q
- Very low group delay
- Solid aluminum Case built like a tank

# THRAX

## Technology

Basus uses a 15" bass driver with secondary magnetic circuit used for motional feedback giving unprecedented control and damping via the proprietary control electronics. The use of sealed solid metal enclosure ensured utmost rigidity and resonance free operation with minimal group delay when driven by the 1 kilowatt built in power amplifier.

The integrated active crossover system with switch selectable preset frequencies and adjustable levels allows integration with any speaker/amplifier combination, making Basus the ultimate universal woofer. Undistorted and timely delivered bass at high enough levels creates a different perception of music.

Has to be experienced to be believed.

## Specification

- **Crossover frequencies at 12db/Octave**  
80,100,125,160,200,250Hz
- **Tilt type EQ** +/- 6db at 20Hz and 20kHz in 1db steps
- **Level adjust** +/- 6db
- **XLR and RCA inputs and outputs**
- **Driver** 15" custom dual magnetic system with 75mm VC
- **Amplifier module:** 1kW classD
- **Frequency response bandwidth:** 20-250Hz +/- 2db
- **Weight:** 130kg
- **Dimensions:** 450Wx450Dx800H mm



# Thrax Sirens

## Two Way Bookshelf Loudspeaker System



Sirens are brought to your attention due to a very recent development in speaker drivers by Purifi Audio. They have addressed and implemented solutions that advance the design of conventional moving coil speakers in multiple areas, leading to an order of magnitude better performance. It was worth our attention, so here we are with our little babies, taking full advantage of these new drivers.n.



### Features

- Two way passive loudspeaker system
- A custom ring diaphragm compression tweeter
- A proprietary ultra short horn with shaped directivity
- Ultra low distortion Purifi mid-woofer
- Wax impregnated foil wound inductors in crossover
- Silver capacitors on tweeter
- Sealed and potted crossover assembly
- Aeco binding posts

## Technology

For the Sirens the brief was - shrink the Lyra to bookshelf size and lose nothing! Well we lost 3db sensitivity but the performance gain due to the new driver and our unique new serial crossover takes the Sirens in a league of their own. Phase response linearization presents you with a new tone on many familiar voices. The lack of break up in the cone allows for a gentle slope of the crossover and better blending with our horn. The zero resonance front baffle not contributing to the sound underlines the drivers unique abilities.

Compact cabinet size doesn't limit the low frequency performance of the Sirens keeping the extension the same as on the Lyra via a rear mounted port.

Crossover components used are all premium - foil capacitors and air core inductors potted in

polyurethane for vibration free operation and all wired with custom OCC copper wire for undisturbed low level detail and resolution.

The Sirens favor amplifiers with generous power reserves, so the lack of dynamic compression can be exploited in full at realistic sound levels. Yet a flea powered single ended amp will work just as well due to the Sirens virtually flat impedance and phase making them an easy load.

The use of real leather was chosen to complement the softer styling or the speaker accentuating the luxury pedigree of the product.

Sirens poses voices no one can resist, once experienced they enchant the mind and have brought many travelers to the shores of Thrax.

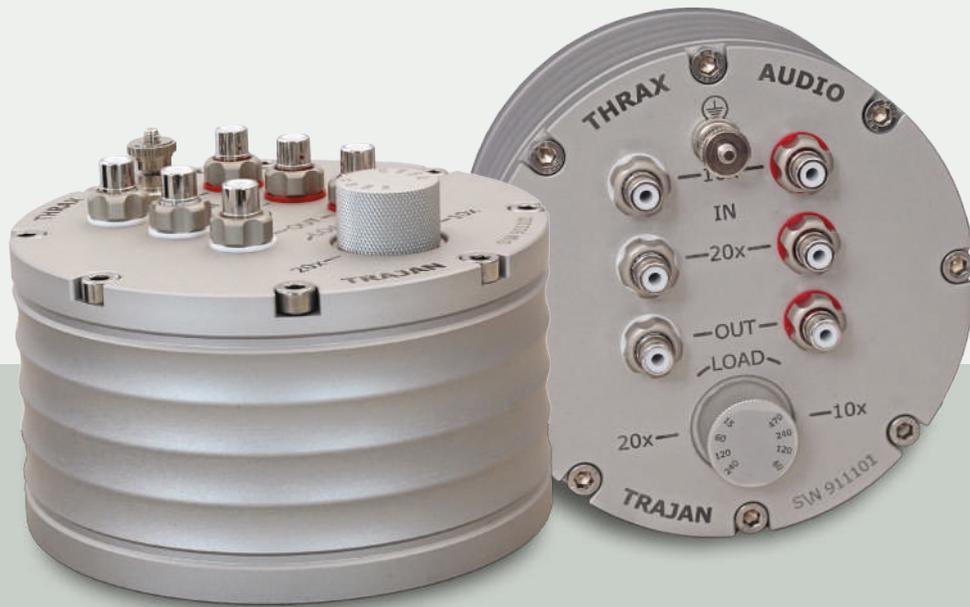


## Specification

- Impedance : 4Ω
- Max Power Handling: 250W
- Dimensions: 210W x 340D x 340H mm
- Weight: 20Kg
- Sensitivity: 87db/1m/2.83V
- Frequency band: 36~20 000Hz

# Thrax Trajan

## Step - Up Transformer



Trajan is a transformer designed to interface a Moving Coil cartridge to a Moving Magnet phono stage.



### Features

- System: Two independent inputs per transformer
- Core Type: Toroidal 20u
- Core Material: Nano-crystal soft magnetic material
- Coil: LITZ wire primary
- Shielding: MuMetal



## Technology

There are many great phonostages that can take advantage of the ultra high tech transformers at the core of this unit. Most MM phono preamplifiers have no loading settings at their input. This limits the capabilities to match the cartridges in use to their standard 47kOhm input. To alleviate this problem we have added selectable loading in the step-up transformer, so even a vintage tube phonostage can be used in optimal conditions with multiple MC modern cartridges.

Trajan offers two different step up ratios to make it truly universal. A ratio of 1:10 for cartridges with output above 0.35mV and a ratio of 1:20 for low output cartridges with less than 0.3mV output. At the different

step up ratios there are four different loading options.

Trajan uses a core with the lowest magnetostriction and highest permeability available. This reduces the amount of turns needed and as consequence the internal resistance, capacitance and losses of the transformer. Furthermore the LITZ wire primary allows for very low DC resistance without any eddy current loss.

The resistance of the coils in a transformer is a source of noise added to the cartridge. The noise figure of Trajan is among the best you can get, bringing significant advantage to most modern MM solid state phonostages when coupled with very low impedance cartridges.

## Specifications

### Gain

- 20/26dB

### Input Impedance

- 15Ω/30Ω/60Ω/120Ω  
/240Ω/470Ω selectable

### Load Impedance

- Above 47KΩ

### Dimensions

- 65mm (H) x 125mm (D)

### Weight

- 2kg

### Frequency response

- 10-80,000Hz +/- 1db



# Thrax CB Tonearm

## Designed by Frank Schröder



Frank Schröder created an entirely new, radical technique to decrease friction in captured bearings. The resultant experimentation generated a coefficient of friction lower than anything ever published. This is complemented with a new multilayer carbon fibre wand, establishing a new level in tonearm design. Constrained layer damping and material transitions are used throughout the design to tune and separate sources from the impeding mechanical movement in the device.

The end result is no discernible sonic fingerprint is added to your system by the wand.

### Features

- Magnetically centered and pre-loaded ceramic hybrid bearings eliminating bearing chatter completely, guaranteeing constant rigid structural coupling and silent ultra-low friction movement
- Unique system for lateral movement damped by eddy current induction
- Symmetrical mass distribution around the central bearing axes prevents external excitation to cause any cantilever deflection
- The geometry and mass balance prevents change in VTF when altering VTA
- Bearing for vertical movement is on the same plane as the record, so the arm is immune to warp wow effects
- Wiring harness with extremely low dielectric losses allows usage of any MM cartridges with proper capacitive coupling to the phono stage
- Symmetrical layout of the conductors preventing RF and EMI entering your preamplifier
- Multi-layer armwand construction using carbon fiber and other composites create extreme torsional and bending stiffness with very high internal damping factors. This prevents any signal reflection back into the cartridge
- A dual section counterweight is incorporated with an adjustable damping system. This allows tuning of structural vibration absorptions to prevent signal reflection across the armwand
- Magnetic anti-skating - dynamic compensation for the varying skating forces across the record



## Technology

The design skills of Frank Schröder are no where more apparent than in the CB tonearm. Visually simplicity with timeless aesthetic conceals cutting edge technology and mechanical wizardry. Simple principles of physics applied in a masterful way like balancing the mass of the tonearm on the bearing to reject vibrations conducted through the mounting plate that originate from other turntable components such as the motor, plinth, bearing or airborne feedback, any force acting on that point will effectively eliminates external excitation by generating equal forces to all sides of the arm, maintaining the dynamic stability of the system and preventing a deflection of the cantilever effectively ignoring the incoming disturbance.

Another issue are the disturbances generated constantly by the cartridge. Problem here is energy reflected back to the cartridge due to the stiff bearings of tonearms. Here the issue is addressed with adjustable counterweight coupling to sink some of

this energy and a wand that is super stiff and very well damped coupling those vibrations to the magnetic centring of the lateral bearing, operating as an eddy current brake, absorbing all the vibrations that reach it. Different type of materials are used to create an impedance mismatch for all the vibrations travelling the path. This reduces energy coupling without being visually noticeable.

The use of magnetic force is exploited in the anti-skating compensation. Here a system of 3 magnets takes care of this without any dangling weight or spring eliminating yet another source of signal contamination.

Tonearm effective mass is controlled by the use of different material cartridge mounting plates allowing the use of almost any cartridge on the arm.

Last but not least the use of continuous wire from cartridge to preamplifier with no intermediate contact or joints maintains cartridge signal integrity.

### Specifications

**Effective Length**

• 239.3mm

• 282mm

**Pivot to Spindle distance**

• 222.0mm

• 267.48mm

**Overhang**

• 14.52

• 17.3

**Effective mass**

• 14g

• 18g

**Effective mass with heavy plate**

• 19g

• 23g

**Mounting collar**

• 24-25mm - single M6 hole

• 24-25mm - single M6 hole

**Deflection force Vertical**

• >2mg

• >2mg

**Deflection force horizontally**

• >3.5mg

• >3.5mg



**Thrax**



## **Thrax Audio Ltd.**

251 Okolovrasten Pat, 1766 Sofia, Bulgaria / Tel.: +359 2 988 9555 / Fax: +359 2 988 9556  
Mobile: +359 888 561 269 / E-mail: [sales@thraxaudio.com](mailto:sales@thraxaudio.com) / Internet: [www.thraxaudio.com](http://www.thraxaudio.com)