



EON ART

HADRON

MONOPHONIC ULTIMATE INTEGRATED AMPLIFIER



400 Wrms (8 Ω), 700 Wrms (4 Ω) of type A+D

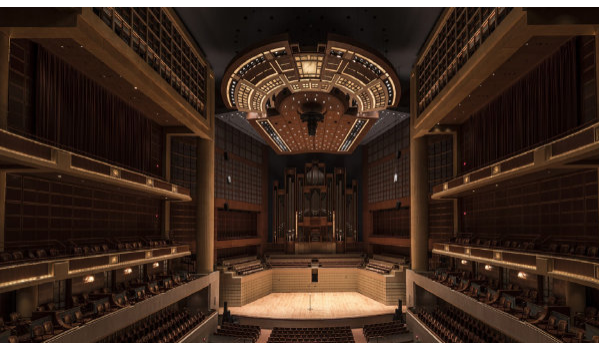
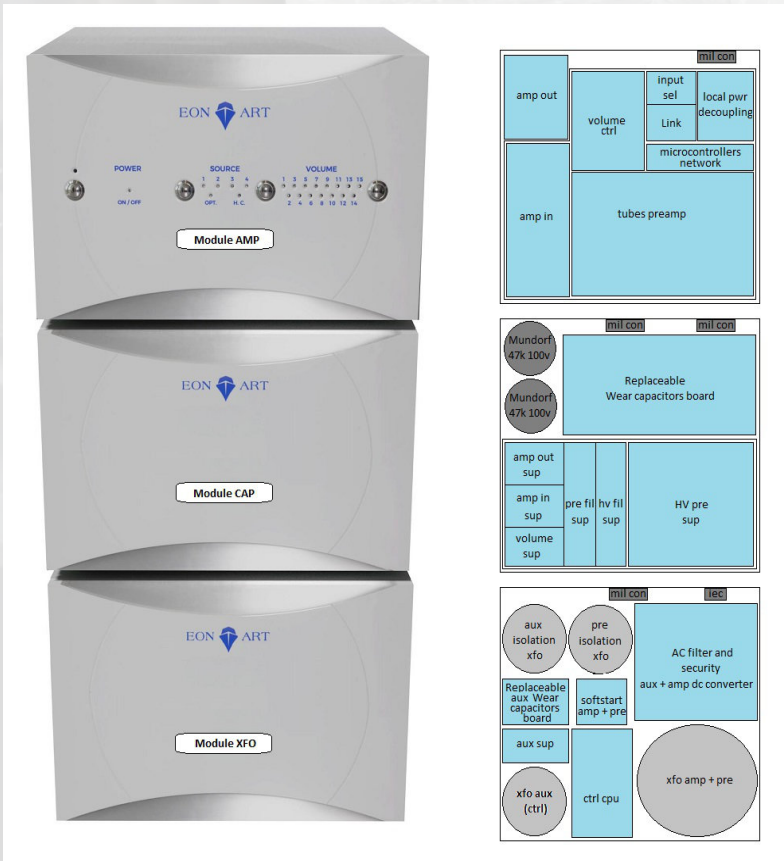
The Hadron integrated hybrid ultimate monophonic amplifier

Even if it looks like an amplifier with two power supplies it is far from that! In fact, each Hadron triple modules amplifier consists of a monophonic integrated circuit whose electronic is divided into three cabinets to provide a lower noise floor and more space for better and larger components. This also allows us to choose a more complex circuit that is impossible to place in our regular housing.

As usual, we choose an integrated architecture that has many advantages on an amplifier and a preamplifier in separate elements; such as a shorter connection that remove a signal and a power supply cables as well as many signal connectors between the two stages. It also gives us a larger latitude to optimize the parameters of the combination of the two sections.

Our solution is unique. First of all, it offers what transistors and lamps can bring to each other; which translates into neutrality and power. Secondly, the Hadron ultimate integrated mono has modular boards for easy replacement of all its depreciable components. This system brings the world's first eco-friendly hi-fi amplifiers. Finally, Eon Art offers the best warranty in the industry.

Hadron can be integrated into most existing systems. The synchronized control of all (up to six) amplifiers in one system can be done with the front buttons of any Hadron or by remote control. Each unit consists of three different and complementary modules.



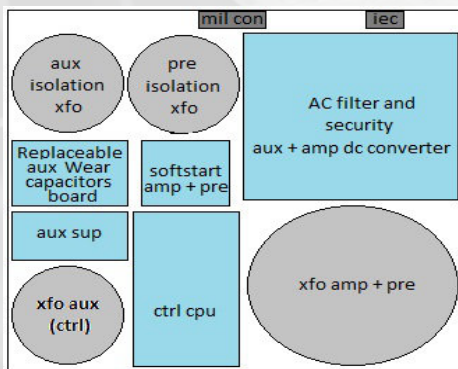
The XFO module



The Xfo module hold, aside of the filtering circuit, the two power and two isolation shielded electric transformers of the Hadron.

One is dedicated to the preamplifier and amplifier sections and a smaller one support all the microprocessors and the controlling circuits.

Each transformer has an AC filter circuit designed specifically upon their use. The auxiliary transformer is filtered in output and input with a medical filter to be sure the control electronic does not reject noise that can be picked up by the rest of the amplifier or your sound system. The same method applies to the preamp windings. Both also benefit from a dedicated Toroidy Supreme shielded isolation transformer in their circuits.



The electric power tranformer of the amplifier section is filtered with a circuit based on bipolar capacitors only and a DC blocker to not degrade its dynamic and do not use an isolation transformer that would be detrimental.

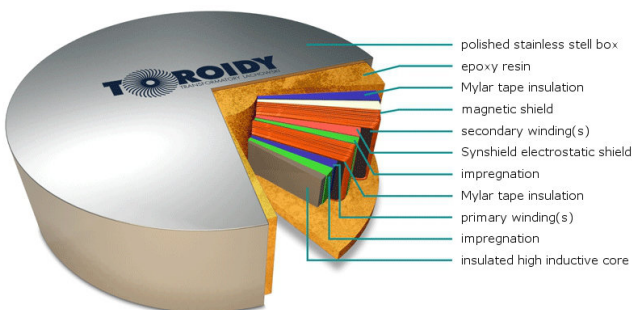
The XFO module uses a softstart that protects your electrical installation and the lifespan of the Hadron capacitors banks.

A microprocessor system analyzes the amplifier and the utility electricity to stop it in case of any unwanted variation.

The role of the XFO is, in addition to the one of providing a physical distance and additional shielding between the transformers and the sensible amplification circuitry, to make sure the electricity that reach the module and is provided by it is clean and secure.

The power and isolation transformers are exceptional units of the Supreme serie from the renowned Toroidy.

SUPREME class power transformer



The CAP module



The Cap module holds the 14 independant power supplies of the audio circuits.

The high voltage section featuring a 1060uF capacitive reserve and a large Toroidy Supreme Choke is based on a fully regulated 5 tubes output power supply. Those tubes are heated by 3 dedicated individual power circuits.

The preamp stage filament supply is regulated with Mundorf capacitors and Kiwame precision resistors. It offer a 140000uF capacitive reserve.

The two volume controller bipolar supplies are a Kelvin type regulation ultra low noise circuit with a 47022uF Mundorf capacitive reserve.

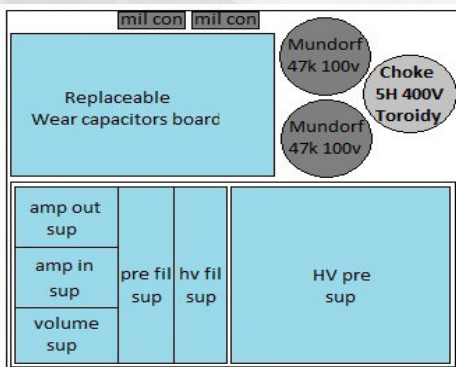
The amplifier input stage supplies are three Kelvin type regulation ultra low noise circuit featuring discrete Kelvin type regulator with a 79200uF Mundorf capacitive reserve.

The amplifier output stage dual power supplies is based on a high current filter featuring very high end Mundorf large value capacitors offering near than 210000uF or reserve at 85 volts!

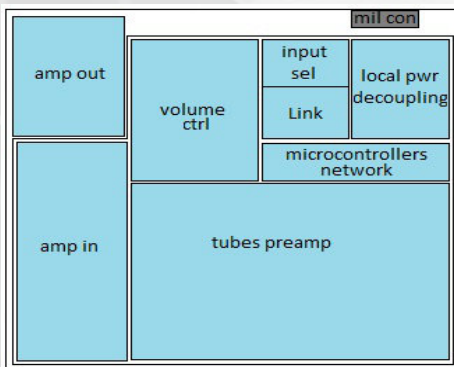
The cap module is completely protected by a large quantity of high end ceramic quartz fuses with copper alloy filament.

All the chemical capacitors and relays are mounted on a dedicated wear board for easy replacement on maintenance.

The ombilical connections between the modules are made with tin plated OFC shield and conductors cables, double insulated with polyurethane and polypropylene, connected with 2 shielded chrome and cadmium metal alloy 10 pins circular locking military connectors.



The AMP module



The Amp module hold the signal preamplifier and amplifier sections of the Hadron and their local microprocessors for controlling these circuits.

This circuit feature a local power decoupling section with hyper fast polypropylene and polyethylene capacitors. Its electrochemical Mundorf capacitors are on sockets for easy maintenance and replacement.

The input selector feature three RCA and one XLR source inputs. All their relays are on a plugin board for easy maintenance and replacement. A link section supports the remote control of other Hadron units and a Lundahl shielded audio transformer, that can be disabled, for splitting of the input signal between them that drives an output with RCA connectors.

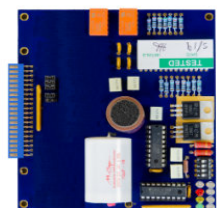
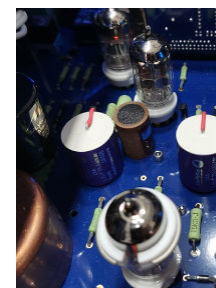
The volume selector is made with tightly appaired transistors driving thin film military resistors. Two different curves of 15 positions can be selected. It use Duelund capacitors on the signal path and is powered by its own independant dual power supplies.

The tubes preamp stage use two double triode tubes and feature Duelund CAST resistors and capacitors on the signal path among other Amtrans, Auricap, Clarity Cap, Kiwame, Mundorf, Pathaudio and Solen components.

The amplifier input stage is completely in discrete components with very high precision resistors and capacitors from Amtrans and Charcroft. The transistors are specically selected after extensive simulations, tests and listening sessions.

The output stage of the Hadron offer two times better distortion figure and output impedance than our Boson and Quark line with a 75% increase in power at 700W@4Ω.

All of the audio section internal cabling are from Cardas and the connectors are from WBT and Neutrik.



About EON ART



Eon Art and the Hadron are the creation and implementation of Mr. Stéphane Hautcoeur.

Research and development on this circuit began in France in 2008 and continued in Canada until 2024. It gave the Quark, Boson and now Hadron amplifiers.

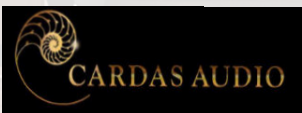
Eon Art Canada Inc. is the result of 2017 structure modification of Eon Art Haute Fidélité, founded in France, for its move to Canada. Now based in Chandler, Quebec, Canada it is in partnership with Art Logik an electronic and scientific computing firm.

Each amplifier implement a single amplification channel including also the preamplification stage. You connect your sources directly to the amp module. The Hadron consists of three interconnected modules in aluminum cases, shipped in individual Pelican boxes, that are easy to open but secure. These modules feature a specific convection design with sensors and closed loop heater circuits for each of its internal sections.



The internal audio cabling and the supply cables of the Hadron are made with Litz wire and high grade copper from Cardas Audio cables. The high voltage cabling is made with silicon insulated tin plated OFC aerospace wires and the double ombilical cables between the module are ten conductors tin plated OFC shield and tin plated OFC conductors cables, double insulated with polyurethane and polypropylene. The Hadron is delivered with a Cardas high end power cable.

The cabling



Eon Art exhibited at many audio shows with Cardas and we won many Best Room Of The Show prizes with this partnership.





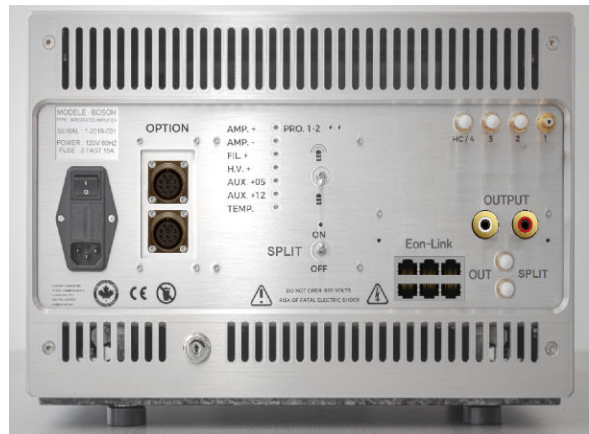
Amp module front view: Simple and flexible design inspired by the Lady M. Yacht and Delphi turntable. Cabinet finishing and assembly by Oracle Audio Technologies.



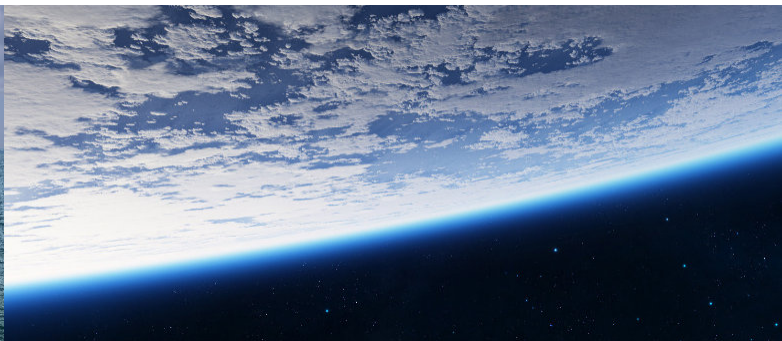
Amp module 3/4 view: A 7mm aluminum case on a semi-precious I abradorite stone base with a massive 19mm facade.



Amp module top view: A shield that protects against most electromagnetic waves and a unique silver and white, or other color, high gloss finish.



Amp module rear view: A lock secures access to the rail system and the inside of the enclosure.



**The only high-end A+D
integrated amplifier in the world.**

Experience unique musical emotions with this masterpiece of computer science and engineering. A generous power reserve at all levels of volume that retains a warm, soft and transparent sound. Not only is this amplifier unique, it is revolutionary in its sustainability and environmental aspects. In addition, it has the best warranty of his class.

With a specifically designed stand

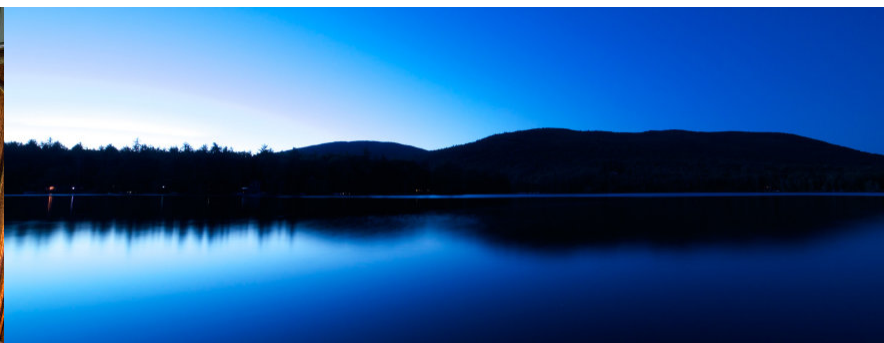
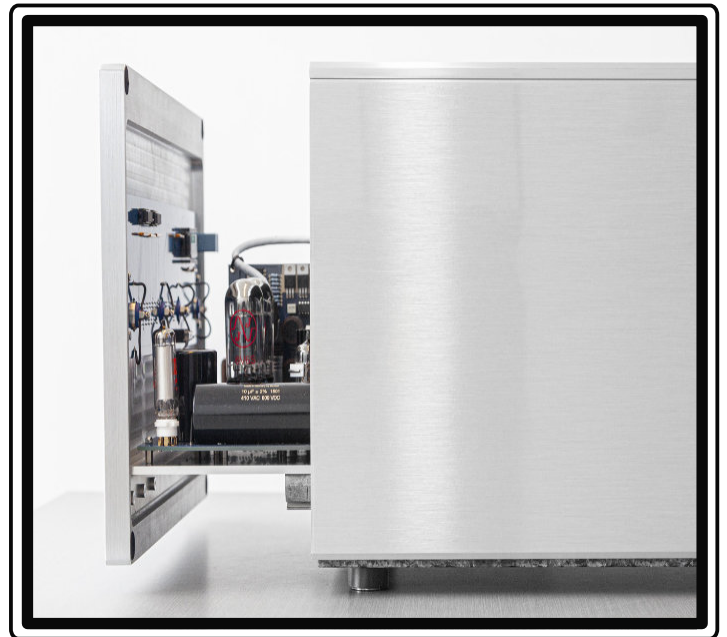
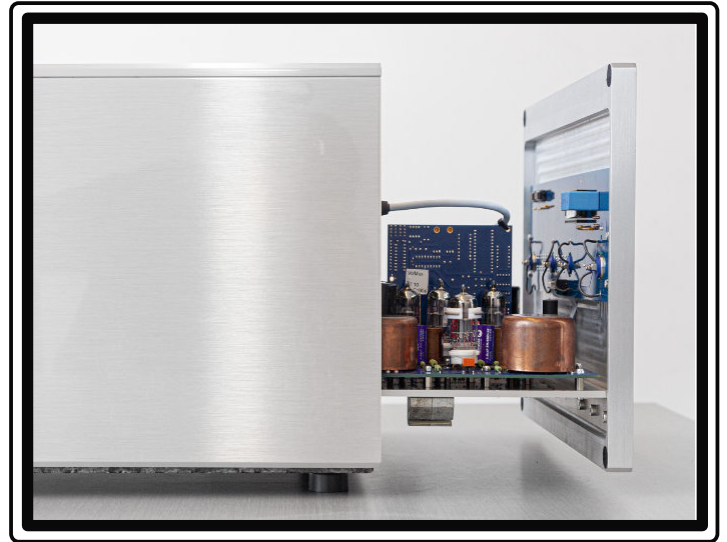
The Hadron comes with a specifically designed stand able to support the massive weight of its three modules while being very discrete, beautiful and qualitative.

The stand is fabricated in Deschambault, Qc by our partner Solid Meubles from the finest material.

First Class Design

Our casing, built by our partner Oracle Audio in Sherbrooke, maker of the magnificent Delphi turntable, won two prizes at the Montreal International Design contest. Taking out the cradle of every module on its rail system you immediately notice a new architecture.

Made with expertise it is intended to make music; not merely to push sounds. The components are carefully selected and tested in order to recreate what you would have experienced during the recording.



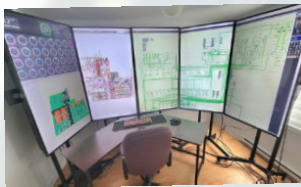
Neutrality



The capacitors used on the audio signal path are all audiophile quality and bear the brands of recognized suppliers such as Amtrans, Auricap, Clarity Cap, Duelund, Mundorf and Solen.

Those used in the most sensitive places are shielded. We ensured that their quantity was adjusted to provide no phase rotation and to use multiple complementary models with a different sound signature in order not to exacerbate it. We thus avoid the usual problems with the use of capacitors and guarantee the utmost neutrality of their action on the music.

Exclusivity

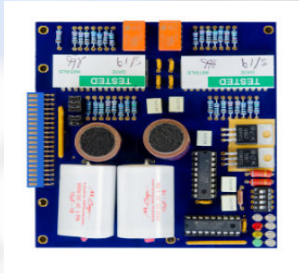


Since 2018, Eon Art Canada is the only amplifier company that has managed to produce an architecture that optimize the selection of its components and the engineering of its circuits with a supercomputer simulation-assisted design process which allows to optimizes the placement of the components and the path of their signals. It also optimize the value and the choice of the components. This brute force computing process can't be done otherwise than by supercomputer like the 800 cores machine we have. This unique technology ensures that any improvement that can be achieved on a circuit is actually done.

This results in a tube sound, that is, with details, image, and emotions without being limited to high efficiency loudspeakers that would otherwise be needed. It is admitted that the great force exclusive to the Hadron is also to be able to drive all the loudspeakers with difficult behavior without the traditional compromises.



Ultra low distortion volume control



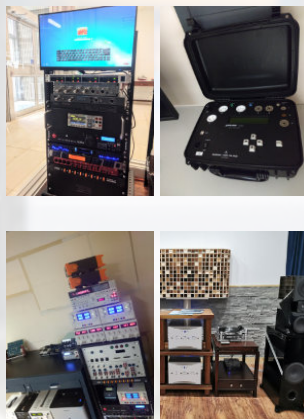
Amplifier volume level is controlled by a set of individual high stability, very high precision and medical grade, thin metal film resistors which are selected by transistors. The complete absence of relays and mechanical potentiometer, as well as the circuit topology guarantees a rate of distortion lower than those offered by competitors volume controllers, without any other impact on the source seen by the amplifier stage or mechanical wear. The volume can be adjusted on two different curve to best match the efficiency of the loudspeakers.

Multiple casing

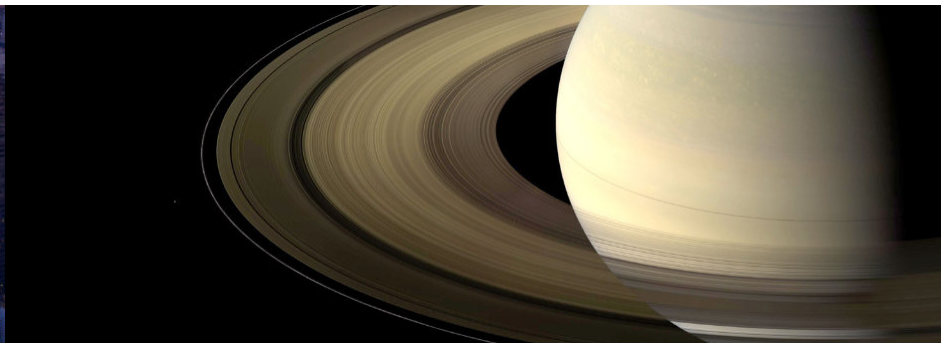
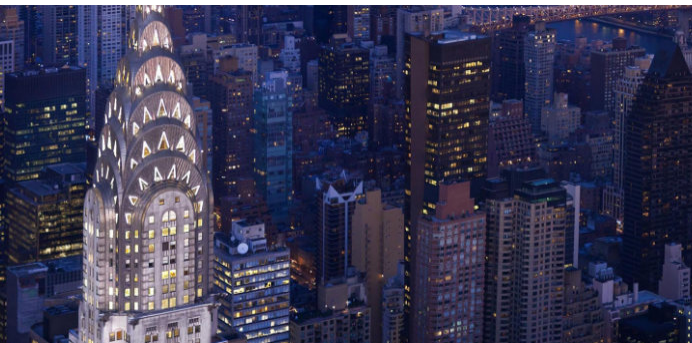


The architecture of the Hadron amplifier in three separate modules helps manage the temperature and the noise floor. It also provides more space to use the best components even if they are much larger. The interconnection of these modules is made by four ultra high quality ten wire cables with shielded chrome and cadmium metal alloy ten pins circular locking military connectors. It offers a 75% increase of the power with even greater capacitive reserve than a Boson with its optional external power supply. Bringing even tighter bass, more depth and deeper silence.

Quality control



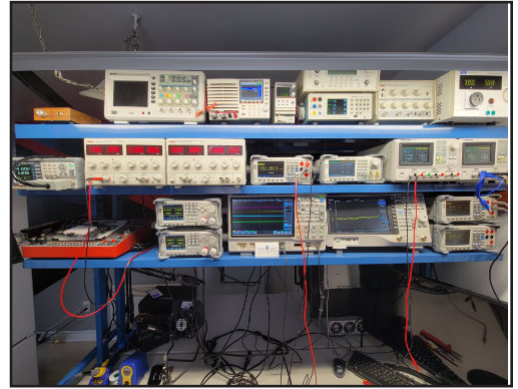
Each printed circuit board is subjected to rigorous automated testing after welding its components using specific computerized analyzers. The amplifier is then tested for endurance and stability for twenty-four hours at full power under the eye of our 64-channels M300 Acquisition Center. An Audio Precision analyzer is used to prove that each amplifier reproduces complex musical signals according to ultra-high restrictive standards that we have selected and that are the most rigorous in the industry. Of course we also listen to each Hadron in a reference system. Each step of the assembly and qualitative process is documented and signed by various stakeholders in a certificate to the owner located in the hardcover user manual.





HADRON 700W ULTIMATE MONOPHONIC INTEGRATED AMPLIFIER

Brand	Eon Art	Operatingmode	Integrated Amplifier
Model	Hadron	Environmental responsibility	All-component replacement modules and 5 year calendar with the use of circuit plug-in boards holding the wearable components.
Type	Ultimate integrated mono amplifier	Repair Index	8/10 -Specialist required
Class	A+D	Life cycle	50 years when Recommended Schedule is adhered to.
Preamp stage	Tubes	Warranty	Full product 10 YEARS transferable, parts and labor,
Amp input stage	Audiophile discrete solid state & regulators	Wearables components boards kit	5 YEAR's Recommended schedule provided
Amp stage	Solid state	Inputs	3 x WBT RCA mono, 1 x Cardas XLR mono
Gain	40.117 dB	Inputs splitting	Deactivable Lundahl mu-metal shielded transformer, 1 input to 2 output
Rated Power (1kHz,120 VAC)	4Ω 700 Wrms, 8Ω 400 Wrms	Modules ombilical connectors	Three (3) set of double (2) shielded chrome and cadmium metal alloy 10 pins circular locking military connectors.
S/N ratio reference to rated output	96.751 dB	Outputs	Lundahl transformer input line splitter on 2 WBT RCA, Pre out on 2 WBT RCA and two WBT loudspeaker posts
Frequency response 20 Hz -20 kHz	0,721 dB	Low lightmode	Always ON / 10 sec-delay front only or back and front
Frequency response 0 Hz 70 kHz	+0/-3dB	Qty of printed circuit boards	Eleven (11x)
Power bandwidth	35 kHz	1- Module XFO, Main board	
THD+N 20Hz<f<20kHz, 4Ω Pout<Pr/2	0.1518%	2- Module XFO, Replacement wearing board	
Input sensitivity	1 Vrms	3- Module XFO, Back panel board	
Preamp input impedance	41 kΩ	4- Module CAP, Power supplies board	
Amplifier output impedance	250 uΩf<1kHz, 2 Ωf<20kHz	5- Module CAP, Replacement wearing board	
Damping factor (8Ω)	>4000	6- Module CAP, Back panel board	
Amplifier current limit	27 A	7- Module AMP, Input relay wearing board	
Efficiency (amp only)	93%	8- Module AMP, Main board	
Efficiency (amp+preamp)	91.33%	9- Module AMP, Output stage board	
Volume Controller	Analogical transistors switching ultra-low distortion medical Thin Film resistors network. Selectable in two curves: Low ouput on the first 10 pos Medium ouput on the first 10 pos	10- Module AMP, Front Panel board	
Distortion, volume controller,min.level	0.37%	11- Module AMP, Back panel board	
Distortion, volume controller,max.level	0.052%	Board thickness	2.5 mm (twice the industry standard)
Pre-amp tubes (2x)	Recommended SQ E88CC Philips or Telefunken, JJ 6922, Reflector 6H23N-EB	Qty of layers (audio & power pcb)	Ten (10x)
Power supply tubes (5x)	Recommended JJTESLA 1x 5AR4 / GZ34,1x 12AX7, 2x 6V6G, 1x 0B2	Qty of layers (control pcb)	Four (4x)
Soft-start & Pre-heat	5 minutes minimum / 24 hours optimum	Board colour	Reflective blue
Remote turn-on & control	Infrared and Bluetooth via EonArt API for iOS et Android, Linux	Audio copper track thickness	70 micron copper, including internal layers
Links and control between multiple Hadron	Eon Link no noise proprietary link Using Rj45 Cat5 shielded cables	Power copper track thickness	70 micron copper, including internal layers
Cooling	Natural convection, case temperature of 35 celcius at 23 celcius ambient	Control copper track thickness	35 micron copper
Protection mechanisms		Auxiliary supplies filter	Input and output by medical grade, IEC60601-1 RC filter and also filtered by Toroidy isolation transformer
Thermal Excess	Built-inautomatic shutoff	Preamp supplies filter	Input by medical grade, IEC60601-1 Choke and RC filter, dual high voltage output also filtered by Toroidy isolation transformer
Over current from internal source	Built-inautomatic shutoff	Amp supplies filter	RC filter and DC blocker.
Over voltage from internal source	Built-inautomatic shutoff	Microprocessors	Four (4), 2x controls, 2x sound parameters
Fuses	(30) 2 main, 28 internals	Internal network	I2C, 100 kbit/s
Self-diagnosis	Bluetooth, LED's, microprocessors	Shielding	Faraday cages in sensible zones and antistatic windings on transformers
Power supplies	Total of 14	Signal capacitors	Amtrans, Auricap, Clarity Cap, Duelund, Mundorf, Solen
DC power supplies	11 of which 4 of Kelvin type regulations in discrete components	Internal cabling	Cardas tin plated OFC and Cardas OFC Litz wire. Avionic high voltage and temperature silicon insulated tin plated OFC,
AC filament power supplies	3	Audio Connectors	WBT Cu Nextgen, Cardas XLR, Neutrik heat resistant XLR
Transformers	16 secondary windings in 2 Toroidy transformers for a total of 1385 VA in steel and mu-metal internal casing		
Total capacitive reserve	691,453 uF (0.691453 Farad)		
Power capacitors	Amtrans, Mundorf, Nichicon, Solen, Wima		
Maximum powerconsumption	1385 W		
Inrush power consumption	2.23 A / 274 W		
Softstart	Yes		
Idle power consumption	2.46 W		
Supply voltage factory set	Americas,Europe,others		
AC mains input	IEC with a two (2) meters Cardas Clear Power		



HADRON 700W ULTIMATE MONOPHONIC INTEGRATED AMPLIFIER

DETAILS OF THE POWER SUPPLIES AND CAPACITIVE RESERVE

- 1) Auxiliary relay control: 100,600µF/12VDC, Toroidy Supreme isolation transformer filter, input and output Schurter medical filter & solid state regulation
- 2) Auxiliary logic control: 114,000µF/5VDC, Toroidy Supreme isolation transformer filter, input and output Schurter medical filter & solid state regulation
- 3) Volume control: 23,511µF/22VDC Schurter input medical filter & solid state regulation
- 4) Volume control: 23,511µF/-22VDC Schurter input medical filter & solid state regulation
- 5) High voltage preamplifier: 1060µF/(MAX 600)VDC, Toroidy Supreme isolation transformer filtering, input Schurter medical filter & all tubes regulation with Toroidy Supreme choke.
- 6) 5AR4 filament preamplifier: 40µF/5VAC Schurter input medical filter
- 7) 6V6 filament preamplifier: 40µF/6.3VAC Schurter input medical filter
- 8) 12AX7 filament preamplifier: 40µF/6.3VAC Schurter input medical filter
- 9) 6922 filament preamplifier: 139,451µF/12.6VDC Schurter input medical filter & solid state regulation
- 10) Amplifier input stage: 26,400µF/22VDC Schurter input medical filter & Kelvin solid state regulation
- 11) Amplifier input stage: 26,400µF/-22VDC Schurter input medical filter & Kelvin solid state regulation
- 12) Amplifier input stage (driver): 26,400µF/-15VDC Schurter input medical filtering
- 13) Amplifier output stage (Boson): 105,000µF/(MAX -85)VDC Dc blocker, RC filter, 4 poles filter
- 14) Amplifier output stage (Boson): 105,000µF/(MAX -85)VDC Dc blocker, RC filter, 4 poles filter

Casing	Triple varnished brushed aluminium -7 mm alloy chassis with quick access rail system; Faraday cage effect, white enamelled 19 mm solid front panel made by Oracle audio Technologies.
Front panel color	White, RAL color available in option
Access	Front drawer-motion access
Security	Rear lock with key
Base	7 mm Brushed aluminium alloy on 20 mm Labradorite semi-precious stone; Soundcare feet. Microphonic vibration neutralizer
Assembly	Handmade in Canada by Eon Art
Casing assembly	Handmade finish and assembly in Canada by Oracle Audio Technologies
Stand assembly	Handmade finish and assembly in Canada by Solid Meubles
Packaging	Three (3x) Pelican Protector
Quality control	Five-level procedure
Product certification	Audio Precision and Rigol analysers
Musical quality	Listening session for each product
Documentation	Documented and signed by the various stakeholders in a certificate to the owner located in a hardcover user manual.
Availability	10 units per year, numbered edition Sold by set of 2, 4 or 6
Weight	
Net, 3 modules set	249.6 lbs / 113.22 kg
Packaged set	372.6 lbs / 169.02 kg
Dimensions (WxHxD)	
per module	43.8 cm x 43.5 cm x 320 cm
Packaged set	3x (67.3 x 67.3 x 64.1 cm)

