



Test.

CAAS Audio Elysian pre-amplifier and Elysian 100

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The CAAS pre-amplifier enchants with a housing crafted from solid aluminium, it offers three balanced inputs, is not made in China and their price ranges, so far, in the four-digit range. If they came from the United States you would expect double or triple the price to be reasonable and the Monos are in no way inferior.

CAAS audio was founded in 2006 by Dr. Carl and Neil Broomfield and has up to now a mono power amplifier, a pre-amplifier, an audio server, as well as a combination of pre-amplifier and audio server in the product range. Dr. Carl Broomfield specializes in engineering electronic and high frequency and microwave technology. His brother, a software engineer has developed the CAAS' audio-server as well as the software and firmware for the pre-amplifier. The British company also appears to have a go-getting marketing department: Under the heading "Technology" a whole series of abbreviations are presented with partly obvious resolutions: "OpBias" for "Optimal Bias", which means the monoblocks work to about 20 watts into eight ohms in class-A operation and deliver greater benefits in Class A / B. It gets more complicated with "RWave" or "RF & Microwave Design Techniques," catchwords for the fact that Dr. Carl Broomfield uses circuits and techniques which are used in high-frequency technology for the design, layout and the stability of the circuit. Ultra-fast transistors, DC coupling, short signal paths, an intelligent placement of components, zero use of feedback and balanced driver stages are combined to achieve the highest sound quality.



Thanks to its modest dimensions, the CAAS do not dominate their surroundings and upon closer inspection have a certain elegance

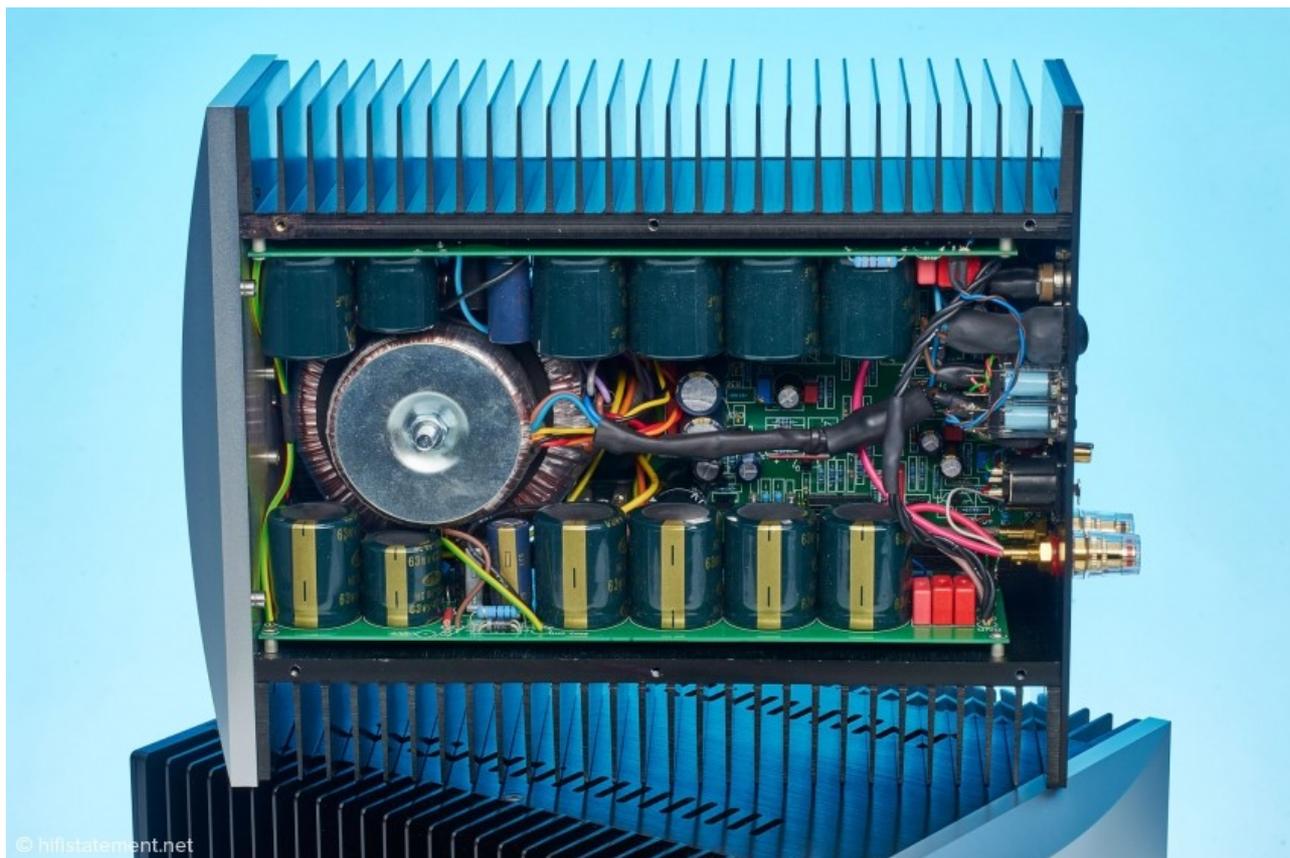
Instead of individual technical solutions I'd rather imagine the pre-amp and power amp as respective unit. The Elysian Pre-amplifier has, as mentioned, a case which has been machined from a solid aluminium block. This enables, in my eyes, an elegant design of the front panel and the absence of visible screws. It also protects the electronics from microphonics. Each channel of the Elysian has three XLR and two RCA inputs, even with the outputs you have the choice between balanced and unbalanced. The volume control is handled by a relay controlled network with metal film resistors and 128 steps in the range from -50 to zero decibels. The fact that this complex solution produces the best sound quality, needs no more explanation. Even with the power supply CAAS have pulled out all the stops: Two toroidal transformers provide channel isolated power to the left and right audio circuits and a third supplies the control computer, which organizes among other things, the volume control. There are twelve discrete, analogue voltage regulators and seven digital regulators to ensure stable working conditions for the audio circuitry, which CAAS Audio states works without any local or overall negative feedback. In the DC-coupled circuit, a servo circuit ensures that virtually no DC component is present in the output signal.



The connections of the Monos raises no questions. With the "Caas Link" connected, remote activation is possible

The Monos include circuitry with elaborate concepts: Here not only the voltage for the driver stages is regulated, the power supply of the output stage is also regulated. Since in the developer's view, such an arrangement only makes sense if it reacts much faster than the output transistors require power, they developed an extremely fast power supply with high current capability. The power amplifier also operates without any negative feedback.

Often first impressions are indeed the most important, which is why I describe briefly my first encounter with the pretty amplifiers: I had a personal interest with Jörg Klein, the owner of "listening for audiophiles" and distributor for CAAS products, While using the Auralic Aries including Melco with the Aurender N100H as source, the CAAS units were compared to the Einstein preamp and Ayon-monos. The transistor pre-amplifier immediately played at the same level as the Einstein preamp. We heard two or three of the usual test-pieces from the hard disk of Aurender through Einstein and the Ayon-Monos and then switched to the Elysian. When reconnecting the cables, I noticed that Jörg Klein, did not have the Artesania Audio Rack adapted to the dimensions of CAAS E100s, the power phase was not properly connected and they had not warmed up. Despite this supposed handicap, the Elysian produced a similar-sized imaginary and space as the well tempered Einstein. However, the Einstein seemed to be tonally a degree warmer. While the Elysian displayed a little more force in the lowest octave. At that point it was clear to me already that further examination of the CAAS amps would be the fun part of my job.



Two transformers and thus two separate power supplies with their own smoothing capacitors supply the driver stages and the final stage. Overall supplying six discrete regulator stages

Then we heard the Elysian pre-amplifier and the Ayon Epsilon playing " The Flight Of The Cosmic Hippo " from the album of the same name: the extreme depths possessed force and definition, the five string rolled surlily, the drum samples came with bite, rhythmically to the point yet also relaxed. The Banjo plink was enriched in a beautifully reverberant space. Then we changed from the Epsilon to the not warmed up, CAAS Monos: the definition in the depths was again slightly better, there was no lack of force, but the snare drum sounded crowded a little in the foreground. Jörg Klein asked for a little patience, because in his experience the CAAS Monos need a certain warm-up time, unlike the pre-amplifier. Half an hour later, we again played Cosmic Hippo and you could hear that there was no real snare drum at work, but that's a good thing, since it corresponds to the facts. It was then clear that the hardness in the relevant frequency range was due to the lack of warm-up phase. Now I was happy again to start testing again.



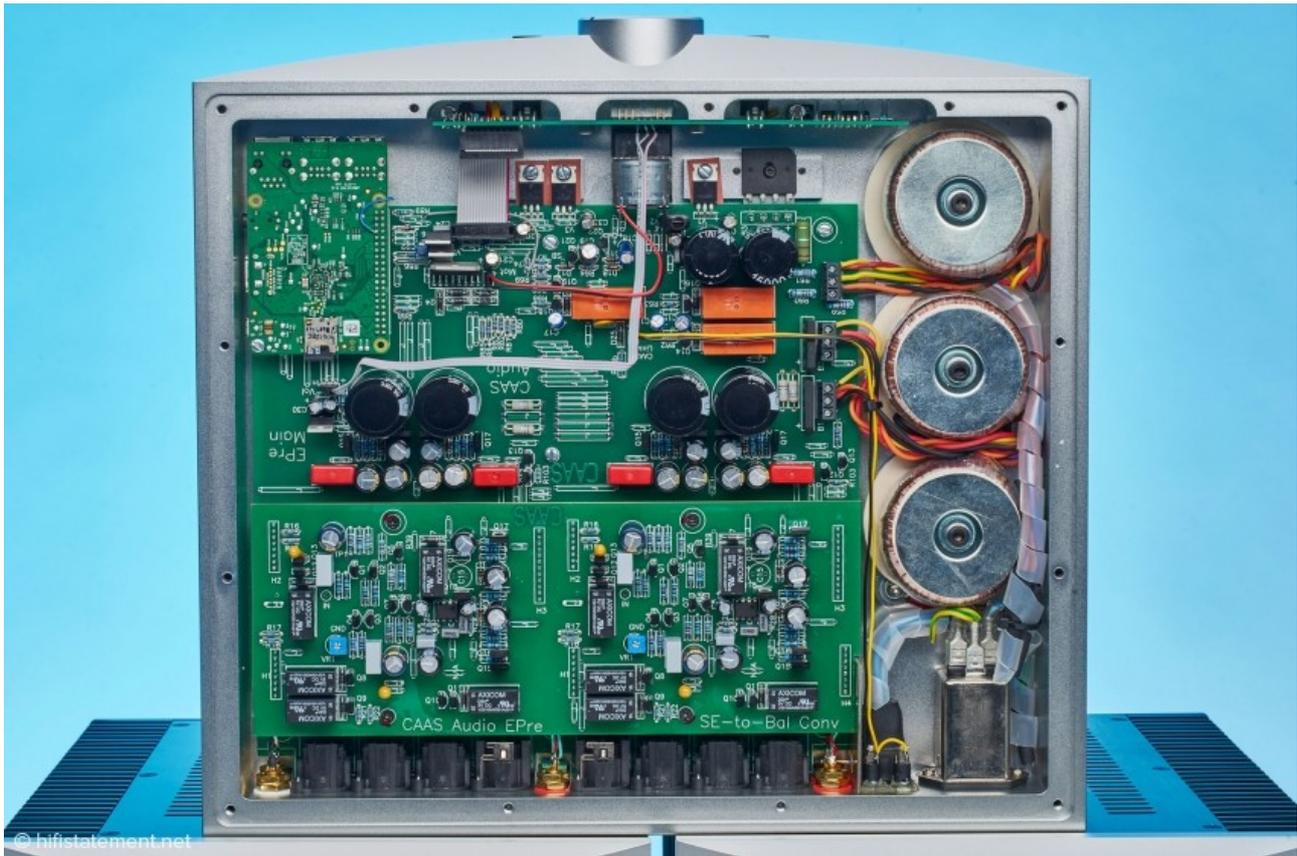
The entire housing of the pre-amplifier and also the remote are machined from a solid piece of aluminium

After Jörg Klein had made his way back to Frankfurt, I wondered if I could improve the installation of the CAAS combo before I turned them off for the day. The pre-amplifier was sitting level on the Artesania Audio Racks and was connected with Göbel-signal cable and Swisscable-Reference Plus power cables. Since I did not know how this could be improved, the Monos were allowed to enjoy the same high-quality wiring, however, they were still placed directly on the tiled floor, while the Ayons are supported by Bfly audio 4Tube supports. So I supported the Elysian Monos using Bfly Master 1 supports. When comparing the amplifiers, the test disc used was Keith Jarrett's "Wrong Blues" from the album Live standards. With the Bfly supporting the Elysian, the stage on which the recording took place, seemed once again a little larger and the Elysian wove their magic in a wider colour spectrum and that is the icing on the cake for the CAAS: In terms of dynamics, joy of playing and audio transparency there were no wishes unfulfilled.



The pre-amplifier fortunately has three balanced inputs

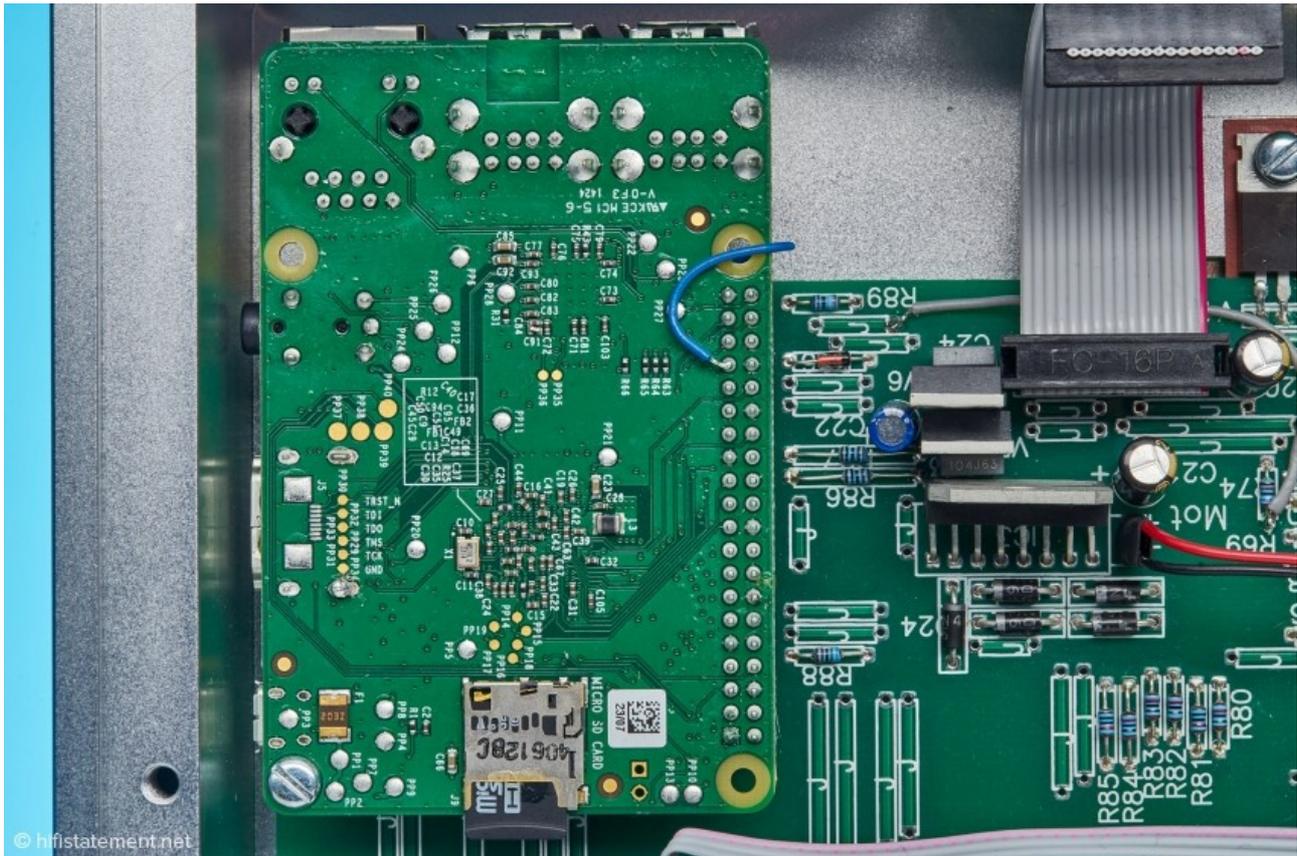
When you consider the huge effort that is usually required, even with very good individual components, to get the optimum sound, including installation, cabling and accessories such as line filters, which evoke a not inconsiderable part of the overall sound, it is quite amazing how harmoniously the CAAS inserted perfectly in the Einstein and the Ayons environment. One obvious explanation is that the developers of high end equipment aren't burdened by the financial compromises normally required and therefore they follow an almost identical sound ideal and this moves the sound differences of these components in the way of slightly different tones rather than in the quality area. I observed this effect with loudspeakers years ago: Some time, after the Accuton ceramic driver had begun its triumphal march, I had found the loudspeakers of Avalon and Charma as enjoyable to listen to music with as my Lumen White. When you transfer this philosophy to the CAAS amps, it means that they can operate perfectly in the same systems that the Einstein and Ayon are at home in and I probably need write nothing more about their reputation.



The separate left and right channel audio circuits and the volume control electronics are each supplied by separate power supplies. The volume control with metal film resistors and relays is unfortunately obscured

Consequently on the following days and also in the evening for relaxing listening with my wife over a glass of wine, CAAS were on duty. The Aurender sent the data from Gianluigi Trovesis Profumo Di Violetta to the converter and the playback was so outgoing, lively, detailed and expansive that not only a few songs were played instead we heard the whole "CD". However, with all the enthusiasm I will not conceal that Trovesis clarinet probably had plenty of "bite" because of the relatively high volume. As I found out two weeks ago, when I took Rolf Kühn clarinet duo one played by Christian von der Goltz wing. Anyway, prior to a final statement, I will compare the CAAS again with the tube amplifier.

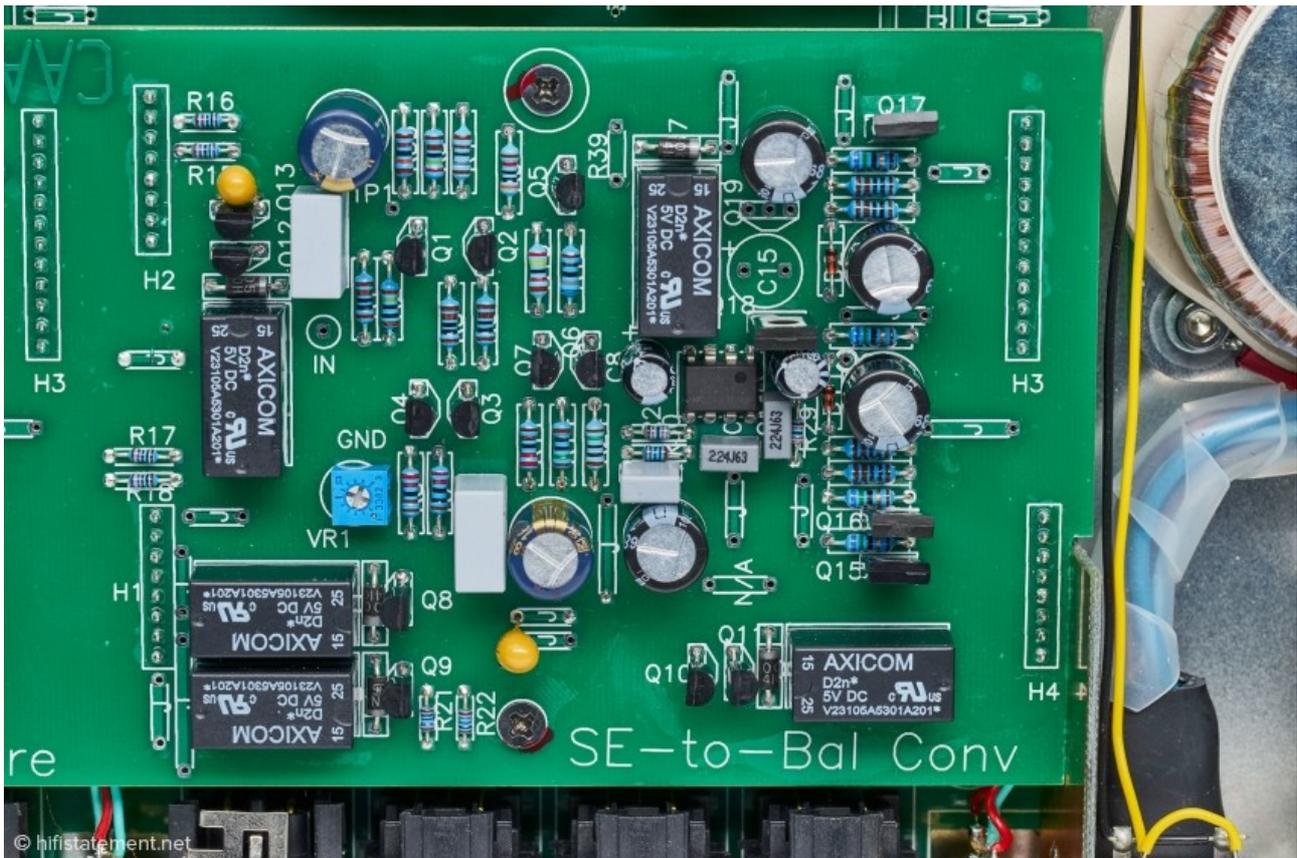
When transporting the Monos to the photo studio for the photo-shoot, I noticed that the cover was vibrating a little, which is why on my return, I briefly applied weights (Artesania discs) to them for damping and that really again brought a sharper focus on the Instruments, a deeper minimal space and at least for my taste even a minimal dynamic improvement. In short: The CD version of Shostakovich Polka from Opus-3 album Testrecord 1 came suddenly much closer to what I had remembered when playing the LP. Although the Monos with their regulated output stage provide an enormous amount of circuitry for a relatively moderate price, the housing could still use a little fine tuning, which I would have at least found a tiny point of criticism.



Software updates are possible via the SD-Card in the picture above

I went back again to Gianluigi Trovesis "Alba" to check how much "bite" his clarinet on the recording really has: The change from CAAS Elysian Pre-amplifier for Einstein The preamp only confirmed that the two, despite their different circuit concepts, tonally and also in almost all other criteria, are incredibly close. Also swapping cables from the transistor to the tube Monos does not produce a major tonal change: With the Elysian, I want to talk of a silvery lustre, the Ayons are more of a golden lustre. This in no way means that the CAAS combination and the Einstein-Ayon trio played music identically.

Now I come to the usual tube vs transistor debate, especially in direct comparison you can hear the nature of the amplifier's active components. When the tubes are playing, there is just a touch more air and shine, however the transistor amps engage in a bass track more satisfyingly. To me it would have also been very much prefer if both combinations completely renounced their type in their sound. However I can not help but use the familiar stereotypes to confirm that each approaches the truth in glorious way. Nevertheless, neither Einstein and Ayon produces the sound that is usually associated with tube amps, especially when operating in Triode mode. The bass comes with force and contour and there is no softness in treble. The CAAS sound is in no way cool, but full of enthusiasm with a colourful midrange and a huge sound stage. Now rather than work through descriptions of really quite minor differences, without falling into a repetition of the tube vs transistor opposites, I'd rather just stress once again that the CAAS equipment operate on a musical level well above that of their price and thus represent an immensely enticing alternative to established brands, assuming you are not a tube Aficionado.



The relays on the board gives an indication of CAAS' "Switched Amplifier Modules", in which only the currently required amplifier modules are in the shortest possible signal path

Conclusion

CAAS are for me because of their excellent sound / price ratio, a real find. The fact that the pre-amplifier is housed in an elegant, fully milled case and the regulated power supply of the amplifiers guarantees immense stability is virtually an added bonus. What is still missing for happiness? At best, your courage to opt for a (still) less well known manufacturer, who deserves to play in the premier league.

Equipment

NAS	Melco HA-HA-N1A and N1Z
Wireless streaming Bridge	Auralic Aries (Femto) with SBooster BOTW P & P Eco and Sbooster Ultra
Network Streamers	Aurender N100H
D / A converter	Chord Hugo TT, Auralic Vega
Record player	Brinkmann LaGrange with tube power supply
Tonearm	AMG Viella 12, Thales Symplicity II
Pickup	Brinkmann EMT ti, Einstein The Pickup
Phono stage	Einstein The Turntable's Choice symmetrically
Preamplifier	The Einstein preamp
Power amplifier	Ayon Epsilon with KT150
Speaker	Lumen White Diamond Light Monitors
Headphone	Audeze LCD X
Cable	HMS Gran Finale Jubilee, Audioplan Powercord S, Göbel High End Lacorde statement, the AudioQuest Wild and Diamond, Swisscable Reference Plus
Accessories	PS Power Plant, Sun bar Audioplan Powerstar, HMS Wall outlets, Acapella bases Acoustic system feet and resonators Artesania Audio Exoteryc, Harmonix Real Focus, bfly bases and feet

PRODUCT INFORMATION

CAAS Audio Elysian Pre-amplifier

Amplification	+ 6dB to -44dB & Mute (128 volume levels) SE to Bal (RCA to XLR) 0dB to -50dB & Mute (128 volume levels) SE to SE (RCA to RCA) 0dB to -50dB & Mute (128 volume levels) Bal to Bal (XLR to XLR)
Frequency response	<1Hz to> 100kHz (-3dB) DC coupled 20Hz to 20kHz (+/- 0.1dB)
Analog inputs	4V RMS (Max) per phase
Analogue Output	4V RMS (Max) per phase
Input Impedance	> 27kΩ (RCA), > 27kΩ per phase (XLR)
Output Impedance	60Ω per phase (XLR), 60Ω (RCA)
Harmonic distortion	<0.01% at 1kHz (0dB level, 2V RMS)
Crosstalk	<-90dB
Signal to Noise Ratio	~ 100dB on output, A-weighted
DC offset	<+/- 1 mV at the output
Input	<20W (idle), <0.5W (standby)
Analog Inputs	2 pair (L / R) RCA, 3 pair (L / R) XLR
Analog outputs	1 pair (L / R) RCA (variable), 1 pair (L / R) XLR (variable)
Power Transformers	3 x 15VA (toroidal)
Dimensions (W / H / D)	350 / 80 / 330mm
Weight	8.6kg
Remote	Solid aluminium, RC5
Price	8950 Euro

PRODUCT INFORMATION

CAAS Audio Elysian 100 mono-block

Amplification	25.5dB
Frequency response	DC coupled T0,8Hz to > 300kHz (-3dB) 10Hz to 50kHz (-0.1dB)
Max. Input voltage	10V peak
Max. Output voltage	44V peak
Output Power	100W at 8Ω (the first 20W in Class A) 200W at 4Ω
Peak output current	> 50A (10ms cycle per 200ms)
Input Impedance	33kΩ (unbalanced, RCA) 66kΩ (balanced XLR)
Output Impedance	0.1Ω
Input Sensitivity	1.6V RMS (100W output power 8Ω)
Speaker Impedance	Any (with varying output power)
Harmonic distortion	<1% @ 1kHz (100W at 8Ω) <1% @ 1kHz (200W at 4Ω) <0.01% @ 1kHz (1W, 0dBW at 8Ω)
Transient intermodulation	not measurable
Signal to Noise Ratio	> 90dB at the output, input shorted, 0dBW output
Rise Time	100V / us (no input filter, max. Output power)
DC offset	<10mV at the output
Input	<110W (idle), 400W (max)
Fuse	T3.15A, 250V (slow)
Working temperature	45 to 55 degrees Celsius, 25 to 35 degrees above ambient
Thermal fuse	70 degrees Celsius, 55 degrees reset
Inputs	1 x unbalanced, gold plated RCA jack 1 x symmetrical plated XLR connector
Output terminals	2 gold plated connectors for high currents
CAAS Link Trigger	12V DC to turn off (0V to turn on)
Power Transformers	1 x 300VA (toroidal) & 1 x 50 VA (toroidal)
Dimensions (W / H / D)	260 / 140 / 340mm
Weight	11kg
Price (Pair)	10900 Euro