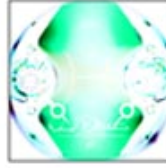




## AUDIO REVIEWS



Dan D'agostino Master Audio Systems

MOMENTUM STEREO

Country of Origin



United States

**Reviewer:** Wojciech Pacula

**CD player:** Ancient Audio Lektor Air V-edition

**Phono preamplifier:** RCM Audio Sensor Prelude IC

**Cartridges:** Miyajima Laboratory Shilabe & Kansui

**Preamplifier:** Ayon Audio Polaris III Signature with Regenerator power supply

**Power amplifier:** Soudation 710

**Integrated amplifier/headphone amplifier:** Leben CS300 XS Custom

**Loudspeakers:** Harbeth M40.1 Domestic + Acoustic Revive custom speaker stand

**Headphones:** Sennheiser HD800, AKG K701, Beyerdynamic DT-990 Pro 600Ω vintage, HifiMan HE6

**Interconnects:** CD/preamp Acrolink Mexcel 7N-DA6300, preamp/power amp Acrolink 8N-A2080III Evo

**Speaker cable:** Tara Labs Omega Onyx

**Power cables (all equipment):** Acrolink Mexcel 7N-PC9300

**Power strip:** Acoustic Revive RTP-4eu Ultimate

**Stand:** Base IV custom under all components

**Resonance control:** Finite Elemente Ceraball under CD player, Audio Revive RAF-48 platform under CD player and preamplifier, Pro Audio Bono PAB SE platform under Leben CS300 XS

**Review component retail in Poland:** 124.000zł



Dan D'Agostino is an iconic person, a legendary figure and founder and longtime owner of **Krell Industries**. Above all he is a man full of passion. Selling his shares in Krell to investors from KP Partners in 2009, little did he know that it would prove to be a kiss goodbye. He left the company shortly afterwards

accompanied by ex wife Rondi with whom he'd started the company in 1970 together with their eldest son Bren, head of technical projects. The financial details of the Krell takeover are not known but it clearly turned unpleasant. Literally overnight the D'Agostino family which had founded and directed the company for 29 years was escorted to the front door. What would they do next?

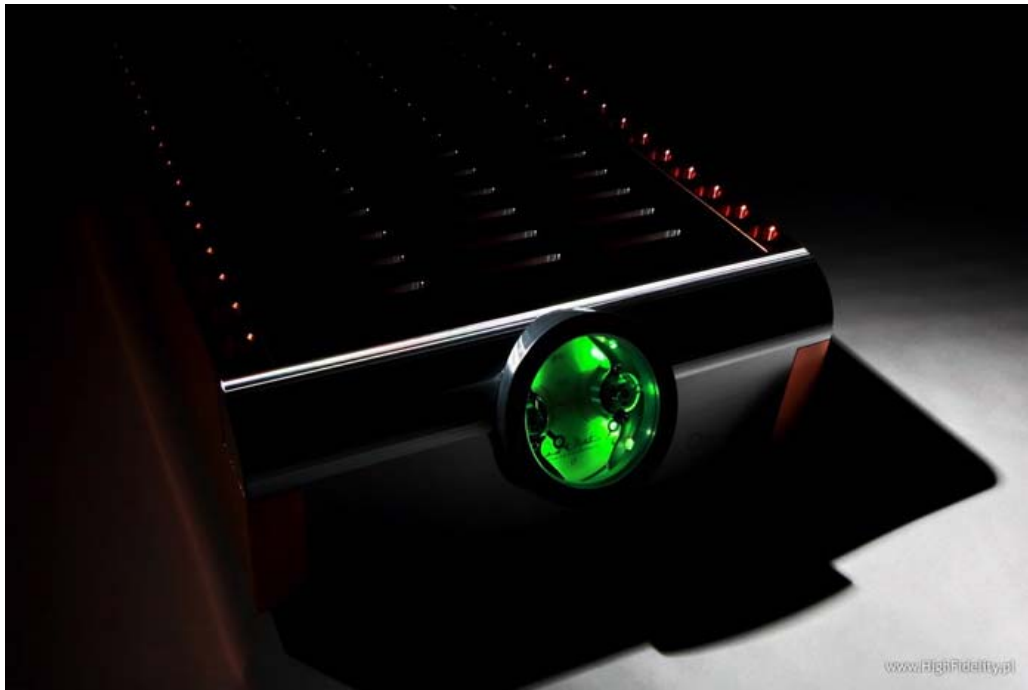


The answer came as early as January 2010 during the CES exhibition in Las Vegas with the Momentum amplifier from new company Dan D'Agostino Master Audio Systems. Just as Franco Serblin had done parting ways with his company sonus Faber three years earlier, Dan decided to immortalize his own name in the name of his new company. Incidentally both the first amplifier that bears Dan's name and the first speaker available under the name of Franco Serblin hit the stores in the same year of 2010.

The Momentum Stereo amplifier introduced a year later looks almost identical to the monos except for featuring two power output meters. This is the most distinctive element of the amplifier's exterior. Looking as though taken straight from a steam punk movie, it's actually a tribute to one of the most important watchmakers Abraham Louis Breguet who in 1775 in Paris founded a company bearing his name. It was Breguet who designed the characteristically shaped hour hand which D'Agostino used in your project.



The amplifier is surprisingly small but very heavy. Its 40.8kg of fighting weight concentrate over a very compact surface area in an extremely rugged aluminium/copper enclosure made of flat milled bars. You won't find classic finned aluminium heat sinks but thick copper plates with vertical bores. These through-holes are shaped like a double funnel with 12mm core diameter flared to 19mm on either end. Due to copper's 91% higher thermal conductivity over aluminum, classic heat sinks were deemed unnecessary.



Although the founder of Krell became famous for his class A amps, the new class A/B design is far more eco-friendly, a very important contemporary detail. According to Dan the amplifier consumes only 1 watt at idle though the measurements by *Hi-Fi News & Record Review* beg to differ by showing 99 watts. The circuit is built upon 12 pairs of ultra-fast transistors per channel. The stereo model is said to be identical to one monoblock apart from a smaller number of output transistors.



**Sound – a selection of recordings used during the auditions:** MJ Audio Technical Disc vol.6, Seibundo Shinkosha Publishing, MJCD-1005, CD (2013); Adam Makowicz, *Unit*, Muza Polskie Nagrania /Polskie Nagrania, "Polish Jazz vol.35", PNCD 935, CD (1973/2004); Artur Lesicki Acoustic Harmony, *Stone & Ashes*, Fonografika, 559040, (CD: 2010); Bogdan Hołownia, *Chwile*, Sony Music Polska, 505288 2, (CD: 2001); Czesław Niemen, *Katharsis*, Muza Polskie Nagrania, PRCD 339, "Niemen od początku, nr 9", CD (1976/2003); Czesław Niemen, *Spodchmurykapelusza*, Pomaton EMI, 36237, CD (2001); Depeche Mode, *Heaven*, Mute/Columbia, 47537-2, maxi SP, CD (2013); Diorama, *Even Devil Doesn't Care*, Accession Records, A 133, CD (2013); Frank Sinatra, *Sinatra Sings Gershwin*, Columbia/Legacy/Sony Music Entertainment, 507878 2, CD (2003)...



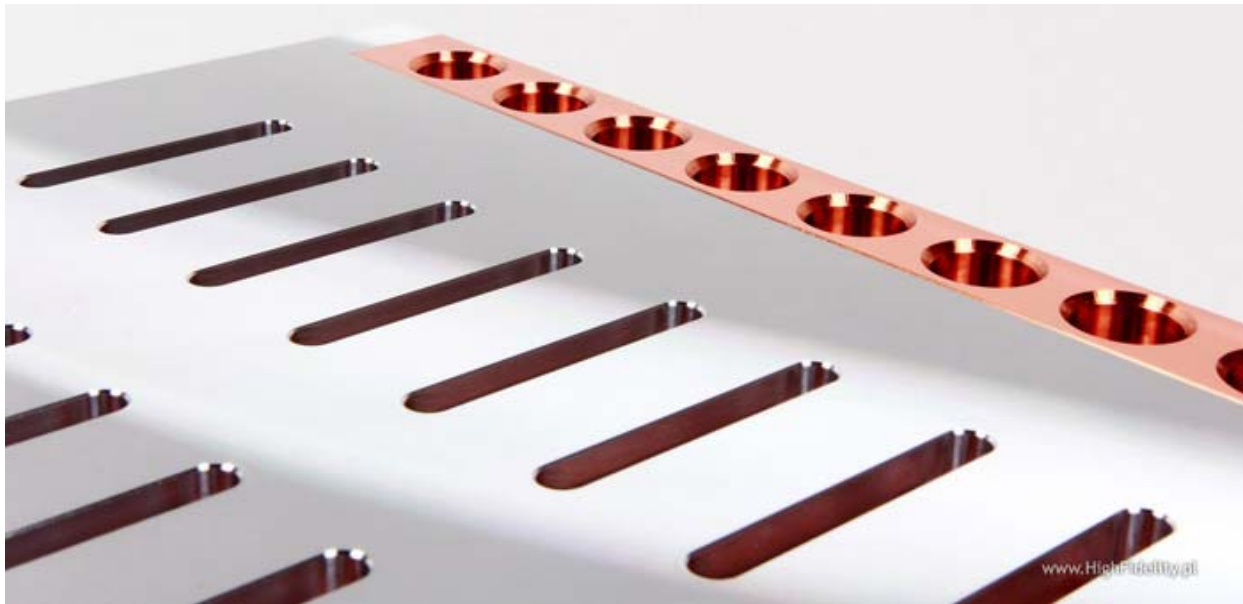
...John Coltrane, *Coltrane*, Impulse!, 589 567-2, "Deluxe Edition", 2 x CD (1962/2002); Józef Skrzek, *Podróż w krainę wyobraźni*, Polskie Nagrania/Metal Mind Productions, MMP CD 0541, CD (1978/2009); Komeda Quintet, *Astigmatic*, Muza Polskie Nagrania /Polskie Nagrania, "Polish Jazz vol.5", PNCD 905, CD (1966/2004); Lars Danielsson, *Mélange Bleu*, ACT, 9604-2, "ACT: Nu Jazz", CD (2006); Lucy Ann, *Lucky Lucy Ann*, Mode Records/Muzak, MZCS-1121, "Mode Vocal Collection", CD (1957/2007); The Dave Brubeck Quartet, *Time Out*, Columbia Records/Sony Music Entertainment Hong Kong, 883532, "K2HD Mastering CD", No. 0055, CD (1959/2011); The Oscar Peterson Trio, *We Get Request*, Verve/Lasting Impression Music, LIM K2HD 032 UDC, "Direct From Master Disc. Master Edition", gold CD-R (1964/2009); Tomasz Stańko Quartet, *Lontano*, ECM, 1980, CD (2006); Wes Montgomery, *Echoes of Indiana Avenue*, Resonance Records, 195562, CD (2012).



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**The appearance and birth in the world of an extraordinary person** is meant to be heralded by supernatural signs, wonders and other miraculous events. It could be a comet, celestial conjunctions, animal behavior, dreams, prophecies and great historical events. The bigger the event, the more important the person associated with it. The arrival of the Dan D'Agostino stereo power amplifier at my home was accompanied by nothing special apart from the huge effort expended lugging the well thought-out suitcase with the amplifier up to the third floor. It was a day like every other day, another device to review, albeit a very interesting one. But then I don't really deal in any others. For me fantastic products have become a standard.

Immediately after unpacking it, the first surprise was the compact size of the Momentum Stereo. Its weight is impressive but its overall dimensions not so much. Placed next to the Soulution 710 it looked like a beefy but agile karateka lurking beneath a sumo wrestler. Although I'd read about it earlier, I still didn't expect this high a quality of fit and finish, such well-chosen ingredients, such a keen balance between 'macho' hifi cues and non-exaggerated footprint. Its sound on the other hand was not particularly surprising. I'd expected a top presentation on the level of a Soulution 710, Accuphase A-200 with a nod to the fantastic Devialet D-Premium Air as well as the best tube amplifiers. The novelty for me was a desire to have the device in my system not instead of my trusted Swiss amp but right adjacent to it.



On paper the Dan D'Agostino amplifier has plenty of power. The company brochure talks of 200/400/800w into 8/4/2 $\Omega$  suggesting an ideal current source. RMS power output measured by HiFi News & Record Review in August 2012 differed again as 240/390w into 8/4 $\Omega$ . The actual power into 8 $\Omega$  is therefore higher but without full doubling into halved impedance. But it's a potent amp regardless, twice as powerful as my 710 Soulution. That power however manifests in a unique manner combined with incredible color. Placed next to each other, the two amps behave differently to a large extent. The 710 sounds like an on-stage pro-audio machine whereby recordings have proper momentum, wide response and a large 'church'-type perspective. The Stereo in turn sounds more focused, celebrating each and every sound as would be the case in small clubs of intimate meetings between audiences and smaller concert halls where we might sit a dozen feet from the piano, vocalist or guitar.

Dan's amplifier portrays the world in beautiful colors. Both the warm color temperature of Wes Montgomery's Echoes of Indiana Avenue, the K2HD version of Brubeck's Time Out and Stone & Ashes from Arthur Lisiecki recorded with microphones set up very close of which I happen to own a CD-R copy directly from the master tape all were saturated and fully mature. As I have repeatedly emphasized, the word 'warm' can refer to both coloration and a lack of distortion for a natural presentation instead. We usually deal with the former in cheaper devices whose budgets don't allow for top high-end performance. Here it's often enough to slightly emphasize the lower midrange, add some specific harmonic distortion, soften the treble a bit and withdraw some transient fire to get an incredibly vivid very satisfying presentation. Still, all along we know it to be a trick which avoids dealing with true high resolution, never mind selectivity.



At first glance the second case produces similar results. Its sound is warm too. It's just that now we're almost one galaxy ahead. When we eliminate distortion by careful design and not merely oodles of negative feedback, the sound becomes more and more natural to which our reaction then is a subjective sense of warmth. There's really nothing warm about it per se. It's simply a counter reference to the vast majority of hifi gear which is cooler and more skeletal. It's this realization which becomes the starting point of investigation for an amp of Momentum Stereo caliber.

Such *implied warmth* is at the heart of it. Its sound is incredibly friendly without trading pleasantness for resolution. True, the Souldution 710, Accuphase A-200 and Ancient Audio Silver Grand Mono are even more resolved and selective. The best of these in this respect is Jarek Waszczyszyn's amplifier equipped with Takatsuki 300B. Its low power however restricts it to a limited range of speakers in smaller rooms with no chance at properly conveying the full power of a symphony orchestra. The Souldution and Accuphase in turn show more three-dimensional instrumental bodies and further differentiate the textures and dynamics gradations and differences in distance between performers.

Even so it was the American amplifier which proved most satisfactory—except for the Ancient Audio tube amp with its caveats—and as such was closest to what could be described as *ideal equilibrium*. But it's no nirvana in the sense of dissolution of the self and the end of the subjective I. Music after all can cause true highs without any illegal substances involved. We simply need music properly presented. Here the Momentum Stereo guarantees a controlled contact high by way of an active participatory experience.

This has nothing to do with tracking novel flavors, hearing new things or stumbling over unexpected musical constants as something all the previously mentioned amps do better. With the D'Agostino music is experienced on a more emotional and less intellectual level. Our emotions react to the emotions encoded in the recordings, a feat of which this amplifier is uniquely. I was amazed by just how it did that. After all it's a smallish amplifier operating in class AB and solid state at that. But I'd heard a similar sonic signature before in the hybrid class A/D Devialet. The sophistication of the Momentum Stereo thus was indisputable and its treble quality outstanding. Even the Souldution 710 which champions this range in an amazing fashion seemed just a little more coarse.



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Not everyone will hear it right away as here we're talking about the top high-end where differential deltas shrink. An experienced music lover however will notice them in the cymbals of Coltrane's album and in the sibilance formation on *Sinatra Sings Gershwin* and related moments. It's astonishing how much transistor technology has improved and how similar this compact solid-state amplifier working in class AB behaves to valve amplifiers. This is something that at least to me was unthinkable until very recently.



But what's really most important is the joy this device can bring to our lives by doing so many things so well and only a handful of them worse than the competition. It deserves applause. That's been well captured by Jonathan Margolis' *How To Spend It* [website](#) with "... it's impossible to measure the pleasure

these amplifiers bring" . As always this remains a function of expectations, taste and our own audio system. In some cases the characteristics which are weaker than in other top amplifiers will make themselves felt more prominently. It is therefore good to be prepared and informed in advance.



What needs mention in this context are slightly calmed-down dynamics. Without my Soudition 710 as the world champion of dynamics next to it I probably wouldn't have paid attention and taken the Momentum Stereo at face value. Only by contrast could I hear how everything was just slightly restrained and suppressed. It was a delicate shift in emphasis creating a slightly different sonic character. The class D Devialet and I-35 tube amplifier from Jadis were similar. The ultimate resolution demonstrated by the Soudition 710 and Accuphase A-200 on one hand and the Ancient Audio tube amp on the other is sacrificed by these others for the sake of consistency and smoothness. Let me repeat that in the end it was only the Polish amplifier which proved capable of *both* smoothness and top-level resolution to be saturated and selective at once. Dan D'Agostino's amplifier had its tonal balance set slightly lower than these three amps and its lowest bass was nice rather than perfectly defined.





**Conclusion.** Each and every amplifier misrepresents reality by distorting the signal fed to it. The true art lies in eliminating distortion, noise, interference as much as feasible and to select all the necessary parts in a way that adds up to good sound. Shelling out well over 100.000 zlotys for an amplifier makes us entitled to expect wonders. The Momentum Stereo is such a miracle. We might even say "little miracle" compared to the size of its main solid-state competitors. It's designed by one of the founding fathers of American high-end audio through whom we all have learnt a lot over the decades. You can hear how he must have had fun designing it by starting from scratch without the burden of Krell's heritage binding him to a certain path.

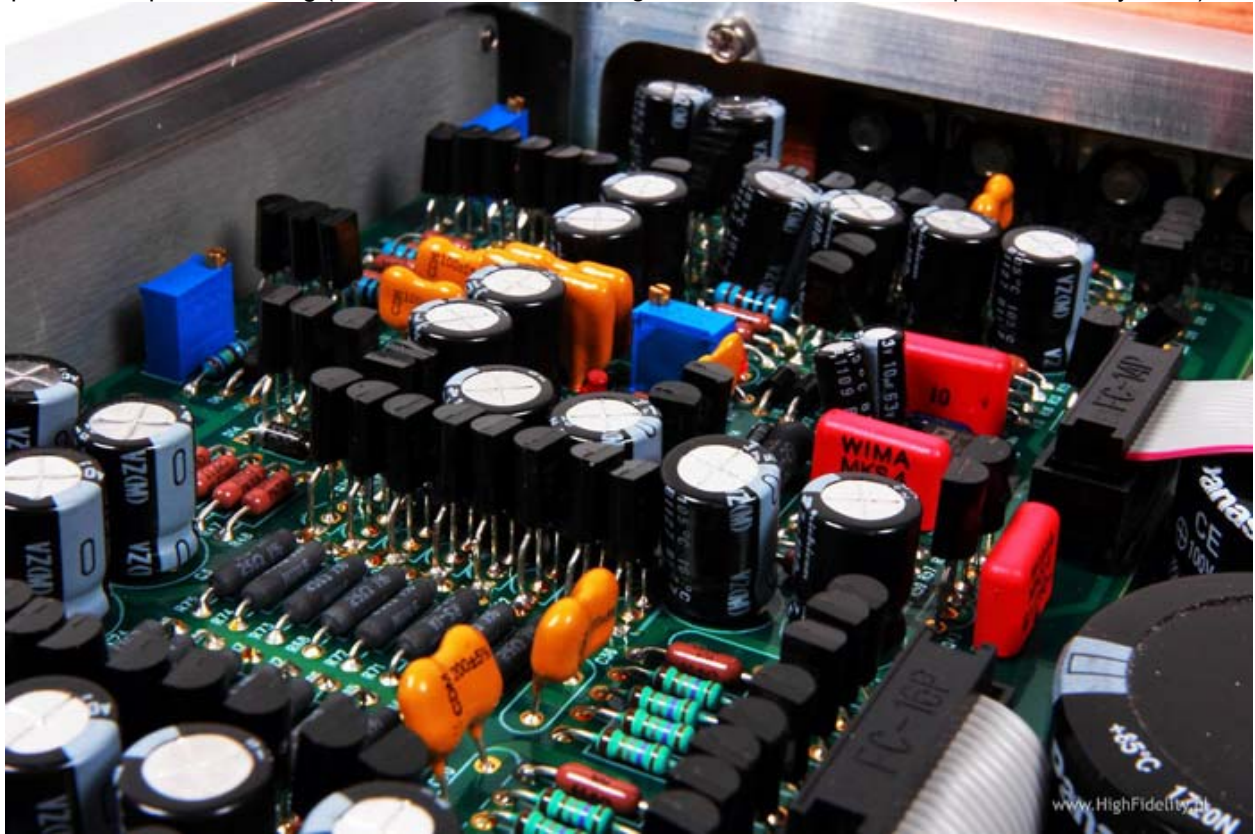
Here we have an amplifier which boasts a very tasteful sophisticated sound that resembles the best tube amps whilst being better than their vast majority. The Momentum Stereo has its own character. It's not some wire with gain, a notion to which it won't even pretend. It approaches things in its own way to create envy. Here is another solid-state amplifier which denies getting trapped in the stereotype of cold dry sharp transistor sound. Many tube amps sound far colder, drier and harder yet are praised left and right. I will instead praise Dan's amplifier and feel perfectly honest about doing it.



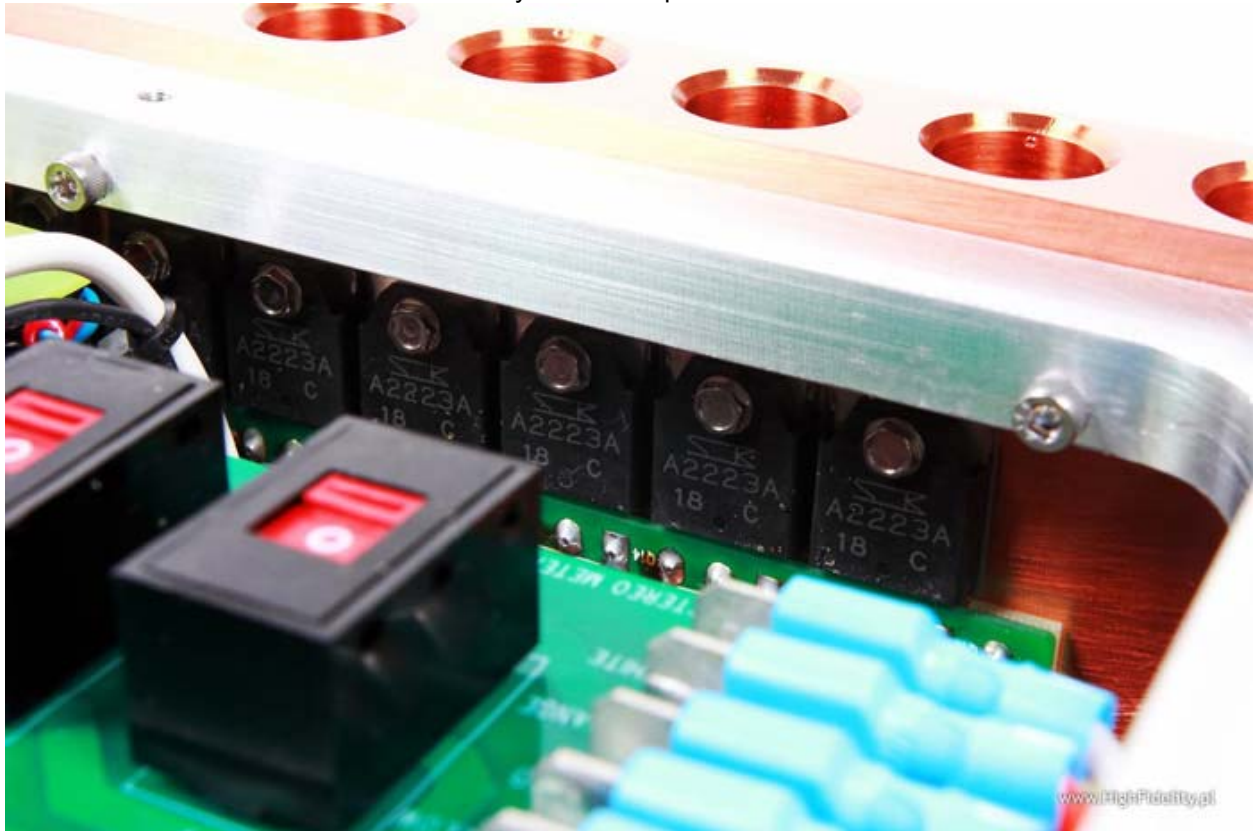
**Review methodology:** The amplifier was tested in an A/B comparison with both A and B known. The reference was primarily the Soulution 710 amplifier with the Ayon Audio Polaris III modified by Gerhard Hirt as preamp. It was also fed directly from the variable output of the Ancient Audio Lektor Air V and Aesthetix Romulus CD players. It sounded best without preamp fed directly by the Ancient Audio player. Take care of providing the best possible source. The Momentum Stereo will show off any difference. During the test the amplifier sat on the Acoustic Revive RST-38 anti-vibration platforms (two) and not on its own feet but rather on three Fat Padz from Symposium. It was powered via the Acrolink Mexcel 7N-PC9300 power cord.

**Design.** The Momentum Stereo from Dan D'Agostino Master Audio Systems is an extraordinary amplifier. Small, beautifully finished, styled as a steam punk or watchmaker's work of art (you decide), it's already been recognized as such around the world. Its enclosure is made of very thick panels. The side walls are flat copper bars with through-holes acting as heat sinks. As shown by John Atkinson in his *Stereophile*

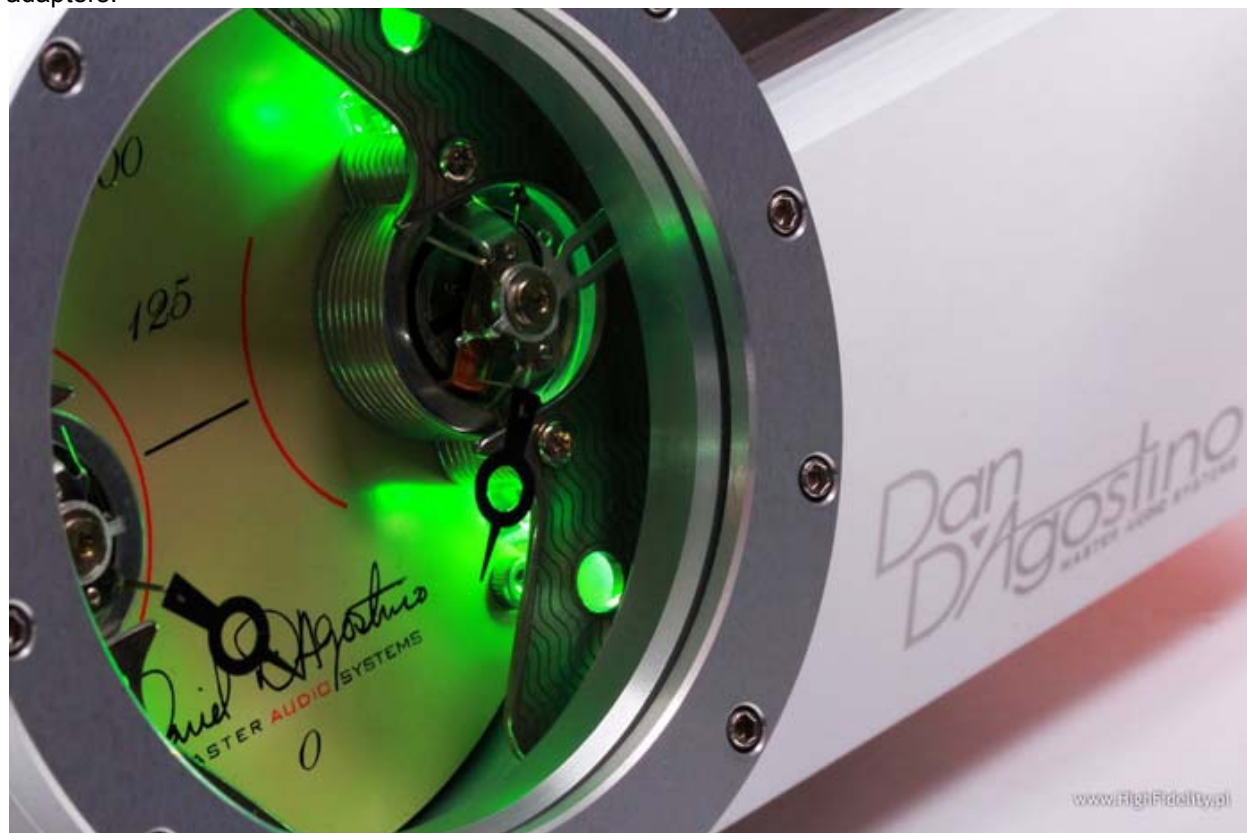
measurements of the Momentum monos, the heat sink area is insufficient for the amp to work at its quoted max power for long (Michael Fremer, *Dan D'Agostino Momentum*, Stereophile, February 2013).



It's very unlikely however that it will ever be placed in this kind of condition. In normal operation even with very high sound levels, overheating protection will never get triggered and heat dissipation will be perfectly adequate. The rear panel is made of thick aluminium plate with a milled recess for the connectors. No screws or bolts are seen anywhere except for the bottom.



What primarily catches our attention is the output indicator meter designed to resemble a ship's porthole (that of Captain Nemo from Jules Verne's novel perhaps) or certain luxury watches. It's illuminated green. The power switch is nowhere in sight and found on the belly near the frontal edge. On the back panel we find an IEC power input with integrated fuse, two pairs of speaker terminals, balanced XLR input connectors and small switches to set the sensitivity of the power meters and their backlit brightness. The speaker terminals are very closely adjoining and I would be *very* cautious using larger spades. One channel's output is also very close to the power cord. Detailed measurements in *HiFi News & Records Review* showed how this results in a 5dB lower S/N ratio for that channel, a small difference which shouldn't be audible. Inputs are balanced exclusively. With an unbalanced preamp use the supplied adapters.



The unit rests on four pretty solid feet but you are well advised to upgrade to something better. The manufacturer offers a special stand which elevates the amplifier significantly. Our Polish distributor instead sent along three Fat Padz Symposium footers. The electronic assembly is upside down similar to tube amps, i.e. suspended from the top panel. To improve shielding a thick copper plate bolts to it from the inside. The electronic circuit spreads across a few PCBs. The input section is situated close to the rear panel. The circuit is fully solid-state with fantastic parts, from Dale precise resistors and Cornell Dubilier CDM mica capacitors to polypropylene Wima capacitors and others. This section has its own separate power supply with a dedicated toroidal transformer. The latter is mounted to an aluminium plate, shielding from its bottom side the arguably widest toroidal transformer I've ever seen. Power for the output stage is filtered by eight very good Panasonic caps. The output-stage PCBs mount to either cheek and feature six pairs of output transistors each, 2SA2223+2SC6145 from Sanken. Here too the passive parts are top notch. The interior looks beautiful and adds to the pleasure of watching the machine from the outside.

**Specifications (HFN&RR measurements):**

RMS output power: 240/390w 4/8Ω	Instantaneous output power: 300/550/970/1, 3W (8/4/2/1Ω)
Input sensitivity (0dBW/200W): 175mV	Output impedance (20Hz - 20 kHz): 0.28-0.29Ω
Signal/noise ratio (A-weighted): 113.8dB	Frequency response (+0dB/-1.9dB): 20Hz - 100kHz
THD: 0.07 -0.1%	Power consumption (no signal/full power): 99/690w
Dimensions (WxHxD): 318 x 109 x 470mm	Weight: 40.8kg

*Wojciech Pacuła*

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