

Review

Power amplifier **Dan D'Agostino Master Audio Systems**
MOMENTUM STEREO

Price (in Poland) 124 000 zł

Manufacturer: Dan D'Agostino Master Audio Systems

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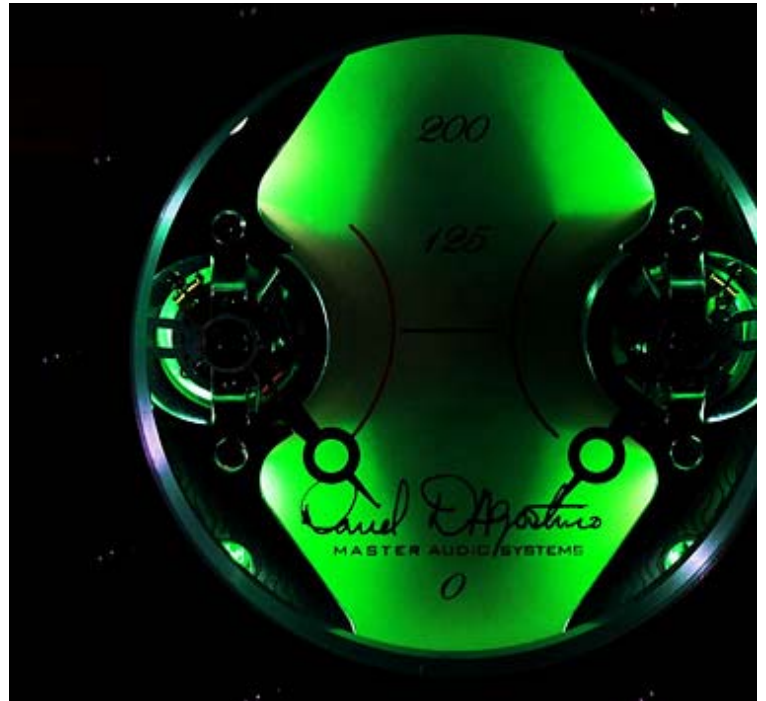
Manufacturer's website: dagostinoinc.com

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Dan D'Agostino Master Audio Systems

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Dan D'Agostino is an iconic person, a legendary figure, the founder and longtime owner of Krell Industries and, above all, a man full of passion. In 2009, selling his shares in Krell to investors from KP Partners, little did he know that for him it was a "goodbye" kiss; he left the company shortly afterwards. Actually, he did not go alone, but was accompanied by his wife Rondi with whom he started the company in 1970, together with their eldest son Bren, head of technical projects (Jerry Del Colliano, *What Happened At Krell and Why The D'agostino Family Is Out*, "Home Theater Review.com", December 7, 2009). Financial details are not known, but what is known is that the takeover was not pleasant – literally overnight, the D'Agostino family was turned out from the company they had founded and directed for 29 years, and escorted to the front door. As Jerry Del Colliano wrote in his article *What Would Dan D'Agostino Do?*, everyone wondered what the D'Agostino family would do. While they stayed on the board, they did not have any say in the company. The answer came as early as January 2010, during the CES exhibition in Las Vegas, when the Momentum amplifier was presented by a new manufacturer, Dan D'Agostino Master Audio Systems. Just as Franco Serblin had done, parting ways with his company

three years earlier, in 2007, Dan also decided to immortalize his 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, 2010.



The Momentum Stereo amplifier introduced a year later than the Momentum monoblocks looks almost identical, except for the power output indicator, featuring two, not one, meters. This is the most distinctive element of the amplifier's exterior design. Looking like taken straight from a steampunk movie, it is actually a tribute to one of the most important watchmakers, Abraham Louis Breguet, who in 1775 in Paris founded a company bearing his name. Breguet designed the characteristically shaped hour hand which D'Agostino used in your project. The amplifier is surprisingly small but very heavy - it is 40.8 kg of live weight concentrated on a very small surface area, in an extremely rugged aluminum-copper enclosure made of milled flat bars. You will not find here classic aluminum heat sinks, but instead a thick copper plate with through-holes. These have the shape of a double funnel - 19 mm in diameter at both ends and 12 mm in the middle. As thermal conductivity of copper is about 91% higher than that of aluminum, classic heat sink fins are not needed. Although the founder of Krell became famous for his designs operating in class A, the new design is much more eco-friendly - a very important trope. According to the manufacturer, the amplifier consumes only 1 W in idle mode (although the measurements by "Hi-Fi News & Record Review," speak of 99 W) and operates in class AB in the whole range. Its built on ultra-fast transistors, 12 pairs per channel. As head of the company says, the stereo model design is identical to (one) monoblock, apart from a smaller number of output transistors.

The appearance of an extraordinary man in the world, his birth, meant to be heralded by supernatural signs and wonders, and other miraculous events. It could be a comet, a star or other astronomical phenomena, as well as animal behavior, dreams, prophecies, and great historical events. The bigger the event, the more important - by implication - the person associated with it. The arrival of the Dan D'Agostino stereo power amplifier at my home was accompanied by nothing special, excluding a huge effort of lugging the well-thought out (alleluja!) suitcase with the amplifier up to the third floor. It was a day like every day, with another device to test, granted, an interesting one, even very much so, but then I don't really deal with any others. Fantastic products have become a standard for me.

The first surprise, immediately after unpacking it, was the compact size 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, quick-moving agile "fighter" lurking next to a sumo player. Although I'd read about this earlier, I did not expect such a high quality of manufacturing and finish, so well-chosen components, a balance of what is "macho" about audio with non-exaggerated size. Its sound, on the other hand, was

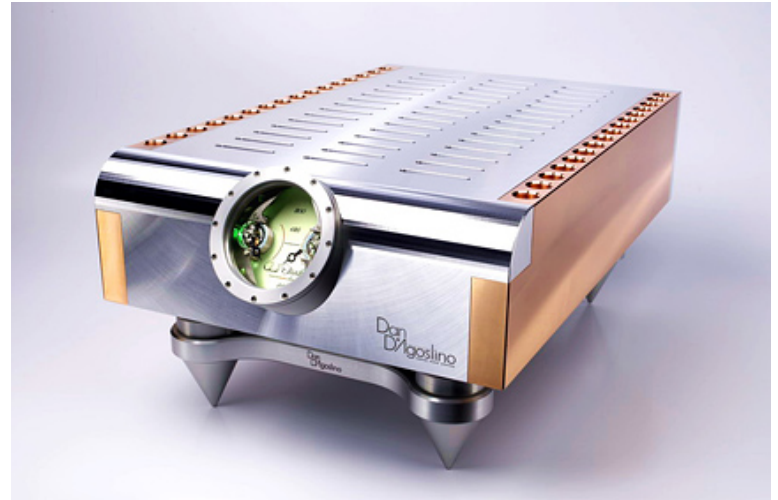
particularly surprising, and I was kind of expecting just that - a top presentation at the level of the Soulution 710, the Accuphase A-200, with a nod to the fantastic Devialet D-Premium AIR as well as the best tube amplifiers. A novelty for me was that I felt a desire to have the device in my system - not INSTEAD OF my trusted Swiss amp, but rather NEXT TO him.



On paper, the Dan D'Agostino amplifier offers plenty of power. In the company brochure we will find information that it is 200 W into 8 Ω and 400 W into 4 Ω (and 800 Ω into 2 Ω), suggesting a very high current output, or an ideal current source (in this range). RMS power output measured by "Hi-Fi News & Record Review" (August 2012) is a bit different: 240/390 W (8/4 Ω). The actual power into 8 Ω is therefore higher, but the switch to 4 Ω does not double it. Be that as it may, it is a powerful device, twice more powerful than the 710 from Soulution. That power, however, is manifested in a unique manner in combination with incredible color. Placed next to each other, the two amplifiers behave to a large extent differently - the 710 sound as a professional, stage device, with recordings having momentum and wide frequency response, and a kind of "large church hall" production. The Stereo, in turn, sounds more focused, celebrating each and every sound, as in the case of small music clubs, intimate meetings with the listeners in small concert halls. Kind of like when we sit a dozen feet from the piano, the vocalist, or the guitar. Dan's amplifier shows the world in beautiful colors. Both the warm (in terms of color temperature) Wes Montgomery recordings from *Echoes of Indiana Avenue*, the K2HD version of Brubeck's *Time Out*, and the album *Stone & Ashes* by Arthur Lisiecki, recorded with not

microphones set up very close, which I happen to own in a unique version - on a CD-R copy from the master tape, all those recordings sounded saturated, full, and mature. As I have repeatedly emphasized, the word 'warm' can refer to both coloration and to the lack of distortion and natural presentation. We usually deal with the former in cheaper devices, where it is impossible to obtain such performance as in the top high-end. It is often enough to slightly emphasize lower midrange, add some specific distortion (odd harmonics), cut off the treble a little bit, and withdraw some sound attack to get an incredibly vivid, really satisfying presentation. Still, all the time we know that it's just a trick and that we do not really deal with high resolution, not to mention selectivity. The latter case, gives similar results at first glance - the sound is warm. It's just that we're now somewhere else, almost a galaxy ahead. When we eliminate signal distortion and we use our head doing it, not just simply applying negative feedback, the sound becomes more and more natural, and hence it seems warm to us - by way of reaction. There is really nothing warm about it, however, a point of reference, which in this case is the vast majority of audio equipment, sounds much cooler, more "skeletal-like" and that's what sets the "tone", becoming the starting point. Such understood warmth is at the heart of what the Momentum Stereo offers. Its sound is incredibly friendly, without losing resolution. Yes, both the Soulution 710, the Accuphase A-200 and the Ancient Audio Silver Grand Mono have even more resolved, more selective sound. The best of them all in this respect is, no surprise here, Jarek Waszczyszyn's amplifier equipped with Takatsuki 300B. Its power output, however, is low, making it work well with a limited range of speakers in rather small rooms, with no chance of properly conveying the power of the full symphony orchestra. The Soulution and the Accuphase, in turn, show more three-dimensional instrument bodies, further differentiate the textures and dynamics jumps; the differences in distances between the performers. So what, we might say, as it was the American amplifier that proved the most satisfactory of them all (except for the Ancient Audio tube amp, with all the caveats), and closest to what could be described as a "perfect balance", an equilibrium. But it is not nirvana in the sense of "dissolution of the self" and the end of the subjective "I". Music can indeed make "fly high", we do not need any substances for that, just properly presented music. The Momentum Stereo, however, will guarantee a controlled flight. This will be active listening, a "participating" audition. Not really something to do with listening to small flavors, new things, musical consonants; that's not really the point. The previously cited devices can do that better. Here the music is, however, experienced on a different level - more emotionally, a little less intellectually. Our emotions will

to react with the emotions contained in the recordings; the amplifier is capable of that. These emotions will be evoked in us.



I myself am amazed at how all that is possible – after all it is a small (in terms of size) amplifier operating in Class AB, and solid state at that. I heard a similar sonic signature before, in the hybrid, digital-analog D-Premier's AIR amplifier from Devialet, but the sophistication of the Momentum Stereo is indisputable. The quality of treble here is outstanding. Even the Soulution 710, showing the range in an amazing way, seemed to present the events just a little more coarsely. Maybe not everyone will hear it right away, as we're talking about top high-end and very small differences percentage-wise; an experienced music lover will notice them, however, with the cymbals sound on the Coltrane album, and sibilance formation on the album *Sinatra Sings Gershwin*, and in other moments. It's amazing how much solid state technology has improved, and how similarly this small-dimensioned, solid state amplifier working in class AB behaves to tube amplifiers – something unthinkable until very recently. But what's most important is the joy that this device brings to our lives - it does so many things so well, and only a handful worse than the competition that it deserves applause. It has been well captured by Jonathan Margolis in his article, posted on "How To Spend It" website, saying, "It's impossible to measure the pleasure that these amplifiers bring" (see [HERE http://howtospendit.ft.com/audiovisual/5709-dan-dagostino-amplifiers](http://howtospendit.ft.com/audiovisual/5709-dan-dagostino-amplifiers)).

As always, everything remains a function of expectations, taste and our own audio system. In some cases, the characteristics that are weaker here than in other top amplifiers will make themselves felt more prominently. It is therefore good to be prepared and informed in advance - in the end, that's what we are here for; the critical role of the audio press is just as important as the affirmative. What needs to be mentioned is slightly calmed down dynamics. Without my Soulution 710, the world champion of come dynamics, next to it, I would probably not even have paid attention to it with the Momentum Stereo, and would have taken it as it comes. And yet I can hear that

everything is just slightly restrained, slightly suppressed. It is a delicate shift in emphasis, creating a slightly different sonic character. The class D amplifier from Devialet and the I-35 tube amplifier from Jadis sounded similar. The ultimatum resolution showed by the Soullution 710 and the Accuphase A-200 on the one side and the Ancient Audio tube amp on the other, is being sacrificed here for the sake of sound consistency and smoothness. Let me repeat: in the end, it was only the Polish amplifier that was able to show both smoothness and resolution, to be both selective and saturated. Dan D'Agostino's amplifier has its tonal balance slightly lower than all these three amps, but its lowest bass is rather nice than perfectly defined.

TESTING METHODOLOGY

The amplifier was tested in an A / B listening test, with the A and B known. The reference was primarily the Soullution 710 amplifier, with the Ayon Audio Polaris III modified by Gerhard Hirt working as a preamp. It was also fed directly from the variable output of the CD players: the Ancient Audio Lektor AIR V-edition and the Aesthetix Romulus. I must say that it sounded best without a preamp, fed directly by the Ancient Audio player. Take care of providing the best possible source – the Momentum Stereo will show any change! 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, stylized on steampunk or watchmaker's works of art (you can choose), which has already been recognized by everyone in the world. Its enclosure is made of very thick panels. Side walls are copper flat bars with through-holes, acting as heat sinks. As shown by John Atkinson in his measurements of the Momento monoblocks, the heat sink surface area is too small for the amp to work with the quoted maximum power output for a long time (Michael Fremer, *Dan D'Agostino Momentum*, "Stereophile", February 2013). It is very unlikely, however, that it will ever be placed in this kind of condition. In normal operation, even with very high sound levels, the overheating protection will never get activated and heat dissipation will be perfectly adequate. The rear panel is made of another thick plate, with milled out recess for the required connectors. No screws or bolts are to be seen

anywhere, except for the bottom.

However, what primarily catches our attention is its output indicator, designed to resemble a ship porthole (that of Captain Nemo from Jules Verne's novel) or luxury watches from some manufacturers. It's illuminated in green. The power switch is nowhere in sight – it's found its place on the bottom panel, near the front edge. On the back panel we find an IEC mains socket with an integrated fuse, two pairs of speaker terminals, balanced XLR input connectors and small switches to select the sensitivity of power meters and illumination brightness. Speaker terminals are very close together and I would be very cautious using larger spades with them. One channel output is also very close to the power cord. Detailed measurements in "HiFi News & Records Review" shows that this results in the Signal to Noise Ratio 5 dB lower for that channel; such small difference, however, should not be audible. Inputs are only balanced, but if you want to use the unbalanced preamp (which is popular in Japan, for example), use the adapter supplied with the unit. The unit rests on four feet, pretty solid, but you will be well advised to upgrade them to something better. The manufacturer offers a special stand, lifting the amplifier quite significantly. The distributor, however, sent along something else - three Fat Padz mini platforms from Symposium. Electronic components are assembled "upside down", similarly to tube amps. They are suspended from the top, thickest panel. In order to improve shielding a thick copper plate is bolted to the top panel from the inside. The whole electronic circuit is mounted on a few PCBs. The input section is housed on one PCB, located close to the rear panel. The circuit is fully solid state and employs fantastic quality passive components; everywhere we can see Dale precise resistors, CDM mica capacitors from Cornell Dubilier, polypropylene Wima capacitors and others. This section has its own separate power supply, with a dedicated toroidal transformer. The latter is mounted to an aluminum plate, shielding from the bottom side arguably the widest toroidal transformer that I've ever seen. Power for the output stage is filtered by eight, very good quality capacitors from Panasonic. The output stage PCBs are mounted on both sides, and they feature six pairs of output transistors per channel – these 2SA2223+2SC6145 from Sanken. Here, too, passive components are top notch quality.

The whole interior looks beautiful and adds to the pleasure of watching the machine from the outside.

Specification (HFN&RR measurements)

RMS Output Power: 240/390 (4/8 Ω)

Instantaneous output power: 300/550/970/1,3 kW(8/4/2/1 Ω)

Output Impedance (20 Hz - 20 kHz): 0.28-0.29 Ω

Frequency response (+0 dB/-1, 9 dB): 20 Hz - 100 kHz
Input sensitivity (0 dBW/200 W): 175 mV mV/2470
Signal / noise ratio (A-weighted, A, 200 W): 113.8 dB
THD: 0.07-0.1%
Power consumption (no signal / full power): 99-690 W
Dimensions (WxHxD): 318 x 109 x 470 mm
Weight: 40.8 kg

Recordings used during test (a selection)

- *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, kopia z tańmy-matki, CD-R (wersja CD: 2010);
- Bogdan Hołownia, *Chwile*, Sony Music Polska, 505288 2, kopia z tańmy-matki, CD-R (wersja 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).
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- 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).