



Wattson Audio Madison LE streaming DAC and headphone amp

Alan Sircom

If you only buy audio equipment by the metre or the kilogramme, turn the page. If you are into bling, a Christmas tree front panel, and attention-grabbing displays, you've come to the wrong place. No, this one's for those who want a remarkably high-performance, 'just the facts' headphone amp, DAC and streamer. It's for those who don't want a price tag that mistakes 'streamer' for 'private jet'. The people who buy a product for its performance, not its label. If you are that kind of person, the Wattson Audio Madison LE speaks your language.

Given the audio world is awash with Special and Custom Editions that are little more than a new colour scheme, you might be forgiven for thinking the 'LE' suffix means 'Limited Edition'. However, this 'Lounge Edition' sports some fundamental changes to the power supply architecture over the regular version, with both running concurrently in catalogue. Like its brother, the Madison LE uses a separate power supply.

Small, but packed

The main Wattson Audio Madison LE chassis is small, but packed. It's the size and weight of a hardback novel (more *Pride and Prejudice*-sized than a *War and Peace*-like tome). Unlike most rectangular audio boxes, the volume control side is tapered. It's a Wattson Audio thing; the regular Madison, the power amplifier in the same line and the two small Emerson converters in the range have the same taper. 'Small' does not mean 'cheaply made', however. The extruded aluminium case is solidly finished in a grey ceramic finish not unlike a powder coat. That sits outside the more conventional black or silver squared off audio electronic aesthetic. But that isn't necessarily a bad thing; in a world of 'me-too' boxes, the Madison LE stands small... and proudly so!

The Wattson Madison LE streamer-DAC has three inputs: 100Mb/s Ethernet, and S/PDIF on RCA and TosLink. There's no USB, no I²S, no AES3 and no external clock sync. There are no analogue inputs or remote either, >>

EQUIPMENT REVIEW
Wattson Audio Madison LE



» but there is a volume control, and a single-ended 1/4" headphone socket at the front and a pair of RCA and XLR sockets at the back for connecting to an amp.

This isn't perhaps the most comprehensive set of features and functions around, and there are streamers, DACs, and personal audio products that have more comprehensive feature sets. However, in a very real way, paring back to the basics invites a question; do you really need more?

Yes, if you are using the Madison LE as a digital hub or a preamplifier, it will be found wanting, and if you demand balanced headphone listening or must have access to a range of filter options, the Madison isn't that product. But there's nothing wrong with being a niche product, if you do that niche very well.

Part of the reason it does things very well is its use of a LEEDH volume system. It's a genuinely lossless digital volume control that makes a lot of sense when the Madison LE is used with the matching Madison power amplifier to create a bare-bones system. In a more conventional DAC setting, you can disable the volume control.

Appiness

The Madison LE is best driven by the Wattson Music app, and, unlike its CH Precision stablemate, this is designed for iOS (there is an alternate app for Android users). The app is as stripped to the bone as the Madison LE it controls, but does allow the streamer to speak to the usual streaming suspects; Tidal (and Tidal Connect) and Qobuz (and Qobuz connect). It also grants access to Apple AirPlay and Audirvāna, as well as UPnP and DNLA streaming set-up. The Wattson Music app is more a facilitator than the place where your music lives, but it does allow you to run some basic housekeeping on the Madison LE. These include volume adjustment and source switching, changing the brightness of the display and even some basic speaker-placement correction.

The machine is also Roon Ready, and that makes an excellent use-case for the Madison LE; it's the perfect partner for a Roon Nucleus or similar. That's the joy of a basic app; you don't feel confused over whether to use the functionality of the music-replay app, because that functionality isn't provided with the Wattson Music app. All it does is set up the system to play music well and then get out of the way with the least fuss possible. Kind of like the Wattson Audio Madison LE.

Lively

There's one other thing the Wattson Audio Madison LE does very well. It sounds very good! That's perhaps not quite as much of a niche in audio (hopefully), but the lively, exciting and detailed sound is very much at odds with the flat and slightly dull sound often attributed to streaming-ready devices. And, 'lively' isn't code for 'it can peel paint at 30 paces', it's just one of those products with oodles of built-in joie de vivre.

OK, so if you decide to have a weekend of going through everything in Leonard Cohen's catalogue, the Madison LE isn't so exuberant that you will run out of the room smiling. It's not some rose-tinted optimist. But the Madison LE is like the difference between listening to a Richmond Fontaine album and seeing the band live; the dour is still there, but there's more of a positive outlook at the end. I wouldn't go so far as to say the Madison LE is 'life affirming' but it's energy is infectious.

A niche product would just play up the excitement bit and nothing else. The Wattson Audio Madison LE has got some depth to it, too. Tonally speaking, although we shouldn't equate physical size to bass depth, the bass notes coming out of the speakers when the Madison LE was in the chain were impressive. It doesn't overstate bass, just is not shy of the bottom end. Yes, of course this comes over well with electronica, but it's also there in real instruments; Grant Green's guitar licks take on a more

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» substantial tone. This is the kind of streamer that makes you take someone like Grant Green seriously; the jazzers of the age were all over Wes Montgomery like a nasty rash, and because Grant Green played in a more funky, less traditional style, he got all but cancelled by the 1960s jazz community. The Madison LE shows those blinding licks (rediscovered in the acid jazz era of the 1990s) are built upon solid technique and one few could hope to replicate. The Madison LE brings out your inner musicologist, but not in the sad-faced analytical manner.

The more you play through this pocket rocket, the more you come to like and respect what it does. It doesn't try to be something it's not or bite off more than it can chew. It's clean and detailed, with a close-knit but open-sounding soundstage, and a fundamentally neutral tone.

Which brings us to the CH Precision connection. Yes, it shares many of those attributes in common with CH Precision digital products, but this isn't a CH product. It uses a Sharc DSP and twin-DAC layout with a WM8742 chipset. It chose that due to the spline-filtering algorithm, and it uses a short-tail filter (which is why it sounds so fast and exciting). All of which makes it very CH-adjacent. There is a commonality of sound as a result. But it's best to think of this as a Wattson product, not CH-Precision Lite.

No USB

There are downsides. The lack of USB input being the most obvious. This is not the deal-breaker it once was, but the absence of any kind of USB audio or bulk-storage options might detract some. Also, given the CH Precision connection and that company's love of power supplies,

I'd like to see something a lot more 'stonky' powering the Madison LE. But that's it!

The little Wattson Audio Madison LE impressed me, and it will very likely impress you too. It isn't flashy, it isn't infinitely configurable. It just has got it where it counts; right in the sound quality. If you want to enjoy what streaming really offers, this is one of the best points of entry. +

Technical specifications

Type: Two-channel D/A processor, streamer, and headphone amplifier.

Digital inputs: one electrical (S/PDIF on RCA), one optical (TosLink), and one Ethernet.

Analogue outputs: stereo pair balanced (XLR), stereo pair single-ended (RCA); single-ended headphone (¼" stereo).

THD: 0.001%

S/N ratio: >120dB (A-weighted)

Headphone amplifier maximum output power: 150mW into 32 ohms, 50mW into 150 ohms, 10mW into 600 ohms

Supported formats: PCM to 384kHz, DSD to 256x.

Control protocols: UPnP/DLNA, AirPlay, Tidal Connect, Roon Ready, Audirvāna

Control app: Wattson Music for iOS. Wattson Remote for Android

Dimensions (WxDxH): 17.4 x 18.5 x 5.2cm

Weight: 1.08kg

Price: £4,995, €4,995, \$4,995

Manufacturer Wattson Audio SA

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TECH TALK

Alexandre Lavanchy

Technical Director of Wattson Audio

Wattson Audio might be a comparatively new name to many audiophiles, but the brand comes with a great back-story. The Swiss-based company has been associated with CH Precision and its team for more than 20 years in a purely consultancy manner, and there have long been collaborative projects between the two.

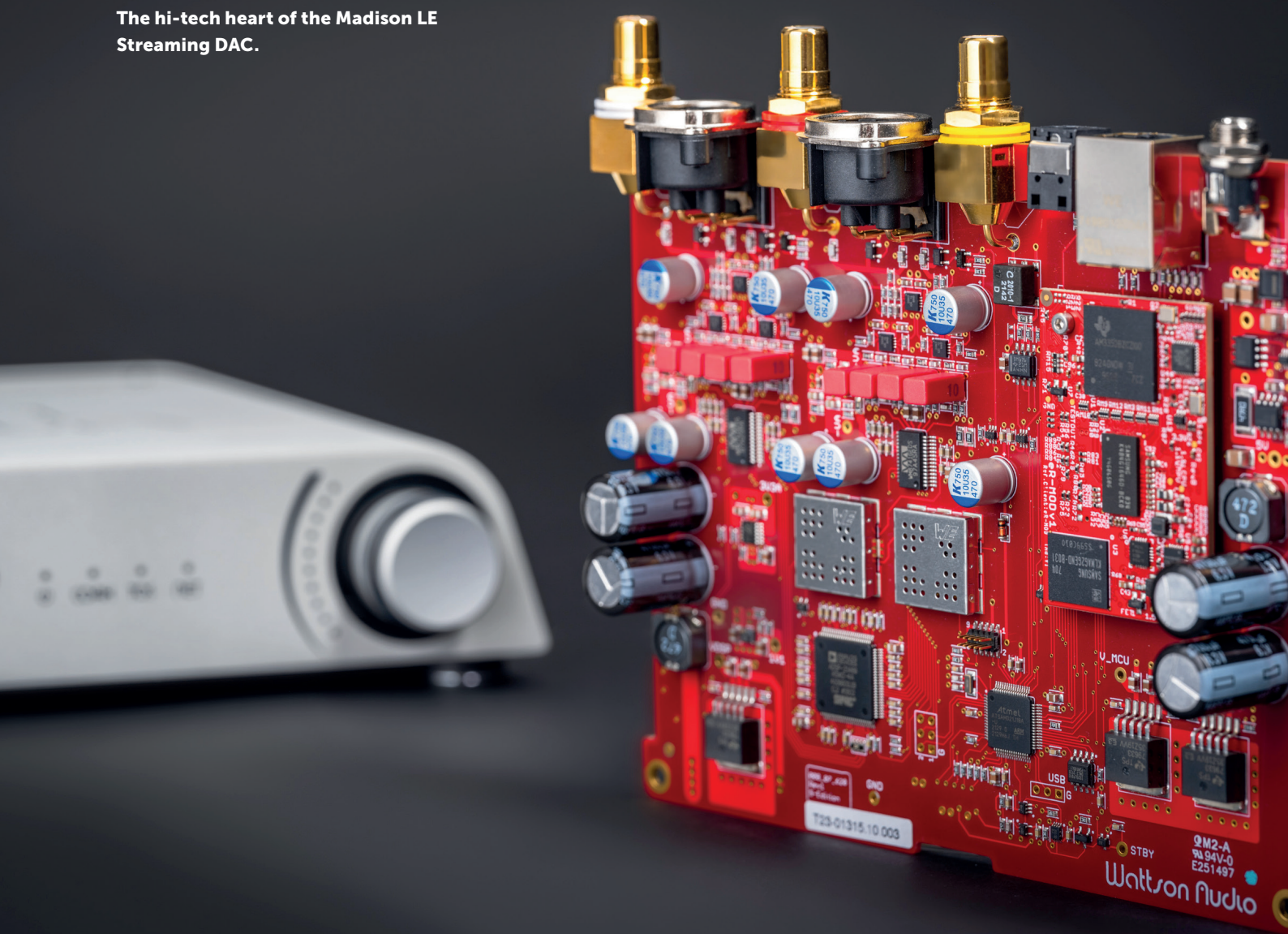
Wattson Audio was a child of the COVID pandemic and has recently become a wholly-owned subsidiary of CH Precision, bringing the two teams together. Wattson Audio is more than just a subsidiary or diffusion brand, though. We spoke to Alexandre Lavanchy, Technical Director of Wattson Audio about the brand, its innovations and how it differs from CH Precision.

1. Describe the Wattson ethos from an electronic and audio perspective

Wattson Audio's philosophy is based on several pillars. From an electronic standpoint, we want to transpose the technologies and concepts of very high-end products to create devices that are more accessible, both financially and in terms of ease of use. Behind this aspect lies a great deal



The hi-tech heart of the Madison LE Streaming DAC.





The way in which the numerical calculation is performed differs from conventional methods.

» of work on the electronic circuits to select, rationalise and ultimately arrive at designs that contain the essentials to achieve the performance we are aiming for.

When it comes to listening results and audio criteria, our primary goal is natural and neutral sound reproduction. We're not Swiss for nothing ;-) We draw on all our experience to ensure that the digital components of the streamers and the digital-to-analogue conversion circuits deliver sound that is free of the harshness or coldness sometimes associated with digital audio, while maintaining precision, speed and dynamics. We target an analogue feel, which carries emotion so that technology as such should not be dominant in the ears of the user.

We aim to create devices that perform a limited number of functions, but with minimal compromise, achieving a very high level of quality. User-friendliness, ease of use, and seamless integration into a contemporary living space, with both aesthetic appeal and discretion, are also very important aspects of our product philosophy.

2. What is the CH Precision connection, both before and after the more formal collaboration?

I was Florian's first employee when he started an engineering consultancy and OEM company back in 2004. Florian decided to launch CH-Precision in 2009, and I took over the consultancy business which has later been renamed 'EngineeRed'. We remained quite close, both geographically, as the two companies were only a few kilometers apart, and personally.

We always kept in touch, discussing business management issues, technical topics, audio and personal matters. There have been some technical collaborations between the two companies, and EngineeRed provided the hardware module for CH-Precision network streaming interface. The mutual teams of the two companies have been in regular contact over the years.

The first Wattson Audio products were developed by EngineeRed, and the brand was launched at the start of the COVID-19 pandemic. The following years were tumultuous and economically difficult, and a decision was made to shut down the consulting company in order to focus energy on the new brand, which was proving very promising. The acquisition by CH Precision, given the historical relationship, was quite logical and, above all, very consistent. We have thus brought the two friendly teams together under one roof.

I feel that things have fallen into place as they always should have. We are now one team, with various departments, two brands, and an excellent working atmosphere and spirit of collaboration.

3. What is your most significant technology in Wattson products, and why?

It all started with the network audio streaming interface. It is a proprietary solution that is quite unique on the market and required many years of development. It was quite an ambitious project given the size of our company. Over the years, it has been very well received by the brands that use this solution, as well as by the DIY community, with whom

we have had many exchanges over the years. This technical solution set us apart from other brands, and we decided that it would be the cornerstone of our first product.

We have developed devices for a large number of brands, thereby acquiring knowledge in other technical fields, including analogue technology. While the streaming interface was the first building block, other blocks are being added to ultimately create a coherent product range. The amplifier we recently brought to market is proof of this.

4. How important is LEEDH? Some think it's 'just' a digital volume control

LEEDH is indeed a digital volume attenuator, but a clever one. The way in which the numerical calculation is performed differs from conventional methods. The calculation error due to truncation inherent in the division of arbitrary numbers is reduced by this method.

5. What is the difference between Madison and Madison LE

The LE is a reworked and improved version of the standard Madison Streamer. The concept is the same, but the electronic circuits have been fine tuned and enhanced in many aspects. The measurements show a clear improvement in performances, and listening experience is significantly better.

From now on, we are discontinuing this distinctive designation. All Madison Streamers now contain the improved circuits, and the original circuit board is no longer being produced. The light grey or dark grey finishes are now only an aesthetic option.





The choice of processor will only have a very limited impact so long as it is powerful enough to perform the software tasks required of it.

» **6. Are there plans for a Wattson preamp, integrated amp, or even phono stage?**

To tell the truth, there is no shortage of plans, and the road map is quite full. In terms of engineering, there is a lot of work to be done in the coming years. For each project, we like to approach the design process differently, trying to think outside the box and find a unique approach at Wattson Audio. It's very stimulating, but it takes a lot of time. We will therefore move forward with the road map as efficiently as possible, with the priority being to bring technically mature products to market, devices that will perform well for many years to come.

We will likely unveil some new products at the Vienna trade show next year.

7. You exist at the cutting edge of streaming. Are there plans for greater DSP development, maybe room correction?

Acoustic correction through digital processing is a process that interests us and is particularly in line with Wattson Audio's philosophy of integration into a normal, comfortable living room environment. It is therefore a topic of discussion within our company, but to be honest, this project has not yet got off the ground.

8. In a hierarchy of importance, where do the chipset, the implementation, and the firmware figure?

Of course, everything matters. But when it comes to the hardware and architecture of a streamer/DAC, I would say that the chipset is the least important factor. We see products promoting this or that DAC chip with exceptional performance, when in

fact the implementation is not up to par. At Wattson Audio, we prefer to use key components that we know well, which perform the function we need without any mystery, in order to maintain complete control over signal processing.

On another note, the choice of processor will only have a very limited impact as long as it is powerful enough to perform the software tasks required of it. However, it is the firmware that will be important here, as it will determine the integrity of the audio data and the quality of the user experience.

9. Is streamer design art, science, mathematics, or electronics?

At the risk of shattering the poetic dream, the development of a streaming device essentially consists of applying electronic theory, which stems from science. Mathematics is a necessary tool for the design of electronic circuits and is present at the software level for audio data processing.

I like to believe that a form of art still exists, however, in the form of eccentricity brought about by the engineer who designs the electronics, in the form of sometimes irrational perfectionism, or simply in this infinite quest of a lifetime devoted to this vocation. In the end, the pragmatic and technical approach prevails.

10. How important is your clean slate approach to audio?

I'm not sure I can answer this question correctly, but I'll do my best. We are exceptionally fortunate that the company's strategy focuses primarily on the quality of work and product excellence rather than purely financial profits. This is the fundamental

condition that allows us to carry out projects without rushing headlong into them. The basic philosophy is that there is no point in starting a project if we are not convinced that we are going to bring something new to the table. We must give ourselves the means and reconsider the fundamentals in order to achieve products that excel in their field. On the other hand, the team is made up entirely of highly experienced people, and there is strong collaboration between all departments. These interdisciplinary exchanges allow us to bring in fresh, cross-functional ideas or to see things from an unusual angle.

Editor's note: It's exciting to see new companies join the audio world, but it's even better when they join with products that genuinely add useful content that provide a unique range of products for music lovers. It gets even better when that company has the technical smarts to back up its claims. That's what's happened here.

Wattson Audio may be a new name on the scene, but it has all of those boxes ticked... and it comes backed by one of the darlings of modern European high-end audio; CH Precision.

This CH Precision link could so easily have been a double-edged sword, with the company becoming little more than a diffusion brand for the parent. But that wasn't in the cards for Wattson Audio; the company has its own identity and sound, even if that sound is 'CH-adjacent'.

We think companies like Wattson Audio represent one of the many futures of good audio. They might not be mainstream 'me-too' products, but they are all the better for that! +