

AAVIK M-880

AMPLIFICATION AT ITS
HIGHEST EXPRESSION

Whitepaper • 2026





Where Music Comes First

At Aavik, music is the central motivation behind everything we do. This passion informs every design decision, driving us to develop electronic components that reproduce sound with authenticity, precision, character, and emotional depth. By integrating a range of proprietary technologies into every Aavik product, we aim to create listening experiences of such realism and immersion that the technology itself disappears.

Today's listeners enjoy unprecedented access to music, with vast libraries available across a wide range of platforms and formats. As recording and distribution quality continue to improve, greater emphasis is placed on the performance of the playback system itself—particularly on the components responsible for preserving signal integrity from input to loudspeaker.

Regardless of source, high-performance amplification remains essential to faithful music reproduction. Among all system components, the power amplifier plays a decisive role. It forms the final interface between the signal and the loudspeakers—the true voice of the system—and must therefore deliver absolute signal purity while maintaining control across complex and varying loudspeaker loads. Achieving this balance is central to Aavik's design philosophy, as it directly determines musical realism, dynamics, and engagement.

The Aavik M-880 amplifier embodies this approach. Designed to drive even the most demanding loudspeakers with ease while preserving complete signal integrity, the M-880 forms the foundation of reference-level systems where performance is uncompromised and musical communication remains paramount.

Engineering Beyond Appearances

The upper tier of the high-end audio world is often dominated by intimidatingly large components and massive internal assemblies—visual cues that many associate with superior sound quality. At Aavik, we pursue a different approach. Driven by curiosity and a relentless desire to push boundaries, we focus on mechanically rigid enclosures, uncompromising noise rejection, and meticulously engineered circuit stages and power supplies. The result is spectacular sonic performance realized in a highly domesticated and aesthetically refined form—sleek, understated, and no larger than necessary.

The Aavik M-880 amplifier is a clear expression of this philosophy and builds directly on the knowledge gained from our state-of-the-art P-880 power amplifier. It embodies the engineering insight and production experience accumulated during the development of that flagship design, refined, re-evaluated, and elevated to deliver exceptional performance in a dedicated stereo configuration.

This document examines in detail what distinguishes the Aavik M-880 from conventional amplifier designs. It outlines the foundations, principles, and engineering approaches that define its performance, as well as the challenges encountered and overcome along the way. Each technology was rigorously analyzed, reconsidered, and scrutinized in isolation, allowing meaningful, performance-driven refinements to emerge beyond previous Aavik integrated designs.

As with every Aavik amplifier, the M-880 was conceived with a dual purpose: to integrate seamlessly into modern living spaces, and to provide uncompromising support for loudspeakers so they can perform at their full potential. It is also the ideal partner for Børresen M8 loudspeakers—a pairing that may appear straightforward in concept, yet whose flawless execution demanded an exceptional level of engineering precision and system integration.

Made in Denmark

In-house production

Our factory in Aalborg, Denmark, is an ever-expanding facility. Over the years, we've invested in cryogenic processing vats, CNC-milling machines, smelting furnaces, advanced assembly lines, and a team of highly trained specialists capable of handling even the most complex tasks. Together, these resources support our mission to build products whose performance and aesthetics are truly second to none.

Outsourcing

We also recognize that true excellence comes from focus. While we excel at designing and building world-class loudspeakers, we have no ambition to master every single production process ourselves. That's why we deliberately choose to outsource specific components and services to trusted partners. Our engineers and designers carefully select technologically advanced subcontractors who share our commitment to quality, professionalism, and precision.

The expertise of these collaborators gives us the perfect foundation to do what we do best: invent and create exceptional loudspeakers—always in service of the music.



The Six Foundations of Aavik's Amplifier Technology

The finest amplifiers are never the product of lucky accidents. They emerge from rigorous engineering—overcoming challenges throughout the R&D process, pursuing new solutions to familiar problems, and establishing strong electrical and mechanical foundations along the way. For Aavik M-880 amplifier, the following principles are essential in transforming this philosophy into reality:

1. Unique amplification stage
2. Resonant-mode power supply
3. Mechanical grounding
4. Advanced enclosure construction
5. Meticulous quality control
6. Noise rejection



Unique amplification stage

Most currently manufactured amplifiers are based on one of three topologies: Class A, Class A/B, or Class D. Each has distinct advantages and limitations. Class A circuits are valued for their simplicity and harmonic richness, delivering high-quality sound. However, their efficiency is typically around 10%, with the remainder dissipated as heat. This requires large heatsinks and enclosures to manage thermal load.

Class A/B amplifiers provide higher efficiency and greater output power, with reduced heat generation, allowing for more compact designs. Nevertheless, high-power Class A/B circuits remain complex and relatively large. A key limitation of Class A and A/B designs is that their fundamental principles have remained largely unchanged for decades.

In contrast, modern Class D circuits have evolved rapidly and, in many ways, outperform traditional designs. With efficiencies up to 97% and precise linearity, Class D amplifiers convert input waveforms into pulse-width-modulated signals. This allows the output transistors to operate as switches rather than linear devices, generating minimal heat and enabling high power output in compact modules. Effective Class D design requires careful management of switching noise and signal integrity—a challenge Aavik addresses through precise component selection, advanced modulation techniques, and optimized power supplies.

While Class D forms the foundation of most Aavik I-x88 and P-x88 amplifiers, the pursuit of sonic excellence is not limited to efficiency alone. For listeners who seek the unique purity of Class A, Aavik has pushed the boundaries of what is possible with this venerable technology.

Following in the footsteps of the I-880 and P-880 models, the Aavik M-880 mono amplifier is a truly special Class A design. Its output stage is engineered to maintain a bias that is consistently 0.63 V above the required current throughout the cycle. This ensures that the amplifier operates entirely in Class A while avoiding unnecessary power consumption.

This significant reduction in power requirements enabled Aavik to implement smaller, locally placed capacitor banks. Each of the eight pairs of output transistors is supported by its own dedicated capacitor bank positioned immediately adjacent to the devices, minimizing current travel through extended circuit traces or wiring harnesses. The result is a substantially shortened current path, reduced noise, and improved overall efficiency.

This innovative layout also allows the M-880 to operate at significantly lower temperatures than conventional Class A amplifiers, preserving the sonic benefits of Class A operation while markedly improving thermal performance and long-term stability.

Each M-880 mono amplifier delivers 400 watts into 8-ohm loads, doubles its output to 800 watts into 4 ohms, and provides approximately 1,300 watts into 2 ohms. Combined with an exceptionally low output impedance—resulting in a damping factor exceeding 1,000 into 8 ohms—the M-880 offers extraordinary control and stability, enabling it to drive even the most demanding loudspeakers with ease.



Resonant-mode power supply

The avoidance of mechanically transmitted vibrations is critical to Although linear power supplies are highly regarded in the audio industry, they can generate switching noise when their large capacitors absorb current from the transformer. Current can only flow into the capacitors when the external voltage is lower, meaning that when the amplifier demands current, the voltage across the capacitors may drop below the nominal 50/60 Hz cycle. While these power supplies are defined as linear, significant current transients still occur.

To address this, each Aavik M-880 mono amplifier employs four high-speed, low-noise switching power supplies—twice the number used per channel in the P-880 design. Each supply is rated at 500 W and 20 A and operates in a power-factor-corrected resonant mode, inherently producing sinusoidal waveforms rather than square waves. These supplies feed a substantial local power bank totaling 266 mF, capable of storing up to 1,050 joules of energy and delivering peak currents of up to 130 A when required.

As musical demand increases, the operating frequency of the power supplies rises accordingly, increasing power density and enabling higher peak current delivery. Even under heavy load, the power supply system maintains an exceptionally low noise floor, imposes no dynamic constraints on the amplifier stage, and supports a vanishingly low output impedance. The result is precise, unwavering control over connected loudspeakers across all operating conditions.

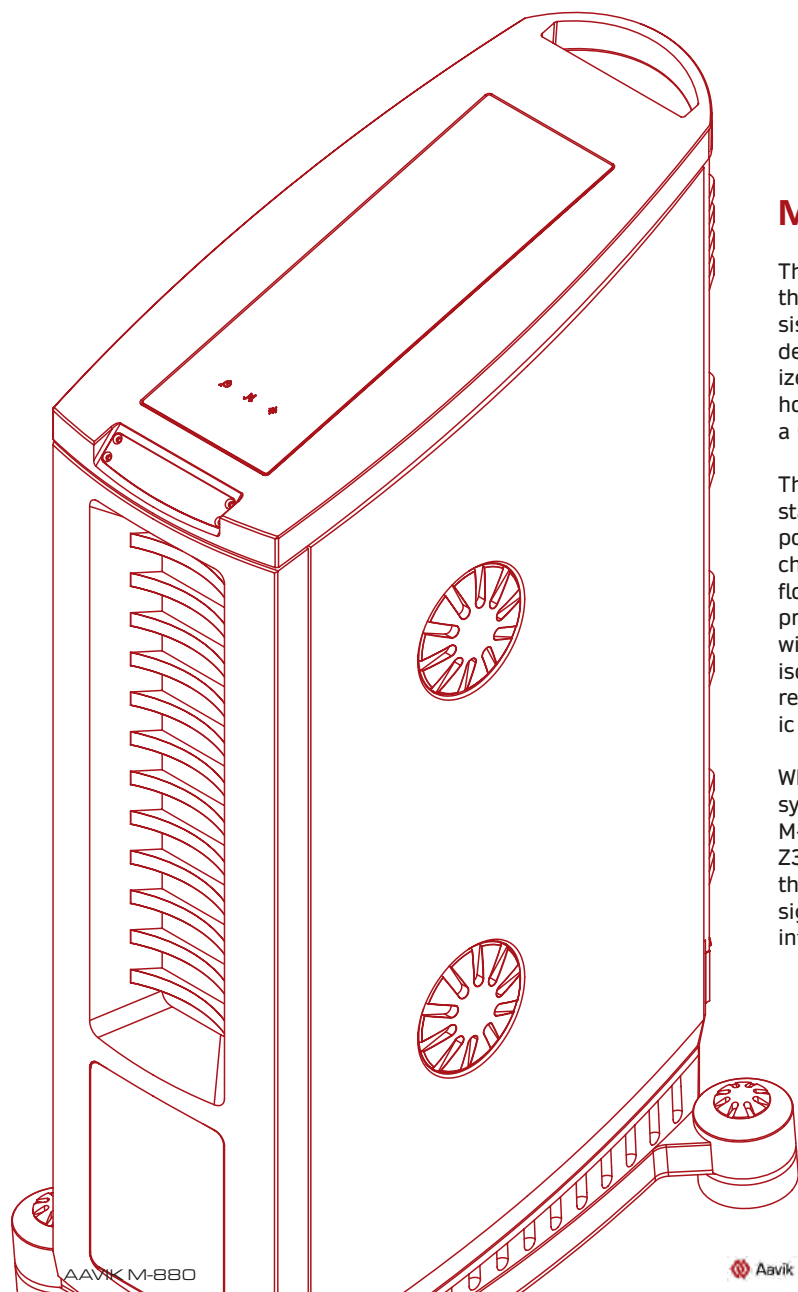


Mechanical Grounding

The avoidance of mechanically transmitted vibrations is critical to the performance of high-end electronics. To address this, Aavik's sister company Ansuz has developed Darkz resonance control devices. Our top-tier R-880 phono stage benefits from a specialized implementation of this technology. Each of the four internally hollow, massive outer footers on the underside of the unit houses a single Ansuz Darkz decoupling insert.

The semi-spherical cavity of each insert accommodates a standalone Ansuz Darkz Z3W puck, consisting of ball bearings positioned between exceptionally hard zirconium discs. The mechanical properties of zirconium prevent the transfer of minute floor-borne vibrations into the enclosure while simultaneously providing a path for internally generated vibrations to dissipate without returning as resonances. Darkz devices function by isolating vibrations that are not part of the signal path, thereby reducing vibrational feedback that could otherwise affect sonic performance.

While we generally recommend Darkz footers for all stereo systems, Ansuz 880-series products come fully equipped. Each M-880 mono amplifier is supplied with a set of four Ansuz Darkz Z3W devices, providing a high level of vibration isolation from the outset. This suppression of mechanically transmitted noise is significant in its own right, and—crucially—addresses vibrational interference that cannot be mitigated through any other means.





Advanced Cabinet Construction

The exterior of the Aavik M-880 reflects Flemming Erik Rasmussen's artistic and aesthetic mastery, building on one of his finest creations, the Colosseum mono amplifier. Yet Flemming's philosophy has always been clear: design must serve a purpose. The M-880 enclosure was conceived primarily to preserve the optimal audio characteristics of its circuitry—minimizing inductance, reducing hysteresis to an absolute minimum, and ensuring precise resonance control.

Although the M-880 is a Class A design developed independently, some foundational principles were established during the R&D of the I-880 flagship model. With these prerequisites in place, the design process became an exploration of shapes and materials, resulting in a unique and constructive synergy between Flemming Erik Rasmussen and Michael Børresen.

Visually striking and unorthodox, the M-880 bears Flemming's unmistakable design signature. Every choice—from materials to interior and exterior layout—emerged from the collaboration between Flemming and Michael, producing a state-of-the-art mono amplifier that is as functionally precise as it is aesthetically elegant.

The M-880 features a base constructed from a thick, wood-based laminate positioned between a lower titanium plate and an upper stainless steel plate, topped by a gently sloped profiling element and an upper copper layer that supports the main enclosure. This multi-layer structure enhances resonance control and directly contributes to improved sound quality.

Inside, the M-880's fully copper internal chamber serves as an exceptionally effective EMI/RFI shield, protecting against airborne interference while isolating sensitive internal components from the external enclosure to preserve audio fidelity.

Finally, the aluminium front panel with its exposed copper radiator, together with the aluminium top, promotes efficient heat dissipation. Paired with carbon-fiber side panels, these elements also define the M-880's distinctive and refined aesthetic.



Noise Rejection

Acoustic, electrical, and airborne (aerial) noise are the primary sources of performance degradation in audio reproduction. At Aavik, we believe that the less noise a component both generates and accepts from its environment, the better it performs in terms of resolution, transparency, and overall sound quality. Every element of our electronic devices—from output stages and power supplies to cabinets and internal wiring—has therefore been engineered with noise rejection as a guiding principle.

This approach is especially critical for amplifiers. Their function is to manage the signal from a source and deliver sufficient current to connected loudspeakers, achieving the desired sound pressure level while maintaining precise linearity from input to output. The performance of individual circuits tasked with these goals depends entirely on the quality and integrity of their surrounding environment.

This is why we devote utmost care to creating an environment that is perfectly suited to the critical circuit stages and as free from noise as possible. The Aavik M-880 incorporates multiple in-house technologies specifically designed to suppress unwanted interference: active Tesla coils and their square variants, analog dither circuits, and anti-aerial resonance coils.

Active Tesla coils (ATC)

The Ansuz Tesla Coil principle operates on a double-inverted coil configuration that responds to voltage spikes by instantly generating counter-spikes, effectively neutralizing noise in real time. In its active form, the technology is realized as squared coils spiraled inward and mounted on a circuit board—specifically, the crossover boards within our speakers. Counter-coils are placed on the underside of the same board.

While both passive and active Tesla Coil systems share the same fundamental concept, the active design offers significantly higher noise suppression efficiency, providing a cleaner and more stable signal path.

Active square Tesla coils (AST)

At its core, the principle behind square and regular Tesla coils is the same; the difference lies in the components used to achieve the noise-canceling effect.

In its active, powered form, the AST technique employs square coils spiraled inward and etched directly onto a circuit board, with counter coils positioned on the board's underside. When a voltage spike passes through a clockwise coil, a counter-spike is generated in the oppositely wound coil, effectively neutralizing unwanted interference.

Ansuz AST technology is highly versatile, suitable for a wide range of products, including cables. Its compact, efficient design allows for easy integration while delivering consistent, high-performance results.

Analog dither technology (ADT)

Originally derived from radar technology, Analog Dither Technology enhances signal integrity by improving signal-to-noise ratio and overall range. In our application, active analog dither circuits are embedded within the crossover boards, emitting precisely defined pulsating signals that both amplify the music signal and eliminate background noise.

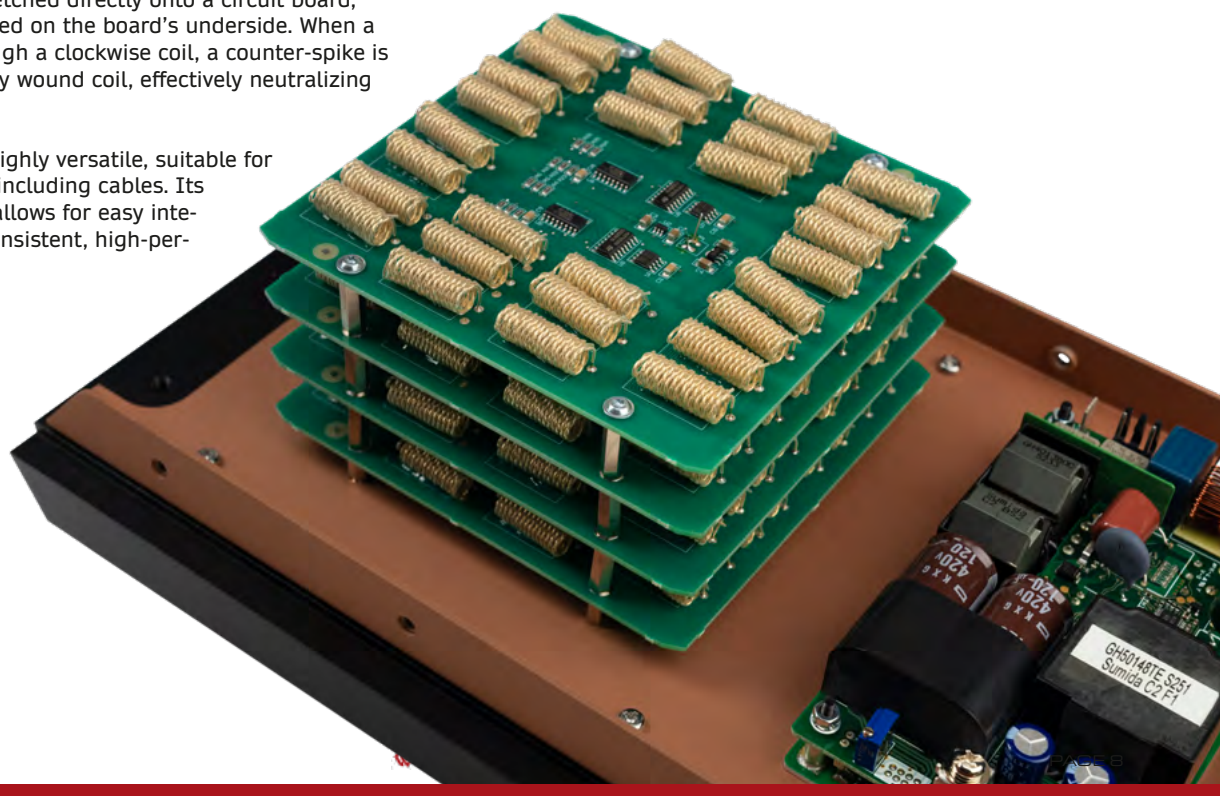
Our ongoing research into ADT has now reached its third generation, with further optimization of operating frequencies. The result is a perceptible increase in soundstage depth, spatial precision, and micro-detail retrieval—bringing listeners even closer to the recorded performance.

Anti-Aerial Resonance Coil technology (AARC)

All cables and their shielding can act as unintended antennas for airborne RF noise, which impairs signal clarity and tonal authenticity. The Anti-Aerial Resonance Coil (AARC) technology counteracts this by absorbing RF noise in one coil and canceling it with a corresponding counter-coil.

Additionally, AARC divides the effective cable length into non-resonant, undefined segments, making it far less susceptible to RF absorption. This prevents such noise from bleeding into the audio system, thereby eliminating the subtle “white noise” that can cloud the purity of sound reproduction.

Every component of the Aavik M-880 has been carefully designed and perfected to excel individually. Yet, it is the synergy of these innovations—working together in precise harmony—that ultimately defines the extraordinary performance of our loudspeakers.

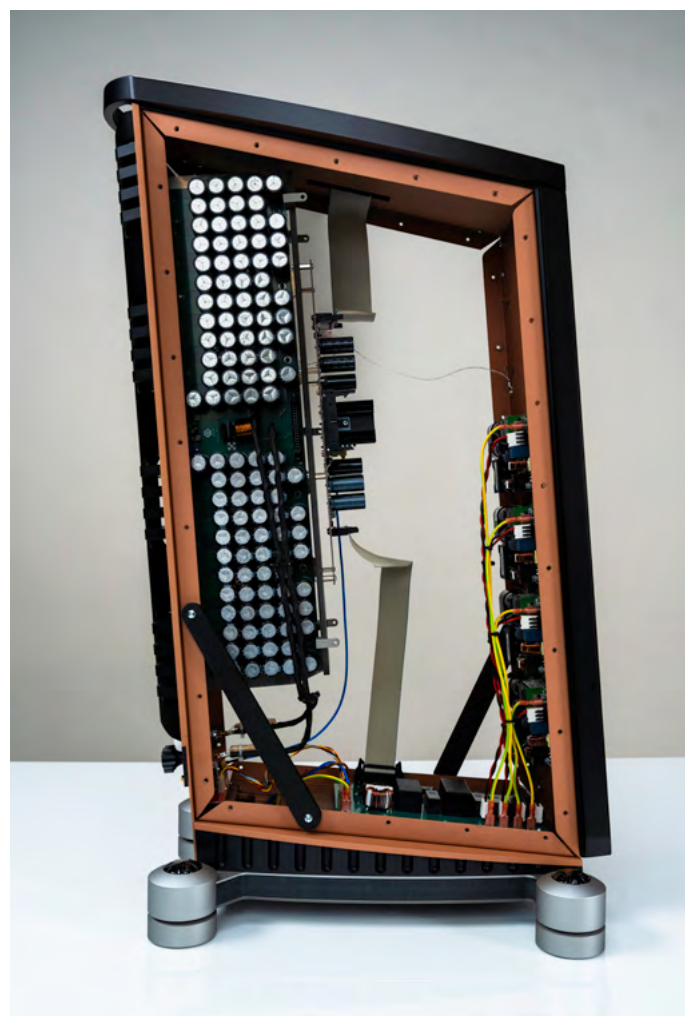




Meticulous Quality Control

Every component in all Aavik designs is meticulously assembled by hand at our Aalborg facility, thoroughly inspected, tested and measured, step by step, to remain in accordance to the reference model.

Each Aavik product embeds these principles to excel at its primary task, which is to support connected speakers in such a way, that sound waves produced by them are perceived as music that is as close to the live experience as possible with all its emotions, passion, vibrance, dynamics and space.



Joint Forces

Flemming Erik Rasmussen joined Audio Group Denmark in May 2021 as a visual design consultant, marking the beginning of a new chapter for us with the launch of the Børresen M-series loudspeakers.

We soon discovered that this series delivered exactly the design and performance our customers had been dreaming of. Inspired by this success, Michael Børresen and Flemming Erik Rasmussen embarked on a sometimes challenging journey to create a no-compromise integrated amplifier that would match the design and sonic excellence of the very best Børresen speakers.

Once the sketches were finalized and the components selected, the first prototype took shape. From there, the engineering battle began—optimizing and extracting every possible bit of performance from this remarkable amplifier. After two years of dedicated work from our R&D team, the Aavik I-880 was born. It exceeded even our most ambitious expectations and quickly earned recognition among high-performance audio enthusiasts around the world.

The success of the Aavik I-880 soon bore fruit in the form of the C-880 preamplifier and the P-880 power amplifier—two components that carried forward the same uncompromising design principles and sonic refinement. As the Børresen M8 loudspeakers emerged, their extraordinary capabilities revealed a need for even greater power and control. This led Flemming and Michael to take the next logical step: scaling up the P-880 and evolving it into a mono power amplifier design, purpose-built to unlock the full potential of the M8 speaker system.

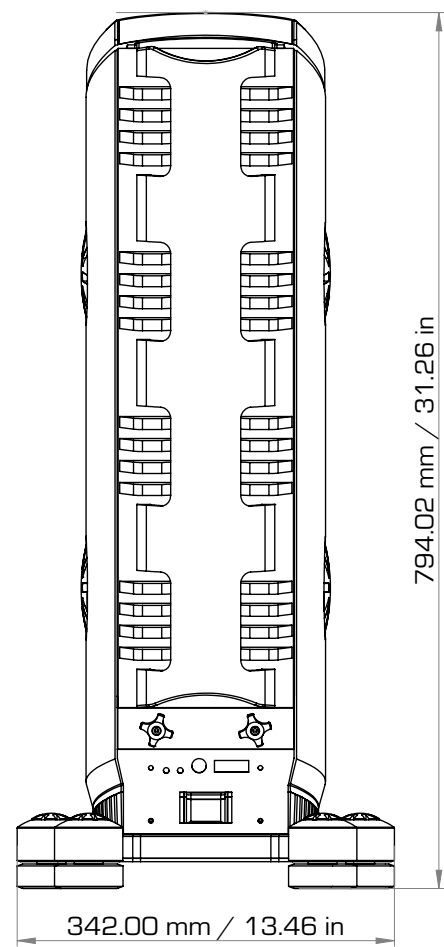
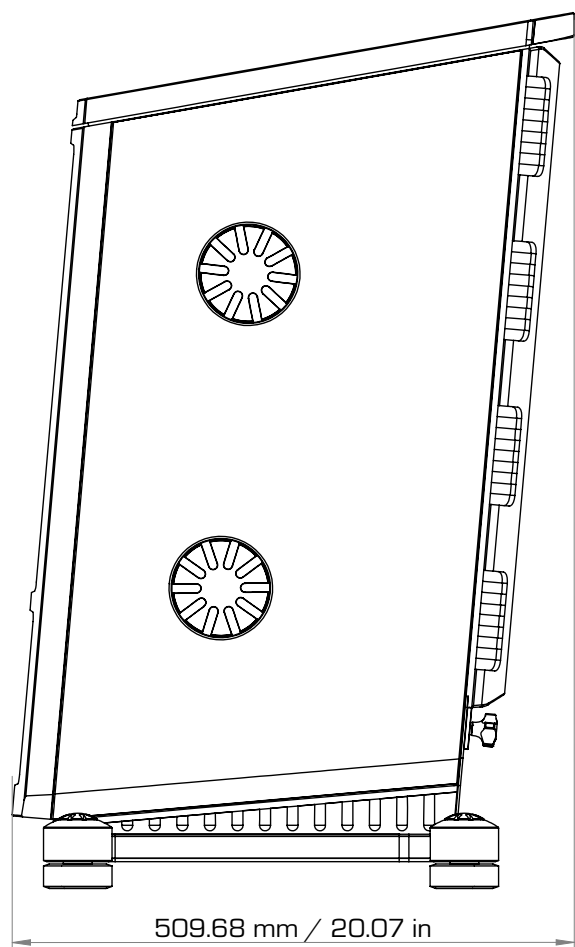


The M-880 is the result of pursuing **absolute performance without compromise**, while breaking visual conventions in the unmistakable style that only Flemming can create. For the M8 loudspeakers, nothing less would suffice — and I'm proud of what we achieved

—
Michael Børresen,
Co-founder & CTO, Audio Group Denmark



Dimensions



Specifications

DIMENSIONS (H x W x D)	Height: 794.02 mm Width: 342.00 mm Depth: 509.68 mm Height: 31.26 in Width: 13.46 in Depth: 20.07 in
WEIGHT	70.0 kg / 154.3 lbs
OUTPUT POWER	1 × 400 W @ 8 Ohm 1 × 800 W @ 4 Ohm
DISTORTION (THD)	< 0.007% (10 W, 1 kHz, 8 Ohm)
AAVIK NOISE REDUCTION	Active GOLD Tesla Coils: 112 Active Square Tesla Coils: 112 Dither Circuitry: 8 Gold Anti-Aerial Resonance Coils: 12
STANDBY	< 0.5 W Idle: 150 W



Among my earlier amplifier projects, one tall, round design with a highly unconventional form factor remains my personal favorite. Working on the visually similar M-880, nearly two decades later, was therefore a very rewarding experience. Opportunities like this don't come along every day

—

Flemming Erik Rasmussen,
Design Consultant, Audio Group Denmark

Excellent performance. Exceptional dress code.

Unforgettable experience.

At Aavik, we always remember about our past accomplishments, but we like to think that the best is still ahead of us. Having said that, all the effort we poured into our M-880 mono amplifier paid dividends in a design which we believe represents the very pinnacle on aesthetics, performance and forward thinking.

Sleek and stylish. Powerful and majestic. Visually timeless and posh. Aavik M-880 power amplifier represents our entire know-how, the direction we want to follow, and also the standards we want to pursue. We invite you to embark with us on this journey. It is going to be unforgettable, that's a promise.

