

AUDIONET

Scientific magic.

SAM G2

One for All



This is a scientific paper.

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Thanks very much. We're glad you are with us.

Scientific magic.

One for All

Since 1997, the predecessor model, the multi-award-winning SAM was held by those in the know as a true exception amongst audiophile integrated amplifiers. To improve the already good, we have now bundled all the insights and experience gained from over 10 years of audiophile development work in the new High Performance SAM G2. Everything came under scrutiny, from the concept to the last detail.

“... SAM G2 is top notch heavyweight; champion of all the price classes ...”

(Stereo, Germany)

Words can hardly convey what the new SAM G2 is capable of achieving. With a spacious yet subtle sound, it plays transparently and spatially, sleekly and most powerfully. Reproducing every single note naturally and effortlessly. The new SAM G2 is even more committed and passionate than its predecessor. Indeed, its richness of

information and tone, power and authority as well as its musical coherence has audiophile critics clapping their writing hands everywhere on the globe.

“... one of the best constructed amplifier we have ever seen ... Audionet’s SAM is a deeply impressive main amplifier ...”

(What HiFi, England)

The new SAM G2 combines excellent performance and unmatched sound properties with exceptionally compact dimensions. Such quality is scarce on the market, making our device ideally suited for domestic use and tonally convincing musical reproduction. The SAM G2 masters all the tasks set to it with dedication, captivating its listeners with breathtaking authenticity. Its sound is characterized by speed, purpose and honesty, yet at the same time is full of charm, finesse and the utmost care to detail. With its catching enthusiasm, this lively device produces a surprisingly realistic sound experience.



New Design

Entirely new is the design, with the clear, unflappable and classical form of the Audionet 4-key medium format with high-quality materials and finely detailed features. SAM G2 comes either with a silver or black front panel and a red or blue display. Additionally, you can extend the SAM G2 with our high-quality phono preamplifier board for MM and MC pick-ups.

Six inputs, one of which is symmetrical, two switchable pre-stage outputs for end stages, subwoofers or recording devices etc, of which one is controlled, the other a fixed by-pass module for integration in a home cinema system. A switchable headphone output, automatic mains phase recognition and Audionet Link remote switching as well as its large display make the new SAM G2 a comfortable allrounder leaving no wishes unfulfilled.

Architecture

The complex SAM G2 circuitry is complex, technically unique and radically realized. The input signals are received from gilded, Teflon isolated cinch jacks and then led further via gold-doped pure silver solid core signal cabling and gold-contacted double anchor precision relays, which switch the input signals. The symmetrical input signals are divided into channels beforehand.

The mains supply is extremely potent and very fast. This is guaranteed by a capped and fused 700 VA toroidal transformer, selected main capacitors with a total of 96,000 μF filtering capacity, a specially developed input filter and highly pure silver cabling as well as a capacitively optimized layout with the shortest of supply routes. Working stress is smoothed and stabilized by fast-working, discreet, local degenerated pre-regulators.

As with all our mono and stereo end stages, we have also developed our ultra-linear amplifier concepts further in the new SAM G2. The circuitry is designed for exemplary distortion-freedom, speed and stability. The SAM G2 is conceived so that the two channels can work as independently of each other as is possible. Influences from the amplifier which could damage the sound have been almost entirely excluded, guaranteeing exemplary reproduction stability.

We use only the best materials, carefully selected, high-grade components such as High Audiograde electrolytic capacitors, with a silk dielectric; high-quality, close-tolerance film impulse capacitors and high-quality silver / gold yaw for internal cabling.

Control

The SAM G2 is controlled via a high-performance flash microcontroller. Software upgrades are very easy. The controller makes for simple operation, comfortable functions and reassuring stability. The control programme enables operator-friendly access to comprehensive and practice-oriented functions. For example, the two pre-stage outputs and headphones output can be switched electronically. A by-pass mode is available for smart integration of the new SAM G2 into a home cinema system.



The inputs are freely nameable and the controller even verifies that the mains connection is phase correct. Moreover, the controller monitors all operating states and deactivates the device as soon as a critical state has been identified. A large graphical-capable display with max. 4 x 26 characters informs the operator of all operating states and settings. The SAM G2 is equipped with AudionetLink as a matter of course. This enables the isolated activation of other Audionet devices via fibre-optics.

Finish

Front panel:

Brushed aluminium, black anodized, light grey printing

Brushed aluminium, silver anodized, black printing

Display:

Red or blue

Cover:

Brushed aluminium, 8 mm, black anodised

Sides:

Brushed aluminium, 4 mm, black anodised

Chassis:

Sheet steel, black varnished



“...The performance of the SAM G2 leaves no-one untouched ...”

(i-fidelity.net)

Function

Microprocessor controlled integrated amplifier.

Special Features

- Audionet ULA-Technologie (Ultra-Linear-Amplifier)
- Completely DC-coupled, no capacitors in the signal path
- Toroid transformer with 700 VA
- 8 impulse-stable high-current capacitors with filtering capacitance totalling 96,000 μF
- Separate power supplies for digital and analog section
- Gold-doped, pure silver, solid core signal cabling
- Home cinema mode for home cinema integration
- Microprocessor with its own power supply controls and handles all functions
- Remote activation of other Audionet component via Audionet Link (optical fiber)
- Headphones output electronically switchable
- Automatic mains phase detection

In- and Outputs

Audio inputs:	5 pair RCA line, gold-plated, teflon insulated 1 pair XLR balanced, gold-plated
Audio outputs:	1 pair RCA, gold-plated, teflon insulated (Pre-Out) 1 pair RCA, gold-plated, teflon insulated (Rec-Out) 6.3 mm jack plug for headphone (switchable)
Loudspeaker outputs:	2 pair Furutech Rhodium 4mm-jacks
Remote activation:	1 Audionet Link (out), optical

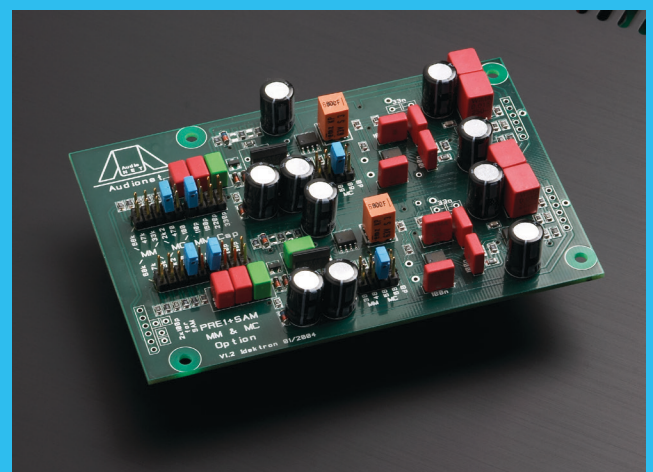
Technical Data

Output:	110 Watt into 8 Ohm 200 Watt into 4 Ohm
Filtering capacity:	96,000 μF
Frequency Response:	0 – 500,000 Hz (- 3 dB)
Damping Factor:	> 1,000 at 100 Hz
Channel Separation:	> 93 dB @ 1 kHz
Harmonic Spectrum:	k2 typ. -101 dB, @1kHz, 25 W/4 Ohm k3 typ. -106 dB, @1kHz, 25 W/4 Ohm
THD + N:	< -100 dB @1kHz, 25 W/4 Ohm
SNR:	> 103 dB (A-weighted)
Input Impedance:	Line-input: 10 kOhm, 150 pF XLR-input: 3 kOhm, 170 pF
Mains connection:	220...240 V / 50...60 Hz or 110...120 V / 50...60 Hz
Power Consumption:	< 1 W stand by, max. 700 W
Dimensions:	width 430 mm height 110 mm depth 360 mm
Weight:	14.5 kg

SAM G2 Option: Phono Module

We do offer an excellent phono module for MM and MC cartridges for our integrated stereo amplifier SAM G2.

It is possible to setup load resistance, load capacitance and gain on the phono module to achieve the best match to your phono cartridge based on output and electrical impedance.



Scientific Breakthroughs: Audionet Key Technologies

Audionet-Ultra-Linear-Amplifier ULA

Audionet's worldwide respected and award-winning ULA (Ultra Linear Amplifier) technology is of fundamental importance for our outstanding technology. This highly complex circuit topology, initially conceived with medical engineering in mind, delivers metrological results which mark a limit of feasibility. Even under the most severe strain or in other stress situations signal impurities are barely traceable, and the high return loss guarantees that even the most demanding loudspeakers will perform faultlessly up to their utmost limits.

Audionet Operational Amplifier

Audionet operational amplifiers (OP) are used in our devices at most sound-critical parts of the circuit design to deliver the very best tonal results. Usual operational amplifiers, available in different quality and price ranges on the global market, can't satisfy our core demands for perfect sound quality. Even the most expensive ones with the best results on paper aren't perfect. That's why we have designed our own operational amplifier technology. Any single Audionet OP contains at least 86 parts and components, and our topology ensures an impressive gain-bandwidth-product of 1 GHz.

Asynchronous Upsampling

With the D/A conversion we've focused our highest attention on eliminating jitter, the wobbling of digital signal slopes. Jitter faults curtail the sound reproduction in every respect: imaging, stage and depth rendition will be impaired. The conversion is done using Audionet's Intelligent Sampling Technology which guarantees an absolutely flawless recovery of the analogue signal from the digital bit stream. For this purpose the data are sent through a sophisticated, two-stage filtering and decoupling procedure. First the input data are filtered with Audionet's proprietary software using a powerful signal processor and upsampled synchronously. The filters have been designed under audiophile aspects with regard to an optimised transient and frequency response. The thus optimised data are then resolved through an asynchronous upsampling procedure at 192kHz/24bit. Hereby the bit stream is completely isolated from its input clock and its associated jitter. The data are then fed to high-performance converters, which are clocked by special ultra-precision quartz crystals, and individually processed per channel into analogue signals. This method ensures that jitter faults are

almost entirely eliminated in the analogue signal. No information gets lost and every bit of information will be processed at the right time, bringing forth an unmatched clarity, room depth and stage imaging.

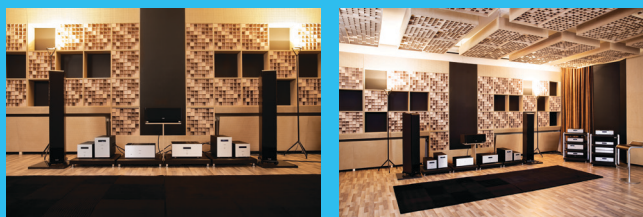
Double-Precision-Bassmanager and Parametric Equalizer

The digital signal processing is accomplished with efficient signal processors and our proprietary Audionet software which was developed and continuously improved exclusively under audiophile aspects in more than 15 years of painstaking scientific labour.

Audionet Listening Room

Listen and be enlightened!

In Audionet's quite incomparable listening room.



The double precision bass management uses a 48bit resolution at all sampling frequencies. Even the very lowest frequencies are therefore precisely reproduced and accurately processed. The bass manager offers freely selectable cutoff frequencies, filter Q factors and subwoofer phases. Thus you can perfectly integrate your subwoofers into the system and into the room.

The digital parametric equalizer uses Minimum Phase Equalizers (MPE) both for the main channels and subwoofer channels. For each MPE the filter type, frequency, gain and Q factor can be selected within an unusually wide adjustment range and disturbing room interference and tonal annoyances efficiently compensated. In combination with CARMA, our computer aided room acoustics measurement system, it is possible even for non-professionals to reach nearly professional results.

The delay manager has an adjustment range of up to 7 m and automatically calculates the delay times from the distances.

Reference

Stereo, Germany:

“And then something very rare happens: the composition begins to ‘float’, the music comes alive and can truly be experienced. The high-technology of the unit is forgotten, disappearing in a mist of pure naturality. ... There is no question about it: the SAM G2 is top notch heavyweight; champion of all the price classes.”

What HiFi, England:

“This is an impressive product, one of the best constructed amplifier we have ever seen. ... Only few rivals can reproduce deep frequencies with such control and resolution. ... it is the articulation and the rapidness, that points out the SAM in this section. ... Audionet’s SAM is a deeply impressive main amplifier.”

i-fidelity.net

“With the addition G2 to its name, this unit numbers amongst the most tonal amplifiers on the market. ... Above all good characteristics is its impressive tonal quality, especially the enormous degree of musicality. The performance of the SAM G2 leaves no-one untouched; its strength of expression reminds us of significantly more expensive amplifiers. The SAM G2 is i-fidelity.net’s must-beat unit.”

Video, Domáci, Kino, Czech Republic

“The integrated amplifier Audionet SAM G2 is a consequently build analogue hifi-amplifier, with contemporary design and a perfect sound reproduction.”

en.audionet.de



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Sources

VIP G3
ART G3



Integrated Amplifier

SAM G2



Preamplifier

PRE G2
PRE I G3
MAP I
PAM G2



Power Amplifier

MAX
AMP
AMP VII
AMP IV2
AMP V
AMP IV
AMP III



Network Components

DNP
DNA 2.0
DNA I
DNC



Power Supply

EPX
EPS G2

