

ATOHM®

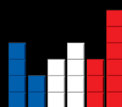
| RS SERIES |



RS700 GT EDITION

•
HIGH PERFORMANCE AUDIOPHILE DSP CONTROLLED
DUAL MONO AMPLIFIER
•

•
T-GUARD™ / U-GUARD™ / X-GUARD™ / X-TEND™
EXCLUSIVE SPEAKER DIGITAL PROCESSINGS
•



PROUDLY DESIGN AND MADE IN FRANCE

RS700 GT EDITION



T-GUARD™ / U-GUARD™ / X-GUARD™ / X-TEND™
EXCLUSIVE SPEAKER DIGITAL PROCESSINGS

Ultimate performances for your GT SERIES speakers !



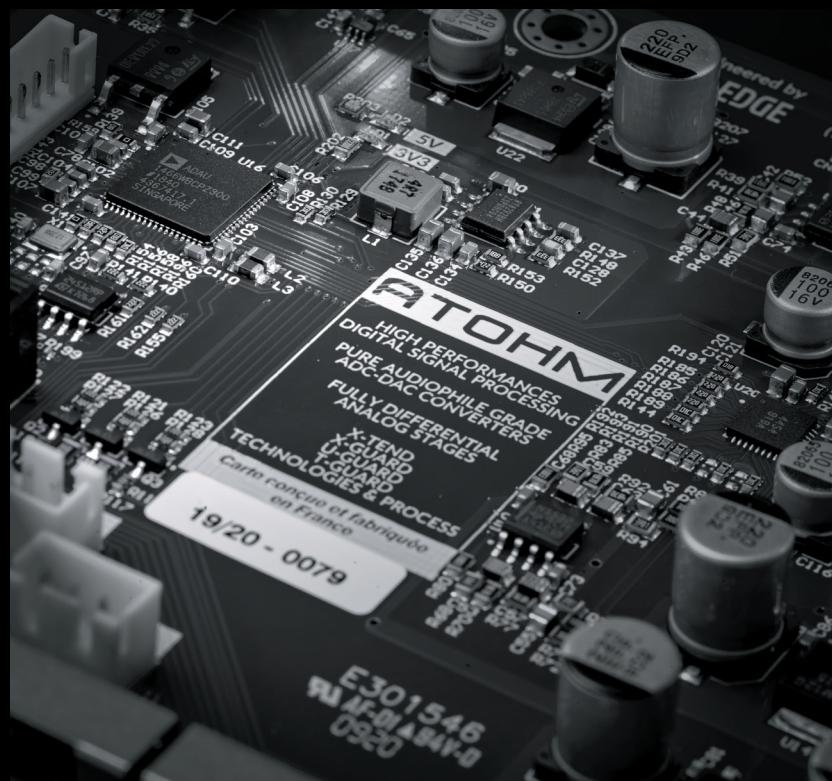
With about 6000 hours of R&D, the RS700 power amplifier is highly innovative and resolutely «hi-fi». It is based on a «double mono» structure driven by a high-performance analog/digital board incorporating a DSP. Its signal processing capabilities are used to drive the power stages (limiting, soft clipping, phase and amplitude correction, etc.) but also and especially to offer advanced coupling of this amplifier with speakers through exclusive processings based, among other things, on our knowledge of electroacoustics and, ultimately, on the exact specifications of our driver units and coupled speakers.

Engineering marvels that make all difference !

The device's topology, the vast possibilities of programming and digital chaining make the ATOHM RS700 base very versatile. Each unit is fully assembled, wired, controlled, and programmed in our workshops. Depending on the applications, different versions are developed and offered.

The ATOHM RS700 amplifier in this «GT EDITION» is a power unit operating in 4 modes. The first mode (GENERAL mode) allows you to «drive» any type of speakers with power, dynamism, finesse, and precision. The U-GUARD™ processing limits the power stages just before they saturate and provides a soft clipping. Just like the other three modes, this first setup allows, if needed, to (digitally) filter the speakers with a «high-pass» filter in order to truly relieve them in the bass region and to associate, via the XLR outputs, one or two subwoofers to relieve them in the lower frequency spectrum.

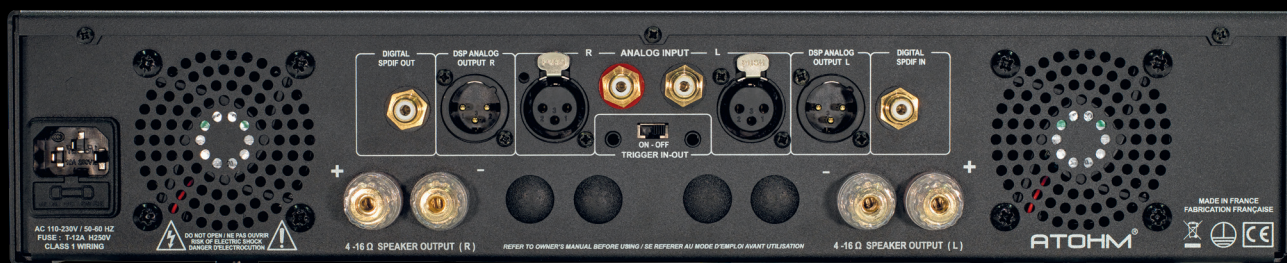
The other three modes (GT1-GT2 and GT3) are specific to each model of our GT SERIES speakers. Amplification and speakers then work in symbiosis. The exclusive X-GUARD™, T-GUARD™, U-GUARD™, and X-TEND processing then come into action, allowing an increase in the performance of our GT SERIES speakers in order to extract their ultimate essence.



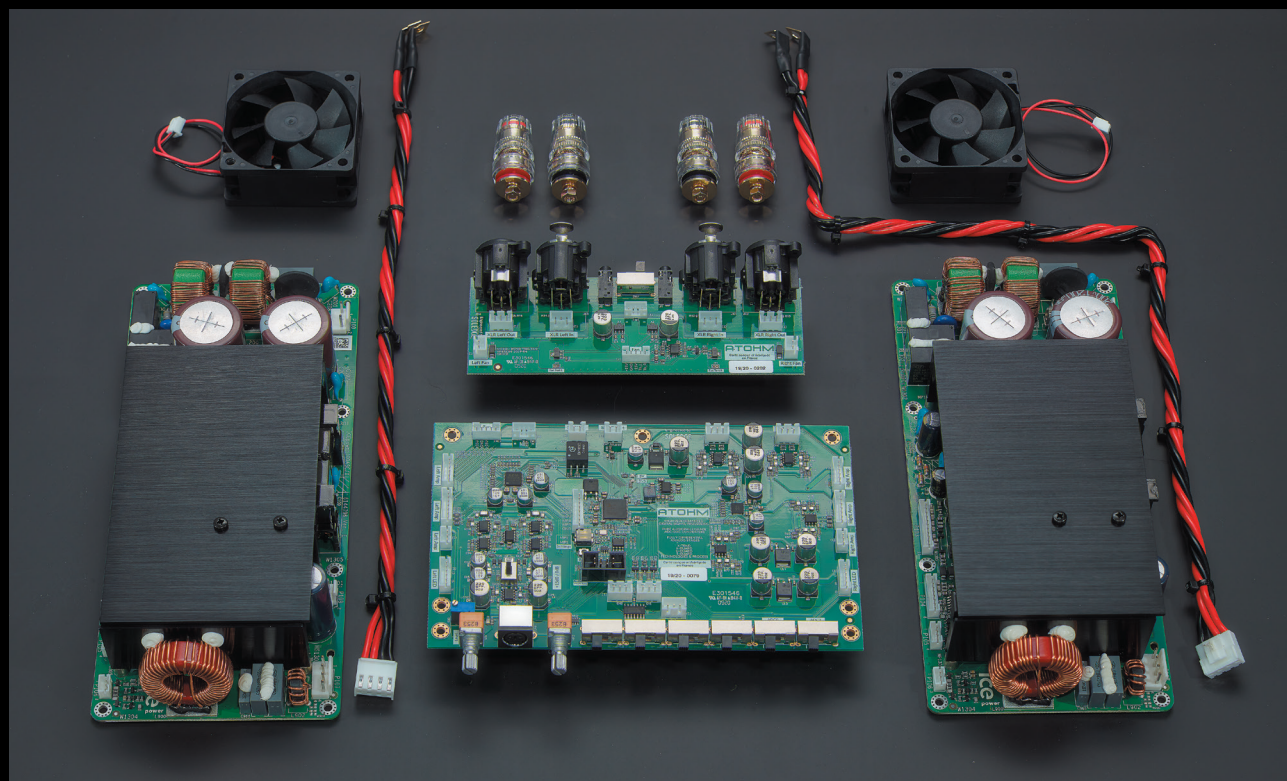
RS700 GT EDITION

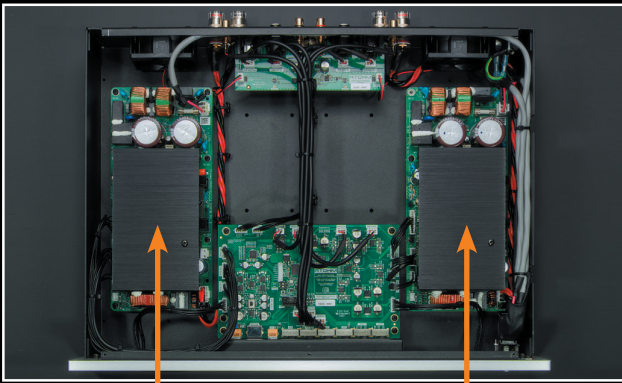


Quick and simple access to all adjustments.

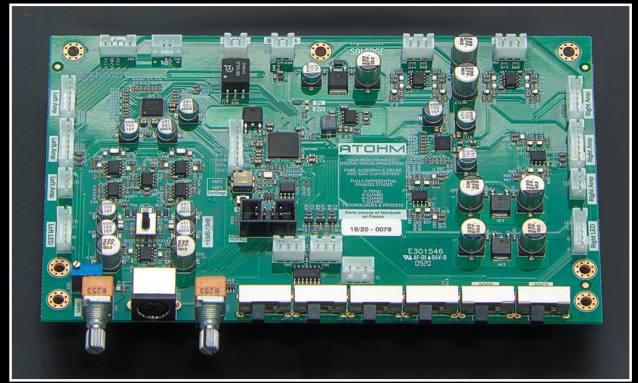


Switchable XLR and RCA inputs, processed XLR outputs
trigger input/output, specific digital linking and very low noise fans (2500 rpm) for "high power" usage.

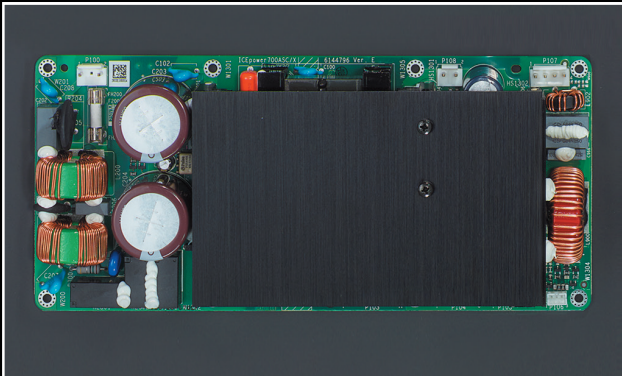




DUAL MONO DESIGN

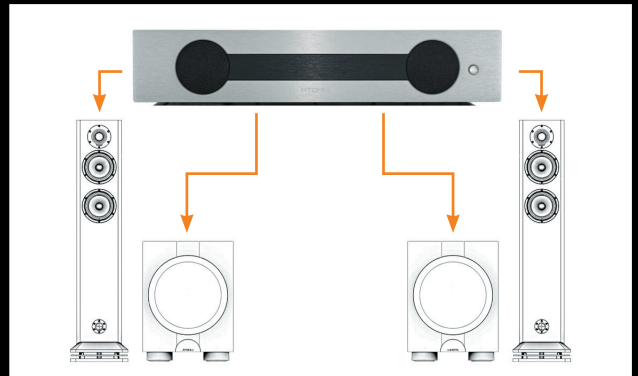


HIGH PERFORMANCE PREAMP - DSP BOARD
96 KHZ - 24 BITS AUDIO

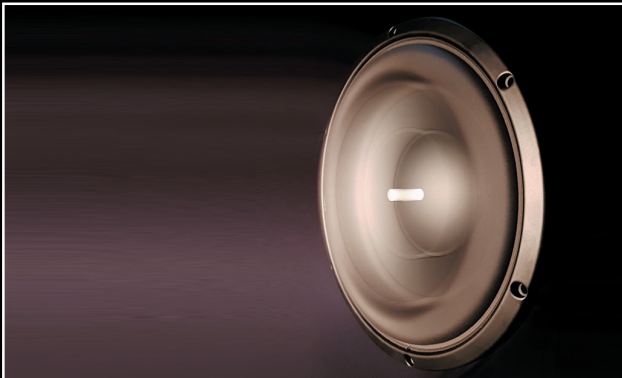


HIGH POWER D CLASS OUTPUT STAGES
WITH PHASE COMPENSATION

Thank to DSP & F.I.R. filter, output stages provide the perfect phase reponse in high frequency range.

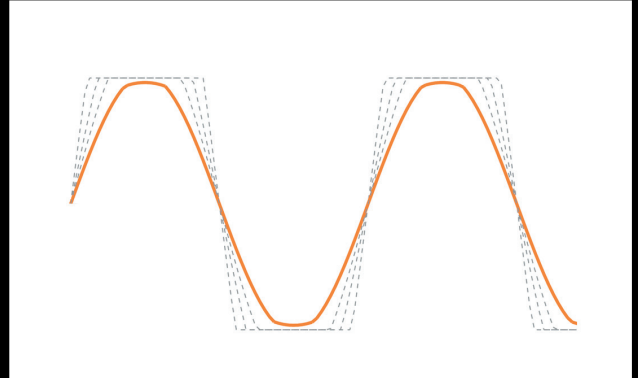


DIGITAL BASS MANAGEMENT
WITH SPEAKERS FILTERING & SUBWOOFER OUTPUTS



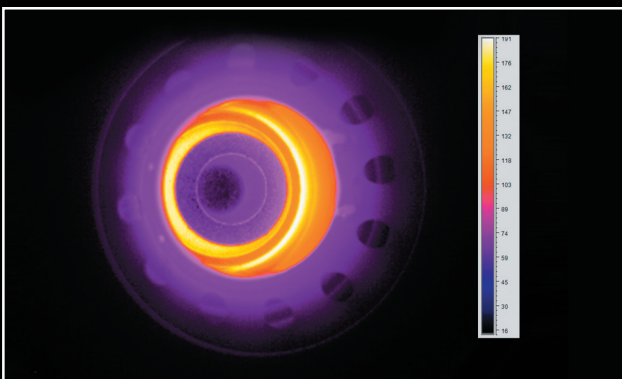
X-GUARD™
EXCURSION CONTROL EXCLUSIVE PROCESSING

Specific calibration for each GT-SERIES model (active in GT1-GT2-GT3 mode only)



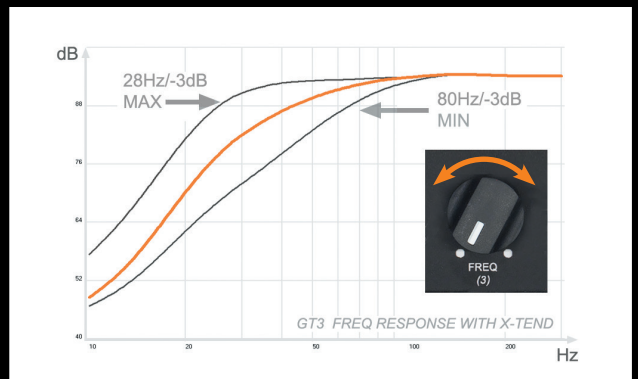
U-GUARD™
POWER & CLIPPING CONTROL PROCESSING

"Soft Clipping" on speakers and XLR outputs



T-GUARD™
AMPLIFIER & SPEAKERS THERMAL PROTECTION

Specific calibration for each GT-SERIES model (active in GT1-GT2-GT3 mode only)



X-TEND™
BASS OPTIMIZATION EXCLUSIVE PROCESSING
Bass frequency response adjustment (11 steps) with group delay optimization (can be activated in GT1-GT2-GT3 mode only)

| NOTES REGARDING ATOHM'S EXCLUSIVE DIGITAL PROCESSINGS |

• X-GUARD™ Processing (GT1-GT2-GT3 modes only)

The X-GUARD™ processing ensures that the excursions of the bass speakers never exceed an absolute limit (too high distortion and risk of breakage). This processing analyzes in real time the input signal and its parameters (especially frequencies/amplitude) and compares them to a set of instructions. When the signal becomes greater than the latter, it intervenes immediately to limit the amplitude of the signal without inducing audible artifacts. X-GUARD™ preserves the integrity of the signal, its phase, and does not introduce group delay. This technology allows for the exploitation of all the available dynamics of the bass speakers without putting them in danger.

• X-TEND™ Processing (GT1-GT2-GT3 modes only)

The X-TEND™ processing uses the precise knowledge of the vented speaker and its load, which has an acoustic response equivalent to that of a high-pass filter. By conditioning the electrical signal relative to this model, the X-TEND™ processing allows for the «reconstruction» of the speaker's response in the low frequencies. Unlike a simple «boost» (EQ), its action aims to improve the group delay (especially deviations due to vents and speaker alignment). Adjustable, it also allows you to choose the extension in the low frequency spectrum and, depending on the setting, obtain a notably extended response compared to a conventional amplifier. This adjustable response also allows, to some extent, to more or less «dose» the extreme bass depending on the room acoustics and speaker placement. The extension of the response in the extreme bass causes larger excursions on the speakers. The X-TEND™ processing works in conjunction with X-GUARD™ to maximize the speakers without ever exceeding their limits.

• U-GUARD™ Processing (All Modes)

The U-GUARD™ processing aims to reduce the formation of square signals (clipping distortion) at the output of the device and to avoid the saturation of the power stages at maximum power. The DSP constantly measures the amplitude of audio signals. When it exceeds the set thresholds, the processing limits the amplitude of the signal while maintaining a signal shape that is closer to the original and more pleasant to listen to. This process is calibrated so that the power stages are never in saturation.

• T-GUARD™ Processing (GENERAL and GT1-GT2-GT3 Modes)

The DSP constantly analyzes the audio signals transmitted to the power stages and calculates the average power over a sliding period. At the exceeding of the set thresholds, the algorithm triggers a drop of -18 dB on all outputs of the device to greatly reduce the power level during approximately 20 seconds.

In «general» mode, the T-GUARD™ processing manages the thermal parameters of the power stages in real-time. It eliminates certain situations where the amplifier is used inappropriately.

In «GT1 GT2 and GT3» modes, the thermal limits are no longer those of the power stages but those of each speaker model. In this context, the algorithm calculates an average and compares it to the set thresholds of selected loudspeaker model with included weighting for high frequencies transducers.

| TECHNICAL SPECIFICATIONS |

Dual mono DSP controlled power amplifier with 4 working modes (internal settings)	1 general mode for use with all kinds of speakers 3 specific modes for use with ATOHM GT SERIES speakers only
Nominal power / 4 ohms in general mode	2*700 Wrms
Nominal power / 8 ohms in general mode.	2*350 Wrms
Nominal power in GT1-GT2 & GT3 mode	GT1 ----- 2*220 Wrms GT2 ----- 2*280 Wrms GT3 ----- 2*700 Wrms
Nominal impedance	4-16 Ohms (Min. 3 ohms)
Maximal peak current (Protection stage threshold)	2*30A
Frequency response	2Hz – 45 kHz (-3db)
Phase rotation (F.I.R. correction)	2 ° @ 30 KHz
THD+N distortions at nominal power	Less than 0.06%
Damping factor (1 KHz / 4 ohms)	Sup. to 1000
AD/DA « PREMIUM » (AKM) conversion	2 inputs / 4 differential outputs - 32 bits
Intelligency	32 bits -295mHz Sigma DSP
Sampling frequency	96 kHz - 24 bits audio resolution
SNR	110 dB
Saturation and clipping limiter (all mode)	U-GUARD™ exclusive processing
Active bass driver(s) excursion control (GT1-GT2 or GT3 mode only)	X-GUARD™ exclusive processing
Bass response optimizer (GT1 -GT2 ou GT3 mode only)	X-TEND™ exclusive processing
High pass filtering on speakers power output with adjustable subwoofer output level (all mode)	Switchable with frequency choices of 60-80 or 100 Hz & slopes choices of 12 or 24 dB/oct on speaker outputs Low-pass Bessel filtering at 350Hz/12dB with adjustable level on the two subwoofer outputs (XLR)
Short circuit protection	Yes
Amplifier thermal protection (T- GUARD™processing) Speakers thermal protection (GT1-GT2 and GT3 mode only)	Yes - 18dB drop in level with automatic reset after 20 seconds
Supply voltage	(auto) 100-240V / 50- 60Hz
Consumption	Power off with trigger control (standby) : 400mW Mute (speaker disable) : 18W Maximum peak :2300W
Dimensions (L*H*P) (H= 2U)	17.71 * 3.46 * 13.70 (inch) / 450 * 88 * 348 (mm)
Weight	19.2 Pounds / 8.7 Kg

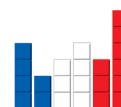
12 rue du Breuil • 70150 PIN • FRANCE
Tél. : (+33) 3 81 47 91 01 • contact@atohm.com

www.atohm.com

Our concern for performance is leading us to constantly improve our products.
The present features are subject to modification without any notice.

ATOHM®

CRÉATION THIERRY COMTE



PROUDLY DESIGN AND MADE IN FRANCE