

Press Release:

Atohm introduces the RS700 Dual Mono DSP amplifier !

The new Atohm RS700 Class D amplifier boasts advanced audio technologies while delivering high output



Park Ridge, IL, March 27, 2024 - The new **Atohm RS700 power amplifier** (MSRP \$4,900 USD) was developed in-house in Atohm's facility in Pin, France. Taking approximately 6000 hours of research and development, the RS700 amplifier is highly innovative and resolutely "hi-fi". It is a **dual mono class D design** driven by a high-performance analog/digital board incorporating a DSP. The signal processing controls and maximizes the performance of the output stages while maintaining the purity and fidelity of the signal. The RS700 is rated at **700 watts per channel into 4ohms with four operating modes**. It utilizes Atohm's advanced **DSP processing** called **U-Guard, X-Guard, T-Guard and X-Tend** to offer a new level of

control and minimization of audible distortions. The "general" mode works with all audio speakers and takes advantage of the company's U-Guard processing, while the other three modes are specific to Atohm's high definition GT series loudspeakers; the GT-1 2-way bookshelf, the GT-2 2.5 way floorstanding and the series' flagship the GT-3 3 way floorstanding model.



X-Guard™ Processing for Atohm GT series speaker mode

The X-GUARD™ processing ensures that the excursions of the bass drivers never exceed an absolute limit (too high distortion and risk of breakage). X-GUARD™ preserves the integrity of the signal, its phase, and does not introduce group delay. Its presence is completely undetectable to any measurement when it does not intervene on the signal. The X-GUARD™ processing even allows for the reproduction of a musical range at slightly higher sound levels without increased distortions.

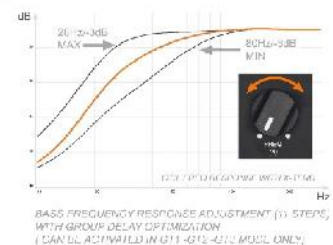
X-GUARD[®]
EXCURSION CONTROL
EXCLUSIVE PROCESSING



X-Tend™ Processing for Atohm GT series speaker mode

The X-TEND™ processing uses the precise knowledge of the bass-reflex speaker and its load. By conditioning the electrical signal relative to each model, the X-TEND™ processing allows for the "reconstruction" of the speaker's response in the low frequencies. 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 XTEND™ processing works in conjunction with X-GUARD™ to maximize the speakers performance without ever exceeding their limit.

X-TEND[®]
BASS OPTIMIZATION
EXCLUSIVE PROCESSING



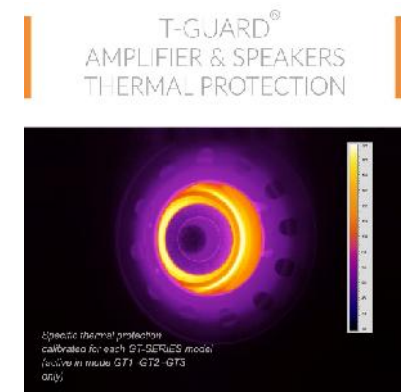
U-Guard™ Processing All Modes and speakers

Typical analog circuits, often referred to as "soft clipping," provide a gentler clipping than a square signal. However, they are often placed in a feedback loop and only react once the first rising front is established. U-GUARD™ processing goes further by acting from the first rising front and maintaining a signal shape that is closer to the original and as a result is pleasant to listen to. It also contributes to protecting the power stages and speakers in extreme cases. The U-Guard™ processing reduces clipping distortion (squared signal formation) at the output of the device and avoids 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 its original form as best as possible. This process is calibrated so that the power stages are never in saturation.



T-Guard™ Processing for Atohm GT series speaker mode

In "general" mode, the T-GUARD™ processing manages the thermal parameters of the power stages in real-time. It eliminates certain situations where the device is used inappropriately. In "GT1 GT2 and GT3" modes, the thermal limits are no longer those of the power stages but rather those of each speaker model. The algorithm calculates an average over a sliding period of 6 seconds and compares this average to the respective thresholds of each model. The high-frequency drivers have a lower permissible power compared to the midranges and woofers. The protection therefore includes a weighting for high frequencies.



Active crossover for proper sub-woofer integration

The RS700 makes subwoofer integration easy by offering an on board active crossover. The crossover can also be set for high-pass for the main speakers as well as for the subwoofer low-pass utilizing Bessel 12dB/octave or Linkwitz-Riley 24 dB/octave slopes and selectable frequencies of 60, 80 or 100 Hz.



About Atohm

Atohm was founded in 2000 by Thierry Comte, the company engineers and manufactures its own drivers and complete speakers in their facility in Pin, France. Atohm also supplies its advanced drivers and technologies to other companies in the high-end audio industry. www.atohm.com

About Audio Excellent

Audio Excellent is located in Park Ridge, IL and distributes high quality audio equipment from France and Italy for home, custom integration and mobile audio. The company currently represents Atohm, Atoll Electronique, Laboratorio Audio, Quartorigo, and Absolve Creations.

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