

AUDES

Heavenly silence with Audes power conditioners



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More electronic devices than ever before are connected with the public network. Most of these, from little electronic gadgets up to large industrial plants, not only draw a lot of current but also emit interferences back into the network in many different ways.

You may have experienced different sound qualities from your hifi system, depending on time of day or differences between listening on weekdays or weekend. That is NOT your imagination but depends directly on the number and kind of other power consumers connected with the public network.

You ask what you can do about that? Well: Isolate your system from the noise in the network! At this point the Audes power conditioners come into play. Audes is a hifi manufacturer from Estonia with quite a reputation for their superbly built loudspeakers. Lesser known is the fact that since a long time, Audes designs and builds transformers on an industrial scale and is selling them worldwide. This know-how also made them capable of manufacturing their own tube amplifiers and of course the coils for crossovers in their own speakers. Obviously, this competence lead Audes to developing devices for the optimization of domestic hifi system's power supply.



**Rear View of the Audes ST-3000
with 6 power sockets**

Power conditioners Audes ST-1500 and ST-3000 are designed to supply electrical power to High-End and Hi-Fi AV equipment. The main element of the device is a balancing toroidal transformer 230 VAC/115 + 115 VAC designed and developed by Audes, which isolates the equipment from the domestic network. Despite the significant power rating of such transformers the construction of the power conditioner completely excludes harmful electromagnetic radiation.

The mighty toroidal transformer inside the ST-3000

Using ST-1500 or ST-3000 with any AV equipment, including both solid state and tube devices, improves the quality of sound reproduction. The most significant results are achieved when used the power conditioner is used with power amplifiers. During highly dynamic parts of an audio track (e.g. *tutti fortissimo* of a full symphonic orchestra, sounds of large ethnic drums bass parts of experimental electronic music, cinematic SFX) a powerful amplifier must draw substantial current surges from a power supply unit, which can reach magnitudes of 50–100 A, while maintaining voltage levels



without dips. An ordinary domestic socket, which is connected to a distribution board using long electrical cables, is not capable of providing such current levels due to relatively high output impedance. ST-3000 has an output DC resistance of 0.4 Ω therefore it can easily supply high current surges without facing voltage dips. This is achieved by using a transformer with a very large core and making it work with a minimal inductance. In turn the response time of a power amplifier to a changing audio signal is reduced, which benefits reproduction of transients, especially in lower frequency bands.

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An audio reproduction system exhibits a wider dynamic range, which results in more realistically sounding musical instruments and cinematic SFX.

Another problem in power supply of high-quality equipment is noises in electrical networks. They appear when switches and controllers of electrical motors, dimmers and regular lighting, as well as switch-mode power supply units of modern AV equipment are used nearby. High-quality CEE 7/3 sockets are galvanically isolated from an external electrical network. The transformer is equipped with a reliable electrostatic shield. Arriving electrical interferences are counteracted using a mutual cancellation principle. The secondary winding of the transformer is separated into two halves and has an artificial centre tap, which is connected to the earth clips of each socket outlet.

The ST-1500 and ST-3000 transformers were designed to work as low-pass filters with a cut-off at 800 Hz, since all electrical network interferences happen at much higher frequencies. Secondly, the filtering effect is caused by self-inductance of a very large core, because of which magnetic flux cannot change instantaneously under a transient disturbance. All of the above technical aspects allow to almost entirely remove electrical network noises providing reliable high-quality power supply to audio equipment.

When the power conditioner is first switched on the transformer is subject to an inrush current of approximately 20 A during magnetisation of the transformer core. Due to this a soft start is implemented into the power conditioner. A special ballast resistor limits the current surge, so that other electrical equipment, which is connected to the same electrical network, remains unaffected.

Audes power conditioners have an overload protection and a thermal protection, which switches the transformer off if temperature of the transformer reaches 90 °C. Once the temperature drops to 75 °C the device will reconnect to the electrical network automatically. The transformer was designed to maximise the number of turns in the primary winding. Because of this under the no-load condition the power consumption of ST-3000 is only 16 VA.

ST-1500 and ST-3000 produce virtually no acoustic noise, which allows its use not only with domestic High-End audio equipment, home cinemas and show rooms, but also in sound recording studios.

ST-3000



ST-1500





Specifications

Model	ST-1500	ST-3000	ST-5000
Power Rating (VA)	1500	3000	5000
Inlet	10 A Inlet IEC C14	16 A Inlet IEC C20	powerCON 32 A connector Neutrik NAC3MP
Outlet	16 A/250 VAC Socket CEE 7/3 (× 4)	16 A/250 VAC Socket CEE 7/3 (× 6)	16 A/250 VAC Socket CEE 7/3 (× 9)
Power Supply Cable	10 A/250 VAC Connector IEC C13	16 A/250 VAC Connector IEC C19	powerCON 32 A/250 VAC cable connector Neutrik NAC3FC (Power cable not included)
Dimensions (mm)	155 H × 477 W × 347 D	180 H × 477 W × 347 D	260 H × 435 W × 347 D
Dimensions (Inch)	6 $\frac{1}{8}$ " H × 18 $\frac{3}{8}$ " W × 7 $\frac{3}{4}$ " D	7 $\frac{1}{8}$ " H × 18 $\frac{3}{8}$ " W × 7 $\frac{3}{4}$ " D	10 $\frac{1}{4}$ " H × 17 $\frac{1}{8}$ "* W × 7 $\frac{3}{4}$ " D
Weight (kg/lbs)	25.5/57	33/73	45/100

Audes reserves the right to change technical specifications without notification.

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