



ENERGY CORE

Probably in this day and age, I don't have to explain that the quality of our mains power is not quite what it used to be. But perhaps I may introduce you to a tried and tested means of solving the problem quite thoroughly



So simple the appearance, so convincing the effect: Audez builds one of the most convincing passive mains filter solutions on the market

Filter or regenerator? That's the ultimate question regarding when it comes to processing the 230-volt „raw material“ from the wall socket that is supposed to feed our hi-fi components. Of course, even in the year 2020, you can simply avoid the decision and plug your equipment into the wall „just like that“ using an ordinary power strip. Apart from the more or less occasional noise, you'll probably never notice that you're giving away a considerable amount of sound quality.

In general, I am not a fan of „upgrading“ hi-fi systems with high-priced accessories of questionable benefit. However, investing in mains power is indispensable nowadays, and I can only strongly advise you to try experiments of this kind. Filter solutions are generally considered inferior „out there“ because filters are said to cost dynamics. This does not happen if you rely on one of the complex, active regenerator solutions that more or less completely rebuild the power supply from the outlet. This extends to a wholly decoupled battery-supported solution. If you don't want to spend quite so much money, then the only solution is a filter. And there are different kinds of filter solutions. An uncompromising offer comes from the Estonian manufacturer Audez. Known as a loudspeaker manufacturer, they have developed into a specialist for electromagnetic coiled goods, and the results are presented here.

With its lid in place, the ST-3000 is a rather plain black box with a stately weight of 33 kilograms—one with six Schuko sockets and a sizeable 20-ampere IEC plug on the back. You correctly guess that the latter is the mains input and the former is for connecting hi-fi components. It gets spectacular when you look inside. There is an encapsulated toroidal transformer the size of mother's marble cake. And as the type designation of the device suggests, it is a transformer with a whopping three kilovolt amperes load capacity. Or three kilowatts, if you're not too particular about physics. That should suffice—and don't be afraid of a system with power-guzzling Class A amplifiers.

But what is such a fat transformer doing in a mains filter? And what does it do differently from a „normal“ filter? You'll allow me to make a few simplifications in the explanation: Ideally, we want a filter that passes only the 50-hertz line voltage and does not allow any other components that are vagabonding on the power line to

Team Players

Record Player:

- **TechDAS Air Force III**

Cartridge:

- **Ikeda 9TS**
- **Audio Technica AT5V**

Tonearms:

- **Reed 3P - Reed 1X**

Phono preamplifier:

- **Accuphase C-47**
- **Integrated Amplifier:**
- **Accuphase E-800 Speakers:**
- **Wilson Audio Alexia 2 Opponent**

Power conditioner:

- **PS Audio Power Plant P10**



If the six sockets on the output side aren't enough, you can create additional connections with a power strip

Neil Young – Massey Hall 1971



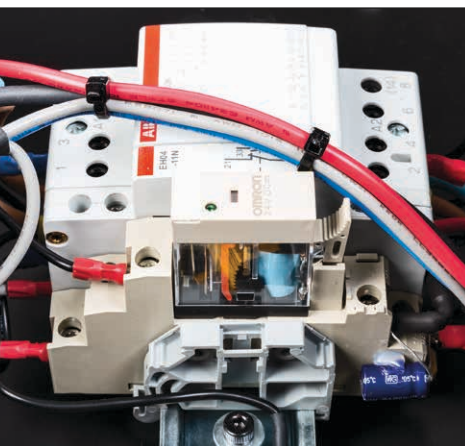
Played

Neil Young
Massey Hall 1971

Prince and the NPG
It Ain't Over!

Rabih Abou Khalil
Blue Came

Rickie Lee Jones
Pirates (MFSL 45)



The large relay is used to bridge a resistor that brakes the inrush current



Transformer production at Audes: Here, work is carried out on modern machines on an industrial scale

pass through. A „normal“ filter works with a coil that is inserted into the power line. This amounts to nothing more than a piece of wire wound on a magnetically reactive core. Such a coil acts as a „low-pass filter,“ that is: it filters out frequencies above a specific range. Below that, a coil is „continuous“ and opposes the current only with its wire resistance. A coil stores energy in its core. It uses this energy to compensate for short-term fluctuations in the input or output current flow. A transformer can do the same. But it does even more: The coupling between the input and output current flow is exclusively magnetic; there is no „continuous wire. So the famous „galvanic connection“ is missing, which can help to reduce any hum problems. It also helps solve the problem of power plug orientation: If designed appropriately, the transformer balances the line voltage around the ground conductor. This means that the same conditions prevail regardless of how the plug is inserted into the socket.

The decisive factor for the actual filter effect is that a transformer is a bandpass and not a low-pass filter. This means that it blocks not only frequencies above the desired 50 hertz, but also those below. There are plenty of them, caused, for example, by light dimmers.

With the Audes ST-3000, these virtues were implemented with rarely seen consistency. The transformer's massive core has a considerable energy storage capacity and thus does not buckle even under common load impulses. In practice, the device is entire-

ly unproblematic. The manufacturer has solved the problem of switching on such a colossal transformer without blowing the house fuse using an „inrush current brake,“ which does its job flawlessly. It consists of a power resistor that is switched in front of the transformer through a time-controlled relay when switched on and short-circuited after a short time. You don't notice anything of this in practice, and besides,



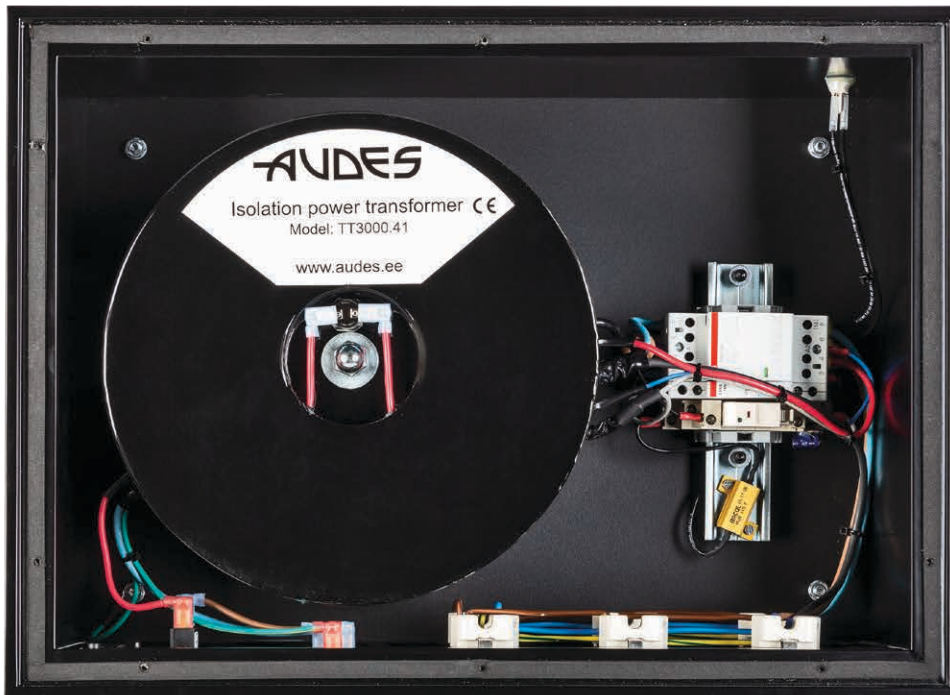
Audes ST-3000

• Price	3.900 Euro
• Distribution	TCG GmbH, Nordhorn
• Phone	05921 7884927
• Internet	tcg-gmbh.de
• Warranty	2 years
• W x H x D	477 x 180 x 347 mm
• Weight	33 kg

Bottom line ...

» Mains plug polarity, plug sequence? It doesn't matter. The Audes ST-3000 not only makes such considerations superfluous when connecting to the mains but is first and foremost a fresh-cell-treatment for the sound of your system: crisper, bigger, more intense - definitely worth trying out!





Apart from the transformer and inrush logic, there's not much to see in the STA-3000

you rarely switch such a device on and off. The only control element is, therefore, the power switch on the back of the device. A very inconspicuous small LED on the front of the wholly unadorned but very solidly manufactured matt black case signals that the device is ready for use. Of course, there are protection mechanisms against excess temperature and too high load built-in. While the transformer is, of course, the pride of the in-house production, the rest of the components are preferably taken from the shelves of renowned German suppliers. Very nice.

And what happens when the Audes is entrusted with the supply of the system? What I find most notable are the dynamic improvements that can be achieved. Even the mighty Accuphase E-800 sounds a bit more energetic and colorful. The effect is comparable to what the PS Audio P10 does, which I usually use. That one is a real active voltage regenerator, but the passive Audes delivers a similar stability level to the output. What stands out are things that happen when playing great live recordings. Take Neil Young's legendary Massey Hall concert, which undoubtedly belongs in this category. If the room dimensions are already imaginable with „untreated“

mains, the processed mains convey the impression much more convincingly. Also, Neil Young's harmonica acquires astonishing drive and substance, the localization of the voice is enhanced. The wonderful „Cowgirl In The Sand“ by itself is not only a convincing argument for buying the record but also the Audes mains filter. The same goes for the great after-show party „It Ain't Over!“ by Prince (review in LP 5/20). To hear that this heated brew can still gain so significantly in intensity and radiance when the quality of the mains supply is taken care of is more than astonishing. In any case, the fears of dynamic losses when using such a solution are not tenable: When I connect the Accuphase integrated amplifier – a significant power guzzler – directly to the mains, the sound quality deteriorates noticeably, loses its spectacular openness and directness. Once you get used to what this solution is capable of, the way back is difficult: without mains treatment, it sounds more one-dimensional, duller, and grayer. A big compliment goes to Estonia; this machine provides real sonic benefits.

Holger Barske



In addition to very large inductors, Audes also manufactures tiny types, as seen here



The sockets are wired together with thick solid conductors



The 3kVA toroidal transformer is a caliber you don't see every day