

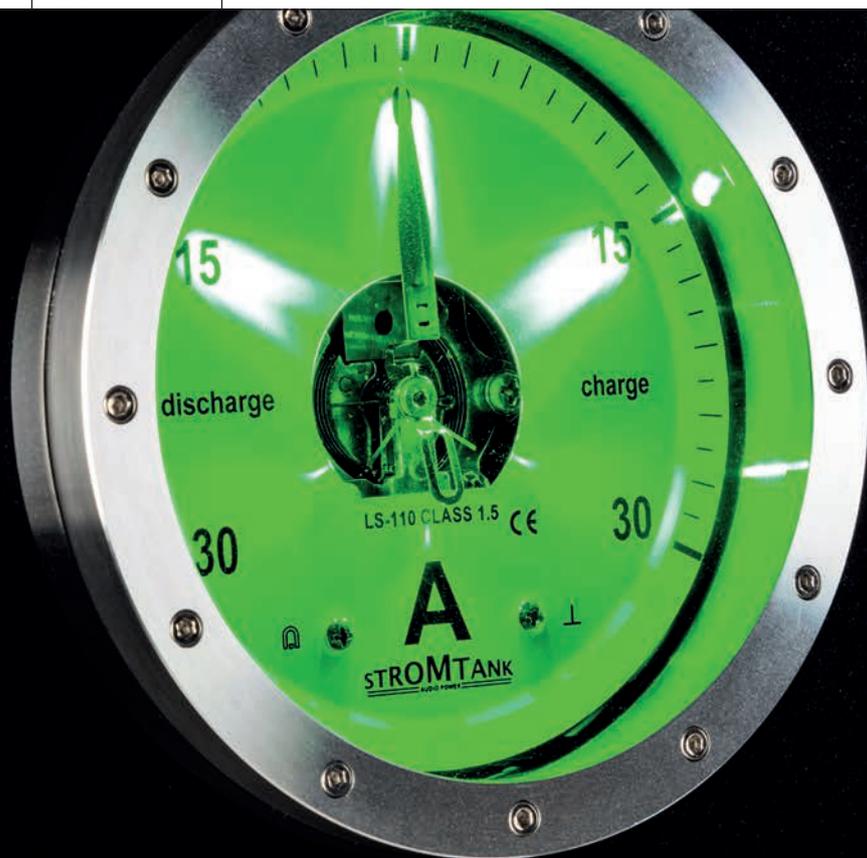
# SONDERDRUCK

Mains Power Generator  
Stromtank S 1000

LP Ausgabe 2/2020

## MAGAZIN FÜR ANALOGES HiFi & VINYL-KULTUR





# REFILLED

Hardly any other type of equipment in the field of hi-fi has been as vividly discussed in recent years as that of power conditioners. Yet there is exactly one – and only one – manufacturer who approaches the subject with all due consequence.



*Stromtank's power generators are the only ones on the market that can supply your stereo system consistently independent of the mains*

And this manufacturer comes from Berlin and does nothing else but take care that your hi-fi system is not supplied with disgusting contaminated mains power or voltage fluctuations. The name of the company? Stromtank (= power tank/storage). Yep. Bull's eye. There's no better way to sum up the product and how it works. Yeah, right. I already told you that about a year ago, and as a loyal regular reader you can of course remember the eye-catching title of the magazine with the large, green illuminated display instrument. And of the somewhat unwieldy 20,000-euro sales price of the Stromtank S 2500, which the

manufacturer asked for in exchange for the splendor we were looking at back then. Well, you may now burst out in uninhibited jubilation and rob your petty cash: A small Stromtank has arrived, and the S 1000 is available for a mere 12,800 Euro! Irony aside – this is a good deal. For a little more than half the money, you practically get the same functionality of the big model, and the same technical effort. You just have to recharge it a bit more often and get by with a lower power rating, otherwise everything is the same as with the S 2500.

Let us recapitulate first: What exactly is it that distinguishes Stromtank from all other manufacturers when it comes to power conditioners?

As is well known, the point of the matter is to provide the connected components with a perfect mains voltage. Perfect means: a flawless 50-Hertz sine wave with an effective value of unwavering 230 volts, free from high-frequency and other interference. The simplest approach is to use passive filters to remove interference from the mains voltage. This works sometimes more effectively, sometimes less effectively, depending on the type of interference and application. However, it is in the nature of a passive filter that it „takes something away“ and in most cases this is more than the interference itself. Voltage stability is therefore not the highest virtue of such a solution. The better and much more complex solution is to initiate an „active recombination“ of the output voltage after filtering. Here, active electronics, not unlike an audio output stage, supplement the output voltage to create the perfect 230-volt sine wave. This is what PS Audio and, as introduced in the last issue, MFE do, for example. This works really well, but it's not the final word: it would be desirable to completely decouple the power supply of the system from the mains socket. Then we could be completely indifferent to how much interference and/or fluctuation there is in the electricity supplied, as we simply create our own. „Simple“ is of course relative, the energy has to come from somewhere. In the case of a Stromtank, it comes from a pretty substantial amount of batteries. And not that filthy lead-gel stuff, which used

to be the spearhead of battery technology for decades. Even lithium-ion cells (or the closely related lithium-polymer packs), the now widespread solution for everything that is more or less senselessly operated with rechargeable batteries these days, were not good enough for the electricity tankers: As a company at home in professional solar technology, the Berlin-based company is aware of the significantly higher possible number of cycles and robustness of lithium iron phosphate batteries.

„LiFePo4“, the common abbreviation, has a lower energy density, but that doesn't matter in this case – you just have to make the Stromtank a little bigger and heavier. The S 1000 therefore still is a real behemoth with a net weight of 41 kilograms and a casing with almost half a meter of width and depth. Eight high-performance rechargeable batteries are responsible for a substantial part of the weight, which, connected in series, have a capacity of 40 amp-hours at a voltage of 24 volts. That is an energy content of around three and a half megajoules. For comparison: Two 22,000-microfarad electrolytic capacitors fully charged with 40 volts in the power supply of a potent output stage contain around 35 joules - that's a one-hundred thousandth of that. Stromtank indicates a battery operating time of two and a half hours at an average load of 400 VA. The S 2500 introduced at the time manages six hours at the same load thanks to its 100 amp-hour batteries. Those who consume significantly more power - the S 1000 delivers 1800 VA at the output for a short time - must expect a correspondingly reduced operating time in pure battery mode. Apart



*The blue illumination of the instrument indicates on-grid operation*

## Fellow players

### Turntables:

- [Rega Planar 10](#)

### Pickup cartridges:

- [Rega Apheta 3](#)

### Phono pre-amplifiers:

- [D'Agostino Momentum Phono](#)

### Integrated amplifiers:

- [Thivan Labs 811 Anniversary](#)
- [Cambridge Edge A](#)

### Loudspeakers:

- [Dynamikks Model 12](#)

## Opponents

### Power conditioners:

- [PS Audio P10](#)



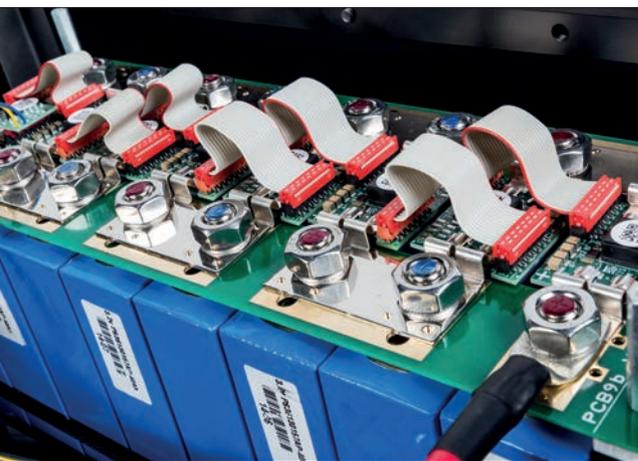
Nothing works without it: the key must remain on the device during operation



In case something happens: The fuse will blow if things go too fast for the big relay.S.



View into the inner sanctum: This switching converter generates the mains off of the battery voltage



Eight solid lithium iron phosphate batteries store the energy from the mains

from the „pure teaching“, there is also the possibility of charging the batteries during operation, which is almost as good as the complete decoupling from the mains - but only almost. In this case, the current from the socket flows into the batteries via the complex charging and protection electronics, while the voltage converter, which operates with an efficiency of an impressive 93 percent, converts the battery voltage into the output AC voltage in parallel. This means that the batteries act as a kind of buffer. The S 1000 has a nice little remote control that allows you to switch between battery and

buffer mode from your armchair, which is very convenient for understanding the differences in sound.

The obvious star of the thing is of course once again the impressive display instrument arranged in the middle of the front: in pure battery mode - the manufacturer calls this „Off Grid“ - there is a rich green backlight and a chain of light emitting diodes that indicates the charge level. When the charging electronics are switched on (on-grid operation), it lights up blue and the LED chain is off. The pointer in the instrument shows the current flowing into and out of the battery. You cannot overload or overstrain the unit, it is elaborately secured against all kinds of adversity. On the back of the device there are four mains sockets to which appliances can be connected. This is not abundant, but can of course be extended with a power strip. The reason for the scarce equipment is simply lack of space: On the back of the US version there are eight sockets, but the crummy American power sockets are also much smaller than our German „Schukos“.



Four devices can be connected directly to the unit, beyond that an external distributor is required

To start up the system, you absolutely need the „ignition key“, in addition you have to operate the main switch and the input-side circuit breaker. After various very solid sounding tinkling noises inside, one may indulge in the blessings of the device. I



Played

**Julia Kadel Trio**  
Kaskade

**Crippled Black Phoenix**  
A Love of Shared Disasters

**Paul Desmond**  
Easy Living

**Dire Straits**  
Brothers in Arms

recommend to schedule any first experiments around noon or in the late afternoon, when our power grid is struggling with the biggest problems. The extent of the sound improvement also depends on the connected components: The Thivan Labs vacuum tube amp, for example, reacted rather subtly to the upstream connection of the Stromtank S1000, but it also appeared louder, more energetic and more powerful. This became all the more apparent when switching to off-line operation. With the large Cambridge transistor amplifier, the differences were more pronounced: It actually appeared noticeably louder when supplied by the Stromtank and improved even more when playing completely „off grid“, especially in terms of focus and precision. Even the extremely complex D’Agostino Momentum Phono audibly acknowledged the interposition of the device – that’s quite amazing. As always, the upsetting part is the step back after getting

used to the blessings of such an upgrade, as the experience of the regression to the reality of normal mains supply in 2019 is quite a bitter one: It sounds noticeably grayer, more sluggish and cramped. And even if the investment in such a device as the Stromtank S 1000 is beyond the capabilities of most hi-fi enthusiasts, its use makes one truth very clear: the quality of the mains supply is important for the sound and you should definitely take care of it.

*Holger Barske*



*The Stromtank is a highly professional design  
with components from solar technology*



## Stromtank S 1000

• Price	12.800 Euro
• Distributor	Stromtank, Berlin
• Phone	+49 30 52688330
• Internet	<a href="http://www.stromtank.com">www.stromtank.com</a>
• Warranty	3 years
• W x H x T	480 x 470 x 220 mm
• Weight	ca. 41 kg

### The bottom line ...

» Stromtank also demonstrates with the S 1000 how convincingly a perfectly designed mains supply can improve the sound of a hi-fi system. Without doubt the least compromising solution on the market!



# STROMTANK

AUDIO POWER



KÖNIGSKLASSE