



# „Stromtank“ – when sounds are reborn

**The influence of electricity on sound quality is a complex phenomenon. Errors or changes in the luminous flux of a mechanical device can also be detected without much experience, as the information can be easily evaluated visually. In order to experience subtle changes in the multifaceted sound field, not only experience is required, but also the ability to appreciate this immaterial material. Who can notice these differences? They will say professional musicians and sound directors. However, fans of hi-fi and high-end technology can feel the effect of electricity on the sound of a home audio system. It is simply not possible to discuss this subject without first explanations.**

Why did "bad" electricity distort the audio signal? The answer is very simple: by the time electricity reaches your home, it will travel hundreds of meters or a few kilometers on a poor quality cable. In addition, electricity faces many obstacles along the way, from radio signals to feedback from mains powered devices. Thus, the electrical current flowing into our amplifier is as clean as the water in a small forest ditch - as if there is no direct

threat to human life, but you will find many microscopic species in the water. Frequent electrical buildup negatively impacts elements of the sound system that simply do not have healthy energy to expose the resources of the exposed equipment. This factor, in turn, reduces the ability to restore the full beauty of musical information.

How is this problem resolved? A line filter can be installed to protect the system from overloads and to compensate for overvoltages that are particularly harmful to noise. However, such a filter does not increase the power supply. It is possible to go further and install a regenerator that will straighten the sine wave of the electrical signal, but then the sound system will lose its dynamism. This problem was solved by the talented German engineer Wolfgang Mileck, who is known for his unique MBL devices. Like other brilliant engineers, Wolfgang has a particularly subtle feel for his creations. While developing precision amplifiers, players and acoustic systems, he kept asking himself why he had to deal with the incomplete power supply for such precision instruments. Over the years experience has been

gained, thorough research has been carried out and a solution has finally been found. This solution impresses not only with its appearance, but also with its technical properties. Its name is STROMTANK.

## „Stromtank S 2500“

A special feature of the power tank are the possible rechargeable batteries, which are supplemented by a voltage regenerator. This hybrid circuit has a unique property of Stromtank, but first we will get to know the device externally. The monolithicity of the device and the minimalism of the surface are striking. The S2500 power tank is a massive metal box with a slightly convex front. The Stromtank S2500 has a voltage display - massive lighting with a backlight, the color of which changes depending on the selected mode. At the bottom there is a practical and clearly visible LED battery indicator. There are two buttons on the sides of the housing: the left one to switch the mode and the right one to adjust the brightness of the voltage display. The back of the case is equipped with a power switch, three sockets, a LAN port and USB-A for software updates. You ask - which PSU needs to be updated?

The device has an internal battery cleaning system that balances the power supply and coordinates the overall operation of the battery and regenerator. It should be noted that the S2500 power tank has the same LiFePo4 elements as those used in Tesla vehicles. This is a serious decision and, as further tests have shown, a perfectly reasonable decision.

The S2500 power tank has two operating modes. The first mode (indicated by a blue operating display) is very interesting - the sound reproduction system is operated according to the regenerator principle. However, it is important that the power failure is compensated for by mains operated batteries which, thanks to the internal control system, continuously transmit as much energy as they need. The second green mode shows the full potential of the power tank. If this mode is activated, the device switches to standalone mode if all components of the audio system are only operated with power tank batteries. Their power is sufficient to supply the system with a fixed power amplifier or with two less demanding "mono" units. The average standby time is 4 hours or more (depending on power consumption). When the battery is almost empty, the S2500 power tank is charged via the mains.

The Stromtank S2500 has been tested with the MBL sound reproduction system for which it was developed. System used: Integrated amplifier MBL N51, CD / SACD player MBL C31 and 116F loudspeaker. The system is "heated" for about half an hour. It is important to note that you should begin your acquaintance with the electric tank by connecting a well-known sound system to it. Then you can get to know all the possibilities of the power tank. Initially, the system uses the usual audiophile line filter, in this case too the MBL device impresses the listeners: the amplifier captivates the performance, the player - with very precise signal reproduction.

The result is great - the acoustic systems create a unique, incomparable sound field that lacks focus and directionality, and the listener is constantly at the center of events. In short, the sound is independent but rich and detailed.



If the power tank is connected instead of the mains filter, the "blue" mode is selected first. From the first few seconds, familiar data sets begin to change. At first it is not easy to grasp the difference and describe it in words. The ears hear the change, but the awareness is a little late. And it involves real admiration when the brain makes a seamless impression. It turns out that the sound of the system without the S2500 power tank is like a well-designed building frame, its shape and technical perfection, but it lacks finishing and finishing. This does not mean that without this power supply the system has no depth, but the differences are very clear and the first impressions completely disappear when you feel the possibilities of Stromtank.

Numerous mid-tones stand out, the bass becomes incomparably rich and gains in sophistication in creating space. Like the light falling through the prism, the sound of the S2500 system reveals many hidden colors. Stromtank simply "throws" energy into the system - this feeling is extremely comprehensive! It is said that because of their rational thinking and critical evaluation of reality, modern people lose primitive sensations that allow them to see and hear what the body is feeling. After the deep inhalation, the autonomous mode of the S2500 power tank is selected when the system is only powered by the battery. The hearing returns to its original state and the listener is absolutely immersed in the sound of the music. Impressions are similar to a child's feelings:

there are no rational boundaries, a feud of emotions rages in my head. Half an hour ago we thought about the type of system sound, and now we're flying around the sounds. Vocals sing around, tremble in trouble, rhythm stimulates dancing - these are just the details of the senses that can be taken over from the vortex of music. Forced into dry-rate events, we could single out a few aspects. First, you just can't see the acoustic systems because the sound comes from everywhere and isn't connected to the speakers. The opening of the stage and the sound of the instruments can be compared to the characteristics of a solid concert hall. After all, we simply accept every element of the sound field physically - the sensation of hearing the recording disappears completely as the music fully comes to life and floods the whole body.

The STROMTANK S2500 is a complex, unique device that requires a proper disclosure system. The sound system must be balanced, otherwise you will not be able to feel all the extraordinary possibilities of the energy source. Your preparation, the listener, is no less important. Stromtank is definitely an important and solid upgrade of the system. However, if you've just embarked on a path of serious, uncompromising sound, you should wait a while before adding such an element to your composition. The more complete and varied your experience as a listener, the greater and more sincere you will be with this device.

## HI-FI HIGH END

### „Stromtank S 1000“

High-end audio lovers can be intimidated by the price of the S2500 power tank, which is € 24,200 in Europe. You can also save - a small S1000 power tank is produced, which is available for only 15,500 euros! Despite the irony, it's a lot. For just over half the price of the S2500 power tank, you get the same functionality for large models and the same technical capabilities. You just have to charge a little more often, the other properties remain the same.

The S1000 is still a real hippopotamus. Its weight is 41 kg, the width and depth of the trunk is almost half a meter. Eight high quality batteries make up a large part of the weight. The capacity of the batteries connected in series is 40 ampere hours at 24 volts. This corresponds to an enormous amount of energy of around 3.5 megajoules. The power tank battery life is 2.5 hours with an average load of 400 VA. The more powerful S2500 power tank delivers 6 hours with the same load. In addition to "pure operation", it is also possible to charge the batteries via the audio system. This is almost as good as a complete breakup, but only almost. In this case, the current flows from the socket to the battery through the charging and safety electronics system. The adjustable voltage converter with an impressive efficiency of 93% converts the battery voltage parallel to the output AC voltage. This means that the batteries act as a kind of buffer. The S1000 has a large small remote control with which you can comfortably switch between battery and bumper mode in the armchair.

The obvious cleanliness of the device is of course the impressive screen in the middle of the case. In pure battery mode - the manufacturer calls it "Off Grid" - the screen lights up a rich green and the LED circuit shows the charge status. When the charging electronics are switched on (mains operation), the display lights up blue and the LED circuit is switched off. The device arrow shows the power supply to and from the battery. You cannot overload the device as it is thoroughly protected from problems. The back of the device is equipped with 4 power supply sockets to which devices can be connected. The reason for the limited equipment is simply a lack of space: The model for the US market has 8 sockets on the back, as American sockets are also much smaller than German ones.



The sound improvement depends heavily on the connected components. For example, the tube amplifier from Thivan Labs works subtly before the S1000 power tank is connected, but then "sounds" louder and more powerful. This becomes even more apparent when you are working offline. When connected to a large Cambridge transistor amplifier, the differences are particularly noticeable: when powered by a power tank, it sounds much louder and even cooler in off-grid mode, especially in terms of sound focus and accuracy.

Even the sophisticated D'Agostino Momentum Phono "recognized" the vital role of the device - which is amazing. As always, the sad part of the test is a step back from connecting to a normal power supply: it sounds noticeably grayer, slower and a bit more limited. Even if the investment in a device like the Stromtank S 1000 exceeds the capabilities of most hi-fi enthusiasts, one thing is clear: the quality of the power supply is important for the sound. You should definitely take care of it.

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