

JASON VICTOR SERINUS

Stromtank S 1000

COMPUTER-CONTROLLED BATTERY POWER SOURCE

The Kingdom of Audiophiledom rests on a paradox. Inanimate audio systems and rooms aim to deliver music that animates our senses and touches our souls. The inherently lifeless exists to bring music to life.

This holistic reality—that systems and rooms function as living organisms where every part is interconnected and interrelated—came home to me when, during one of the first AXPONAs in Chicago, I entered a long, cavernous basement room with several spongy “conference room” walls. “There is no way that any setup can deliver good sound in this room,” self said to self. Yet, the system sounded *unbelievably* good. Rock-solid bass, enviable transparency, smooth delivery, superb soundstaging, drop-dead beautiful sound. That thoroughly musical presentation compelled me to linger for quite some time.

Before I left, I queried the exhibitors about the one component in the setup that, though conspicuous in its size and design, was unfamiliar to me. Thus did I discover the German-made Stromtank S 5000 power generator (now \$50,250), an imposing, 275lb computer-controlled lithium-iron-phosphate battery array behemoth whose 1500VA continuous power capability and 5000Wh (Watt-hour) storage capacity, distributed to six outlets, enables it to power amplifiers and front-end components at once.

I’d long been assured that batteries can deliver the cleanest, most stable power to high-end components, at least until they begin to lose their charge. Had Stromtank developed a practical (if weighty and expensive) solution that might help to connect me (and others) to better sound?

Thus it came to pass

Some seven years later, Alex Wilde of Stromtank America offered



The Stromtank gives you independence from fluctuations on the grid—even from blackouts.

—WOLFGANG MELETZKY

me the smaller Stromtank S 1000 audiophile power generator (\$15,975) for review. I uttered a silent “Hallelujah!” While the eight Hubbell outlets that transmit the S 1000’s 1000Wh can power front-end components for 5–8 hours, its 450VA continuous output power at 77°F is *not* suffi-

cient to deliver full power via my D’Agostino Progression M550 monoblocks, which output up to 1100Wpc to the 4 ohm (nominal impedance) Wilson Audio Alexia 2 loudspeakers. Still, I leaped at the opportunity to discover how even partial freedom from current fluctuations and AC-line-induced noise generated by computers, appliances, internet, cell towers, LEDs, sunspots, and/or space aliens might influence my system’s sound.

When the 90lb Stromtank S 1000’s 19" × 19" footprint proved

¹ Pronounced, roughly, “Shttrum’tonk.”

SPECIFICATIONS

Description Computer-controlled lithium-iron-phosphate battery array. Storage capacity: 1000Wh. Output voltage: 100–130V AC. Output frequency: 60 Hz±0.05% (crystal controlled). Continuous output power @ 25°C: 450VA. Output power up to 30 min @ 25°C: 700VA. Peak

power 3 sec @ 25°C: 1800VA. Harmonic distortion: <2%. Maximum load: up to short circuit. Acoustic level: <29dB SPL. AC output receptacles: 8 US sockets (4 Hubbell duplex hospital spec. grade). **Dimensions** 18.5" (480mm) W × 8.7" (220mm) H × 18.5"

(470mm) D. Weight: 90lb (41kg).

Finish Silver/black anodized, others at additional cost.

Serial number of unit reviewed 317519. Made in Germany.

Price \$15,975. Number of US dealers: 5.

Manufacturer Stromtank,

Rathenower Str. 45, 10559 Berlin, Germany. Email: info@stromtank.com. Web: stromtank.com US distributor: Stromtank of America, 5855 E Surrey Dr., Cave Creek, AZ 85331. Tel: (480) 575-3069.

too large for my rack, I stuck a 1"-thick piece of plywood between the Stromtank and the floor and placed Nordost Sort Kones between the Stromtank and the wood. Directly behind it, on my rack's bottom left shelf, sat the AudioQuest Niagara 7000 power conditioner, whose high-current outlets continued to power the D'Agostino monos. The S 1000 powered the D'Agostino Momentum HD preamplifier, the dCS Rossini DAC, Clock, and Transport, and the HDPLEX 300 linear power supply, which feeds an EtherRegen and AfterDark clock. The rack also held a darTZeel NHB-18NS preamp, whose rechargeable battery power supply obviated the need to feed it from the Stromtank.

I found myself drawn in an almost religious way to the "Mighty Fortress Is Our God" face of the S 1000, with its huge power meter that changes from blue to green. I paid close attention to its green LED array, which indicates the amount of charge remaining before the unit automatically switches to wall power. I followed directions and put the unit into blue-lit charge-the-battery mode whenever I left the room. Only once during my listening did the S 1000 run out of charge and switch on its own to AC.

Stromtank claims that its deployment of lithium-iron-phosphate batteries (LFP, or LiFePO₄) offers maintenance-free "maximum power delivery, maximum lifetime, voltage stability and intrinsic safety." Smart circuitry ensures that the innately long lifetime of the LFP batteries is realized in practice. Stromtank emphasizes that even during recharging, "you can listen without any interruption. Even when the Stromtank is connected to the grid, current pulses are not taken directly from the grid; they are absorbed by the battery ... [with] less interaction between the grid and your audio/video setup."

During a Zoom chat, Stromtank founder Wolfgang Meletzky (who, incidentally, also founded MBL) explained the product's genesis and operation. "I saw Tesla and other companies using stronger and better batteries—superior to lead batteries—and decided to build an audiophile power generator driven solely by a lithium-iron-phosphate battery pack and well-shielded in aluminum, that would eliminate all dirt and deliver perfect amplitude on the sine wave and perfect frequency," he said. "If you move from one house or setup to another, you still have the same power. The Stromtank gives you independence from fluctuations on the grid—even from blackouts.

"Together with the German government's Fraunhofer Institute, we created a battery-management system to keep all batteries at



the same voltage and energy level. When you need a strong pulse for drums or something else, the batteries can supply it very fast. We measure each sound in voltage and current, gauge the charge of each battery, and shift current from the stronger battery to the weaker one, if necessary, so that current charge and energy remain constant, and you can generate a fast pulse."

The batteries are said to last for 6000 recharge cycles. If you recharge the batteries once per day, they will last roughly 15 years before energy storage drops by 20%. The unit does emit a quiet hum—as does the AudioQuest Niagara 7000 power conditioner—but it never interfered with my listening.

"We consider our power generator and the pre-stages of the amplifier as one system that works together. To get the best sound, we don't want either the lowest or highest impedance possible; we want *matching* impedance, ie, impedance that kind of matches the amplifier's power supply. This is why we have different products for different uses. When you have the right impedance match and you play strings, they sound nice and soft. It's the same with other instruments. If the matching is good, the air around the instruments is good. If the sound sizzles a bit or goes wider or slower, it's not a good impedance match."

Listening as proof

Stereophile's policy of changing only one component at a time so that you know what's responsible for the changes you hear is undoubtedly a good idea. Sometimes, though, things just don't work out that way, because reviewer systems and rooms are in a constant

ASSOCIATED EQUIPMENT

Digital sources dCS Rossini DAC and Clock and Transport; EMM Labs DV2 Integrated DAC, Synology 5-bay 1019+ NAS, Roon Nucleus+ music server, Uptone Audio EtherRegen with AfterDark Giesemann Emperor Double Crown Master Clock, Small Green Computer Sonore opticalModules (2) and Deluxe opticalModule, Linksys routers (2), and Arris modem, all powered by HDPLEX 300 (3) and HDPLEX 200 linear power supplies (3); Apple 2017 iPad Pro and 2017 MacBook Pro laptop with 2.8 GHz Intel i7, 16GB RAM.

Preamplifiers Dan D'Agostino Momentum HD, darTZeel NHB-18NS.

Power amplifiers Dan D'Agostino Progression M550 monoblocks.

Loudspeakers Wilson Audio Specialties Alexia 2 with Acoustic Diodes.

Cables Digital: Nordost Odin 1, Odin 2, and Valhalla 2 (USB and Ethernet); Frey 2 (USB adapter); Wireworld Platinum Starlight Cat8 (Ethernet), OM1 62.5/125 multimode duplex fiberoptic cables. Interconnect: Nordost Odin 2. Speaker: Nordost Odin 2. AC: Nordost Odin 2, AudioQuest Dragon, Dragon HC, and ThunderBird. Umbilical cords for HDPLEX LPSs and NAS: Ghent Audio Canare and copper.

Accessories Grand Prix Monza 8-shelf double rack and amp stands, 1.5" Formula platform; Symposium Ultra Platform; Nordost QB8, QX4 (2), QK1, and QV2 AC power accessories, QKore 1, 3, and 6 with

QKore Wires, Titanium and Bronze Sort Kones, Sort Lifts; AudioQuest Niagara 7000 and 5000 power conditioners, NRG Edison outlets, JitterBugs; Tweak Geek Dark Matter Stealth power conditioner with High Fidelity and Furutech options; Wilson Audio Pedestals; A/V RoomService EVP Equipment Vibration Protectors, PolyFlex Diffusers; Resolution Acoustics room treatment; Stillpoints Clouds (8) and Aperture 1 (2) and 2 (2) acoustic treatments; HRS DPX-14545 Damping Plates; Stein Music Blue Suns, Blue Diamonds, and Quantum Organizers; Bybee Room Neutralizers; Absolare Stabilians; Marigo Aida CD mat.

Room 20' L x 16' W x 9' H.—Jason Victor Serinus

state of flux. Just as the S 1000 was settling in, a local contractor and friends found time to help me install A/V RoomService Poly-Flex Diffuser panels and some homemade slap-echo treatment. After these adjustments, I heard vastly improved image specificity and detail retrieval, smoothed rough edges on high-frequency sounds, and clarified soundstage boundaries and depth. As I listened to Strauss's *Alpine Symphony* and other works on our recent Recording of the Month, conductor Andris Nelsons's *Richard Strauss* box set (24/96 WAV, DG 486 2049), even the softest instrumental lines were easily discernible amidst 90 instruments blasting away.

So now that I'd found that the recent upgrades improved my sound, I needed to know which upgrades were responsible for what improvements. I asked friend Scott Campbell to help hold power conditioners in place and slide wires under and through as I wrestled with occasionally intractable Nordost Odin 2 power cables and reconnected the front-end components to the Audio-Quest Niagara 7000 power conditioner.

But first we listened to one of Scott's favorite groups, Talk Talk. We chose "Ascension Day" (16/44.1 FLAC, Qobuz) and "I Believe in You (Single Version)" (16/44.1 MQA, Tidal). Then we listened to sonorous baritone Andri Björn Róbertson singing Schumann's "Morgens steh' ich auf und frage" (Every morning I wake and ask), from his album *Thorsteinson & Schumann* (24/96 WAV, FUG 787). After that, it was Debussy's colorful Sonata for Flute, Viola & Harp, performed by Emmanuel Pahud, Gérard Caussé, and Marie-Pierre Langlamet, on *Debussy: Sonates et Trio* (24/96 WAV, Erato 0190295773960). Finally, we heard the riotous, pull-out-all-the-stops last movement of *Symphonia Domestica* from the aforementioned *Strauss: Andris Nelsons*.

With the S 1000 out of the picture, we experienced less color saturation and transparency, less integration of orchestral instru-

ments in different ranges, thinner and slightly noisier highs, shallower bass, a (relative) lack of clarity on bass lines, and a grayer background. In relative terms, image localization lacked precision. On "I Believe in You," I missed the silence and space that Stromtank power allowed. Reverb around vocals was obscured, and background detail smudged—all small but discernible, repeatable effects. When we returned to the Stromtank, reverb returned, midrange increased, and I felt immersed in a mystical soundfield.

One of the biggest revelations came when, during another listening session, I moved back and forth between the darTZeel NHB-18NS preamp and the Stromtank battery-powered D'Agostino Momentum HD preamp. I had previously declared the battery-powered darTZeel the most detailed and revealing preamp I'd ever heard in my system. With colors more direct and primary than the D'Agostino's softer, more pastel-rich palette, and a soundstage neither as wide nor as far set back, the darTZeel seemed a champion of directness. With Stromtank battery power, the D'Agostino's ability to convey detail increased to darTZeel levels, and its soundstage magic increased. I'd expected the Stromtank S 1000 to improve the sound of my system, but I never thought it would serve as the missing link to component greatness.

Let there be light

The Stromtank S 1000 and its more powerful family members enable you to hear more of what components, rooms, and recordings can deliver. Think of it as the sonic equivalent of removing yellowed varnish from the paintings of Old Masters. Depending upon the level of electrical noise plaguing your setup, the Stromtank, inanimate though it may be, has the potential to reveal more of the human and musical essence that composers, artists, and engineers want you to hear. ■