



Linn Selekt DSM Network Music Player

An Accomplished Modular Solution

Greg Weaver

The striking-looking Selekt DSM represents the most current and comprehensive execution of Linn's 12-plus-year-old family of digital streaming sources, which now includes four platforms, Majik (starting at \$2999), Selekt (starting at \$5200), Akurate (starting at \$10,250), and Klimax (starting at \$23,375). Jen Cassidy, Linn's Sales and Marketing Director, describes Selekt as a complete reworking of Linn's existing DSM platform, starting from the ground up, one that will define the template for all further DSM developments going forward. And, Linn chose the introduction of this new device to announce its commitment to a comprehensive reintegration to the U.S. market, announcing the establishment of some 25 authorized U.S. dealers.

When I asked Linn's PR officer Andrena McBain, I was informed that DSM isn't *really* an acronym. Though the "DS" part of the designation stands for Digital Streamer, the "M" represents the component's ability to be or do many different things: music, movies, multi-source, multi-room, multi-user, etc. The Selekt and, in fact the entire range of DSM devices, are essentially extremely sophisticated Linux computers. Unlike the typical computer running a generalized operating system like Windows or MacOS, or even a more specialized application computer, such as a file or application server using Unix or Linux, the DSM platform is highly specialized.

By default, the typical computer manages all requests, from opening a web browser, checking email, surfing the web, or editing your digital photos, based on a "best practices" set of global instructions, written to assure that the operating system stays stable and that all tasks presented to the processor are dealt with in a timely and resource-efficient manner. It should be easy enough to understand that by stripping away all those generalized, superfluous requests and processes, and by dedicating its new dual-core processor to specific audio-performance and control processes, and managing only services specifically requisite for the recreation of music, you can build one powerful music-streaming device. Selekt DSM does

just that, and based on my experience as both an equipment reviewer and IT professional, does so in an unparalleled manner.

Mechanical

Weighing just under 18 pounds as configured (more on that shortly), and with a svelte 13¾" square by 4½" tall chassis, the Selekt DSM sits on a troika of low, wide, isolation footers. The sleek, glossy front panel features a central 5" by 3" onyx-black OLED display, which readily allowed me to see any displayable status—including selected source, volume, even the name of the file playing—from my listening chair some 12 feet away.

There are six customizable "smart" buttons just above the display, fitted into the

Digital Focus Linn Selekt DSM Network Music Player

front top “edge” of the chassis. Designed with travel, like piano keys, each may be customized to allow immediate access to any “pinned” content from any source. Sitting just $\frac{3}{8}$ " behind the row of buttons, centered left to right on the top of the chassis, sits a remarkable-looking one-half-inch tall, two-and-a-half-inch diameter dial. Called the “jewel,” this variably illuminated dial provides comprehensive control and feedback directly from the product and allows for diverse and pleasantly tactile interactions with the device.

The rear panel of my evaluation unit was fully loaded. Starting from the left, on the lower half of the rear panel, we have the IEC socket and on/off power rocker switch. Next is the RJ-45 Ethernet jack for the network connection, followed by an HDMI, USB-B, two TosLink optical inputs, two SPDIF inputs, and two more RJ-45 jacks for Exakt Link communication with other Linn Exakt devices on your network. Starting above the second TosLink input are three single-ended RCA inputs, one generic analog in, then two phono inputs, mm and mc, followed by a knurled-nut ground post. Finally, to the right are the left and right speaker outputs, which are very closely spaced. Given the proximity of these outputs, and the elevated chance of inadvertent shorting they present, the use of banana terminations on speaker cables makes the most sense.

Both RIAA equalization and cartridge loading are done in the analog domain, then the signal is digitized, and passed through the other processes and on to the DAC.

Loading options are fixed, with the moving-magnet input set at 47k ohms resistance, and 100pF capacitance, while the moving-coil input has 100-ohm resistance and 470pF capacitance.

The Selekt DSM was originally offered supporting digital formats up to 24-bit/192kHz, but with the most recent firmware the Selekt now supports Direct Stream Digital up to DSD128, as well. The Selekt DSM also integrates seamlessly with Roon, Spotify, Tidal, Qobuz, and Apple AirPlay, and streams Internet radio via TuneIn.

The included highly functional plastic remote houses 19 round individual access buttons. A sectioned group of six shaped buttons (to activate the six “smart” buttons) forms a circle, and a round rocker-style button is set inside that circular formation for scrolling movements—up, down, left, right. Finally, there are two up/down rocker switches for volume control and option changes.

As touched on briefly, the Selekt DSM is available in multiple configurations, starting with the base configuration, which provides network-streaming functions (Ethernet only as of this writing, but Wi-Fi support is planned), Linn’s standard DAC, and a fully functional preamplifier with ten digital and analog inputs, including both mc and mm phono-stages, and analog outputs for connections to pre- or power amplifiers.

You can add the Linn Integrated power amp module, opt to replace the basic DAC with the Katalyst DAC, or do both. The amp cartridge is a Linn-designed, modu-

lar, 100-watt (at 4 ohms), stereo, switch-mode power-supplied, bridged, Class D amplifier, designed to maximize performance and minimize heat dissipation and space utilization. It drops into a preconfigured slot in the chassis. Either or both options are quickly and easily installed by your dealer at your home and can be chosen at any time, allowing users a very flexible upgrade path. I opted to audition the full monty, including the Katalyst DAC upgrade and amplifier cartridge.

The Katalyst DAC represents the most serious implementation of Linn’s fourth-generation DAC architecture to date, and it uses a data-optimization stage that Linn says prepares the digital signal for conversion with enhanced accuracy, helping to minimize errors right from the start of the process. It uses independent, isolated power supplies, tailored to each applied process, helping to eliminate feedback and any destructive influence between processes, again in an attempt to lower overall distortion. A single high-precision clock (with its own independent power supply) imparts greater timing accuracy throughout the entire process. A new ultra-low-distortion analog output driver, said to be less susceptible to noise and degradation than previous drivers, enhances the transmission of the delicate analog signal out of the device. Finally, the establishment of a high-stability, reference-level input voltage, well isolated from other noise sources, allows the analog signal’s amplitude, which is particularly vulnerable to minuscule variations in reference-level voltage, to be generated with much lower deviation. The advances Katalyst affords in lower noise, overall resolution, timbral accuracy, and spatial recreation are quite significant over the base DAC.

Functional

Perhaps the most significant feature offered by the Selekt DSM is something Linn calls Space Optimisation, its own bespoke digital-room-correction technology. It is used to manage the undesirable results of imperfect speakers, speaker placements, and room shapes.

Given the complexities necessary to use Space Optimisation effectively, the purchase of the Selekt DSM includes a visit by your specially trained Linn dealer to install the device and measure and upload your room specifics (and those of your speakers if need be) to dial in optimal settings for your listening space.

The first step in using Space Optimisation requires that you choose your loudspeakers from an existing database of dozens of manufacturers and hundreds of loudspeakers. If, for some reason, your speakers haven’t been included already, your dealer can measure and submit the unique data about them via the Exakt Design Web portal. After the necessary processing, the engineering team at Linn will then upload your speakers to the library for use.

One of the key advantages derived with Space Optimisation is that it allows for solutions to many of the problems most listeners run into in real-world listening rooms. Too few of us have the luxury of being able to place speakers optimally out into the room and away from walls, or, because of furnishings or physical limits, even to place them symmetrically in relation to our primary listening position. Space Optimisation digitally corrects for all such shortcomings and optimizes the system for a much

Digital Focus Linn Selekt DSM Network Music Player

Specs & Pricing

Output: 50Wpc into 8 ohms, 100Wpc into 4 ohms

Inputs: Ethernet, HDMI ARC, TosLink (2), SPDIF (2), USB Audio Class 2, line-level (RCA), mm phono (RCA), mc phono (RCA)

Outputs: Exakt Link x 2, stereo speaker binding posts, spades/bananas

Digital file formats supported: FLAC, Apple Lossless, WAV, MP3, WMA (except for lossless), AIFF, AAC, OGG

Resolutions supported: Up to 24-bit/192kHz, DSD up to DSD128

Dimensions: 13¾" x 4½" x 13¾"

Weight: 17.8 pounds

Price: Selekt DSM, \$5200; with integrated power amp, \$6825; with Katalyst DAC, \$7150; with integrated amp and Katalyst DAC (as reviewed), \$8755

LINN PRODUCTS LIMITED

Glasgow Road, Waterfoot
Eaglesham, Glasgow G76 0EQ
Scotland
linn.co.uk

more natural, engaging, spatially accurate presentation, regardless of real-world limitations.

Earlier versions of Space Optimisation were considerably more limited, allowing only for standing-wave correction for rooms of rectangular shape (only), physical placement within the room, as well as offsetting amplitude-based room modes (i.e., one-note bass). The latest iteration, introduced with Selekt DSM, is dynamic, with all computing managed in the cloud rather than on your local device. Operating from a new interface in an app called Kazoo on iOS, Android, or via a Web portal from a browser in Windows or MacOS, it now includes a three-pronged approach, addressing room modes, speaker and listener placement, and time-delay management. This newest version accommodates non-standard-shaped rooms, time-domain room modes (i.e., boominess), differing wall and floor surfaces or materials, and objects such as doors and windows. And, you can store and recall many different configurations, allowing fine-tuning and experimentation without compromising the settings that the dealer helped dial-in at initial setup.

Practical

At first I was both surprised and disappointed upon the Selekt DSM's arrival to find no manual in the box. As an IT professional and music lover, I wanted to get it set up and start experimenting as soon as it arrived. The response that came from Andrena McBain made perfect sense. "We don't have a manual as such, as we train the retailers and they do all the installations. So there really is no reason to ship manuals." To that end, I would be treated to a visit from Linn Events & Training specialist, Ross Paterson. Ross and I had worked together via Skype to measure and enter all the

data to add my reference Von Schweikert Audio VR-55 Aktive loudspeakers to the Space Optimisation data library.

It had been my plan to utilize my reference loudspeakers for this evaluation. It should come as no surprise that I am strongly opposed to changing more than one item at a time for any product evaluation, but this new Selekt DSM had already mandated abandoning that purist paradigm—it would be replacing my reference DAC, phono-stage, linestage, mono amplifiers, and cabling! I initially felt very strongly that I should try to keep as much else unchanged as possible, which, when looking at this situation, left only my speakers.

Ross arrived as scheduled, and setup was quick and easy. Once in place, connected to my wired network, loudspeakers, sources (initially to my turntable and Roon), we powered it on.

Ross spent roughly the next half hour or so taking measurements of my 45' by 13' by 7' 4" room with a laser measuring device, including doorways, surface types and materials, speaker location, and listener location. During that time, I had installed the Linn Kazoo app on my smartphone and tablet and had started to familiarize myself with its operation. Once all my room data were entered via the Linn software, within a matter of minutes the computations were done, and we had a starting point for Space Optimisation.

While the Space Optimisation effects were discernable using my VR-55 Aktives, and repeatedly refined with more and more enhancements as Ross honed the settings for my room parameters, the

degree of those results was not as remarkable as those experienced at the launch event. While I suspect that should not have been surprising given the demonstration event had used considerably less costly speakers in rooms not already optimized for a high-performance system, I was nonetheless hopeful of a more rewarding experience in my room.

Those results, combined with the fact that my VR-55 Aktives present a nominal 8-ohm load to the amplifier, limiting its output to only 50 watts, led me to abandon using them for this review. Instead, I installed my B&W Matrix 1 monitors on my sand-and-shot-filled, 24"-tall, Plateau-spiked stands. Given that the Matrix 1 is both more typical of products that would be used with a device in this class than speakers costing \$60,000 (the B&Ws would sell for about \$2300 today), and that they presented a nominal 4.5-ohm load to the amp, they seemed a much more effective and logical choice. So, after uploading their measurements via the Exakt Design portal, waiting for Linn's team to complete the computations, and seeing them added to the data library, I was finally all set. Time for a real test drive.

Emotional

From my first interaction with this stylish device, the Selekt DSM was intuitive and easy to operate, and delivered an unexpectedly engaging and moving sonic experience. My primary testing was done using Roon, with my own files and streaming from Qobuz, as well as both my reference Kronos/Helena/Air Tight rig, and a Music Hall mmf

Digital Focus Linn Selekt DSM Network Music Player

9.3 walnut with a Goldring Elite. I used the included remote, the Linn Kazoo app, and the Roon 1.6 app, all with remarkable ease and intuitive convenience. I can say that the Selekt DSM user experience is second to none.

Given my affinity for analog, I started listening using my Kronos reference rig. I very quickly discovered that the inevitable constraints imposed by a fixed mc input stage in this price range (my reference phono stage sells for more than one-and-a-half times the retail price of the Selekt DSM) was clearly limiting my analog front end's more expressive capabilities. Again, after asking myself how likely it might be to find a \$40,000 analog front-end being used with an integrated, one-box solution in this class, I moved to a more appropriate (about \$3500) Music Hall/Goldring system. With this synergistic pairing, I was regularly treated to the joys of vinyl in a way that was more commensurate with the products' respective prices, allowing me to revel in the unmistakable joyous and inimitable sound of LP playback with musical choices that will likely never find their way into digital formats.

While LP playback with Selekt DSM is respectable, it is with digital sources that this new machine shows its real stripes. Its signature sound will be easily recognized by long-time Linn adherents; articulate, detailed, nimble, and well-controlled. While the 50-watt rating (at 4 ohms) may seem modest, I had no issues driving my relatively low-sensitivity (85dB) Matrix 1 monitors to exciting and dynamic listening levels in my relatively large room (nearly 4000 cubic feet).

My musical tastes run from Debussy to Dream Theater, and this modular music-maker delivered the sonic goods with everything I played. It revealed realistic body and accurate tonal color of instruments in small chamber ensembles or jazz trios just as easily as it did the dynamic punch and transient snap of rock 'n' roll or full-scale orchestral performances.

The Selekt DSM/Katalyst DAC system offers solid, accurate, timbres and remarkable transparency, and portrays dynamic events, especially microdynamic shadings and nuances, with exceptional resolution, all without glare or obvious distortions. It fashions a vibrantly three-dimensional, organic soundstage, recreating instruments in a surprisingly authentic manner, given its price, with remarkably accurate spatial information, routinely rendering an expansive, get-up-and-walk-through image.

As such, I found much here to rival even more costly stand-alone DACs. My listening suggests that the Katalyst DAC is an exceptional performer, and well worth the additional cost if you truly wish to experience the full measure of remarkable expressiveness available from this modular-system experience.

Further, the sonic benefits realized using the otherwise unobtainable results of native

Space Optimisation make for a considerably more realistic, powerful, and exciting presentation. Once engaged and properly configured, bass was cleaner with notably better transients; in fact, everything was clearer and better focused. And while the entire spectrum took an unmistakable step closer to naturalness, the soundstage blossomed, both expanding outside, behind, and a bit in front of the Matrix 1s, as well as offering much more definitive location and sizing of individual instruments. Linn's Space Optimisation is the most effective, comprehensive, and versatile version of room-correction software I've experienced.

Invincible?

Who could have foreseen that this Old School audiophile, steeped in the "purer" values of separates and only recently (just within the past half-decade) accepting of the expanding contributions of digital music—mostly thanks to DSD—and taking that enormous step closer toward format agnosticism, could be so unreservedly charmed by such an affordable all-in-one solution? Believe me, no one was more surprised than yours truly.

While my main rig is much bulkier, and costs more than my home, I found the Selekt DSM experience to be an absolute delight, both in its functionality and its rewarding, consistent, and natural sonic performance. While it clearly could not replace my extraordinary main system, it did so much right, was so intrinsically musical, was so fully engaging and listenable, and was so easy to use, that I simply never grew tired of its musical gifts.

Linn created this product category back in 2007 when it made the extraordinary decision to abandon the CD format, going all-in on what was then seen as a highly controversial choice. While it blazed its way as the first established manufacturer to embrace the digital streaming path, other manufacturers, such as Aurender, Cary, Esoteric, and most notably Naim, have since seen the light and have followed closely in Linn's footsteps offering streaming preamplifier devices and taking a reasonable bite out of Linn's market share. Until now...

Selekt DSM's clean, incisive sonics, rife with startling dynamic contrasts, expressive nuances, authentic tones and textures, and expansive staging, won me over in short order. The combination of its distinctly accurate and articulate sound, when taken to the next level by the application of Space Optimisation, easily lifts this new, modular solution to the top of the list of its growing number of competitors. With Selekt DSM, Linn has made a powerful and bold statement that is sure to set the bar for all who follow this now clear and accepted path. Make no mistake, Linn is back, and it means business! **tas**

