



# DELA S50 Switch Review – The switch for the best possible streaming sound

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[https://www.lowbeats.de/test-dela-s50-switch-der-weichensteller-fuer-bestmoeglichen-streaming-klang/?fbclid=IwY2xjawPII9tleHRuA2FlbQIxMQBzcnRjBmFwcF9pZBAyMjIwMzkxNzg4MjAwODkyAAEeTeDsztJtRMMlKEGesvMtsRgsaVG9JuGbqevUKToW0WILUNayrJZVpTS8zU\\_aem\\_UetURNhOf1FYXQ9LQsLKmg](https://www.lowbeats.de/test-dela-s50-switch-der-weichensteller-fuer-bestmoeglichen-streaming-klang/?fbclid=IwY2xjawPII9tleHRuA2FlbQIxMQBzcnRjBmFwcF9pZBAyMjIwMzkxNzg4MjAwODkyAAEeTeDsztJtRMMlKEGesvMtsRgsaVG9JuGbqevUKToW0WILUNayrJZVpTS8zU_aem_UetURNhOf1FYXQ9LQsLKmg)



The DELA S50 network switch (3,750 euros), specially developed for audio, surpasses all previously tested solutions of this type in the LowBeats test.

Wired network connections in digital audio systems have proven sonically superior to wireless Wi-Fi in most cases. However, this requires careful networking and often additional hardware. Network switches specifically designed for hi-fi streaming are a consequence of this. With the S100 ( [see review](#) ), the Japanese brand Melco – now called DELA – had already earned accolades in this field

and secured a permanent spot on **LowBeats** . Currently, a significantly improved version, the S50, is available under the new company name.



Unassuming: The DELA S50 doesn't make as much of an impression as its larger (and much more expensive) siblings, but it's a true high-end treasure (Photo: F. Borowski)

## The network dilemma for streaming fans

Admittedly, the topic of audiophile network switches or LAN cables has its share of pitfalls. Just as wrong as the claim that there can be no difference due to the digital nature of the data is the assumption that network cables or switches can *improve* the sound as if using a DSP . That's simply not possible. As with all parts of a playback chain, one can only try to protect the sound of the music recording from degradation caused by the pitfalls of network transmission and signal processing, and to keep it at the level of the best CD or SACD players, which naturally don't use network transmission. With Wi-Fi, there's virtually no way to prevent the negative effects of this transmission method, but with Ethernet transmission in a home network, there is. Similar to power supply, a lot can be salvaged in the proverbial "last mile."

My recommendation for any discerning music fan is therefore to definitely try a good switch plus better network cables (including optical connections) when streaming, and to disable Wi-Fi on the devices if possible. Ideally, do the same with Bluetooth.

# DELA – New name, more possibilities

Many hi-fi manufacturers have addressed the challenges of networking. Some (by no means all) have achieved considerable success, although very few approach the issue with the necessary technical expertise. In the worst-case scenario, standard switches from the IT sector are slightly modified and sold in a new casing for ten times the price (or more). These are the kinds of products that give the industry a bad name. Most manufacturers are making more of an effort, but still largely rely on off-the-shelf IT components because developing a completely new switch is far too complex and potentially beyond their expertise.

DELA can draw on relevant expertise in IT network technology. Its parent company, Buffalo Inc., is highly knowledgeable in this field. However, access to basic knowledge and materials is only half the battle. One must also understand the specific difficulties and challenges of an audio environment, which differs in its requirements from ordinary IT environments. It is rare to find the fortunate combination of experienced IT network specialists who are also well-versed in the intricacies of the audio world and, ultimately, have access to the necessary budget to develop a targeted solution. This is precisely what happened with DELA's new network switches.

It all started with the S1 , which, as a kind of technology showcase, implemented everything that seemed technically feasible, but consequently became exorbitantly expensive (14,000 euros).

The S5 was derived from it , featuring a similar, though not quite as elaborate, housing and slightly streamlined technology, but still costing a hefty 9,000 euros. The DELA S50 , which is the subject of this discussion, is the next generation of the family, offering almost the same functionality as the more expensive models and based on the same platform, specifically developed for audio, as the S1 and S5.



DELA's larger S1 (above) and S5 switches are the technology donors for the S50. The smaller switch inherits many of their features (Photo: DELA).

At a price of €3,749, it's hardly fair to call it an entry-level model. And from a hi-fi perspective, the S50 certainly isn't. But as it turns out, it's one of the best investments that discerning streaming users can make in their audio system.

## The DELA S50 can do that.

The S50 is a so-called managed switch. This is essentially nothing special and simply means that its ports can be individually configured – which is a real rarity among audio switches. Aside from the DELA switches, the only other managed audio switch that immediately comes to mind is the [SilentPower \(iFi\) OMNI LAN](#), which costs around 800 euros and which I consider the best of its kind in the under-1,000-euro price range.



The DELA S50 has the familiar housing from the Melco era, but is otherwise completely redesigned (Photo: F. Borowski)

But back to the test subject. The S50 offers three SFP+ ports and six RJ45 ports for connectivity. Their configurability is one of the S50's greatest strengths, making it extremely useful not only for hi-fi testers with constantly changing equipment. Three buttons on the front panel (a fourth for dimming the LEDs) allow the ports to be individually configured or switched off when not in use, thus preventing them from picking up and passing on external RF interference. The RJ45 ports can be set to 1 Gbps, 100 Mbps, or 10 Mbps. The SFP+ ports also enable connections of up to 10 Gbps. While such high data rates aren't usually necessary for stereo audio (10 Mbps is generally sufficient even for Hi-Res), users can, for example, connect a NAS and a Mac/PC at high speed. However, this usually requires a suitable [RJ45 transceiver](#) to convert from 10 Gbps Ethernet to SFP+. The S50 has no problem with this.



A look at the back reveals: the power supply is installed internally (Photo: F. Borowski)

The most practical use for one of the SFP ports is to connect the switch to the router via fiber optic cable. Since common routers, such as the widely used Fritz!Box in Germany, do not offer an SFP port for internal network connections, a media converter is required to convert the electrical RJ45 connector to optical SFP. The German DELA distributor 3-h offers [suitable kits and fiber optic cables from ADOT](#) for this purpose .

The S50 and its siblings boast another special feature: internal power supplies. These are precisely tailored to the requirements of the electronics and are not simply generic laptop power supplies. Some might argue that this eliminates the option of upgrading the switch with a high-quality external power supply like the SBooster. Personally, however, I greatly appreciate being able to simply connect a good IEC power cable directly to the S50 and avoid having another bulky cable behind the rack.



Six RJ-45 ports and three SFP module slots. All are freely configurable. And the traffic LEDs can be switched off (Photo: F. Borowski)

# Now things are getting technical...

Back to SFP. The three letters stand for **Small Form-factor Pluggable**. This interface standard is most often associated with optical cables (pun intended), but an SFP connection can also be electrical. More on that later. First, let's look at fiber optics.

The most important advantage of an optical connection between a router and a switch is galvanic isolation. This means that no electrical potentials can arise between these components, which could ultimately cause interference that, in turn, affects the sound. Furthermore, optical cables have the significant advantage that, unlike electrical cables, they exhibit no antenna-like properties whatsoever – regardless of their length.

But nothing is free. The disadvantage of optical connections lies in the need to first convert the signals from electrical to optical and later back again, which means additional components that have their own vulnerabilities (RF susceptibility, noise, etc.). I will come back to this topic later in the section on the DELA C1 cable.

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ForwardBack



The internal design

of the S50. According to DELA, everything here has been specially adapted to the requirements of an audio environment

(Photo: F. Borowski)

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Now, let's continue with the question of why digital signal transmission in a network can even have an impact on sound. As briefly as possible:

Ultimately, it all comes down to noise. Not the obviously loud hiss of old amplifiers or tapes, but noise at the smallest signal level. While this is easy to understand with analog, it causes quite a bit of

confusion with digital, because it's often said that as long as all the bits arrive correctly, it can't sound any worse. But the world isn't that simple, even in the digital realm.

Everyone is familiar with the representation of digital data streams as square waves. In graphs, they always look perfect and crystal clear: a peak is a one, a trough a zero. But in the real world, it's not always so clear. For example, the vertical edges representing the change between "0" and "1" are never perfectly vertical because the rise time isn't infinitely short. Therefore, such an edge is actually more of a ramp, and even that isn't perfectly straight, but rather curved. Overshoot occurs at the transitions until the voltage stabilizes. And then there's the infamous jitter, which, to a greater or lesser degree, blurs and obscures the signal edges due to inaccuracies on the time axis. As a result, the DAC can't convert the signal at the one, precisely correct moment, ultimately leading to deviations in the analog signals.

Some of this apparently operates at the absolute limits of detection. At least with the typical short cable runs in a home network, where we're not talking about data transmission halfway around the world and through countless stations. And yet: The effects are clearly audible. Further research and public awareness are needed here.

## The DELA S50 in practice

A network switch typically performs its duties completely unobtrusively in the background. However, thanks to the S50's configuration options, there's potential for sound experimentation. First of all, I appreciate the fact that there's a switch on the back to turn off the flickering traffic LEDs on the ports. These are only needed to see if data traffic is occurring, which is almost always the case when the switch is connected to the router and end devices, even when no music is playing. When it's clear that a connection is active, the LEDs don't need to flicker indefinitely, as this can be extremely distracting in dark environments. Furthermore, flickering LEDs ultimately generate signal noise and interference. So, turn them off. Might as well do it right.



The S50 is larger than a typical home IT switch, but still very compact by HiFi standards (Photo: F. Borowski). The front panel is similarly designed. There, LEDs are arranged in a mirror image of the rear ports, so you always know exactly which indicator corresponds to which port. The configuration of each port with different speeds is color-coded: Blue = 1 Gbps, Green = 100 Mbps, Orange = 10 Mbps, Red =

off, and for the SFP+ ports, an additional white LED for 10 Gbps. A separate button allows you to dim or completely switch off the LEDs. Only the blue power LED on the far left cannot be switched off, but it can be dimmed to a very subtle level.

As is typical for network switches, all ports are hot-pluggable. This also applies to SFP ports. Cables can therefore be plugged in and unplugged while the system is running without any negative effects such as crackling or humming. With a standard DHCP network connection, devices register on the network automatically.

Aside from the question of sonic impact, one thing about the DELA S50 has particularly impressed me. I have an unusually temperamental device here when it comes to LAN. The MOON 791 ([review](#)), as brilliant as it otherwise is, simply refuses to work with any network cables other than the included cheap CAT-5e cable. It doesn't matter whether it's a cheap CAT-7 or CAT-8 cable from Amazon, or some high-end cable. If it did work with a different cable, there were often dropouts with tracks having a sampling rate higher than 48 or 96 kHz. Furthermore, the MOON previously only worked on ports with a 1 Gbps connection speed. It doesn't like 100 Mbps ports. I've had this problem with all switches, from cheap to very expensive. Now the S50 arrives, and suddenly the MOON is reliably recognized on the network with all other cables, even on 100 Mbps or 10 Mbps ports. And it also plays tracks with a 192 kHz sampling rate without dropouts.

What does this tell us? First, the network interface in my MOON 791 has some kind of problem (which, incidentally, the original test unit didn't have). Apparently, the fault tolerance in this device is too low. Absolutely all other test devices I've ever used with the various switches worked flawlessly – with every cable, on every switch, and on every port. Second, the DELA S50 seems to deliver a particularly clean signal, which the extremely picky 791 apparently accepts. Without precise knowledge of the processes involved, this is, of course, just speculation. But it certainly strengthens my confidence in the quality of the DELA.

## The DELA C1 SFP+ Direct Attach network cable

Earlier, I discussed the technical advantages and disadvantages of an optical network connection. So-called SFP Direct Attach cables, such as the [DELA C1](#), are used in IT whenever the disadvantages of fiber optics outweigh the advantages, which is most likely the case with short connection distances and high data transmission rate requirements.

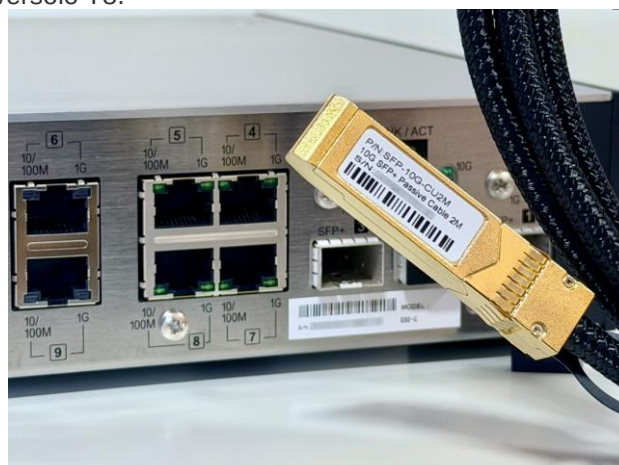
Direct Attach is based on the SFP protocol, but uses electrical conductors instead of optical ones, just like LAN cables. And like LAN, the cable (despite the bulky connectors) is purely passive. But there are a few crucial differences. For example, transmission over RJ45 Ethernet requires a whole host of additional electronics. These components can cause additional noise and other problems.



The electrical (non-optical) DELA C1 allows for a particularly direct connection to the data bus (Photo: F. Borowski)

The name "Direct Attach" is no coincidence, because, similar to Inter-Integrated Circuit Sound (I<sup>2</sup>S), Direct Attach also connects directly to the data bus. In IT, this type of connection is mostly used where maximum speed is required. However, high speeds are not necessary for audio. DELA leverages the advantages of this transmission method instead because of its higher signal purity compared to RJ45.

SFP Direct Attach means less jitter and fewer signal edges. The downside, however, is that Direct Attach doesn't offer galvanic isolation. Therefore, the approach is to isolate the switch from the upstream electronics using an optical cable and then handle the final connection to the end devices (provided they have a compatible SFP port) with Direct Attach. I naturally want to try this out, but I'll have to provide the results with the C1 later, once I have a suitable streamer here. That should happen soon with the eversolo T8.



The DELA C1 Direct-Attach cable is connected to one of the SFP ports (Photo: F. Borowski)

The DELA C1 Direct Attach cable, unlike standard direct-attach cables, is more elaborately manufactured and specifically designed for the demands of an audio environment. And that's why it's significantly more expensive. Of course, those who are skeptical can try out cheaper direct-attach cables from IT retailers and draw their own conclusions.

The conductor material, made of silver-plated solid core OFC copper, makes the cable somewhat stiff. Due to its construction, DELA states that long distances are not possible, so it is specifically designed for short distances. Therefore, the C1 is only available in a 2-meter length.

## Hearing test: The sun rises

Compared to a standard computer switch that I still have, every better, HiFi-optimized switch I've used in my system has offered advantages. These range from barely noticeable to very significant and indispensable, as with the (no longer available) Melco S100 and the [Ansuz Acoustics LAN PowerSwitch X-TC](#) . The DELA S50 doubles the potential in an instant. At least.



The S50 (here next to the Mac mini M4 as a Roon server) handles the distribution of network signals (Photo: F. Borowski)

The effects of network optimizations on sound are essentially always the same, similar to those of good power and grounding systems. Greater calmness and control emerge, the finest details and sonic textures gain sharper definition, becoming more focused and clearly positioned in the soundstage, and a certain harshness disappears. Sometimes more, sometimes less. The S50 also improves my system in this way, but to an extent I previously thought impossible. The impact is

greater than with almost any streaming bridge I've ever used. And even some DAC preamps had less of an effect on the system.

I could now write lengthy paragraphs with specific musical examples, raving about how guitars suddenly resonate more subtly, voices sound more natural, or the room is better illuminated. I'll spare you that, because it misses the point. EVERYTHING improves. And to an astonishing degree.

## Conclusion: This is how an audio switch should be.

The realization itself isn't exactly new: Discerning music streaming users can hardly avoid an optimized network environment. Ideally, this means foregoing Wi-Fi and using a network switch optimized for audio. How much to spend is the typical hi-fi dilemma. Relatively inexpensive solutions, such as [LAN adapters with galvanic isolation](#) or a switch like the [NuPrime Omnia SW-8](#) , can help. More sophisticated solutions like the SilentPower Omni LAN offer noticeable improvements. But the DELA S50 is in a completely different league.

The DELA is also far more practical as a managed switch than most other switches offered for audio. And it's one of the very few that doesn't simply rely on modified mass-produced IT components, but was designed from the ground up for this purpose. And that pays off. I hardly dare try what the much more expensive DELA S5 and S1 models are capable of. The [DELA S50](#) is now my **new reference** . Don't be surprised: The overall rating of 4.7 is only slightly higher than that of the Melco S100, which might raise eyebrows given the significantly improved sound performance. The reason is the increased price, meaning the sound rating, which is always price-dependent, remains unchanged. The practical rating, however, is somewhat higher thanks to the well-designed features and connectivity options. The housing is unchanged, so that doesn't affect the rating either.

DELA S50

2025/12



LowBeats

4,7

REFERENCE

ERGEBNIS

REVIEWS

SOUND 

PRACTICE 

PROCESSING 

IN TOTAL 

The rating always refers to the respective price range.

+ significant improvement in sound quality

+ well-designed connection options

+ exemplary configuration options

+ Integrated power supply, switchable LEDs

Distribution:

Drei-H Vertrieb GmbH,  
Stormsweg 8,  
22085 Hamburg  
[3-h.de](mailto:3-h.de)

Price (manufacturer's recommendation):  
DELA S50 : 3,749 euros  
DELA C1 D20 Direct Attach : 899 euros

**German Distribution:**

Drei-H Vertrieb GmbH,  
Stormsweg 8,  
22085 Hamburg  
[, 3-h.de](http://www.drei-h.de)

**Price** (manufacturer's recommendation):

DELA S50 : 3,749 euros

DELA C1 D20 Direct Attach : 899 euros

**Distribution in all major territories** <https://dela.global/find-a-dealer-dela/>

Mentioned in the text:

Melco S100 review: the audiophile network switch;

Melco N10: music streaming in its purest form;

Ansuz X-TC: superior power switch;

Silent Angel Rhein Z1