



## Melco S100

**Yes, the Melco's price-tag is without a doubt pretty punchy for a product ostensibly doing the same as a conventional IT-type switch costing a fraction of the price. But Melco suggests the networking knowledge learnt from its range of Digital Music Library servers can bring something extra to the party. Let's see, shall we?**

Regular readers will be aware that I have a cautious, if not incurious, relationship with the nuts and bolts of network music. Having been playing files from servers for many years now – more than a decade – I've built up quite an assembly of equipment, and tried many variables, from an ever-growing amount of storage to various cabling and switching solutions, not to mention reviewing a wide range of network audio players and 'audiophile' music servers.

I long ago learnt the importance of isolation in such systems: yes, I hear all the clamour telling me that 'digits is digits' and 'the data is either there or it isn't', but lengthy experimentation has shown the potential for noise to be transmitted between the elements in a network, and the effect it can have on the resolution of the player at the end of than chain. However, I've noted with more interest than fascination the recent stirrings of audiophilia in one unexpected area of the network chain: the Ethernet switch used to hold the whole network together.

It's not that there hasn't been endless online discussion of preferred switches, threads about modifying existing switches, and even 'audiophile' solutions on offer in the past, but the period around the Bristol Show back in February saw a number of new launches suggesting such thinking was going more mainstream. The Melco S100 switch was on display, and cable manufacturer The Chord Company announced its revival of the English Electric brand to be used on its own network switch, demonstrated in pre-production form, and

now reviewed by MC. Not long after, accessories specialist Russ Andrews announced its own switch, also reviewed elsewhere in this survey by MC.

To take things back to basics, simply plugging your network music storage and network player into the router supplied by your Internet Service Provider isn't the way to go; at the very least you need a network switch linking storage and player, with that switch connected to your router to allow connection to the Internet for online streaming services and the like. Most of these inexpensive routers provided by the ISPs can be switched to run in 'modem mode', removing all their routing functions, and that's how I run my Virginmedia Hub 3, with an Apple Airport Extreme doing the routing and providing Wi-Fi access to the network for control apps running on a phone or tablet.

My own network goes further, using a separate switch into which is plugged my main music server, with fibre optic cabling between it and a remote switch allowing the connection of multiple network players to allow comparative testing. The fibre optic is there to break the electrical link between servers and players, so no noise gets through that way, while the switches and fibre converters are powered using linear supplies, to remove the noise of their standard switch-mode plugtop power units. I've also been tinkering with an old Cisco eight-port switch of the kind much raved about in audio networking circles: it's connected using fibre, has had its casework damped using Dodo Dead Mat Hex automotive vibration damping material and at



**HIFICRITIC  
RECOMMENDED**

### Specifications

#### Melco S100

|                    |  |
|--------------------|--|
| Type               | Audiophile Dataswitch  |
| Price              | £1999  |
| Connections        | 4x100Mb and 4x1Gb RJ45 Ethernet ports, 2x SFP/LC fibre optic ports |
| Power supply       | External 12V/1A linear   |
| Dimensions (WxHxD) | 21.5x6.1x26.9cm  |

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the time of writing is awaiting the arrival of the bits needed to replace its internal power supply with an external linear one.

So that sets out the arena into which a review sample of the £1999 Melco S100 'Audiophile Dataswitch' was introduced. Housed in casework to match the company's -10 and -100 components, and powered from an offboard linear transformer (with the potential to upgrade to better supplies), the S100 has four 100Mb RJ45 ports and four 1Gb – the former designed for the best audio quality, the latter for high traffic devices such as a Roon Core device – plus two SFP/LC fibre optic ports for those components so equipped.

The S100 uses a powerful processor to control its operation on a main board built to audio standards, with a 1.5MB packet buffer to deal with any external transmission errors, while audio-grade capacitors are used in the power supply section. The ports are also optimised, as they are in the 'player' connectivity provided on Melco's

Digital Music Library servers, and the high-quality casework, combining a rigid steel chassis and all-metal enclosure, is designed to exclude both mechanical and electrical interference. As a final touch, the LEDs indicating traffic on the ports can be turned off using a rear-panel pushbutton, further reducing noise.

It's arguable whether users of a Melco server, connected straight to their network player using the port dedicated to that purpose, would be likely to add the S100 to their system – after all, the switch is as expensive as a Melco N100, and duplicates some of the functionality of the strategies implemented in the company's server/players. However, the company does suggest there may be some advantages of using the S100 upstream of one of its units on the network connection used for control and Internet access, offering further isolation from incoming noise.

Most potential buyers are more likely to come from those outside the Melco fold, I suspect, encompassing those like me using conventional NAS devices, but without any existing 'network optimisation'. As a result, having tried the S100 at the 'downstream' end of my network – on the end of the fibre optic link – without any conclusive result, I backtracked a bit and connected it straight to my network server, which is a five-bay QNAP running 40TB of storage, and to my Naim ND555/555PS, with an additional connection back to the router to allow network control.

With a lot of cable switching involving replacing the Melco with a reasonable eight-port Netgear, switching back to my fibre-based hook-up and then back to the Melco again, it became clear that the S100 offered noticeable improvements in detail, transparency and overall ease of listening when compared to the Netgear and a couple of lengths of Ethernet cable. There was tighter bass and just a sense of more space, air and focus in soundstage pictures compared to that basic set-up, but no consistent improvement (or indeed loss) when compared to my cobbled together – sorry, carefully constructed – fibre optic solution. To be fair, that set-up has been refined and improved over a long period, and with a willingness to try a range of components (and ditch those not offering repeatable benefits), so I am pretty confident it's as good as I can get it – at least until I try and like something else!

Where the Melco will score is with those who want a simple and effective 'fit and forget' solution, and are willing to pay for that convenience. A cautious recommendation, then: it definitely works, and does so to an impressive extent, but it's not exactly inexpensive.