AqVox Switch 8 SE and CAT 2109

MARTIN COLLOMS INVESTIGATES A HIGH PERFORMANCE NETWORK SWITCH AND INTERCONNECT CABLE FROM AN INTERESTING GERMAN OPERATION

HIFICRITIC RECOMMENDED

Based in Hamburg, Germany, AqVox has been around for some 15 years, and is particularly known for a phono pre-amp called the Phono 2Ci MkII which has the rare option of a balanced hum-rejecting current mode input. It also makes a studio grade mike pre-amp with A-to-D converter called the Mic 2 A/D, plus all sorts of other bits and pieces.

It has subsequently worked on developments in digital audio networks, such as this 800 Euro rebuild of an inexpensive D-Link DGS 108 gigabit network switch. Alongside a custom-modified switch-mode plug-top supply, plus a short length of its new and costly type-2109 network cable (used to connect the switcher to my Naim NDS streamer), all were supplied for this HIFICRITIC review. (The Naim streamer already benefits from a local gigabit network switch which had been mildly improved by using a linear transformer type supply.)

Particular features of the modified AqVox switch include special filtering, and internal RF noise suppression. Waveform shaping was used to optimise data transfer by reducing reflections. AqVox also suggested I should try fitting a 1mm single strand ground cable, from the switch box rear screw

Network Switches

Network switches appear in wired local networks to connect the components, including connection to the outside world via routers in order to acquire music data.

Connections include Ethernet-linked local computer drives holding album stores to synchronise and clock the music and control data, also to link to local computers used on occasion for file management and updates and for music storage. Finally through yet another port there may be a network switch to despatch music files off to the streamer/DAC to replay the audio. In practice there is a constant exchange of data, music packets and control information around this connected network.

Those little switchers, 'data telephone exchanges' are vital for synchronising and directing all the digital data signals, but also perform an important isolating function. Here all the switch ports are transformer coupled and thus largely and beneficially isolate the grounds of the connected equipment. This reduces jitter as seen at the reproducing DAC this located down the replay chain to the streamer.

Network switches vary in cost and performance, the latter to do with switch speeds, from 200MHz up to a GHz rate and ideally reducing residual jitter by increasing timing accuracy, while their power supplies (usually plug-top types) may have some performance effect on the system as a whole according to the residual RF and other noise they may generate.

Low cost switching type supplies, often, but not invariably, sound worse than linear supplies. The question is whether some sound quality variations found are to do with the effect of the supply on the network switch or the local audio system, or both? In its state of fine audio quality tune, my Naim-based system can be affected by electrical noise from peripherals such as net switch supplies and my usual local switch adjacent has an older transformer type supply in consequence.

An Ethernet cable may also figure in network sound quality, both its grade and length, and here are a host of generic Ethernet cables of varying build and sound quality. Industrial grade bulk network cable may cost 5-10 times that of house wiring grade consumer cables and are usually better in performance. And if you take them apart you can see why, as the overall, build, accuracy and quality of materials used is superior. I use an inexpensive gigabit network switch local to the streamer, as my wired control point is 15 metres away, and found further small improvements by substituting 12V linear supplies for the switch mode type supplied (often from disused routers which were made before the more recent proliferation of switch-mode supplies).

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to a local power plug ground connection, which could lower the already low noise floor. M**odifications were encapsulated in a resin.** Our SE version has a phase corrector, and an optimised clock that is said to have lowered jitter. The switch controller chip has additional interference suppression for better ambience. Internal power supply circuits have improved high frequency capacitors. And a butyl rubber damping layer was also applied to the casework.

Sound Quality

Matters did not go entirely to plan as some of the options on offer did not wholly succeed in my system. Initially I powered up the new network switch, installed it as recommended with their power supply, and began auditioning with and without the suggested earth connection to the chassis in place. As instructed, taken to the mains earth via 1mm CSA wire, the sound was a little sweeter than without, but I felt that it also lost a degree of power and drive: a small difference though. Also the switch was not that impressive at first.

Next I compared this 'modified' (improvement aspects not disclosed) switch mode supply with my old Netgear, transformer type. Here AqVox lost out as that old linear supply showed a greater dynamic range and expressiveness in my system, also with better musical timing. Was this result due to the S/M supply unduly affecting the Naim streamer? Quite possibly. If so the AqVox supply might well deliver more in an alternative system.

Now we can get to the meat of this evaluation, comparing the 'tuned' D-Link network switch versus the standard Netgear gigabit switch. It was now obvious that the AqVox-rebuilt switch did deliver the anticipated sound quality improvement. I would rate the gain in timing, expression, clarity, depth, focus and the more convincing spaciousness, as worth 8-12% for my reference streamer sound.

Furthermore, substituting the supplied 0.8m length of AqVox 2109 network cable between the D-Link and the NDS supplied another 5% or so of improvement when compared with the very respectable Meicord link which had been used previously.

The AqVox is therefore altogether a most pleasing combination, particularly in areas where further improvement is very hard won. I continued the evaluation over some weeks noting noticeable and valued further improvements in subtlety and drive as the components were running in from new.

AQ-switch SE	**789Euros**
2109 (network interconnect)	370Euros

Brainwavz Delta

MARTIN COLLOMS

HIFICRITIC **BEST BUY**

MARTIN COLLOMS IS SEDUCED BY SOME TINY EARPODS, THE MORE SO AFTER HE DISCOVERS THAT THEY ONLY COST £20

Odd items cross my desk for possible review, and these apparently well made examples of the usual £35 in-ear variety caught my attention – especially after I discovered that these only cost £20.

Key points are solid aluminium alloy construction, a well interfaced snap-in mount for the wide range of earbuds. An additional Comply memory foam tip for near perfect sealing means virtually noise-free operation for adjacent travellers, and almost no ambient noise leakage into the wearer's ears. The tight seal takes some adjustment, but most users will take to it with gratitude, owing to the considerable benefit in useable signal-to-noise ratio. A good seal also defines good stereophony and the deepest and most powerful bass, as it did in this case.

This type of earphone intimately drives the ear canal entrance and requires very little power for a dynamically realistic result, and theoretically promises a long life provided they are not abused. Inside, tiny moving coil speakers are fitted within a sealed chamber capsule of machined alloy.

Functional details include clear channel labelling, a decent tangle resistant cable with intelligent strain relief at each junction, a full function line remote with microphone and volume, plus track change, Android and IOS. A most detailed operating guide includes excess volume ear safety guidance and a 24 month warranty.

The sound is not high end, nor was it expected to be, but it was sufficiently musical for me to persevere, noting a smooth, fatigue free mid and lower treble. Rock oriented, it had strong bass lines which were well articulated and quite well timed, a smooth midrange, and a mildly dull treble that lacked extension to higher frequencies. Stereo imaging and depth was above average while nothing in the sound annoys.

Weighing up the whole package, this intelligently made and presented product deserves a Best Buy rating.

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