



Scan

3XS SP15

Laptops are certainly getting more and more powerful, but can one feasibly replace a desktop PC? **Hollin Jones** boots up.

3XS SP15

Manufacturer **Scan**

Price **£1,440**

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For many years we were led to believe that top-of-the-range laptops – both Mac and PC – were just as good at heavyweight pro audio and video work as desktop machines. Anyone who actually compared the two for themselves, however, could quickly tell that this wasn't entirely true. Even when laptops first went dual-core – which undoubtedly represented a big performance improvement – you still sacrificed performance and capacity for portability. But now we seem to have reached the point – thanks to the latest generation of Intel processors and other hardware – where there is at last a valid argument to be made that a laptop can do the work of a desktop. To this end, more and more laptops dedicated to audio production are hitting the market.

Key Features

- Intel i7 M620 2.66GHz CPU
- 4GB Corsair RAM
- 500GB Seagate hard drive (7,200RPM)
- Radeon 4570 512MB graphics card
- USB 2.0/eSATA
- FireWire via expansion card
- USB Wi-Fi adaptor
- 15-inch display
- DVD rewriter

Of course, desktop computers have themselves leapt ahead as well in terms of processing power, but for what most people would ask of a professional machine, high-end laptops can really do the business in a lot of cases. This is thanks primarily to three factors, as we will see: CPU, hard drive speed and RAM capacity.

Scan's SP15 system is designed to be, in the company's words, a 'desktop replacement' system. There are plenty of reasons why someone might want a

kinds of background processes that can interfere with recording), they also offer musician-focused support in the event of problems.

It's also worth pointing out that Scan lets you custom-build your system from a large range of components, so you can upgrade things you want to be bigger and faster (or omit things that you don't want). Our review system was pitched near the top of the range, although it's not the most spec'ed-up you could buy if you so wished.

Look and feel

The 3XS' casing isn't particularly exciting to look at but it feels sturdy enough and there's a good range of ports and connections. As well as Ethernet, mic and headphone mini-jacks you get VGA monitor out, eSATA and HDMI, three USB 2.0 ports, a card reader, an ExpressCard slot and, of course, a DVD rewriter. There's no built-in Wi-Fi because of an apparent latency issue that hardware manufacturers are working on fixing for the future. In the meantime, the unit ships with a tiny USB Wi-Fi adaptor that does tie up a port when in use, but is so small that you'll barely notice it (and we found the wireless reception to be fine). There's also an optional FireWire card that slots in the card socket to add FireWire connectivity to the system, which at around £18 is probably a must for the majority of music producers.

The screen is 15-inches and manages a resolution of 1,600x900, powered by a Radeon 4570 512MB video card. The OS is your chosen flavour of Windows 7, which finally seems to have put the ghosts of XP and Vista to rest, not least because it can take advantage of these newer CPUs.

Moving inside, the laptop has a 500GB Seagate Momentus hard drive spinning at 7,200RPM. We always

There is a **valid argument** to be made that a laptop can now **do the work** of a desktop

machine with the power of a desktop but the form factor of a laptop – flexibility, portability and limited space being just a few. As always, when buying a PC for pro audio work it's much better to source from a specialist PC builder as not only will they set up and tweak Windows properly (turning off all

recommend these faster drives as they offer a significant performance advantage in everyday use over 5,400RPM models. This one features a handy protection system that parks the drive heads to prevent data loss if the laptop is dropped. It is also possible to specify a solid-state SSD drive that

offers amazing speeds, although it comes at additional cost and has a lower overall capacity.

The 3XS has 4GB of Corsair memory, upgradable to 8GB for a modest £60 (again, this is something we'd recommend doing if you're going to be using lots of sample-based virtual instruments). Like most laptops, total RAM capacity is limited by physical space (it has only two slots), so if you're going to fit more RAM it's more cost-effective to do it while building the system, otherwise you end up with redundant RAM sticks a year or two down the line.

Remember that this is a 64-bit-capable system, so if or when your DAW and plug-ins are also 64-bit-aware (as Sonar, Cubase and some others are under Windows 7), you will be able to utilise all that RAM, enjoying a smoother ride and a snappier system.

Core values

The processor in our review model was an Intel i7 M620 – a dual-core chip running at 2.66GHz with Turbo Boost and HyperThreading that makes it appear to the system as four cores. Each core is capable of executing two threads at once, so a total of four threads are handled simultaneously. Windows 7 and most modern DAWs are adept at assigning tasks to these threads, so what you get is a system that is essentially able to multi-task exceptionally well; when properly leveraged, it can use all of its processing power to run your DAW projects at low latency.

Software is taking longer than some people would like to achieve efficient multi-processing due to difficulties with coding. Nevertheless, things are improving rapidly and we found that a number of leading DAWs performed very well on this i7-based system, spreading processor load across all four threads fairly evenly and letting us achieve very low latency without much fan noise using a fairly simple USB 2.0 audio interface. The i7 is a properly fast processor and you will definitely notice a jump in performance if you've been using a Core 2 Duo-based system.

Multi-tasking is also impressive under Windows 7 – even when encoding video in the background the system remained responsive. Running a heavy

Scan's 3XS is a solid audio laptop that has it where it counts – in the performance department

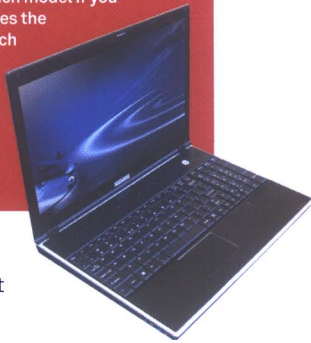
DAW project we were able to achieve low latency without pops or clicks thanks to the multi-threading going on behind the scenes (there is debate as to how well DAWs scale beyond four threads, but that's a bit academic here). The laptop comes with backup software and you can spec-up a range of office, audio and other software.

Portable power

There are still differences between a laptop and desktop system in terms of expandability and there probably

Measuring Up

Scan lets you custom-configure your system so you really can tailor it as you wish. The company also makes a 17-inch model if you need more screen space. Rain recording makes the LiveBook Quad i7 Pro (starting at £1,949) which has an SSD boot drive and optional second hard drive at the cost of removing the optical drive. Apple's 15-inch MacBook Pro is also configurable; an i7 2.66GHz model with 4GB RAM, a 500GB 7,200RPM hard drive and Mac OSX will cost you around £1,838. It has FireWire 800 and USB 2.0.



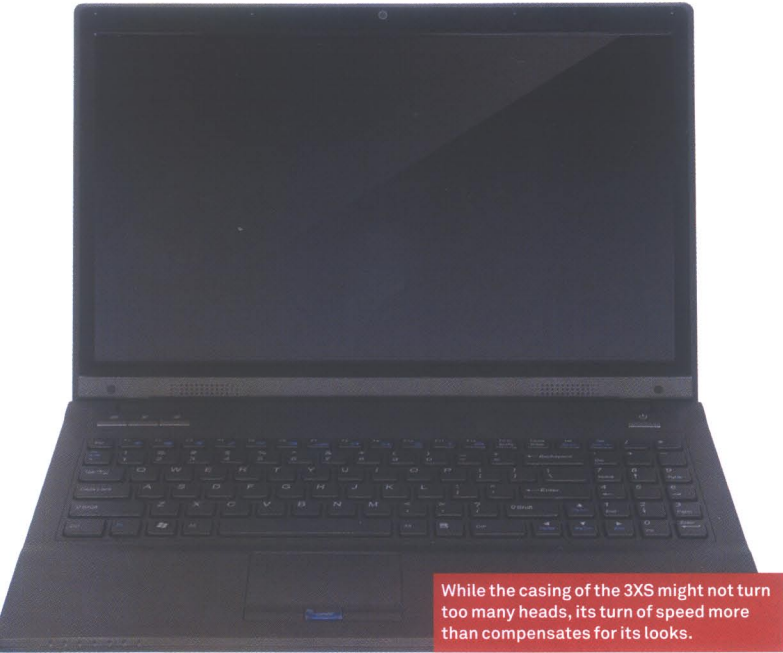
always will be. The question is: at what point does a laptop become powerful enough in its own right to do the work of a desktop machine? And we would seem to have reached that point, at least as far as many people's needs go. As DAWs and operating systems improve in their threading capabilities

and move to 64-bit – thus being able to address larger amounts of RAM – processors like the i7 really come into their own.

The 3XS might not win any design awards, but this is a solid and powerful laptop dedicated to audio production and more than capable of handling any other task that you might care to throw at it. For the relatively small difference in price we'd recommend opting for the full 8GB of RAM, the fast hard drive and powerful CPU to make it a force to be reckoned with. **MTM**

Method Spot

Things are getting slightly confusing in the CPU world. Intel's latest i7 processors are a single processor with two cores, each of which can process two threads. So it's a dual-core CPU, but it appears to the system as four cores, since each core can effectively do two things at once. Dual-core (and indeed quad-core) systems generally benchmark faster than dual-processor systems because they don't have to pass data to another chip to work on it, they keep it inside. These also support Turbo Boost, which means that when a task is using one or two threads rather than all four, the system can boost the speed of the cores in use beyond the stated clock speed to get the job done faster. Modern operating systems and DAWs are getting pretty good at taking advantage of this, which is great news for the end user.



While the casing of the 3XS might not turn too many heads, its turn of speed more than compensates for its looks.

MTM Verdict

- WHY BUY**
- + Very fast processor
- + Great performance for multi-tasking and multi-threaded apps
- + Fast and spacious hard drive
- + Plenty of I/O
- + Wireless and card accessories are inexpensive
- + 64-bit system
- + Low-latency audio performance
- + Upgrade to 8GB RAM at reasonable cost

- WALK ON BY**
- Fairly pedestrian to look at
- Wi-Fi dongle ties up a USB port

A solid audio laptop that has it where it counts – in the performance department. The powerful CPU and a modern 64-bit system cope with whatever you throw at it.

