



## London College of Music BUILDING THE WORLD'S LARGEST REDNET SYSTEM

Founded in 1887, the London College of Music has been a part of the University of West London since 1991. Today it has one of the largest music technology departments of any European educational institution, spread across two sites in Ealing, West London. Over the last few years the College has undergone an extensive building and refurbishment programme, headed by Technical Manager, Richard Liggins, who is responsible for studio facility design and technical development of the department's facilities. Today, UWL's London College of Music has installed the world's largest RedNet installation, featuring 42 RedNet units.

LCM had used Pro Tools as its primary music recording platform for several years, but with the arrival of Pro Tools 11, the college decided to look into moving over to HDX systems. Although integrating all-Avid systems would have been technically straightforward, Liggins notes, the College was aware that there were many other options in the marketplace and felt they needed to evaluate some of the possibilities – including RedNet, Focusrite's range of Dante-based audio over IP networking interfaces.

In addition to listening tests, they considered other factors, such as whether or not the hardware would stand up to heavy usage by large numbers of students. "The notion for me," says Liggins, "was, 'What does it sound like? Is it good enough to replace all the I/O we've got?'"

With RedNet, the answer was 'yes'. "I was very, very impressed by how it sounded," says Senior Lecturer, Andrew Bourbon. "Having heard a bunch of competitors, for me it offered a more detailed presentation that still retained musicality. I think RedNet strikes an excellent balance." It was then that the London College of Music staff began to realise what enormous opportunities were offered by RedNet's audio networking capability: not simply linking recording areas together but also making it possible to capture audio – and record it – almost anywhere there's an Ethernet socket. Bourbon had experience of audio networking systems in the live sound environment and immediately saw the possibilities for RedNet at LCM. When the costs were added up it made excellent financial, as well as technical sense, and thus the first phase of what is currently the world's largest RedNet installation began.

RedNet employs Australian company, Audinate's Dante audio networking technology, which uses standard Cat5e or Cat6 Ethernet infrastructures to transmit high channel counts of high bandwidth, uncompressed and sample accurate digital audio with imperceptible latency. Although LCM's existing network infrastructure could have been used, the decision was taken to lay a separate dedicated audio network as part of the "Future Campus" building and refurbishment programme. Two standard 48-port Cisco Gigabit Ethernet switches were installed and as the network is fully distributed, it can be managed from any network node rather than requiring central control. Each of the available RedNet I/O units allows

### About RedNet

Launched in 2012, Focusrite's RedNet range was one of the first to adopt the Dante audio-over-IP network as the infrastructure for a new and versatile range of products.

Since then, RedNet has become increasingly popular for a diverse range of audio applications, from theme parks to opera, from studio to major live events.





**“RedNet is not only excellent studio I/O, it’s also enabled us to integrate teaching rooms, theatre production rooms, Mac labs and performance spaces into our roster of recording spaces with only the installation of a Cat6 cable.”**

**RICHARD LIGGINS,**  
TECHNICAL MANAGER, LONDON COLLEGE OF MUSIC,

different types of signal to be brought into the Dante network, with RedNet 1 and RedNet 2 providing eight and 16 channels of Focusrite’s precision A/D and D/A conversion respectively; RedNet 3 offering 32 channels of digital I/O – AES, S/PDIF and ADAT; and RedNet 4 offering eight of Focusrite’s highest quality mic/line inputs with full remote control along with DIs. The latest addition on the I/O front in the RedNet D16 AES unit, which adds 16 channels of AES/EBU I/O with network redundancy in a compact 1U unit.

Meanwhile, RedNet 5 offers a bridge between the Dante network and Pro Tools|HD, which was ideal for use with LCM’s multiple Pro Tools|HD installations. “They work!” says Liggins. “The great thing is that the units do what they say on the front panel – they’re simply I/O. And there’s no issue connecting them to Pro Tools,” he goes on. “You just plug the thing in, Pro Tools says ‘hello’ and there’s the audio.”

RedNet 5 makes the Dante network’s interfaces appear as standard Pro Tools hardware, allowing them to be seamlessly integrated into a system. At LCM, 14 Pro Tools HDX systems are linked into the network with RedNet 5s, covering six tracking studios, three surround rooms and teaching rooms, while performance spaces are fitted with RedNet mic pres and A/D-D/A interfaces for playback. An additional forty Logic and Pro Tools Native workstations can join the network thanks to the Dante Virtual Sound Card driver software, which is installed on all of the machines around the campus. Altogether there are 42 RedNet units installed at UWL - three RedNet 4 mic/line input units, nine RedNet 1s, 12 RedNet 2s and a RedNet 6 MADI Bridge installed at LCM in addition to the RedNet 5s – all supplied to LCM via leading education technology provider Academia. And that’s just the story so far: the final stage of the Future Campus programme calls for a new 15-room building at Ealing Film Studios with a fibre optic link to the main campus. “We’ll be connecting it up for RedNet, so we can use it as a performance and recording space as and when we need it,” says Liggins.

The MADI capability is set to become quite important, too. LCM trains a lot of theatre sound engineers, and DiGiCo consoles are de rigeur in these environments. Their RedNet 6 provides a 64-channel link to a MADI-equipped DiGiCo console, linking it with the rest of the campus network. RedNet will also allow simultaneous multiple recording of theatrical performances and other works that take place in the theatre, and encourage and support inter-departmental collaboration. RedNet is already changing how the College works. Liggins explains, “People are coming to us everyday with new ideas as to how to utilise RedNet’s capabilities. Everything from multi-room recording to remote performance, distributed speaker networks and multichannel diffusion systems has been proposed! I love the fact that every day somebody comes up with another way of making use of it.”

“We have students who come in, and they want to track into their own computer,” Bourbon explains. “We had an example: a group of students going into a studio – they’ve got a copy of Dante Virtual Soundcard, and they were able to go direct from that quality recording room into their own laptop. It’s just preparing them for another part of industry that they’re going to get used to.”

“In the end,” Liggins concludes, “if the RedNet units hadn’t sounded any good, we wouldn’t have bought them. So... it’s down to the quality of the kit and the quality of the sound. They’re great!”

To learn more about RedNet, head to [www.focusrite.com/rednet](http://www.focusrite.com/rednet)

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