

Roon: a short story

MARTIN COLLOMS HAS BECOME A ROON CONVERT – HERE HE CHARTS HIS PATH TO ‘ROONIFICATION’, USING THE COMPANY’S NUCLEUS+ CORE UNIT

I’d encountered Roon music playing and cataloguing software on a few occasions, as well as its predecessor, the Sooloos music storage and handling system, with its attractive graphical presentations of tracks, artwork and music cataloguing. Acquired by Meridian some years ago as the heart of its streaming solution, Sooloos was later spun off as a separate company, eventually becoming Roon in 2015. But the heart of the system has remained: an informative, easy to use music management system, based on extended metadata and intelligent cataloguing of content. It has seen several iterations bringing it to the present level of refinement – in fact to a level where I felt that I just had to try it out.

At the heart of any Roon implementation is what the company calls the ‘Core’: either an existing computer on the network running Roon Core software, or a dedicated device running Roon OS, the company’s operating system. As has been pointed out in these pages, it’s possible to build a Roon Core with very little computer knowledge, for example using one of Intel’s NUC compact computers: one need only add memory and a solid state drive to run the software, which is downloadable and easily installed onto a NUC.

How much internal storage you add is really a matter of personal choice: the Roon Core computer doesn’t need to act as a music server, but instead can access other music stores on the user’s network. AE, for example, runs Roon on a NUC whose only purpose is to run the software, which accesses music libraries on a number of NAS devices on his network. Control is then via computers or phones/tablets

running Roon, and playback via a range of Roon-ready audio hardware.

If all that sounds like a lot of complication, you can do as I have, going for the official factory-built unit, a Roon Nucleus+, the more expensive of two ‘turnkey’ solution the company offers. Both offer a similar configuration, which is essentially an Intel NUC plus SSD storage in a custom-made fanless case, with Roon OS preinstalled and configured for more or less plug and play operation. It comes with a good quality, electronic switching plug-top power supply which will satisfy most applications, while for the more particular, accessory linear supplies may be obtained such as the Longdog Audio unit that has also come in for trial. (see review)

The two versions of the unit – the Nucleus and the Nucleus+ – are based around the Intel i-series CPUs: the less expensive model, at £1550, uses an

i3 processor and 4GB of RAM, while the '+' we have here, at £2550, upgrades this to an i7 and 8GB of RAM. Both models have a 128GB SSD to run the operating system, and the basic difference between them is that the more affordable one is described as being for music libraries of up to 10,000 albums or 100,000 tracks, while the pricier model is for larger libraries. This isn't to do with storage capacity, but rather processing power: while the basic model offers basic functions such as headphone crossfeed, and loudspeaker positioning correction, the '+' model is also capable of all the DSP tricks baked into Roon, of which more in a moment.

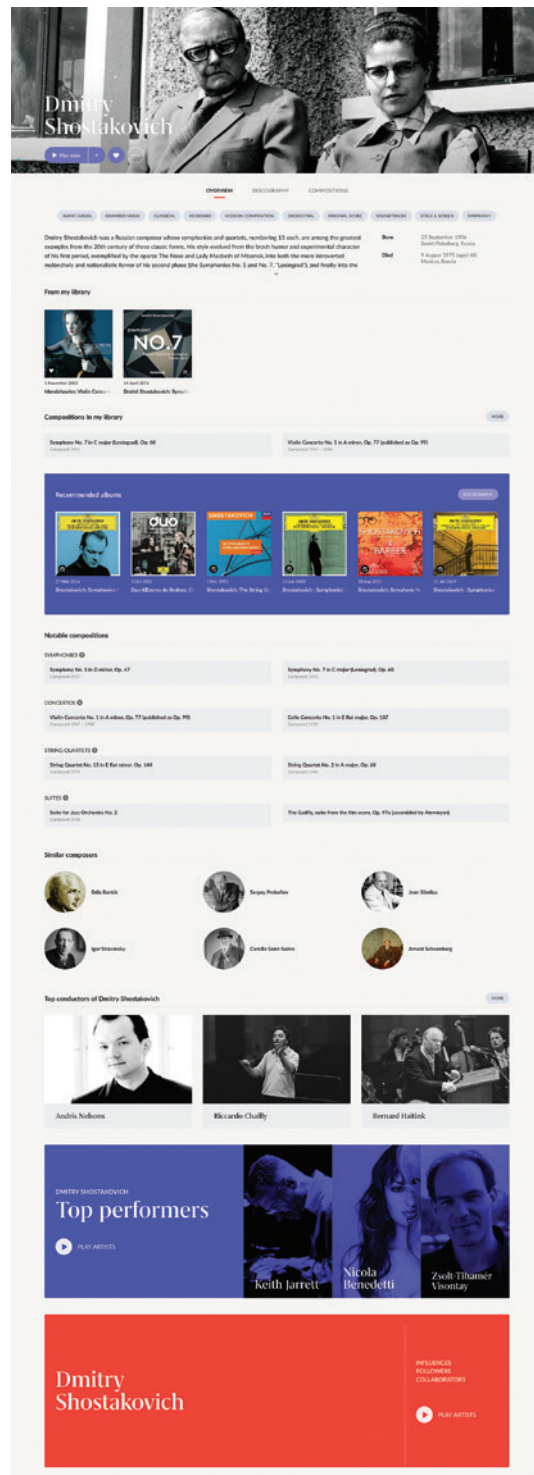
Nucleus is designed to be 'pointed at' external music libraries, be they on the user's network or connected directly to the unit's USB ports, but those with a modicum of computer confidence can open up the unit and install internal storage: a 2.5in SSD or HDD can be installed using mounting rails supplied, and connected to the SATA cable already installed. Or, of course, one could ask the supplying retailer to deliver your Nucleus with such storage already in place.

Powerful DSP

I admit to taking Roon still more seriously when I had become better acquainted with the powerful DSP feature it includes, whereby relatively easy to load pre-calculated filter software may be installed, and invoked at the flick – sorry touch – of a software button. This includes custom equalisation defined by the user, and also eq for specific audio equipment, such as phase correction for some loudspeakers. As well as being powerful, Roon DSP is almost non-invasive sonically – in contrast to many such facilities, and I appreciated the more powerful DSP of the Nucleus+, catering for advanced time domain enhancement filters such as those I use for the FinkTeam loudspeakers.

The Nucleus may be seen as a kind of music management device, library and playback control hub; it brings together high quality on-line music streams such as Tidal and Qobuz and more, allowing their huge music catalogues to operate seamlessly in conjunction with your own music library. This capability is more powerful and valuable than you might first imagine.

As a control point, the Nucleus has no 'conventional' audio outputs of its own: there are no DACs within, but instead it delivers digital audio signals to replay devices via a network connection – my preference – or via USB and HDMI where it also works very well. It also has advanced programming including JavaScript and custom set up facilities, which programming cognoscenti may wish to utilise. It also supports high-def formats, including DSD files, throughsome housekeeping before they can be



played, depending on the capabilities of the device to which the Nucleus is sending the data.

Despite my electroacoustic engineering background, my skills remain more empirical than mathematical, and I rely on carefully planned and executed listening tests to judge advances in audio engineering. But before I did that, it was explained to me that I also had to parcel up all my digital albums from the Core and the NAS drive and get them in FLAC format rather than the WAV files which had

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RECOMMENDED**

SPECIFICATIONS NUCLEUS+

Library capacity Over 10,000 albums (100,000 tracks)

Multi-room streaming 6 simultaneous zones

DSP capability
All DSP functions available.
12-19V DC, 2.5mm ID, 5.5mm OD, 11mm L
No Fan, 2 second boot time
2 x USB3.0 (can be used for hard drive and/or DAC)
HDMI (stereo and multi-channel audio output)
Gigabit Ethernet LAN:
iOS, Android, macOS, Windows

Internal storage slot
2.5" SATA SSD or HDD up to 9.5mm drive height
Drive not included

Bitrate up to 32-bit/768kHz
PCM, DSD512: will unfold MQA, for example with Naim streamers, offering a compatible format at 88.2kHz or 96 kHz

Dimensions WxDxH
212mm x 156mm x 74mm

Weight 2.5kg

Prices Nucleus £ 1,550
Nucleus Plus £ 2,550 (includes one year Roon subscription and 2 year guarantee)

Nucleus/Nucleus+ is guaranteed against manufacturing failures (faulty components and defective materials) for a period of two years from the date of purchase.

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served the Naim setup so well. I had stuck with WAV as earlier iterations of streamers replayed some recordings with little more pizzazz in WAV format.

Now I find that ROON has quietly insinuated itself into my digital music life, and has become the go to facility when choosing what to play. It makes other methods of access to the terabytes of music stored in the network connected drives seem long-winded and relatively opaque and it seamlessly combines these with Tidal and Qobuz, among other sources, for real time online access for streaming download of a huge range of music, both in variety and music types. Other music providers may also be enabled.

While no programmed system is perfect, Roon's power lies in the curation, ordering, cataloguing and classifying of your music in ways that readily enables access. And thankfully classical composers may be found by surname and Christian name. That huge database, constantly updated, is the price of entry (plus the controlling software updates): both units come with a one-year subscription, but beyond that the cost is US\$12.99 a month (or \$9.99/month if you choose annual billing, so just under \$120), or \$699.99 for a lifetime subscription. It's said that ROON now has over 100,000 subscribers.

I enjoy the Nucleus's near-instantaneous wake up from standby and the seamless operation possible from a modest, four year old iPad. Volume control is available by touch here for fully integrated operation but since this is a DSP function, which in my case would be tasked to the streamer DAC, this is better performed to a consistently higher resolution by a dedicated analogue control, in my case a Townshend Allegri Ref which follows the NAIM ND555 streamer in the path to my power amplifier. Left on the network and thus connected to the Internet, Roon has so far operated seamlessly for nearly a year. With it comes excellent documentation and support backup and not least the very helpful Roon Knowledge website.

A resounding success, Roon adds significantly to your listening pleasure and is highly recommended.

