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OCTOBER 2021

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MEASUREMENT



## TECHNICS SU-R1000 amplifier



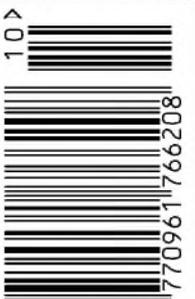
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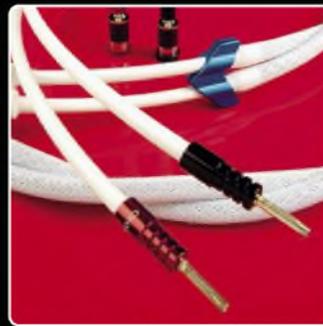


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**7 PAGES OF LETTERS - THE BEST WINS A PAIR OF  
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Paul Rigby, Martin Pipe, David Tutt



**I**f you want a powerful amplifier in a small case, a Class D NCore amplifier from Hypex (Netherlands) has become a popular choice" I said last month. Reason being NCore has overcome all the problems of Class D, notably high frequency distortion, load sensitivity and d.c. on the loudspeaker terminals.

So I was a bit taken aback to encounter all these problems on Technics new SU-R1000 Reference not-Class D amplifier you can read about on p10. I have to call it that at their insistence, but that it's not Class D is a technicality: all the same issues arise. It is what is commonly termed an 'analogue switching amplifier'. These have been around for 20 years or more, without gaining popularity – so a surprise that Technics should try again in unconvincing fashion.

Producing a 'digital amplifier' is an amusingly fruitless goal. No one can agree on what such a thing is in the first place, and with no definition just about anything goes. Ironically, a Class D amplifier is perhaps the last potential contender for the title even though there's a big D in its name. In purest form the pulse streams lack numeric value (although they can be given one). But DSD is the same and we think of it as "digital", so is a Class D amplifier digital? Possibly!

There are other forms of 'digital amplifier', those with digital inputs that are converted to analogue by a DAC for example. Arguably more deserving are those that are totally digital internally, turning all analogue inputs to digital through an ADC. This approach is becoming more popular because all sorts of tricks can be coded in: filters, tone controls and gain adjusters all come to mind, including phono equalisation curves.

I've yet to be convinced that Class D sounds better – even when done perfectly. Analogue Class A/Bs do a near-perfect job in any case, so hardly surprising. The real benefit of Class D – or Class Z or whatever – is economic and 'green-ness'. A small, lightweight amplifier that draws little mains power and costs peanuts. Like it or not, Class D makes an inarguable case and we will be hearing much more from it in future.

**Noel Keywood**  
*Editor*



## hi-fi world

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## verdicts

●●●●●●	<b>OUTSTANDING</b>	amongst the best
●●●●●	<b>EXCELLENT</b>	extremely capable
●●●●	<b>GOOD</b>	worth auditioning
●●●	<b>MEDIOCRE</b>	unremarkable
●●	<b>POOR</b>	flawed
£	<b>VALUE</b>	keenly priced

## ELECTRONIC MAGAZINE

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## testing (see [www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk) for full explanations of all our tests)

To ensure the utmost accuracy in our product reviews, *Hi-Fi World* has extremely comprehensive in-house test facilities, and our test equipment - from big names like Rohde & Schwarz and Hewlett Packard - is amongst the most advanced in the world.

Loudspeakers are measured using a calibrated Bruel & Kjaer microphone feeding a Clio-based computer

analyser, using pulsed and gated sinewaves, in a large room to eliminate the room's influence. Pickup arm vibration is measured with a Bruel & Kjaer accelerometer.

No other UK hi-fi magazine has in-house testing, and none has access to such advanced tests across all types of equipment. That's why you can depend on *Hi-Fi World* reviews.



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# news

## ATTESSA STEPS

Hats off to Roksan, who have just introduced the all-new Attesa range of hi-fi products. Developed in-house, the range currently includes two integrated amps (one with streamer), a CD transport and turntable. Roksan's goal was to match "class-leading...lifelike sound" with "minimalist, intuitive design". The £995 Attesa integrated amplifier features 80W per channel output (8 ohms), high-performance hi-res DAC, Bluetooth, four digital inputs (two optical, two coaxial) two line-level inputs, an MM phono stage and a friendly one-touch-dial user-interface with haptic feedback. A further £500 buys the hi-res streaming version with app-driven BluOS support for internet radio, local playback of numerous formats (including FLAC, MP3 and MQA) and streaming services like Spotify, TIDAL, Deezer and HDTracks. Those with more physical music collections will appreciate the matching CD-R compatible disc transport with coaxial output (£495) and the £995 plug-and-play Attesa turntable. This British-built belt-driven deck features electronic speed-control, Xerxes-inspired isolation feet, built-in phono stage and unipivot tonearm pre-fitted with Dana MM cartridge.

Further details: [bit.ly/3xsZUoh](https://bit.ly/3xsZUoh)



## WHAT'S THE KATCH?

Dali was one of the first manufacturers to hop on the Bluetooth loudspeaker bandwagon with the distinctive Katch model it launched in 2016. Five years later we have the £329 Katch G2. Available in three finishes, the new model supports the latest Bluetooth 5.0 standard for "dramatically improved" range and sound quality from the codecs it supports (aptX/aptX-HD/AAC).

Despite its small size, the G2's extruded aluminium body accommodates two woofers for "considerable...low-end punch" and two dome tweeters. The original Katch's 24 hour battery life has been extended to 30 hours, and although it's already stereo a TWS (True Wide Stereo) mode allows two G2s to work together – one covers the left channel, and the other the right, for improved separation. There is auto-sensing of the 3.5mm analogue input, 2x25W Class-D amplification and USB device-charging.

Further details, Dali: <https://bit.ly/3itM000>

## YOU'RE GROUNDED

Wiltshire-based cable manufacturer Chord Company has taken its proprietary ARAY cable performance-enhancing technology – originally a "mechanically-tuneable configuration incorporated within the construction process" - and optimised it for a new range of GroundARAY grounding devices. Intended to reduce high-frequency noise, the cylindrical GroundARAY 'absorption devices' - available in RCA, DIN, BNC, RJ45, USB Type-A, XLR male and XLR female variants - plug into unused sockets on your AV equipment. Described as providing a "low-impedance route for HF noise to pass through...thereby pulling it from the signal ground" Chord claim that their use will "directly-improve" the noise-floor. Filled with a carefully-chosen material to deaden noise, GroundARAYs are terminated with "ultra-high-bandwidth connectors...made to a very high standard". They are, we're told, at their most effective when used across several devices in a system - analogue, digital and even video socketry. Pricing starts at £550.

Further details: [Chord Company, https://bit.ly/3An1fz4](https://bit.ly/3An1fz4)



## BREATHE SOUL INTO YOUR MUSIC

Japanese audiophiles have long-loved the sound of valve audio. When we were replacing our glassware with solid-state, they acquired our cast-offs. Walking around Tokyo's brightly-lit Akihabara district, you'd spot lovingly-restored Quads and Leaks alongside modestly-priced homegrown amps of low power. At the other end of the scale, we have products like Audio Note/Kondo's flagship Kagura 2i monoblock. Aimed at those who "indulge in the deep charm of music", they're currently being imported by Select Audio... for £175,000 per stereo pair. A 12AU7 is used for gain, while two 6SN7s drive a parallel single-ended output stage implemented with two 211 output triodes – valves originally designed for transmitters. Each Kagura 2i contains three purpose-designed mains transformers and four GZ34 rectifiers. Other features include 50W output (5% THD), 'modularized' short-path design and the extensive use of audiophile-grade components including silver-wound output transformers (with 4, 8 and 16 Ohm taps).

Further details: [Audio Note](http://Audio Note), [bit.ly/3IHsgZW](http://bit.ly/3IHsgZW); [Select Audio](http://Select Audio) (UK distributor), [bit.ly/2X0vUnb](http://bit.ly/2X0vUnb)



## CHIP OFF THE BLOCK

Now in its Mk2 guise, after less than two years, is Primare's £450 NP5 Prisma streamer - which adds full network playback to "virtually any component with a digital input... whether stereo or multi-channel". Interestingly, the speedy redesign was prompted by an AKM chip-factory fire that disrupted supplies of a key component - allegedly a reclocking device associated with the selection of sampling rates. Primare modified the circuit to accommodate a readily-available alternative with no impact on performance; indeed, the Mk2 adds one new feature - MQA passthrough - that wasn't possible on the original NP5. All of the Prisma-driven goodies that made the compact app-driven NP5 so popular, including AirPlay 2, Bluetooth, Chromecast built-in and 'Roon Readiness', are supported by the Mk2; Primare expects Spotify HiFi and Tidal Connect to join the repertoire shortly.

Further details: [Primare](http://Primare), [bit.ly/3s7n96j](http://bit.ly/3s7n96j)



## TONBRIDGE AUDIO JUMBLE

After a Covid-enforced absence of two years, the next Tonbridge Audiojumble is scheduled to take place on Sunday 20th February 2022. The sorely-missed Kent gathering is terrific fun – and a great source of used hi-fi, recorded music and the electronics of yesteryear. Stallholders can start booking space six weeks prior to the occasion.

Further details: [www.audiojumble.co.uk](http://www.audiojumble.co.uk)

## BLACK SWAN

Swan Song Audio's \$1,600 Mini Black headphone amplifier is, unusually, built into a 3D-printed case – this, and the green lighting within, give it a very distinctive appearance. Also inside are a Cirrus digital receiver, Analog Devices upsampling of 16bit material (to 24bit 96kHz) and Burr-Brown DAC. The latter drives a Class A 'diamond-buffer' output stage, built from discrete components and capable of outputting 1.7W into 8 ohms – loads of up to 600 Ohms are supported. The Tulsa firm naturally recommends its own highly-distinctive 33 Ohm wooden-bodied headphones (\$1,750) as a suitable partner. An on-board lithium polymer battery, charged via a 5 Volt wall-wart, allows the built-to-order Mini Black to yield as many as seven and a half hours of listening. Other features include two inputs (optical and USB), volume control thumb wheel (with high/low gain switch to accommodate different headphone sensitivities) and 3.5mm unbalanced output.

Further details: [Swan Song](http://Swan Song), [bit.ly/3ItTGM](http://bit.ly/3ItTGM)



## BLAST FROM THE PAST

Hot on the heels of Rogers recently-announced £4,000 E20a/ii integrated valve amplifier comes a 'limited edition' model based on the distinctive mid-1990s E40A. And we really do mean limited; only ten of these E40Aii LEs will be made. There's a good reason for this; Rogers' head designer Andy Whittle discovered a hoard of E40A 'bits' while working for Audio Note, enough for ten amps. Sittingbourne-based Rogers distributor Retrotone is assembling and marketing the burgundy-finished result.

The E40Aii LE features a revised phase-splitter and driver circuitry, built around 6SN7 double-triodes and one ECC83. Its 40W Class-A power amps, meanwhile, employ a total of eight 6L6GC beam tetrodes. Four line-level inputs are provided, as is a genuine tape-loop with 'monitor' switch. Assuming they haven't all sold by the time you read this, an E40Aii LE can be yours for £4,999 – or £5,499 if you want an integral ECC83-based phono stage.

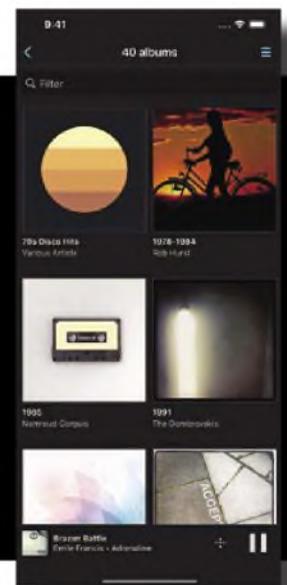
Further details: [Retrotone, bit.ly/3Ai85Wu](http://Retrotone.bit.ly/3Ai85Wu)



## ALL TOGETHER NOW

What do Arcam, JBL and Mark Levinson have in common? Twenty years ago, the answer would have been "they all make hi-fi". Today, though, they're all owned by the Harman 'Luxury Audio Group' so the free MusicLife app their parent company has just "completely updated" can serve a range of connected products from all three brands. It brings together streaming services (including Napster, Qobuz and Tidal, but not Spotify), Internet radio and locally-stored music to products as disparate as the Solo, CDS27/50, ST60, UDP41 I, HDA-series AVRs and SA30 (Arcam), JBL SA750, JBL Synthesis SDR-35/55 and Mark Levinson Nos. 519 and 5101. MusicLife now provides direct access to 'favourites', compatible audio devices and the 30 last-played items.

MusicLife, via [Google Play](https://play.google.com/store/apps/details?id=com.musiclife) or [Apple App Store](https://apps.apple.com/uk/app/musiclife/id1046444444)



## SONY GETS THE BLUES

Now available in a choice of four colours (the latest of which is 'Midnight Blue') is Sony's WH-1000XM4 wireless headphones. A sophisticated QN1 DSP engine works with four mikes to cancel noise in a range of acoustic environments and practical operating modes. The WH-1000XM4's Bluetooth chip can be simultaneously-paired with two devices, for quick switching between them. High-speed LDAC is also supported for Sony hi-res audio. Analogue amplifiers power the 40mm LCP-diaphragmed drivers, although the WH-1000XM4 can also be used passively from a headphone output. Other features include a configuration app, 30 hour battery life and voice-assistant compatibility. Officially priced at £350 some e-tailers are already offering it for less than £200.

Further details: [Sony, https://bit.ly/3jjgESl](https://bit.ly/3jjgESl)

## TRANSCENDENTLY YOURS

New cables from Maine-based Transparent Audio are said to provide "transcendent music listening experiences, in connoisseur-level audio systems comprised of the best components available". The new lineup is topped by the Generation 6 Magnum Opus range of speaker, RCA and XLR cables. The resin-filled 'bulges' in these ultra high-end cables (example: £44,690 for a pair of 1m XLRs - no, that's not a typo!) are vibration-resistant 'network enclosures', into which are built calibrated low-pass filters. Each hand-built cable involves many hours of sorting, measuring, assembly and testing; the pricing no doubt reflects this. Upgrades from some Generation 5 Transparent products are also possible.

Further details: [Transparent Audio, bit.ly/2X4QUt7](http://TransparentAudio.bit.ly/2X4QUt7); [Absolute Sounds \(distributor\), bit.ly/3jzSZEL](http://AbsoluteSounds.bit.ly/3jzSZEL)



# D For Different

Technics Reference SU-R1000 amplifier is digital but different. Noel Keywood explains.



I have never before been faced by a test LP when unboxing an amplifier. The two inhabit different realms, so something was going on here. Technics new SU-R1000 Reference integrated amplifier, price £6,999 lies at very top of the company's product range, a technological statement that brings together modern digital – in conjunction with old LP tuned by computer using that test disc. Prepare for some technological surprises here, not all what you might expect.

At heart the SU-R1000 is an analogue switching amplifier but it is not Class D Technics tell

with a switch-mode power supply are compact and run cool, like Cambridge Audio's Evo 150 I reviewed last month. In contrast Technics' new reference amp is big, heavy and has large internal heatsinks that send warm air out through top vents, making the top panel get warm.

The front has clean lines and visually engaging illuminated power meters with 1 W centre scale and 300 W maximum at right. There's a small, orange LAPC light to show that the unit has been computer tuned – not left in raw untuned state. Above sits a motorised volume control that turns when remote control is used. There was a lovely smooth action and instant readout of volume level – 88dB up to 0dB maximum came up on a small,



us. The topology is similar however, as is performance (see Class Issues box-out).

It's driven by a switch mode power supply. Power output is quoted as 150 Watts into 8 Ohms and 300 Watts into 4 Ohms, figures confirmed by our measurements. Modern Class Ds (Hypex, B&O)

blue dot-matrix screen alongside.

This also shows input selected, either by the rotary input selector knob or by remote control, plus Menu and Setup conditions. It has a lot to reveal and was curtailed with some of the longer messages. At left lies a power switch and headphone outlet; the loudspeakers (A/B) can be switched off for silent headphone listening. There's 30V on the loudspeaker terminals, with no warning I could find in the User Manual – a major omission. This

problem was common in early Class D designs.

The barren simplicity of the front panel hides a lot of internal complexity. The SU-R1000 relies on being 'digital', meaning all analogue inputs are converted to PCM digital through a high quality AKM AK5574 ADC (their technical notes, littered with errors, says AK5572 but there's no such thing). This is a very high spec ADC. There is a PCM-to-one-bit convertor to drive the not-Class D power amplifier. Technics call this their Jenio engine. Once in PCM digital, frequency response manipulation is possible, giving rise to bass, middle and treble tone controls, a whole slew of historic equalisations for the Phono input and an unusual need to tune the power amplifier for flat frequency response through an LAPC (Linear Amplitude and Phase Correction) computer tuning scheme, because it's load sensitive. This Technics say, compensates for external loudspeakers, but that's only because they affect the amplifier's output filters, making it load sensitive. Connected to standard resistive loads (4Ω & 8Ω) it did not measure flat with LAPC switched out, so it has to be tuned – unlike Class Ds from Hypex or B&O for example. This tuning applies only to the power amplifier, not to any preceding stages, so it does not affect either the Rec or Pre analogue outputs.

There are two standard analogue Line inputs through RCA phono sockets and one through balanced XLR sockets. An input ADC always imposes a low overload limit, in this case a satisfactory 3V that can be increased to 8V by using an attenuator in Menu, a handy feature.

The Phono stage for LP replay has RCA phono sockets switchable in Menu for MM or MC, plus a balanced XLR input that is MC only. With Phono selected the Menu comes up with Gain, Subsonic Filter, Equalisation curve and a Cartridge Optimiser function that brings into play that test LP I was confronted with when unpacking. Yes, this amplifier can computer-tune the phono stage to compensate for the cartridge being used by running the enclosed test disc! It tunes not only frequency response but minimises crosstalk



Every note. Every word.  
Every detail.

LS50 Wireless II



### LS50 Wireless II - The Ultimate Wireless HiFi

When you first listen to the new LS50 Wireless II, close your eyes. You'll find it hard to believe that a sound so pure is coming from such compact wireless speakers. That's because our unique Metamaterial Absorption Technology eliminates the high-frequency distortion inside the speaker. So keep your eyes closed and keep listening; there's a whole world of streamed music to enjoy.

AirPlay2, Spotify, Tidal, Qobuz, Internet radio, HDMI, and more.



Listen and believe



too, for up to three cartridges. For this to work the test disc must itself be of exemplary performance – very difficult to achieve. Other discs cannot be used since the amplifier's computer works only with the unique gliding tone and white noise bursts cut into this one. I say more about this in The LP Optimiser box-out. Optimisation can be switched out if wished. There are no loading options for MM or MC cartridges: 47k $\Omega$  and 100 $\Omega$  are used, the usual standards.

And finally there are a slew of equalisations in addition to RIAA (the common standard). Our review amplifier had IEC, Columbia, Decca FFRR, AES, NAB and RCA options. IEC is RIAA with a drastic warp filter that slashes bass below 100Hz, but there's also a subsonic filter function that provides better behaviour – a sharper cut-off below 40Hz. The other curves are for old discs.

And now to digital. Technics fit two USB computer inputs (PC 1 & 2), plus two electrical digital S/PDIF inputs and two optical S/PDIF inputs. The USBs accept up to 768kHz sample rate PCM (up to 32bit) my MacBook Pro (and Audirvana+) declared and also DSD 256 (via DOP encoding). The digital stages had super low distortion and massive dynamic range under measurement. Quite how Technics have configured this amplifier internally I do not know, but the Record and Preamp outputs may come from a DAC, likely a top AKM. The loudspeaker output passes through PCM-one-bit conversion stage sitting in front of the not-Class D amplifier.

I mentioned earlier the SU-R1000 runs warm; mains power consumption whilst idling measured 80 Watts. This rose to around 90 Watts with a few audio Watts being delivered from each channel, as in real-life use. An Auto-Off circuit exists to switch the amp off after inactivity and this, I found, will switch the amp off and lose all settings after LP optimisation if, like me, you walk away from a 10 minute calibration delay to buy a sandwich at the local supermarket! It can be switched out.

Best for two people to manipulate the Technics 22.6kg (50lbs) weight, when sliding onto a rack greater than its 430mm width, 191mm height and 459mm



***The SU-R1000 carries large internal heatsinks that run warm. It is a hugely complex amplifier with large switch-mode power supply needed for a regulated feed to the power output stage.***

depth. Since standard 19in racks are 482mm wide there's plenty of leeway here.

### SOUND QUALITY

Fed CD from our Oppo UDP-205D player via a QED Quartz glass fibre digital link the SU-R1000 showed quickly that it has a fine sense of clarity and muscular deep bass, when driving our Martin Logan ESL-X hybrid electrostatic loudspeakers. Spinning a wide variety of high dynamic range (uncompressed) music tracks like Loreena McKennitt's Gates of Istanbul rumbling deep bass lines bordered on vast, making me go back to check damping factor, because there was a sense of valve amplifier heft to bass, rather than the constrained quality that a high damping factor usually produces. But no, the Technics had good electrical damping but just seemed to deliver huge power, giving its sound weight and stature.

As the tracks slid by I was aware of a nice smoothness across the midband, that fluid quality that comes from a good DAC. I'm uncertain that with digital input and PCM-one-bit conversion the amplifier has a DAC in the main

signal path (there is an ADC in the feedback loop) so perhaps I was hearing the purity of its processing, bearing in mind just a few Watts were being delivered the meters showed, running loud into a 17ft long lounge.

All the same, there was a discernible hue to the amplifier. When I wicked up volume to get 10 Watts or so on peaks – meaning loud – tracks containing a lot of high frequency information got hard and glassy. There was strident sheen to Willy DeVille singing Spanish Harlem for example. It imparted starkness of definition,



***The rear of the volume control shows it is moved by a motor when volume is changed under remote control.***



The loudspeaker sockets are at 30V above ground (but no warning).

Tape inputs/ outputs and Pre(amp) outputs. The phono stage (bottom left) has XLR balanced inputs for MC cartridges.

I could say – a complimentary subjective interpretation. If I raised volume even more the crack of 'Class D' distortion appeared and that's when this interpretation went out of the window. The ESL-X XStat panel is a capacitor that falls to 3Ω at 10kHz and this the Technics did not like, but since 4Ω tweeters are now common, being able to cope with low/reactive loads is crucial – the amplifier's Achilles Heel.

Spinning an even stiffer test, Nils Lofgren's Keith Don't Go, with vivid harmonics up to 20kHz from violently strummed metal guitar strings close-miked, I got a shock. As volume went up to very loud the glassy crackle of 'Class D' distortion became apparent – then the amplifier shut down. But no

more than 20 Watts on occasional peaks was showing on the meters.

Oh! I've never experienced an amplifier shut-down with our ESL-X electrostatics, even though they are a mean load at high frequencies. Time to try again. And it happened again. A sudden clunk and silence. The protection circuits weren't having any of this, which left me a bit non-plussed.

At listening levels of a few Watts the SU-R1000 had a fine sense of clarity and, with most material, smoothness. Its treble tone is not sweet, rather a tad dry and clinical. This gave the amplifier a 'correct' rather than romantic quality. Impressive in its own way, I understand that some may be impressed by it. When pushed hard though the SU-R1000

signalled enough and fell silent.

Wheeling in a pair of Sonus Faber Lumina V loudspeakers the SU-R1000 emphasised just how clean, clear and dynamic it is at normal listening levels (a few Watts on the meter). Again, I got the impression that the digital processing was imparting spectacular vocal clarity, making the Technics worthy of its Reference class moniker. But that was until I turned volume up and then, again, treble took on a hard quality, those vivid strings of Lofgren's guitar again became strident. This time the protection circuits didn't kick in – but I could only manage 10 Watts or so on peaks and remain listening, so the test wasn't an especially severe one.

### CLASS ISSUES

There are two issues to cover here. First is that Technics say this is not a Class D amplifier, even though it has similar topology. Second is Class D and how it compares.

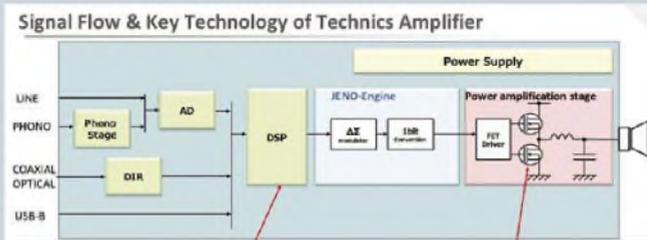
The diagram in Technics technical notes for the SU-R1000 (below) shows an AD (Analogue-to-Digital) converter in the pre-amp stages that is producing PCM (Pulse Code Modulation) digital that can be processed in the DSP (Digital Signal Processor), for gain adjustment, tone controls and Phono stage equalisations.

The DSP feeds PCM into a Delta-Sigma modulator that produces one-bit – a stream of pulses. In Class D the pulses are Pulse Width Modulated (PWM) and that is the definition of Class D. I presume that Technics are using Pulse Density Modulation (PDM), otherwise known as DSD, also possible (but they don't say).

Key points here are a low pass filter in the output to integrate the pulse stream and an ADC (AKM AK5574) that can output DSD in the feedback loop (not shown here). NAD's M2 amplifier used similar techniques and was "not Class D" they said, using patented Zetex DDFA technology that Zetex labelled Class Z. Qualcomm also have DDFA amplifiers that again are "not Class D". Technics are careful not to identify their topology.

However, all these amplifiers feed a pulse stream into a low pass output filter and the latter is loudspeaker sensitive, meaning the load affects the amplifier – as it does with the SU-R1000. Hence the need for LAPC tuning to achieve flat frequency response. So not Class D then, but similar topology with similar problems. The other classic problem with Class D is high frequency distortion and this the SU-R1000 suffered too.

However, new feedback techniques, as used by Hypex in their NCore module, have rendered Class D insensitive to loudspeaker load, also eliminating high frequency distortion our measurements show (see Cambridge Audio Evo 150 review, Sept 2021 issue). So Technics have entered a minefield here, full of patents and players all struggling to make a decent digital amplifier.



**THE LP OPTIMISER**

Tune up a cartridge using a special test LP and a computer? Intriguing. The test LP has four sets of tracks, two per side. Each track has a complete test sequence covering both channels.

Running this test with our Audio Technica OC9X SH moving coil (MC) cartridge no adjustment of phono stage equalisation occurred our spectrum analyser revealed.

Apparently, no useful result. But perhaps not. Modern cartridges like the OC9X do not need tuning; they're flat in response. That the optimiser had no affect in our case was a good thing. It is for inaccurate cartridges only – uncommon nowadays.

**CONCLUSION**

Providing volume is kept in check Technics SU-R1000 Reference amplifier offers impressive sound

quality: it has stark clarity, easy flow and thunderous bass. Making other amplifiers appear hazy, soft or mellifluous by way of contrast. But when volume was turned up treble distortion became obvious, then its protection circuits kicked in with our electrostatic loudspeakers. It's unacceptably loudspeaker sensitive measurement with inductors showed and too problematical all round; other amplifiers do not need tuning to work properly. Add in the fact that there's 30V on all output terminals and recommendation is difficult.



**MEASURED PERFORMANCE**

The SU-R1000 produced 180Watts into 8 Ohms and 340 Watts into 4 Ohms, so it meets its quoted 150 W spec. but into a resistive load only. Both loudspeaker terminals float 30V above ground, a classic Class D problem.

With purely resistive loads distortion levels at 1kHz were low at 0.003% at 1W and 0.07% at high output into a 4Ω load. At 10kHz distortion levels were 0.02% at 1W and 0.08% near full output.

With wire-wound loads possessing small inductance (0.18mH) distortion levels rose 0.2% at 1W/1kHz and 0.3% near full output (4Ω). At 10kHz distortion levels jumped, measuring 0.3% at 1W and a massive 2% near full output, with extended odd-order harmonics. With 0.3mH distortion rose to a massive 10%. The SU-R1000 is load sensitive (LAPC had no affect on these figures).

With purely resistive loads and no LAPC correction, frequency response of the power amplifier peaked by +2dB at 71kHz into 8 Ohms and fell by -3dB into 4 Ohms – a big change, explaining the need for LAPC that tuned response flat.

With the wire-wound loads frequency response of the power amplifier peaked by a massive +14dB at 96kHz, so LAPC must be used since the amplifier is very load sensitive.

Record and Preamp analogue outputs come before the power amp so are unaffected by this peaking or high frequency distortion. Their upper response limit (-1dB) was 43kHz.

The XLR and RCA phono socket analogue Line inputs were sensitive, both needing 180mV for full output, but

with a strict overload ceiling of 2.7V due to the ADC. An attenuator can be switched in (Menu) to raise this limit.

The digital (S/PDIF) input had similar frequency response to the power amplifier. Distortion measured a very low 0.012% at -60dB (24bit) and EIAJ Dynamic Range (24bit) a high 123dB.

The USB (PC1) input accepted up to 768kHz PCM and DSD256, having a massive EIAJ dynamic range of 124dB. Distortion and frequency response were same as S/PDIF.

The Phono stage was sensitive, MM/MC needing 2mV/0.2mV for full output at 0dB Gain, with satisfactory 28mV/3mV overload ceilings. There are +3/-3-6/-9dB Gain options, the lower ones raising the overload ceiling. Noise levels were low, just 0.13μV equivalent input noise (A wtd) for MC.

RIAA equalisation was accurate with both MM and MC, giving flat response across the audio band. Switching in Subsonic introduces fast cut below 40Hz to suppress LP warps.

Technics not-Class D power amplifier produces strong high frequency distortion into a reactive load, if not into a resistive load. Loudspeakers are reactive so a worrying sign. Frequency response is also load dependent, hence LAPC tuning. None of this is in line with performance from current analogue amplifiers or Class Ds from Hypex/B&O – unimpressive. **NK**

**Power (8Ω, 1% thd) 180W**  
**Frequency response (LAPC) 3Hz-100kHz**

**Distortion (10kHz, 1W, 4Ω) 0.3%**  
**Separation (1kHz) 87dB**  
**Noise (IEC A) -88dB**  
**Sensitivity (XLR) 180mV**

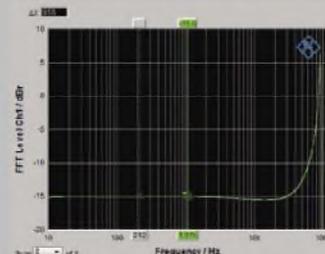
**DIGITAL**

**Frequency response (-1dB) 3Hz-43kHz**  
**Distortion (-60dB, 24bit) 0.01%**  
**Dynamic range 123dB**

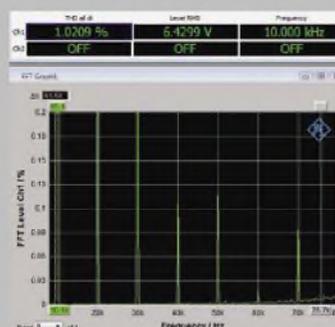
**PHONO**

**Frequency response (-1dB) 10Hz-20kHz**  
**Distortion 0.04%**  
**Sensitivity MM/MC 2mV/0.22mV**  
**Noise MM/MC -77/-64dB**

**FREQUENCY RESPONSE**



**DISTORTION**



**TECHNICS SU-R1000 £6,999**



**GOOD - worth auditioning**

**VERDICT**

Super clear, punchy sound, but treble distortion at high volume.

**FOR**

- clear, punchy sound
- illuminated meters
- balanced MC input

**AGAINST**

- treble distortion
- bulky
- not for electrostatics

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**H**ere's your chance to win Black Rhodium's Stream S mains cable we reviewed in the April 2021 issue. Read the review excerpt below and answer the questions.

"The new £600 Stream S is only available in an unusual 1.7m length. So, why that magic number? When developing the Stream, Black Rhodium tested one of its most popular power cables in several different lengths and consistently found that best sound quality was obtained from cables cut to

1.7m – which, Nalty explains, is one-quarter wavelength "at about the speed of sound". He suggests the observed effect was probably due to vibration that may occur when a mains cable is carrying a substantial 50Hz signal.

The 13A plug of the Stream S has silver-plated metalwork. At the other end of the cable, the conductors of the chunky round-barrelled 'Power' IEC plug have been plated in the rhodium that gives the manufacturer its name.

For the cable that interconnects them, Black Rhodium has specified three (live/

neutral/earth) conductors made up of nineteen 0.3mm-diameter silver-plated copper strands. These wires are insulated with silicone rubber of the appropriate colour.

The overall cable is covered by a heavy braided screen, while ferrite beads have been fitted to all conductors at both ends of the cable. Black Rhodium's 'DCT' (Deep Cryogenic Treatment) process isn't applied here. Nalty suggests that the cable will perform at its best after "about 100 hours" of use".

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## QUESTIONS

**[1] What is the cable's length?**

- [a] 1m
- [b] 1in
- [c] 1mile
- [d] 1.7m

**[2] The 13A plug is -**

- [a] brass plated
- [b] silver plated
- [c] gold plated
- [d] zinc plated

**[3] The cable is covered by -**

- [a] cardboard
- [b] polyurethane
- [c] braided screen
- [d] glass screen

**[4] The beads fitted are of -**

- [a] ferrite
- [b] ivory
- [c] thermo-plastic
- [d] wood

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# Moving Sound

Sound on the move from Philips new Fidelio L3 headphones fascinates Noel Keywood.

I didn't know headphones could get this complicated. Philips new Fidelio L3s (£299) are powered Bluetooth-connected headphones primarily for use with a mobile phone. Wireless connection is undoubtedly a boon, especially on the move, but you can also listen to YouTube on the computer whilst letting the cat out 30ft away. There are drawbacks though.

On-board is a Bluetooth 5.1 transceiver, Active Noise Cancellation (ANC) and an 'interesting' control system activated by tapping or stroking an earpiece. Not quite perfected methinks: it can be switched out in the app. (more later). Philips Fidelio headphones have a reputation for sound quality, meaning

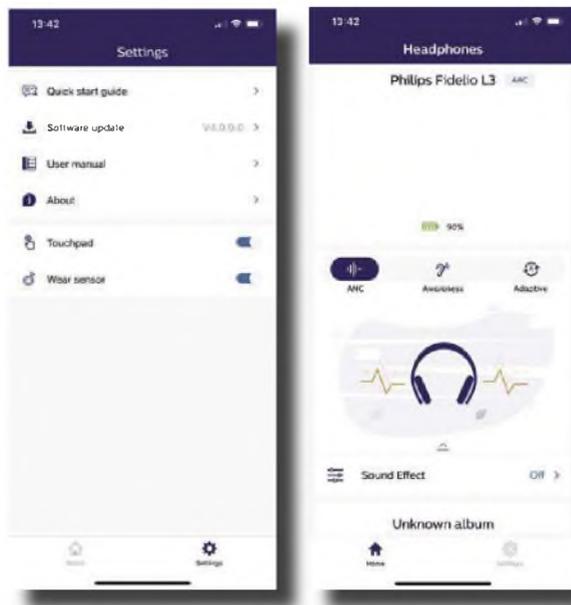
a clean sound accurately balanced in true hi-fi fashion – no Beats bass here. I used a pair of Fidelio X1s for years until they passed away: great sound at sensible price. The X1s were conventional passive phones; the L3s have an on-board battery driven amplifier that power the earpieces at all times.

In spite of all they carry, including 800mAh re-chargeable batteries, the L3s are not heavy at 360gms. I've used plenty of headphones heavier, albeit when

sitting in front of the computer. On the move, weight is more consequential but I think most people could handle the L3s. The headphone band is quite strong, again important on the move, and the ear pads both small and unyielding when compared to the large, lush affairs of the Fidelio X1s. Acceptable all the same.

The L3s can be connected by cable, one 125cm (4ft ) cable being supplied, terminated by a standard 3.5mm stereo jack at 'phone (source) end and 2.5mm stereo jack at headphone end. That excludes balanced connection and 2.5mm jack plugs are so





**In the app's Settings menu both the Touchpad and the Wear Sensor can be switched off – sometimes useful. In the Main menu ANC, Awareness and Adaptive settings too. Plus a graphic equaliser in Sound Effect.**

small they snap easily I've found, so this lead is to be treated with care or replacements kept in the drawer. Hard wired connection should give best sound quality, but not here I found. The 'phones sense cable connection and switch off Bluetooth, ANC remains active but touch control does not.

The L3s are purposed for use with a mobile 'phone and on the move, hence ANC, making electrical connection through a lead unimportant to its primary role. ANC cuts out external noise and the closed backs of these 'phones stop sound leakage outward, making them commuter friendly all round. Of course they receive calls and have a speech mic.

Closed back 'phones commonly have a hollow sound and bloated bass but the L3s avoided these problems completely. They were surprisingly dry in their presentation as closed-back phones go, but not as airy as open-backs.

All of which is to explain that the Fidelio L3s, as headphones with on-board electronics, come with a complex payload. They go very loud, but not shatteringly loud: volume is limited by a sensing microphone. And if the batteries die, so does the music; they will not work via wired connection to a headphone amplifier.

In addition to the slender and flexible electrical lead, there's a

graphics, there are many controls. The earpieces are not marked Left and Right as they should be, but



**The Right earpiece carries a 2.5mm stereo input jack, ANC and Mic buttons. The Left earpiece carries a USB-C 5V charging socket and on/off button.**

a test CD (not supplied) showed Left carries the charging socket and power button, Right the 2.5mm input jack, an indicator LED and two selector buttons, one for ANC the other for microphone.

An app repeats these functions in easy to use form and adds in graphic equaliser plus fixed EQs. What it lacked was auto power-off time adjustment; remove phones from head and they switch off after 10 minutes to conserve the batteries, an infra-red sensor detecting absence of human.

charging (only) lead, for any 5V phone charger. Charge time is 2 hours and working time above 30 hours Philips say. When charging they switch off, becoming unusable – not good. It's possible to charge whilst maintaining functionality – useful at home.

Although the L3s look dull, with their satin black finish and seeming lack of

Switch-on procedure then has to be negotiated, with a voice warning "power on" and "Bluetooth connected" – twice in my case as I used two simultaneous connections. This function can be switched off completely in the app.

If ANC or ANC+Awareness are on, a soft hiss becomes apparent, coming from the microphones. With ANC off there is silence.

A website picture shows the touch-sensitive right hand earpiece has control function graphics like Start/Stop, Forward, Reverse – but our sample came without them.

I paired the L3s with my Mac via Bluetooth; the iPhone was paired as well. This is called "multi-point" connection by Philips and it sort-of worked well. The 'phone takes precedence so as to accept incoming calls, but it also took precedence if a music app was running on the phone: there was technological confusion here. Pressing Play on YouTube running on the Mac started play on the 'phone!

Eerily, tapping lightly on the right earpiece halted YouTube

video on the Mac. What? And with no physical connection. Having headphones control the computer was spooky. Swiping up or down on the right touch-sensitive earpiece changed volume but it was difficult to make work smoothly and the app allows this function be switched off, since it could be annoyingly erratic. These control functions and channels are defined by Bluetooth operating profiles: Hands Free, Advanced Audio Distribution and Audio Remote Control, Philips say.

Removing headphones from

head invoked Pause function, putting them back on triggered restart. With a voice mic on board a virtual assistant can be used, but Siri did not (want to?) understand "Onkyo HF Player", only Apple player – so no use to me.

**SOUND QUALITY**

To judge fidelity I used the L3s wired into an Audiolab M-DAC+ fed from a Mac computer running Audirvana+ software player. For comparison Oppo PMI planar magnetic headphones.

To judge everyday Bluetooth (not wired) sound I used both the Mac and my iPhone 11XPro running Onkyo HF software player (Hi-Res version) that, measurement shows, delivers 24bit quality from an iPhone as well as playing DSD. The Fidelio L3s slotted into this environment well.

But feet on ground. The L3s have an on-board DAC and amplifier – and the DAC is not specified, so it won't be an ESS ES90182KM mobile device, for example. Both DAC and amplifier will be chosen for least power consumption from the batteries, not sound quality. There's just about no possibility the L3s could come close to Oppo PMI magnetic planar phones driven via cable from an Audiolab M-DAC+, with its linear mains supply and ES9018 DAC.

Philips talk up the intrinsic sound quality of their drive units and Fidelio heritage, but there are exchanges to be made. What's on offer here is basically correct – accurate – sound balance in compromise with electronic wizardry.

Running wired from the M-DAC+, fed by Audirvana+ playing hi-res including DSD, the complex multi-track vocals of Fleetwood Mac's Silver Spring (24/96) were clear and well separated, clearer than the PMIs I fancied listening side by side, if with some hardness of tone in the upper midband. With Dreams Mick Fleetwood's drumming was tight and timely, certainly not bass heavy. The Doors Light My Fire (DSD64) was mid-band forward and very clear as a result, if again a bit mechanical and lacking atmosphere. Working through a wide variety of material the L3s were very well balanced, dry in nature and reasonably revealing. Even when running wired, the internal amplifiers are active;

turning power off stops the music. So they determine sound quality, not the headphone amp feeding them.

I was happier with a direct Bluetooth feed from the Mac, again using Audirvana+ to play music. This lessened midband glare and hardness. There were some strange happenings here though, Siri reacting to the touch-sensitive earpiece: iTunes starting up, Onkyo HF Player on the iPhone grabbing Bluetooth and playing in preference until I switched the phone's Bluetooth off. Unbelievably, Siri made four calls from my iPhone whilst I was manipulating the earpiece. When the recipients called back with "did you call me" I said "no, the headphones did". Not improving my reputation for sanity!

It's best not to use headphones like this via Bluetooth from two sources, as weird confusions arise.

The L3s worked best with the 'phone alone, delivering a lovely sound from the Onkyo HF Player app. I turned Siri off and the touch-sensitive earpiece worked more reliably through iOS 14.4. I on the 'phone than macOS 10.4.6 (Mojave) on the computer. The Hi-Res folder of HF player gives supremely smooth sound and this suited the L3s, Daft Punk's 'Giorgio by Moroder' (24/88.2) beating out a hard Electro synth bass line that would please anyone: grippy and powerful. Cyndee Peters 'House of the Rising Sun' (DSD64) was

smooth and almost warm, conveying a sense of smoky atmosphere. Even The Eagles 'Somebody' (16/44.1) slid through well, with a gloriously firm kick drum and Glen Frey sounding menacing at the mic, Hammond whirling in the background. As I moved through the iPhone's music library the L3s were enjoyable: great insight into vocals, firm bass and snappy pace. Philips have wrought a good balance. The 'phone would not stop asking me to turn on Siri whenever I fiddled with the touch sensitive earpiece, but – hey! – at least it got amusing. And Siri can be deleted.

ANC? It worked and there were no great sound quality differences. 'Off' gave best insight by cutting out hiss but on the move in a noisy environment it's useful.

**CONCLUSION**

Philips L3 headphones were worrying. They even made phone calls out; Siri wouldn't let go. This strange behaviour apart they delivered a clear, crisp sound with solid, tuneful bass properly balanced to meet hi-fi expectations. No Beats bass bloat, no searing treble and the touch sensitive earpiece can be switched off in the app. Wire free connection courtesy of Bluetooth made them supremely easy to use and was a boon. An 'interesting' pair of phones giving quality on the move, so well worth considering – especially at some of the low prices being quoted.



*High quality carrying case, optional connecting cable, flight adaptor and charging lead are supplied. The headphones are finished in Muirhead leather we are told.*

**PHILIPS FIDELIO L3 £299**



**EXCELLENT - extremely capable.**

**VALUE - keenly priced**

**VERDICT**

Well balanced sound and lots of techno trickery.

**FOR**

- Bluetooth connection
- balanced sound
- well made and finished

**AGAINST**

- erratic touch controls
- unusable whilst charging
- unusable with dead batteries

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# Love over gold

Martin Pipe tried the latest ('Gen 2') variant of Coherent's 6D IEC mains lead.

**W**eighing half a kilo, a one-metre length of Coherent Systems' 6D Generation 2 IEC mains lead isn't as expensive as gold - if it was, you'd be paying over £20k for one (there is however gold in them thar cables!). By any standards, £1,695 is nevertheless quite a sum to pay for something that merely interfaces your hi-fi to the mains. Note that 1.3m (£1,995), 1.6m (£2,295) and 2m (£2,750) versions are also available; if you ask them nicely, Coherent will even make up custom lengths for you. In standard form the fused 13 Amp mains plug is a Furutech FI-1363 UK - a substantial ABS-bodied Japanese design with plenty of

surface area for grip, but the same real-estate requirements as a normal 13A plug.

The trailing socket at the other end, which is designed to fit the male IEC connector built into many pieces of hi-fi equipment, is a MS9315 from MS HD Power - the high-end brand of a Hong Kong 'electricals' manufacturer. Coherent doesn't merely use these connectors as supplied, though. They're taken to pieces and the body parts put to one side. The conductors are acid-stripped, ultrasonically-cleaned and then gold-plated. After thorough processing in this expensive and time-consuming manner, which ensures "cable impedance matching to a degree" according to

Coherent's technical director Tony Sallis, they are reunited with the bodies and attached to the cable.

You don't expect 'any old wire' when you're paying the best part of two grand for a mains cable - and naturally, Coherent pays considerable attention to this key area. The South Bucks firm draws its own copper wire - five strands of which, 0.5mm in diameter and "gold-plated to 6 microns", live inside each of the 6D Generation 2's three cores. These are jacketed in two concentric custom-made fluoropolymer dielectrics, and then covered with an braided shield (this 'floats', not being connected to earth) to reduce RF interference. Shielding is an important element of the Coherent proposition, the



firm claiming "100% coverage and reduction in some of the radiated emission bands".

Experienced engineer Sallis himself carried out much original research here, concluding that RF noise can adversely affect sound quality. The three braided cores are neatly interwoven, and covered by a heavy-duty transparent polyolefin outer jacket that's terminated at each end with heatshrink sleeving, before the plugs are fitted. Each finished cable, which - Coherent tells us - meets all UK legal requirements - is then cryonically-treated, before undergoing thorough final testing. You don't get this attention to detail with the moulded IEC leads bundled with your gear!

The esoteric plugs fitted to the 6D Generation 2 (the "usual configuration for around 75% of purchasers," according to Sallis..."other types can be substituted") were excellent fits for all of the equipment and mains sockets I tried - including those of a Cambridge Edge NQ streamer

and Edge A power amplifier (feeding Quadral Aurum Wotan VIII speakers) and a Prism Callia headphone DAC (used with Focal Utopia headphones). I found that the best results came when the 6D Generation 2 was used with equipment dealing with smaller signals - processors, phono stages and so on.

I found that the most noticeable effect is a very subtle reduction of noise, which allows the finer background details (venue acoustics, the breathing of musicians and string 'twangs') to be made out with greater ease. Particularly noticeable with very high quality hires recordings - Keith Greeninger and Dayan Kai's 'Looking For A Home' and David Elias's 'Morning Light Western Town' being cases in point - these are important as they help to draw you into a performance.

The balance could be heard to shift as the 6D Generation 2 plugs were switched from a wall-socket connected to the mains ring, to one fitted to a spur. Also perceptible

were slight differences in bass delivery, the ring-main connection being a tad firmer (an example of how such cables can lead to improvements on the power-amp side). This is with kit of comparatively-modest pricing, remember; who would, after all, use a £1,700 mains lead with a £4,500 streamer? Anyone fortunate enough to own hi-fi systems containing £20k+ sources would probably derive even more benefit - assuming they've got the fundamentals (setup, room acoustics and so on) right.

### CONCLUSION

Expensive IEC mains leads are considered by some to be a joke, especially when one considers everything that happens on the other side of your wall socket. Why should the last metre or so make any difference whatsoever? The fact is, it can - as Coherent's work in this area would suggest. If you have a high-end system, give the 6D Generation 2s a trial. If you hear no difference, don't buy them. It's as simple as that.

### COHERENT 6D GENERATION 2 IEC MAINS CABLES £1,695 (1M)



£1,995 (1.3M);  
£2,295 (1.6M);  
£2,750 (2M);  
**CUSTOM LENGTHS  
ALSO AVAILABLE**

**OUTSTANDING - amongst  
the best**

### VERDICT

The 6D Gen 2 can help you squeeze the last ounce of music from hi-fi esoterica, its expense reflecting the work that has gone into the cable's design and manufacture.

### FOR

- greater room for the 'micro-details'  
- high standards of construction

### AGAINST

- phenomenally-expensive!

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## LETTER OF THE MONTH PRIZE

# Mail

Visit our website at [www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk) or send your emails to [letters@hi-fiworld.co.uk](mailto:letters@hi-fiworld.co.uk). Letter of the month wins a pair of KEF Q150 bookshelf speaker

Answers by: NK - Noel Keywood; PR - Paul Rigby; MP - Martin Pipe; DT - Dave Tutt; JP - John Pickford.



## WHARFEDALE DIAMOND 12.1 BOOKSHELF SPEAKER

<https://www.wharfedale.co.uk/diamond-12-1/>

[subject to availability - Black/Light Oak/Walnut/White]

**A PAIR OF KEF Q150 LOUDSPEAKERS are on their way to JAMES & SARAH WATSON, Letter of the Month winner in our September 2021 issue.**

## Letter of the Month

### RIP VINYL

I must concur with Paul Rigby in 'Opinion' this month regarding his large Vinyl and CD collections. Also, to me, a home is not a home without books which I treasure.

Storage does start to become a problem the larger a collection becomes. However, having a very talented cabinet maker in the family, I was most fortunate in getting him to build a unit that used part of an upstairs landing bannister to discreetly store hundreds of CDs plus the most beautiful free standing, glass fronted cabinet for storing literally hundreds of LPs and even more CDs – all with adjustable rails and shelves for said items.

With the brilliant Naim Uniti Nova and Uniti Core system I have now ripped all my CDs so they can remain in the cupboards or the extra ones put in plastic container boxes and stored in the attic, except for a few which are taken on the road when out and about.

Which brings me to the big problem of Vinyl. They require the most (to me anyway) convoluted process in order to store them safely on a hard drive. Don't get me wrong, I do enjoy placing LPs on a record deck up to a point. When in the right mood, however,



**"With the brilliant Naim Uniti Nova and Uniti Core system I have now ripped all my CDs" and put them in cupboards says Donald Hawkins.**

I find the CD arrangement with the Naim Core is brilliant and so easy to use.

I am hopeful that one day in the not too distant future, it will be possible (if not already) to rip Vinyl, from a sensibly priced deck system, in a similar fashion to CDs. Appreciating that there are types of systems out there currently for dealing with this

process, I find them far too fiddly and time consuming but I suppose that this is the problem of converting analogue to digital?! I live in hope, in the meantime I really enjoy your great magazine every month, particularly the opinion section!

Kind regards  
**Donald Hawkins,**  
Gloucestershire.

Hi Donald. As you say ripping vinyl is fiddly. Best to use an external 24bit analogue-to-digital convertor (ADC) as 16bit types giving CD quality – which most internal units are – introduce the slightly grey, mechanical quality of digital. Our usual recommendation is Furutech's GT40a from ADL (£550) which has an MM/MC phono stage as well as 24/96 ADC. An external ADC like this gives more flexibility in turntable choice and upgrade.

Then comes the need to split tracks and here life does get difficult, especially when one track merges into another (Pink Floyd) leaving no detectable gap. VinylStudio is popular and there's a free trial download, but is otherwise \$30 or \$50.

The most commonly quoted choice for this task is free Audacity music editor, but it is daunting for beginners (and has a few confusing quirks). There is a 'silence finder' under Analyze but I'm not aware it can automatically split tracks. However, Audacity can split into manually identified and labelled songs, but as you say this is fiddly. Then there's the need to add metadata. Hi-res 24/96 files are big so Flac or Alac lossless compression may be necessary.

It's faster (cheaper?) to buy an album as a digital download from a store such as HD Tracks or HiResAudio.com. Where material comes from re-masters it can offer very high quality, arguably better than vinyl, if not the 'vinyl sound'.

**NK**

### LIKING VINCENT

Firstly, I wish to take the opportunity to congratulate you on your fantastic review of the Vincent CDS7 CD player, which was featured quite a number of months ago now. At the time of your review I was in the process of purchasing one, as suggested to me by Mark Sears (Missing Link/Vinyl Passion). It duly arrived and first off I replaced the valves with some expensive replacements courtesy of Watford Valves.

At initial switch-on I was anxious to find out how it would sound after reading your article. Although, as you will appreciate, the product, and valves especially needed bedding in – then what I began to hear was exactly what you had most accurately described in your text. I thought that your comparison between digital



**Vincent CD57 valve CD player. "What I began to hear was exactly what you had most accurately described in your text" says John Wilson.**

bicycles and steam rollers, was particularly apt and funny at the same time.

Really good! Absolutely nailed it! This totally vindicated my purchase, as I had been unable to hear one prior to ordering. Excellent! Thank you very much!

It is fair to say that some treat Reviews with scepticism, however you – if no one else – proves that they can be a good guide, although we do not all have the same ears, likes, dislikes, of course. Simply, what suits one can never fit all.

On the KEF B139 bass unit – I have just been reading the letter from Keith Patrick in latest mag. August 2021. I could help him with one of these. I have an original, previously foam surround, re-coned by KEF unit, that I no longer require, and would be happy to donate to him. Please pass on this e-mail.

Kind Regards,  
**John Wilson.**

Hi John. Glad you like the Vincent. We all did. Your kind offer of a B139 has been passed on. **NK**

### SNAKE OIL

Returning to the world of hi-fi magazines after a long lay-off with wife, children and happiness with the sound of my system. Whilst many of the products, terms and topics of conversation are unfamiliar, some of the recurring themes are not: importance of listening to gear, personal preferences, the value to be found in buying second-hand (sorry: pre-loved) and of course tweaks, including accessories.

Part of what has encouraged me to start paying attention is that I used lockdown to go down a hybrid route, buying a new NDX2 and Power Supply and replacing my old LP12 with a brand new full spec version of the same. I have also upgraded other parts of my system by replacing two HiCaps, each with a second-hand SuperCap, and by replacing my (already) second-hand NAC82 with a second-hand NAC52.

However, over the last two years, the single biggest difference has been achieved by radically overhauling the add-ons, the peripheral stuff I never



**To rip LP to digital Furutech's GT40a from Alpha Design Labs offers MM/MC phono stage with 24bit analogue-to-digital convertor for superb quality.**

previously paid attention to and was always somewhat sceptical about – specifically Power Cables, distribution blocks, upgraded wall sockets with dedicated electrical supply and of course, speaker cable.

I have even upgraded upgrades, recently swapping out NAC05 cables and replacing with TQ Ultra Black II speaker cables. Both upgrades were revealing and additive to the whole aural experience.

Here's the rub: I would maintain that for each tweak and despite what I consider to be my normal hearing capabilities there has been a palpable difference and specifically a step-up in the sound reproduced, each time I have tweaked.

I have continued adding to the breadth and depth of my music, not least with the addition of the Naim streamer, but what has prompted this letter was that I recently fell into a conversation with another Naim user. He was interested by my hybrid approach to upgrading, but was totally dismissive of the tweaks I had made, dismissing all the upgraded cables, plugs and assorted mumbo-jumbo as snake oil. This I had to defend.

Now, I have to confess that when I was paying attention all those years ago, I used to be very much of this gentleman's opinion – that is, the emergence of the whole tweaking industry was designed to extract that final Yankee-dollar out of the jaundiced and already over-invested public. But having been encouraged down this route I can confirm it is absolutely worth the effort and if you find people who are supportive of this approach, the type of try-before-you-buy help, then this is a thoroughly worthwhile route to go down.

Of course new or second-hand upgrades are just that: upgrades. But starting from a slightly higher plane means that each upgrade is being assessed from a much more revealing plateau.

Keep up the good and interesting work,

**Simon Shepherd.**

### BBC SALARIES

In an edition of HFW, it may have been the July or August 2020 edition, Dave Tutt vented his spleen on BBC radio output – in particular Radio 2, and Zoe Ball's programme was mentioned. This link <https://order-order.com/2021/07/06/read-in-full-bbcs-2021-stars-pay-revealed/> takes you to a BBC page of presenters salaries, Zoe Ball's salary is shown.



**"I have continued adding to the breadth and depth of my music, not least with the addition of the Naim NDX2 streamer" says Simon Shepherd.**

It is probably best not to show the link to Dave as you may lose a contributor!

Regards

**Mike Bickley.**

### HI-FI'S FUTURE

Whist I enjoy reading Hi-Fi World every month, owning three very modest hi-fi systems (lounge, spare bedroom and kitchen system) from which I enjoy all sorts of music, do you perhaps think that, apart from wealthy people, hi-fi is dying? How on earth do normal people afford £1800 for a 2 metre pair of speaker cables?

I once had at least six hi-fi dealers in my City offering affordable systems to normal people, now there are only two, which probably sell more TV systems than hi-fi. It is nice to fantasize about what one might buy following a lottery win but the younger generation seem quite content to stream music to their smartphones, regardless of the actual sound quality?

My nephews laugh at my CD/LP collection. I would imagine that the demographic of most present hi-fi enthusiasts is aged 50/60 plus and when we are gone, what then? It would appear that, unlike the 60s, 70s and 80s, nowadays home hi-fi systems are of no interest to the majority of the population and are fast disappearing, being replaced by the likes of Alexas etc. A bit sad from my elderly perspective.

Regards,

**Paul Fountain.**

Hi Paul. You are right: hi-fi peaked in the 1970s and is now of most interest to those that were alive then. However, world-wide that is still a significant number of people with buying power interested in listening to music reproduced well.

The headphone and portable audio market is far larger but there is spill over, especially into zippy new products like small powered loudspeakers such as the KEF LS50

Apple Music

Play over 75 million songs in lossless audio, at no extra cost.<sup>1</sup>

Hear sound all around you with Dolby Atmos.<sup>2</sup>

Download your favourite tracks. Play them offline.

Get exclusive playlists and live radio.

**Apple Music is a subscription streaming service (£9.99/month) offering 75million songs as "lossless audio" (not digitally compressed). Mostly CD but there's also hi-res they say. Up to 100,000 can be downloaded but – as with Amazon HD – will be playable only from the app.**

Wireless II that we talk about elsewhere. Even my son, who lives with headphones attached, likes music enough to appreciate that wired passive hi-fi headphones offer a sound worth having, in preference to powered Bluetooth phones.

But there's now a race to high quality going on between the streaming services, Amazon, Apple, Qobuz and Tidal for example all offering better than CD/LP quality, so your nephews sort-of have a point. If they stream hi-res to a portable digital audio player and listen with – say – Audeze magnetic planar headphones, they may well be getting higher quality than hi-fi systems based on LP or CD. **NK**

**STREAM STOP**

*I'm hoping you can help with a mysterious problem. I bought a Pro-Ject Streambox RS (the valve model) a few years ago based on a great review by the sadly missed Jon Myles. It's been a wonderful DAC and makes me smile every time it plays. But suddenly, after updating the control app, the optical and coax inputs just stopped working and nothing will revive them, although all other features work fine. I've tried rolling back to the old app, with no effect. Even a factory reset through the settings menu has no effect. And there seems to be no hard reset option.*

*Here in Australia my only official service option is the distributors but a rather bad previous experience with them makes that an option I'd rather avoid. And getting through to the Pro-Ject headquarters is impossible to all but the most seasoned hacker! Any suggestions that might help restore it to its magnificent best?*



**Pro-Ject Streambox RS. "It's been a wonderful DAC and makes me smile every time it plays" but it has a problem says Robert Exley.**



**"Your Elipson 100 turntable review convinced me to finally get back into vinyl after 30 years. Now fitted with excellent Denon DL-103. Love it!" says Robert Exley.**

*By the way most of my system has been chosen based on your glowing reviews, for which I send many thanks. The Ariand amplifier is a particular treasure, which has converted me forever to the allure of valves. And your Elipson 100 turntable review convinced me to finally get back into vinyl after 30 years. Now fitted with excellent Denon DL-103. Love it! Keep up the good work. Cheers and all the best.*

**Robert Exley  
Geelong,  
Victoria,  
Australia.**

Hi Robert. Pro-Ject is an Austrian company with close links to Henley Audio, their UK distributors (but

not Australia). However, Henley are very helpful and here's their response (that I am forwarding to you) to your e-mail –

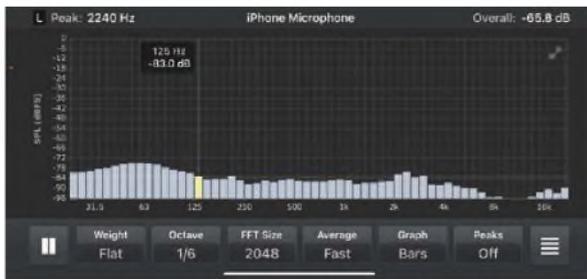
*"I'm not sure what's wrong. This model is discontinued now, but I'm not hearing any complaints about the latest updates, which were a while ago now. Can I request that we get the customer's authority to pass his email/name on to Pro-Ject HQ and Interdyn in Australia so he can get the best response possible to his problem? I'm not sure what happened in the past with the customer, but Interdyn have been representing Pro-Ject for a long time, and for a good reason. I'm sure we can help sort this customer out".*

Kind regards,  
**Simon Powell,  
Henley Audio, UK.**

**BASS TUNE**

*I'm pleased that Chris Frankland may look on subwoofers in a different light. As expected Rob Hunt from REL had the sub optimally set up for the main speakers in use, this in fact is an art. I have laboured the art of setting up a sub in these pages before. It is so easy to have loads more bass as Chris put it.*

*The technique is to get the sub to come in seamlessly when the bass frequency of the main speakers needs a little extension. This involves the use of the Roll Off and Gain settings,*



### Onyx 'Octave RTA' spectrum analyser - a useful app for subwoofer tuning.

this way the sub doesn't swamp the presentation with bass. It is a job that can't be done in five minutes, you need to try and use a varied amount of source material over a number of days, and it pays to enlist another pair of ears to express an opinion of any changes. First time users usually start with these settings far too high. A sub is particularly beneficial for sealed box speakers, my Tannoys are sealed boxes, and my REL Quake is also a sealed box, so it integrates well with the Tannoys.

Regards

**Mike Bickley.**

Hi Mike. I can confirm that my attempts to tune a sub-woofer by ear were no great success. Checking afterward with a measuring microphone and spectrum analyser showed peaks and dips that, when adjusted out, resulted in a much better sound. It's all a bit hit-or-miss without guidance from measurement. Happily, as technology progresses a number of spectrum analyser apps have become available for the iPhone and the Onyx 'Octave RTA' spectrum analyser iOS app – just £4.99 – is well suited to this task. It has a very useful 1/6th octave option that is best used in conjunction with pink noise. CD test discs often have pink noise test tracks or you can find it on the 'net. Best source is Audacity, from where it can be saved as a digital WAV file to a Flash Drive or just played on the spot. I hope this helps all potential subwoofer tuners. **NK**

### META DATA

I inadvisably bought an extended 2-year warranty on a digital tuner long ago. One day after the cover ended, the tuner stopped working. My 1980s FM tuner is still going strong. I wonder at the longevity of digital (software) in today's hi-fi. I am thinking of selling my Naim active system (NAC 72+

power supply, 2x NAP 140s, Naim iXO crossover and EPOS ES14s) and purchasing the KEF LS50 active speakers with MAT technology. But

considering my experience with the digital tuner, I was wondering about the longevity of the KEFs, and how repairable they are? Especially as they are a unit.

I am considering retaining my REL Stadium II sub bass whilst selling my Russ Andrews super tweeters (which improve the bass quality). I was wondering if the Stadium IIs would make a good match?

My Garrard 4011 Bastin PS/ Origin Live Silver III Benz Micro Glider SL will need a MC phono stage and I'd like a MM function too. What recommendations would you make? I would probably buy second hand.

My room size is unknown because I plan to buy a property in the UK. The REL can be adjusted to the room. (musical tastes exclude Country and Western an Opera). I am in my early 60s and I have normal age-related hearing, except a slight loss in the midrange. Are the KEFs a good choice and are there alternatives to look at?

I moved to Connecticut just before the pandemic. I am here for a couple of years, so I have LPs, CDs and cassettes in storage. I brought a laptop with music stored in Foobar as Flacs and a few HD online purchases, backed up on a 1TB external drive [stored in a firesafe].

Purchase tax is only 6.7% in Connecticut USA, so I purchased a

Dragonfly Cobalt DAC, which plugs into the USB of the laptop, and a 2m Audioquest Evergreen lead to connect the DAC to the Aux. of a Fisher amp., driving Dayton T652 floor standing speakers (\$120 new and delivered – a no brainer. The sound is adequate and I can hear that HD recordings are better. The Smart TV is also connected to the amp, enabling me to watch Youtube videos of bands from long ago. I either use Walkfi to start a recording, or a wireless mouse (if I can find my glasses). I suggest that this method of playing digital is more robust, and cheaper than having a wireless server. How would I connect to the KEFs from my laptop?

Many thanks,

**Ray Spink,  
Waterbury,  
Connecticut.**

Hi Ray. KEF make the LS50 Meta that is passive and the LS50 Wireless II that is active, both with MAT. If you want the passive LS50 Meta then just hook it up to your Fisher amp. I suspect however that you are interested in KEF LS50 Wireless II active 'speakers that can be run from your laptop via USB. Here's what KEF say: "LS50 Wireless connectivity options include 2.4GHz/5GHz Dual-band Wi-Fi, Bluetooth 4.0 aptX, Asynchronous USB Type B, TOSLINK Optical, and RCA-type line-level analogue inputs. A dedicated LS50 Wireless app (available for iOS and Android) easily facilitates network setup, music streaming, playback and DSP control". So there are many ways to run them (they are mains powered of course).

You can run them from a USB link or, to avoid wired connection, get the laptop hooked into your



**KEF LS50 Wireless II active loudspeakers. "I am thinking of purchasing the KEF LS50 active speakers with MAT technology" says Ray Spink.**



**Joni Mitchell's The Reprise Years 4CD box set. "I have always found her earlier work on CD to be full of digital nasties making listening painful at times" says Peter Sherwood.**

home network wirelessly and similarly connect the KEFs in wirelessly. Convenient – but it's best to use wired connection to avoid Airplay (if you are using an Apple laptop), since this offers no better than CD quality.

For an MM/MC phono stage look at models from Pro-Ject, Rega, Creek and Cambridge, all of which will be available second-hand. We use the Pro-Ject Phono Box RS2 in-house.

The KEFs are superb loudspeakers and should be both reliable and serviceable. Your REL Stadium II will work from the subwoofer output I believe. I hope this helps. **NK**

### AGEING ORBE

Noel's comments on the letter from Zap about his Orbe turntable were spot on. I would suggest to follow Noel's suggestions. If Zap is still not happy he could contact Michell Engineering with a view to possibly having the Orbe serviced. Then have a look around for a pre owned SMEV tonearm. I upgraded from a IV to a V sometime ago and it was worth doing, this when SME sold tonearms separately.

Regards

**Mike Bickley.**

### LISTENING TO JONI

Beware of placed editorial copy, which we read as a neutral review that is in reality a vehicle for product promotion. Being a lifelong fan of the "Devine Joni", I could hardly wait to acquire the new boxed set of her first four albums on CD. I have the whole cannon of her output in the form of

both CD and vinyl, but always have found her earlier work on CD to be full of digital nasties making listening painful at times. No doubt due to the poor quality of many "early" analogue to digital masters, an issue frequently addressed by Noel K.

My appetite being thoroughly excited by the positive editorials in the Music Press prior to release I rushed out and bought the package. The presentation of which is super, well printed, mat card, pleasing essay and a satisfying tactile feel. Getting home - straight to the high-fi.

Oh dear! Am I hearing this properly? "Blue" sounds exactly the same as my original CD complete

or reasonable expectation?

Needless to say a return journey to HMV ensued, who I know sell their goods in good faith, even though manufacturers are sometimes guilty of the opposite.

**Peter Sherwood**

p.s. Just to prove my ears work - I can perceive the differences between interconnect cables - it's not "moonshine" - it really makes a very big difference - audition and choose wisely and there is a pleasant surprise - in many instances your hardware is better than you think.

Hi Peter. Yes, as you say, you can trust your ears. I was a reviewer in 1983 when CD was thrust down our throats as perfect and I just could not accept that. Luckily, at that time serious spectrum analysers were becoming sort-of affordable (the cost of a Jag). I bought one and this revealed the truth: distortion levels were horrific – up to 40%. In some cases distortion exceed music, meaning more than 100%, which I initially thought was impossible but then realised that with digital it was not. My ears got it right before I could prove it through measurement.

And that is, I'd suggest, what you are hearing in those old 'perfect' digital recordings. Curiously, the official website says – "The Reprise Years 1968-1971) 4CD box set features



**"I upgraded from SME IV to V some time ago and it was worth doing," says Mike Bickley.**

with the familiar wince points! Check the others: "Clouds" as my original, "Ladies of the Canyon" as my original, "Song to a Seagull" much improved.

So what's going on? I check very carefully the recording notes on the packaging and can only find any reference to remastering/mixing on "Seagull". Is it my ears? No! Second opinions confirm my perception.

So what is the point of buying a boxed set for only a limited enhancement? Have the magazines written positive commentary in hope

newly remastered versions of Joni Mitchell's first four studio albums - Song To A Seagull (1968), Clouds (1969), Ladies Of The Canyon (1970), and Blue (1971). In the case of Song To A Seagull, the original mix has been recently updated by Mitchell and mixer Matt Lee".

If the analogue master tapes were run again and a modern 24bit ADC used then Joni Mitchell's songs may well have sounded a lot better. But that did not happen it seems, for reasons unexplained.

This undermines the buying public's faith in the music business as a whole.

And those music reviewers should have managed better, but the equipment people use to assess sound quality is often far below anything Hi-Fi World readers own. Bit of a real-world disconnect here. If you have a high resolution music system then by its very existence you have insight and experience others lack, including music reviewers. **NK**

Paul Rigby says – Music mags review the music, not the sound quality and probably either do that via a noisy, fan-beating, 20 year old PC CD drive or a downloaded FLAC/WAV via tablet speakers. Listening while typing and all that.

I remember writing a hi-fi column in a national music magazine, whose ex-NME editor preferred to talk to me about his search for a valve-based mobile Jamaican DJ trolley on castors with a 20+” woofer and beer-stained cabinet. It was his dream purchase.

**PR**

### RECORD DROP

*Martin Pipe's article was a good read, particularly the dropping of one record on top of another. I seem to recall that 45rpm singles had what I can only describe as teeth around the label, so that when a record drops on top of another, the teeth of the dropping record engages with the teeth on the record on the platter in an attempt to avoid slippage. Perhaps readers could confirm?*

**Mike Bickley.**

Hi Mike. Yes, watching “one record on top of another” raises worrying images from long ago when mechanical auto-changers did what apps do today. The good news was you didn't download the things and they didn't expire when the battery ran out. Watching and listening to LPs and singles crash down and spin around was harrowing though. Perhaps readers can find teeth on their discs that I recall were 45rpm singles, not LPs. **NK**

### MQA

*Having subscribed to the Tidal Hi-Fi service I have become more interested*

*losing traction. I am not aware of your magazine looking at it in detail. Indeed a review of the NAD C658 streamer DAC back in April 2020 edition did not mention it at all although the manufacturer web site confirms it is capable of fully decoding MQA files. I am able to listen to partially decoded files through a Kef EGG desktop system which I won as a prize through your magazine and it sounds impressive, making me curious as to its full potential.*

*It would be timely I suggest for you to examine this encoding system fully, particularly looking at the added benefits of full decoding over partial*



**Do your singles have "teeth"? Most of our 45rpm oldies have a serrated band to prevent slippage. Not found on LPs though.**

*in the MQA system. I am aware it has been around for some years and seemed to originate from Meridian. However it seems currently to be*

*decoding. I notice that a number of DACs capable of decoding MQA files fully seem to have been affected by the current micro chip shortage. An analysis of this shortage and impact on currently available products would be illuminating.*

*I hope you can oblige if only to stop my mind developing all sorts of conspiracy theories!*

*Kind Regards,*

**Charles Pidsley.**

**Burton on Trent.**

Hi Charles. There is little MQA available at present and what we have heard was not especially convincing in sound quality, but this could be the quality of the source material. Perhaps things will change. MQA aids streaming by reducing data rate.

More convincing in sound quality terms is DSD, something we do concentrate on, but it is not live streamed at present because of high data rate. **NK**



**Garrard 2025TC auto-changer with that glorious centre spindle that magically dropped records onto each other, often with a "crash". More reliable than an app, if less elegant.**

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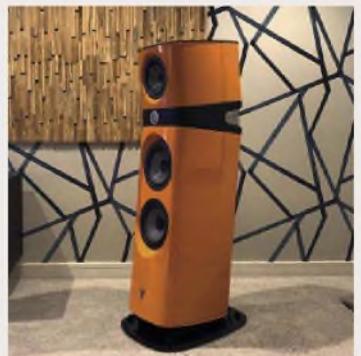
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# Diamond Qualities



**Wharfedale's new Diamond 12.3 loudspeakers shine bright and clear thanks Noel Keywood.**

**W**harfedale's Diamond series always delivered quality at a low price and the Diamond 12.3

floor stander I'm reviewing here epitomises the approach: a pair cost just £499. Wharfedale don't walk away from adding in a little technological razzmatazz either, rather than using prosaic parts.

Style wise, there is a traditional dark oak finish, but our samples came with a light wood veneer on the cabinet plus a white front baffle to give a bright, clean appearance aimed at the modern home – one with a lot of Ikea in it perhaps. A cosmetically fresh finish for an audience of today who might just take their headphones off for 5 seconds to listen to loudspeakers (I have deep experience of all this!).

Such an audience isn't likely to possess an amplifier of substance, so the ability to provide some oomph from a few Watts is where a floorstander scores: the bigger a loudspeaker is, the less power it needs. Counter-intuitive I know, but if a slim cabinet like that of the 12.3 can be found space in a room then it needs little more. A few Watts will do, since this is a sensitive loudspeaker.

Delivering sound from those Watts are three drive units in an



arrangement known as 2.5-way where the upper two drive units cover the entire audio band and the lower one delivers bass only, to improve bass power handling and reduce bass distortion by increasing cone area.

The two lower units of 5in (130mm) diameter have a cone made from a “blend of polypropylene and mica for stiffness to reduce flexing and colouration”, Wharfedale say. The idea behind such composite cone materials is to produce a mix that is light and stiff yet not prone to resonance and the colouration that arises from it, an issue with metal cones that sound – well – metallic. The Klarity cones, as they are called, have ribs that aid stiffness, controlling waves within the cone as well. Polypropylene, from my experience, gives neutral tonal character, but it and other plastics like Bextrene need enhancement to avoid quack.

The benefit of a small bass/mid unit is well controlled behaviour up to the point of crossover to the tweeter. This smoothes out and civilises vocals, removing the roughness that seeps in from cone breakup. Wharfedale’s small 130mm Klarity cone in the 12.3 hands over to a standard-size 1in (25mm) tweeter that, they say, “is made from a woven polyester film with a high loss coating”. The “loss” bit refers to losing energy from resonance by the use of a damping layer.

Gilbert Briggs, founder of Wharfedale, wrote a whole slew of books on sound reproduction and loudspeaker design, from 1948 onwards. In them lie pictures of the company’s test facilities: Wharfedale was founded on the idea of scientific analysis and that’s what they play on with the Diamonds, referring to today’s computer based analysis systems that optimise cabinets, magnetic circuits and even cone materials. The component parts of this ‘speaker have all been knowledgeably designed even though price is low.

The cabinet measures 928mm high, plus 50mm for the height adjustable spikes supplied, and there are protective metal pads that add another 5mm or so. So this is close to a 1m high loudspeaker. Width is 180mm and depth 350mm including the

terminals. Weight is a movable 19.5kgs.

Although there’s a rear port it can be placed close to a wall, the protruding terminals offering enough clearance. At rear lie substantial bi-wire terminals, connected by links for normal mono-wiring. Front grilles hide drive units that are none too pretty, but best to use with grilles on since they usefully reduce treble level for smoothest response and

best integration. The grilles are held by magnets.

## SOUND QUALITY

I drove the Wharfedales from a Creek Voyage iA20 amplifier, connected by Chord Company Signature Reference screened loudspeaker cables. A QED Quartz glass optical digital cable fed in digital from an Oppo UDP-205D universal disc player acting as a CD transport. Grilles were on by default.

In a quick encapsulation of sound quality, this loudspeakers has a dryly clear sound that is utterly devoid of colour, getting right into the instrument playing, the singer singing. No heavy bass, but quite strong treble at times. Clean and modern. On with the details...

Spinning the Pink Panther theme there was little sense of warmth, no boxiness or box thrum. The saxophone was starkly clear and hung nicely centre-stage. No big, fruity flavour here, instead an icily cool rendition.

Keb Mo’s voice almost crackled singing Every Morning, there was lacerative speed behind it, in truth to the edges of sibilants. The metal strings of his guitar sang out vividly as he pulled a slide down them, the Wharfedale’s offering an analytical view of the instrument. Opening chords had some sharpness to them however, the tweeter came over as spiky at times, when playing music with a lot of treble energy. Most of the time though it was civilised – if adding obvious sheen.

After playing a wide variety of CDs I felt a need to add in 1 Ohm resistors to reduce treble a little, since it was too obvious. This gave a more integrated sound, high frequencies not standing out as if a separate entity. It also gave me a different view: now the 12.3s were moving into being a dryly accurate reference loudspeaker which, at the price, is quite extraordinary. There was nothing amiss, just great insight and a nice wide, stable stereo stage with well hewn images on it. Very correct and impressive in being so.

Now onto bass. For much of the time I was not especially aware of bass: it was there, but not flinging itself at me, as it were. But with bass heavy tracks like Dadawa’s Canton Story, where a long, low chant is ended by a massive drum strike, the 12.3s



**Bi-wire terminals with gold plated 4mm sockets that also accept bare wires and spades. Lateral supports accept screwed spikes for height adjustment and floor protection pads are supplied too.**



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**The two bass/midrange drive units have ribs to add stiffness and break up waves. The black cone material is a polypropylene/mica composite.**

showed they not only go low but have grip, control and resolution. The floor trembled with this one and I could hear right into the qualities of the drum. They have powerful and well resolved deep bass but even in my 17ft long lounge it was not intrusive. Some weight and warmth was gained when the treble was pulled back with the resistors.

With Classical from CD not much changed. Renee Fleming stood out clearly centre stage singing Un Bel Di Vedremo from Madame Butterfly, set against a cool background rather than an enclosed space. Her voice was chiselled out cleanly, instruments of the orchestra also well identified. All clear and correct.



**The 25mm (1in) tweeter has a contoured surround to aid acoustic matching and integration.**

I moved on to LP with our Timestep Evo modified Technics SL-1210 Mk2 Direct Drive turntable, fitted with SME309 arm and Audio Technica OC9X SH moving coil cartridge feeding a Pro-Ject Phono Box RS2 phono stage through balanced XLR connection. Output to the Creek amplifier was balanced too, via Chord Company Epic cables. LP did slightly soften and warm the sound, injecting some useful body, but the Diamonds still came over as cool and clear in essence. All but reference class in terms of balance and insight, if a bit short of emotion.

I realised at this stage, however, that I was judging the Diamonds by a slew of loudspeakers that have passed through our portals recently, most costing more than twice as much. In some ways it was embarrassing: the 12.3s were arguably better in some areas – unexpected. But they are heavily engineered and – prominent treble apart – this shows. In a tick list within my mind stage width, image sharpness and stability and complete

lack of colour loom large with big green ticks. A little more bass would have been to my liking, even though I don't much go for heavy bass. Treble level was perhaps acceptable to those hard of hearing but not to me, so a red cross here.

**CONCLUSION**

The original and successful Diamond from Wharfedale was a small two-way distinguished by midrange clarity and superb imaging – I remember it well. The new 12.3 floor stander builds upon that approach by using similarly small 5in drivers, now with Klarity composite cones for impressive insight and imaging. There's also well balanced and tuneful bass. Treble is strong, measurement and listening show, the only sticking point.



**Two 1W carbon film resistors, ideal for attenuating the treble of a bi-wire loudspeaker. Use 1Ω or 2Ω total (not 10Ω shown here).**

**MEASURED PERFORMANCE**

Our third-octave pink-noise analysis (grille on), with microphone slightly off-axis (10 degrees) shows reasonably flat response down to a low 30Hz. With microphone on-axis there was plateau lift of +2dB above 3kHz, so the Diamond 12.3 will sound brighter if pointed directly at listeners, rather than straight down a room. Some slight lift above the 3kHz crossover frequency will ensure good detail retrieval but will make highs obvious.

There is a small amount of lift across the lower midband to add warmth but this has been kept in check. Deep bass output from 150Hz down to 40Hz is balanced for near-wall placement. Our impedance trace shows the port is centred at 50Hz.

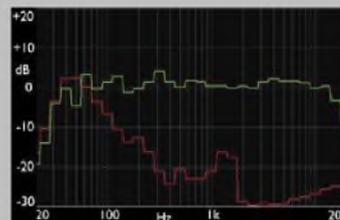
Overall impedance was 6.4 Ohms when measured with pink noise, the bass unit measuring 4.4 Ohms d.c.r. Sensitivity was high at 88dB from one nominal Watt (2.8V) of input, so no more than 50 Watts or so is needed to go very loud.

This is a reasonably accurate

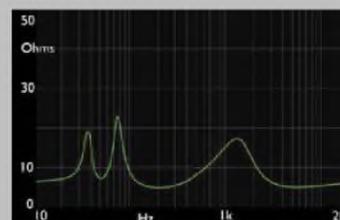
loudspeaker that runs low, measurement suggesting deep bass. It will sound bright with grille off: best with grille on and aimed straight down a room. **NK**

**FREQUENCY RESPONSE**

*Green - driver output  
Red - port output*



**IMPEDANCE**



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# DVD extra

**Martin Pipe recalls 1999's DVD-5000 from Denon – the first DVD player that could also act as a hi-res DAC.**

**"T**he future of home entertainment". That's how Jonathan Ross announced DVD-Video (DVD-V) on his BAFTA podium, when the format was launched to journalists on Wednesday October 14th 1998. Few of us realised just how quickly DVD-V would capture the public imagination, despite the simple fact that DVDs were much cheaper to produce than pre-recorded VHS tapes that had to be expensively duplicated in real time. No wonder the industry was keen for the fledgling format to succeed!

It did however help that DVD-Vs were quick and easy to use, did not suffer tape jams, had much better picture quality than VHS, offered extra content, took up little storage space and supported features like 5.1 surround and even hi-res audio. By the turn of the millennium, DVD was being hailed as the "most successful consumer product of all time".

When it was launched, a range of players were available. All were compatible with CDs, encouraging some people to replace their existing hardware with new-fangled DVD players that could also be hooked up to a telly.

Early models came from well-known marques like Toshiba, Panasonic, Sony and Pioneer. The latter also produced a substantial unit capable of playing not only DVDs, but also the 'legacy' 12-inch analogue Laserdisc software that it had championed. Interestingly, some early DVD-Vs had much worse picture quality than Laserdiscs due to digital-compression artefacts. I can remember articles in the specialist press comparing the two, and DVD didn't always win. An early 4:3-framed release of the Coen Brothers' 1996 movie Fargo was, I recall, memorably-bad.

At that time, video compression (DVD-V uses

MPEG-2) was time-consumingly achieved off-line, owing to the era's lack of sufficient computing power. Fortunately, compression techniques evolved - and rapidly so; we didn't have to wait long for consumer DVD recorders with decent real-time MPEG-2 'compression engines'. Even from the beginning, though, DVD's audio capabilities trounced those of 'hi-fi' VHS. Laserdisc still had some potential, though, as its soundtracks were uncompressed CD-standard PCM. Prior to DVD's launch, the Laserdisc format had been adapted for DTS and Dolby Digital 5.1.

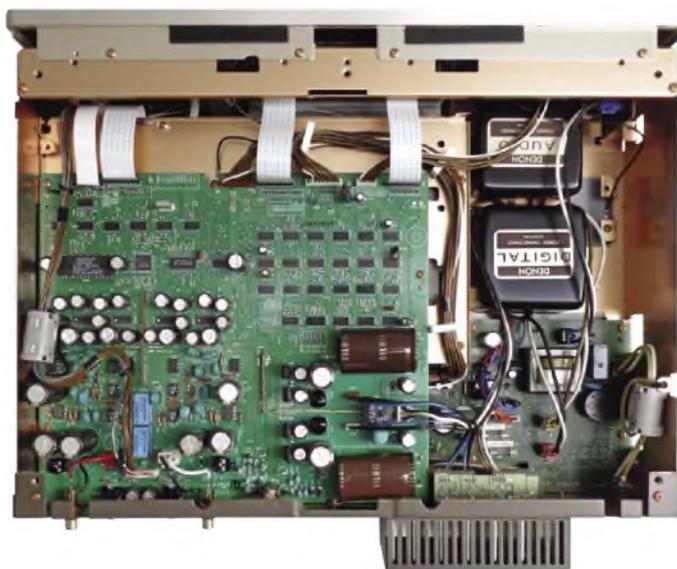
Both of these lossy 'codecs', which brought discrete multichannel audio into the home for the first time since JVC's analogue CD-4 format of the quadraphonic era, made the transition to DVD-V. They quickly eclipsed the 'MPEG Multichannel' standard of the digital newcomer's original spec.

DVD-V made decent home-

cinema a practical reality for the man in the street. For audiophiles, though, there was something else of even greater interest - hi-res audio! The DVD standard supported up to 24-bit, 96kHz audio via PCM (lossless) or DTS (lossy).

Although audio-specific disc formats designed for hi-res stereo and multichannel audio - DVD-Audio (DVD-A) and SACD - were to follow, DVD-V gave music lovers their first experience of hi-res. Classical, jazz and rock music were represented, albeit in a limited way when compared to CD. Miles Davis, James Taylor, Queen, Peter Gabriel, David Gilmour and Genesis were among the artists to have music released on hi-res discs intended for DVD-V players. Some were video with hi-res soundtracks, while others just had audio; there was even an audio-only "DTS 96/24" format for a while.

24/96 support may have been essential for DVD players, but few



*The Panasonic DVD loader and associated circuitry are contained within heavily-screened sections, to avoid contaminating the audio. With the cover removed, all we can see are Denon's audio board and the power supply transformers.*



made the most of its possibilities. Some serious listeners, who took the trouble to feeding hi-fi systems from their analogue outputs, wondered what all the fuss was about. Sometimes, an expensive hi-res music disc would sound the same (if not worse!) than a high-end CD source. DVD players were fast-becoming consumer 'commodities' in a competitive market, where low pricing meant everything - hardly the stuff great audio is made of. What the audiophile needed, certainly until those eagerly-anticipated audio-optimised formats finally arrived, was an upmarket DVD player with audiophile-grade circuitry.

And in 1999, less than a year

after that October DVD launch day, those prayers were answered in the form of the DVD-5000 from Denon - a firm whose earlier offering, the DVD-3000, was acknowledged as one of the better-sounding 'first-generation' DVD players. Then again Denon had more experience with digital audio than pretty much any rival organisation, having conceived and built its own PCM equipment to record music for LP release on its own label. The rather bland-looking £700 DVD-3000 could easily have been mistaken for a CD player. Not so the DVD-5000 - an imposing giant of a machine, with a champagne-gold finish that reflected its substantial £1,500 asking price. Black was available as an alternative...

The DVD-5000 was probably the first world's 'genuine' high-end DVD player. It was first launched in the USA, where it sold for \$2,500 and met the tight 'THX Ultra' performance specs; it wasn't uncommon for impatient AV enthusiasts with plenty of money to have them imported from the US and then 'chipped' for multiregion

operation (the US is Region 1, and players sold there are incompatible with Region 2 discs sold in this country unless modified in some way). That was however not the only other issue. At the time, THX was only specced for NTSC video - hence the absence of the coveted 'THX' logo on the PAL (UK) version of the DVD-5000.

In common with the American version, though, the 'Region 2' UK



*The DVD-5000's headphone amplifier is surprisingly capable, and can drive decent headphones. Its level control also affects the rear-panel 'variable' output.*



*A heavyweight resonance-damping copper chassis, and a linear power supply arrangement based around two transformers, contribute to the DVD-5000's 17kg of high-end DVD goodness.*





**Denon's no-expense-spared design dedicates two Burr-Brown PCM1704 DACs – operating in differential mode – to each stereo channel. Also visible here are switching relays, audio-ophile-grade passive components and Analog Devices OP-275 op-amps.**

model has a component (Y/Pr/Pb) video output instead of the RGB Scart socket then fitted to most European-market AV gear. Component connectivity became more common in the following decade, but when the DVD-5000 was introduced the only non-professional displays to support it in the UK were a handful of extraordinarily-expensive plasma screens, projectors and imported esoterica. To use the DVD-5000 with displays that lacked a component input, users had to resort to the next-best option (S-video).

The DVD-5000 was however not all it appeared to be. Under the bonnet, it was basically a first-generation Panasonic DVD player (as was indeed the DVD-3000) but with Denon 'tweaks'. Panasonic was a far bigger industrial concern than Denon and had the extensive international resources needed to design and build DVD players 'from scratch'. Denon put the basic Panasonic player into a heavyweight resonance-damped copper chassis (the DVD-5000 weighs 17kg!) alongside a linear power supply arrangement based around two transformers - one of which was

exclusive to the audio electronics.

The piece-de resistance though was a completely-new state-of-the-art audio board. Denon spared no expense on the circuitry, dedicating two Burr-Brown PCM1704 DACs - operating in differential mode - to each channel. It could play HDCD titles too, courtesy of a genuine Pacific Microsonics PMD100 chip (try finding one of those in a modern DAC!).

There was plenty of audiophile-grade thinking on the analogue side too, including carefully-selected passive components and Analog Devices OP-275 op-amps. Both fixed and variable audio outputs (unbalanced phono, not balanced XLR) are provided. There's also a headphone amp, the front-panel level control of which also affects the variable output; the DVD-5000 can therefore drive power amps and active speakers directly.

From CDs and DVDs both music and theatrical, the DVD-5000 was intended to extract every last ounce of performance. For 16-bit material, Denon specified its AL24 'upsampling' DSP (in the form of a DXP6001AF chip). Unfortunately the Panasonic transport at its heart rejects CD-R and CD-RW discs, meaning that you couldn't play your own recordings, made on hardware that was also gaining acceptance at the time. Few if any first-gen DVD players are compatible with such media; this was only resolved with the introduction of pickups with separate lasers for CD and DVD.

With characteristic forward-thinking though, Denon built a get-around into the DVD-5000

- one that makes the machine still useful today. It was the world's first DVD player to offer digital inputs, courtesy of a Cirrus CS8414CS interface, so that Denon's audio circuitry could work its magic on off-board sources (including CD transports, DAB tuners, Minidisc decks and CD recorders). It's compatible with anything up to 24/96, HDCD material is supported and 16-bit audio is AL24-upsampled. A front-panel knob switches between the internal transport and the two digital inputs (optical and coaxial). In 'DAC mode' the sampling rate of the



**A front-panel knob switches between the internal transport and the two inputs (optical and digital). Also visible are the LEDs that indicate when the DAC is upsampling 16-bit material (AL24) or decoding HDCDs.**

incoming signal is shown on the front panel display - an 'icon' lights up to confirm a 24-bit source.

As a DVD player the DVD-5000 has easily been outclassed by newer players with better MPEG decoding, CD-R compatible disc transports and DVI/HDMI digital video outputs. Although a modern budget player outclasses the DVD-5000 it will be nowhere as good



**The DVD-5000 can play 'pseudo 20-bit' HDCD titles – remember those? – thanks to a genuine Pacific Microsonics PMD100 decoder chip. Even if its DVD loader no longer works, HDCDs can be spun on a transport feeding one of the DVD-5000's digital inputs.**



# ifi

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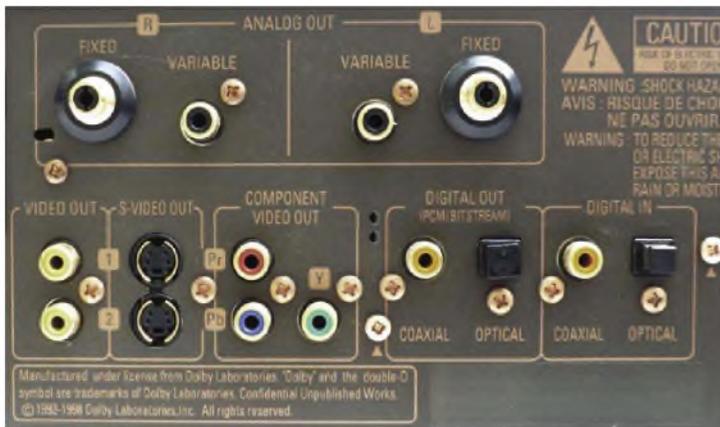
## ZEN DAC

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**As well as digital inputs there are digital outputs (which are primarily-intended to feed multi-channel bitstreams to home-cinema amplification) and fixed/variable analogue audio outputs. Instead of RGB Scart, the DVD-5000 feeds composite video to a display. Composite and S-video are also available, as lower-quality alternatives; the design predates the introduction of HDMI by at least five years.**

as a CD player, thanks to Denon's audio enhancements. However, that may be academic these days; the Panasonic VED0378 laser, as fitted to the DVD-5000, is notoriously-unreliable. Until it's replaced, affected DVD-5000s - including, funnily enough, the one featured here - merely show 'NO DISC', instead of loading whatever disc you have placed onto its tray.

Most VED0378-based players were scrapped after laser failure, being replaced by cheaper and more capable machinery. The DVD-5000's 'DAC-ability', plus its prestige status, seem to have spared many examples from such an ignominious fate (note that 'aftermarket' VED0378 lasers are now available from Chinese sources for £40 or so, should you want to restore disc playback). After its laser had failed, I was happy to use my own unit - acquired in my position as the

contributing technical editor of a home cinema magazine - as a DAC, until its sheer bulk became impractical.

Hooking the DVD-5000 back into my system, I was amazed how good Denon's DAC still sounds more than 20 years after its release - just consider all of the digital-audio advances that have been made since then! I'd go as far as to say it could hold its own against modern hardware. The bass performance is particularly strong, with plenty of impact. Lovers of dance

and rock music will love it for this reason - even though its presentation can be rather smooth and restrained at times. Definition is of a high standard, and it's easy to identify individual performers.

Denon's engineers went to a lot of trouble to maximise the dynamic range of the DVD-5000's audio circuitry and, with the appropriate programme material, it's evident they succeeded. The careful 4-DAC design would have helped here, as well as the DVD-5000's ability to convey a tangible stereo image. The latter is particularly evident with a decent pair of headphones plugged into the front-panel jack - Denon has clearly put thought into the amplification behind it. If you can find the space (or strong enough shelves!) for one, a DVD-5000 is well worth seeking out if you're after a fine-sounding DAC for not much money. I've seen 'no disc' DVD-5000s change hands for less than £40! At that price, you simply can't do better.



**In DAC mode, the incoming sampling-rate is confirmed by the front panel display. To the bottom-right of the display, a '24-bit' icon reminds us that we're listening to a hi-res source - fed, in this case, to the DVD-5000 via its coaxial input.**



**This is a Region 2 UK unit - when the DVD-5000 was first launched, it wasn't uncommon for impatient AV enthusiasts to have them imported from the (Region 1) US and then 'chipped' for multiregion operation.**

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# “Suddenly, the iPhone can be used as a hi-res music player”



Noel Keywood

**J**ust like CD, Bluetooth is a technology hampered by its unfortunate early reputation. It staggered into the world as a form of MP3 for the airwaves, just as MP3 had become known for destroying sound quality by the use of lossy compression.

The likelihood of Bluetooth offering much better digital quality than Medium Wave always seemed unlikely to me. And it wasn't just me. Whenever the subject of Bluetooth and sound quality arises it is consistently said to be inferior to all other digital transmission schemes.

But I'm increasingly faced with listening to Bluetooth connected devices in for review and it often sounds good to me – so what's going on?

I became suspicious about all this some months ago when reviewing the Cambridge Audio Evo 150 for our September 2021 issue. Playing music from my iPhone to the Cambridge, connected to our revealing Martin Logan ESL-X hybrid electrostatic loudspeakers, suggested to me there was little difference to the same music test files stored on a Flash Drive. I use a selection of high quality, high dynamic range CD tracks, and hi-res including DSD, that I know well – and they were travelling over Bluetooth unmolested it seemed. Odd.

Ploughing through discussions of Bluetooth technology on the 'net there's little useful information on all this – as there is not likely to be, since the official Bluetooth site is focussed on technicalities such as software stacks rather than real life performance as experienced by a user.

Current audio products will be using Bluetooth Classic, we're told, quoted as being suitable for headphone use (considered

high fidelity) using the mandatory SBC (Sub-band Codec) – but at 320kbps or so this is little better than MP3. Is this what I was hearing?

I don't think so. The only meaningful test that catches out compression systems is that for Dynamic Range. This applies a low level tone and measures the total distortion and noise generated by compression. If I was listening to SBC then using a 24bit test file on the iPhone, dynamic range (EIAJ) would measure around 90dB, compared to CD's 103dB – a 13dB shortfall and clear proof that a compression system is degrading the audio.

What I actually measured with our Rohde&Schwarz UPV analyser was a massive 115dB dynamic range when transmitting the test file from iPhone 11XPro to Cambridge Audio Evo 150. That's way better than CD!

Since the Cambridge with ES9018 DAC measured 119dB from a direct digital input and just 4dB less from Bluetooth the suggestion is that Bluetooth radio transmission in this particular situation was stunningly good, far better than it has any right to be.

How so? Both systems used Bluetooth 5.1, but that does not say much. However, a new codec called LC3 (Low Complexity Communications Codec), introduced in 2020, is used in “efficient LE audio profiles” and it just could be that this was operating. Bluetooth say LC3 “supports 24 and 32bit depths” at up to 48kHz sample rate.

Aha! That sounds more like it. If Bluetooth 5.1 LE was in use on the iPhone, then it becomes possible to achieve very high dynamic range, explaining why Bluetooth audio quality is now so good. Other factors playing a part are that iOS supports 24bit audio at 48kHz

sample rate and I was using the Hi-Res version of Onkyo HF Player (£9.99) that leverages this.

The iPhone may have AAC, as is often talked about, but that again is just techno-talk; the presence of AAC does not mean the 'phone was using it to compress data on the fly. And Qualcomm's aptX and aptX-HD are not used in the iPhone.

Bluetooth is more than just about transmitting audio. It is a general purpose radio data channel transmitting at 2.4GHz, for short range communication, quoted as 30ft but often more. Data can be sent too, so with the Philips Fidelio L3 headphones I review this month Play or Pause can be selected, Next track or Last track too – from the headphones!

But the point is Bluetooth isn't MP3 quality any more. The view that it offers sound quality worse than CD is wrong. Far from it, measurement shows it is now capable of full hi-res performance, with sound quality better than CD.

Suddenly, the popular iPhone can be used as a decent hi-res music player. Which, as I ponder on it, is almost worrying. It will store a huge music collection in the pocket, including hi-res and DSD. Just like a Flash Drive.

But you can also get a hi-res music player with track listings, artwork and much more, unlike a Flash Drive.

Better, there is just one comms link – Bluetooth. Avoiding wi-fi, the network and all associated difficulties. With DSD in particular it's a bit like carrying a decent record player and a whole stack of LPs in your pocket. What's transmitted over Bluetooth is at best 24bit PCM – but DSD and LP still give a great sound. Certainly better than MP3 and in my experience CD too. ●

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# "In my listening room it's Christmas every day"



Paul Rigby

**I** explained how weirdness can be evoked during last month's column. This month I want to explain how weirdness is manifested. At least in my own case. It's a variant that I've yet to see in others or hear about on social media or hear claimed aloud in recent medical journals.

Last time, I talked about this weirdness and how it had taken a physical form via my vinyl collection. I also talked about the carrier of my weirdness, my Kallax collection. IKEA has a lot to answer for (in a Swedish accent), especially when I seem to have as many Kallax shelves as I do vinyl records.

So what is it then? What's going on? What's this 'weird' thing all about then? I blame Christmas (obvious when you know, eh?).

As a kid, I loved Christmas and I loved the magic of it. I loved the multi-coloured lights, the tinsel, the brightly-lit shop windows in a winter darkness, the corny pop tunes, the classic carols, carol singers, singers who happened to be named Carol and the expectation of the event and the other-worldly feeling during the time itself and the differences it brought.

In my family's case that meant Morecambe & Wise (oh, how I miss them), a rare game of family Monopoly, Black Forest Gateau and the amazing sight of half a tin of Salmon as part of a post-roast dinner salad. A particular cultural delight.

I still get the buzz now that I'm a big kid. I still believe in Father Christmas. I still get a buzz when I see the light's reflecting in dangling Christmas decorations and I still take visceral pleasure in replying to American friend's soggy

"Happy Holidays" with a loud "Merry Christmas!" And startling callow youths at Sainsbury's checkouts with the same.

And I love presents. I love buying, wrapping and giving presents. And I love to receive them too. It's the surprise. It's the not knowing. It's the delight of the unwrapping. It's the wonder and the magic of the thing. That. All of that. All of what you see above. All of it. Can be applied to my vinyl collection and the organisation of the same.

How?

When I discuss vinyl on social media. Wherever it is. There will come a time when the notion of organisation rears its ugly head. "How," they ask with a little trepidation, "How do you organise your vinyl, then?"

Upon which the usual chatter flows forth. What you normally get is a combination of well-worn themes.

One user will organise his vinyl alphabetically. Now I've seen Amazon sell black plastic dividers covering the entire alphabet for around £40. You can also get the same for 7" singles and CDs too for lower.

The Koeppel Design wooden dividers are very expensive but rather beautiful (<https://koeppeldesign.com/products/horizontal-a-z-record-divider-stencil>). I'm sure I've reviewed them in this august organ in the distant past. Never got to keep them, though. Had to give them back. More's the pity.

Other vinyl fans will organise their vinyl in different ways. They'll initially separate by genre and then alphabetise within each genre.

I've heard some people organise by decade: 60s, 70s, 80s, etc. If they're a mad fan of a few

groups, they might organise by those groups and then, within the group material, go alphabetically or by year and then clump the rest of their collection together and go by the alphabet there.

You can see a logic in all of the above, can't you? It makes sense. I do things differently. My method of organisation is this. I don't.

That's right, I purposely do not organise my vinyl. If I see a naturally evolving collection of vinyl popping up then I'll go in there and separate them and distribute them all over my other shelves.

Why? Because I love surprises. I love the whole "Oh wow, I forgot I had this one!" feeling. It's a thrill. I love the not knowing what will appear next. I love the variety too.

That's inherent in my personality. Variety. I hate ruts (the state of being not the punk band). I hate too much regularity. It's why I'm a freelance journalist. I could never do an office/desk job. I'd die of depression within 3 weeks if I did.

That variety is another key factor in my vinyl (dis)organisation. I'm not the kind of guy who says "I'm in the mood for 80s indie today!" I'm the sort who says, "OK, whaddya got? Give me your best shot!" I love the contrasts I get when running through one Kallax 'cube' at a time. That's the only order I follow. I start on the top left cube, work left to right then head for the far left on the second line down. And so on from there.

And yes, it means I can't locate a specific album if I need it. The one downside. But it's a small price to pay because, in my listening room, it's Christmas every day. ●

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# "streaming firms are stumping up a fraction of a penny for each listen"



Martin Pipe

**M**usic streaming has been with us for longer than we realise, although in the past it complemented a healthy recorded-music industry. I can remember the 'Dial-a-Disc', which the GPO offered to pre-Internet telephone subscribers alongside the speaking clock, weather forecasts and test-match cricket scores. Trialled in Leeds before rolling out nationally over the late 1960s, Dial-a-Disc invited users to call a number during certain 'cheap-rate' times of the day. They'd then hear a pre-set choice of 'hit' records – two during weekdays, or five at the weekend. We complain today about streaming being lossily-compressed and of mere 16-bit resolution, but spare a thought for Dial-a-Disc users listening to the big hits of the day over crackly phone-lines.

Going back even further was the pre-war 'Multiphone', conceived by American pinball magnate Kenneth Shyvers. His 8,000 elegant art-deco 'kiosks', installed mostly in Washington state, allowed bar and diner patrons to order from a list of 170 popular songs attached to the front of the machine. Pop in a nickel and you'd be connected, via a 'leased-line', to a girl in the Seattle 'Central Music Studio' – arguably the human-powered analogue equivalent of today's cloud music servers! She'd take your request, and cue it up on a '78'. The music would then be played over another leased-line (better quality than regular phone-lines), where it was heard over the Multiphone's internal speaker. This ingenious system was not without problems – the girls frequently got requests for...non-musical services – and by 1960 had been rendered obsolete by newer jukeboxes, which boasted

repertoires of a hundred or more 7in 45rpm singles. Technology has the tendency to disrupt established ways of doing things.

More recently, just before the pandemic struck, various wags have described the late 2010s-to-early '20s as the 'golden age of television'. But the mega-budget productions of Amazon, Apple TV and Netflix are not television in the traditional broadcast sense, perhaps better-described as the 21st-century online equivalent of the home-video rental shops that once graced every high-street.

The music industry has similarly been disrupted by 'big tech'. Amazon and Apple both run streaming music services, that compete with more established Spotify and Tidal, as well as YouTube.

However, there has been a pandemic-amplified backlash. Not so long ago, musicians toured to support recorded music. Listen to old concerts recorded for transmission – the BBC's late-night '6 Music Classic Concert' archive, for example – and you'd often hear bands plugging forthcoming albums before performing their new material.

Recorded music is alas no longer as crucial to a musician's income as it used to be, thanks to the increasing dominance of streaming. In the US, it was recently estimated that streaming accounted for 83% of recorded-music revenues. Spotify, for example, is now claimed to have 356m users worldwide. So we have a situation in which musicians use their studio work and its internet distribution/radioplay to promote tours.

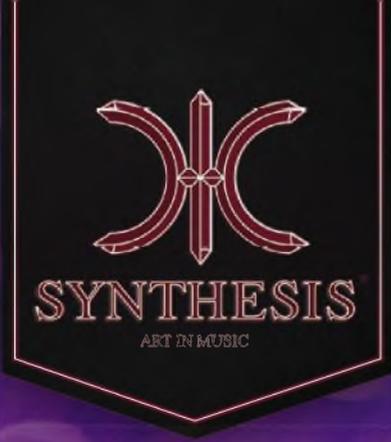
When you can't perform live though, due to a bug, that 'live' income disappears. In this country,

many musicians have struggled to make ends meet during the pandemic; it didn't help that a significant proportion – 40%, according to the Musicians' Union – weren't eligible for furlough. The scarcity of royalty income from streaming, which has eclipsed album and single sales, was ruthlessly-exposed – even though the fruits of their labours may have been placed in the charts (which now include streaming).

It turns out that the streaming firms are stumping up a fraction of a penny for each listen. Spotify pays approximately £3,000 per million 'plays', but that's to the record companies. Only a fraction of this amount ends up with musicians.

The deals struck between the record companies and the streaming operators compound the problem. All revenue, collected by a streamer as ads and subscriptions within a specific time-frame, is typically divided by the total number of plays over that period. It is 'stars' that benefit the most from such a scheme. Musicians that aren't household names are alas less favoured, and this does not bode well for the future of the industry.

Some are campaigning to increase the amount paid per play. The Musicians' Union, the Ivors Music Academy and Gomez founder Tom Gray's #brokenrecord campaign have however been campaigning for more fundamental reform of "the streaming funding model". It's already had an effect; a cross-party select-committee has called for "complete reset" of music streaming so that "artists, performers and songwriters...are fairly-rewarded for their work". Dial-a-Disc was perhaps a fairer system. ●



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"It will last provided you don't fill the thing up with self raising flour"



Dave Tutt

People often dismiss the old stereo receiver as an ancient throwback to something akin to the music centre. This is not exactly fair to the things as there were many wonderful receivers, especially from the brushed aluminium 70s and 80s with oodles of power and great engineering.

But there are some much more cut-down units from the same era with very little output power but great FM tuners, MM phono inputs and spare aux sockets for your phone with digital audio toy output – so do these low power old-timers stack up against more recent hardware?

I have two receivers in my workshop at the moment, a Sony STR-7025 and a Pioneer SX-424 – relatively cheap low power units from a similar age, with wooden sleeves and that brushed aluminium front panel finish. Both are more or less immaculate.

The Sony offers around 18 Watts a channel. It might not seem much but given that most listening with any hi-fi system is with the volume control at no more than the 9 o'clock position it is unlikely that you need drastically more than what is available here.

There is always a sweet spot in output that a regular listener will know on the volume control and these two were much the same. Meaning a few things needed addressing, as usual starting with all the noisy controls stuck in one position, so out came the Servisol spray – the only thing you really want to spray into a switch or potentiometer to banish dirt and restore full operation.

Then there was intermodulation caused by worn out main smoothing capacitors – but once

these had been replaced with new ones of a higher value and the power supply diodes up-graded we had a nicely working piece of kit.

I have to say this Sony is a bit of a dark horse item. With big speakers where efficiency was a bonus the sound was surely great, just a few Watts of the 18 being needed. Radio reception is much better than from tuners of more recent times, being clean and clear with slight warmth – without that "we are all the same" integrated circuit tuner sound of the last 25–30 years or so. But then there are no ICs in the radio section, just old fashioned transistors – and similarly old, tuned intermediate frequency circuits. Running through the full range of stations it was easy to hear which were the best and the least processed by all that transmission hardware.

If the Sony was low powered at 18 Watts then the Pioneer gave even less, only 12 Watts a channel. Good looks, with blue/green tuning display illumination, made the Pioneer look rather tasty so it was worth the trouble to make it sound better.

Bigger power supply capacitance yet again helped – double the original values made things sound better, as did four times more with associated bridge rectifier upgrade.

The power amp, although all discrete, is early transistor style and lacks modern classic design topology. It is capacitively coupled to the speakers – so that is another potential point for an upgrade, to give a definite boost in performance.

As you can imagine, this 1972 receiver's components were really worn out! Changing the output capacitors tends to give better bass, especially with modern low ESR

types. I like to put my oscilloscope on the outputs when these sort of changes are done to see how it looks with a square wave going in – just to check on the high frequency stability more than anything else.

So the thing is: what are these two receivers any good for? Surely not modern uses. It is quite clear these machines are the equivalent of a kitchen radio if you have the space – but with so much better sound. Reception with both of them on FM as you might suspect was superb with just a length of wire.

As for speakers to suit, well there are any number of new ones you could put on top of a kitchen cabinet and make a semi-permanent installation. They are rather warmer when using the tuner section than modern digital tuners but not detrimental to the quality of the sound. Do you really need DAB? There are several really cheap sub £25 DAB personal radios available that could just plug into the aux inputs.

Likewise, if you are really in need you could connect your laptop to it and whilst working on that latest Mary Berry concoction following those on-line instructions to make a great cake, you could be listening to music from any of the hundreds of internet enabled radio stations.

A renovated unit from this era will deliver a sound quite unexpected with any input compared to modern equipment and it is a shame we have cast so much of this gear into the scrap bin. Such receivers are ideal as a starter system too of course. A really cheap solution then that will probably last a while and provided you don't fill the thing up with self raising flour it should make music for the foreseeable future. ●

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THE BEACH BOYS

Feel Flows: The Sunflower & Surf's Up Sessions, 1969-1971  
Capitol

This is one of those releases that wallows in minutiae and has a ball doing so. The CD version either arrives as a 2CD set or as a 135 track, 5CD box set with 108 previously unreleased tracks, live recordings, radio promos, alternate versions, alternate mixes, isolated backing tracks and 'a cappella' versions, taken from the album sessions.

The vinyl version itself arrives in two reduced-track forms, the double album and the more expensive and expansive 4LP box set, on both black and coloured vinyl (labels certainly milk every format and variation they can find, don't they?).

Why now? It's a 50th anniversary celebration of the albums and I, for one, am glad they're here.

There's a tedious undercurrent surrounding Beach Boys material stating that, after 'Pet Sounds', the rest doesn't matter. As if the quality

fell off a cliff and was nothing more than ephemera.

Yes, the band had to move to a different creative path away from Brian Wilson's meticulous, almost OCD music-making methodology but the public's Brian fixation unfairly damages and blurs out the talent that surrounded him. As if The Beach Boys were a Brian solo project only backed by session men.

Personally? I think the band were reinvigorated when Bruce Johnston established a creative presence (noted on both albums here). Instead of navel gazing and wandering around in circles, the band were infused with new life.

Me? I'd get both the big CD box set and either vinyl edition (for sound purposes and sheer physical presence). This is a superb insight into the creative process. Mastering quality varies – this is a compilation after all – but content is king here (be glad it exists at all), not sound quality.

AUDIOPHILE VINYL



MARC BOLAN

Star King  
Demon

This single disc LP in a simple sleeve arrives with the subtitle 'A collection of working and master versions and mixes' and was published, as a limited edition, during Record Store Day in 2021.

The LP features ten rarities including demos, 'working versions', alternatives and the like. They range from 1972 to 1976 and, taking a cursory look, are essential for any Bolan fan who likes to dig beneath the commercial releases, to enter into the artistic process. Here we see songs under construction. There's no chrome finish here. This is a snapshot, a collection of unfinished rough diamonds.

Those tracks include the likes of 'Born to Boogie (working version)', 'Blackjack (master version)' and 'Squint Eye Mangle (working version)'. That is,

there's a host of goodies here.

In terms of mastering quality? Well, this is an aural note pad so the quality of the recordings is far less important than the ability to access them in the first place. So there's chatter and conversation alongside the music too.

Pressed on red vinyl, the mastering is surprisingly good for a collection of 'notes'. Demon's rather dry mastering technique means the sound is possibly not quite as lively as it could be but, for many tracks here, there's a refreshing immediacy, a direct, stripped, unprocessed truth to this track selection.

This is a compilation so there is variation in mastering quality. For example 'Dreamy Lady' recorded for TV's 'Top of the Pops' is compressed and edgy. Nothing too aggressive but it's there, nevertheless. Even so, that takes nothing away from this wonderful collection.

I was rather surprised to see this one. Surprised in a nice way, of course. I'm not being derogatory. This is quite a lavish collection, though.

I say this because the band have never really received the kudos that were bestowed on The Stone Roses or, later, Oasis and Blur and the rest. They always seemed to be a Britpop outfit on the periphery because they were late arrivals. They had a certain 'me too' aspect because they were not there in the early 90s. Second division material. Wannabees. Neverwills.

Also, because they made their initial splash as Britpop was just starting to wane, they were often lumbered with any negative kick back from the scene by the press. That is, the increasingly stale aspect of Britpop was shovelled up in a bucket and poured over the heads of The Bluetones. Unfair.

For me the band's 'Slight Return' single (found here) was as iconic of the mid-nineties as anything else on the scene at the time while 'Bluetonic' is a notable and rather catchy song of the era. A real ear worm that, once in the mind, refuses to leave.

So it's nice to see the album receive attention in a pizza-style box over three slabs of vinyl that includes the original album, a second disc featuring the singles alongside B-sides (always a welcome addition and too often ignored by labels) plus a third disc called 'The Early Garage Years' featuring demos and early EP tracks plus home-made recordings.

This is a superb collection for fans, arrives with a large-format photo booklet while the mastering, despite being a bit dry and lacking in clarity, offers low noise, good detail and a broad soundstage.



## THE BLUETONES

Expecting to Fly  
Demon

# AUDIOPHILE VINYL

At time when co-founder, Andy McCluskey was on his lonesome because everyone else had jumped ship and the music veered further away from Kraftwerk (an early influence) and more towards The Pet Shop Boys.

Dance pop was the core connect. A means to an end. Money, in other words. It sold and produced chart material and worked a treat, initially. Top 10 hits 'Sailing on the Seven Seas' and 'Pandora's Box' would appear on 'Sugar Tax' (1991) which appeared just before 'Liberator' (1993) and 'Universal' (1996). By then, the Top 10 singles had given way to singles in the Top 30 and Top 50.

'Liberator' is OMD controlled by the market. OMD as a slave to fashion and fad. Swamped by bad dance rhythms and technolite. Frankly most of these songs could have been sung better by

Kylie Minogue. To prove my point, McCluskey would soon drop OMD to write songs for teen groups like Atomic Kitten.

'Universal', having come a cropper with Pet Shop Boys Mk.2 is Tears for Fears Mk.2 instead. That didn't work either. McCluskey tried – bless 'im – but he never had his heart in it. It sounded stale. It was a retreat.

After this album the group deservedly died a death, McCluskey stepped out of the hamster wheel and refreshed his creativity. He should have done that ten years earlier.

There would be a happy ending to all of this when McCluskey and co-founder Paul Humphries kissed and made up in 2010 and began to produce real music again.

This LP duo remains a fascinating pairing for fans. They will always be part of the OMD story and deserve a place in the pantheon because of that.



## OMD

Liberator/Universal  
Virgin

# 2go/2yu



## BRIDGING THE GAP

HUGO RANGE

Upgrade your audio system with Chord Electronics' award-winning streaming technology. The 2go/2yu network bridge offers effortless music streaming plus up to 4 TB of SD card library playback. Connect to your DAC for music in glorious Chord Electronics quality.



# Silver Surfer

Play silver discs with a streamer? Noel Keywood gives it a go with Arcam's ST60.

**M**any readers have asked us about a replacement for the highly regarded Oppo UDP-205D Universal Disc Player with its super high quality ES9038Pro DAC from ESS of California. Well, here is a replacement – but it's a streamer! Perhaps better termed a Network Player. Arcam's ST60 (£1200) can do much the same job – something that will appeal to a lot of people I suspect.

There's nothing radical going on here. Arcam have simply come up with a sensible multi-role package that meets real life requirements in easy fashion. Plug in a CD player digitally and you get ES9038Pro sound quality from silver discs. You get the same from other digital sources – and the Arcam copes with a wide variety of them.

As a streamer there is network connection of course: the rear carries an RJ45 ethernet socket that's plugged into a router. For those unable or unwilling to use ethernet wi-fi is fitted as an

alternative. When I connected up our review sample it was seen by a BT Smart Hub 2 router as 'st60' on the client list – a useful step up on all the many devices that appear as 'unknown'. Once identified like this the likelihood of a phone app seeing it is high, not something I can say for many app controlled devices I've struggled with.

Arcam's Control app, downloaded to my iPhone 11XPro, saw the ST60 immediately, once it was fired up with white front light on. There are no non-working alternative apps to confuse the issue, and Onkyo HF player on my 'phone saw it too, via Airplay. So the ST60 was easy and hassle free to hook up and get running, including wi-fi that auto-connects.

As a streamer it will connect into all commercial music streaming services such as Spotify, Tidal, Qobuz, Napster, Deezer and what have you. Both Google's Chromecast and Apple's Airplay 2 are compatible, the latter allowing music to be 'push' played through the DAC section from a Mac computer. There is UPnP too, allowing music files to be read from

a PC in 'pull' play. Well, that's what usually happens, but things were a little different here, as I'll explain later.

There are four digital S/PDIF inputs, two electrical (RCA sockets) and two optical (TOSLINK), selectable on the front panel, the remote control or the app, and any one can accept digital from a CD player or CD transport. It gets better for anyone interested in doing so. Volume is controllable on the front panel, remote and app, and analogue outputs come as normal unbalanced RCA phono sockets, or balanced XLR sockets, the latter always being preferable because all DAC chips provide balanced output, unbalanced requiring another chip.

So just like the famed Oppo player, the ST60 has not only one of the best DAC chips in the world, it also has balanced outputs. The only difference I see between the two is that Oppo specifically used a linear power supply, where Arcam use a switch-mode. If for some reason you'd rather use another DAC then there are optical and

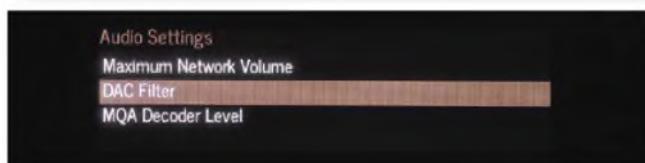


electrical digital outputs too. The volume control can be bypassed, but its presence allows the ST60 to drive a power amplifier direct.

Not wanting to leave anything out it seems, Arcam also fit USB media replay, so music files stored on a Flash Drive can be played too. The USB socket is awkwardly positioned under the RJ45 ethernet socket and although USB can be selected in the app there's no track listing and, in my case, selection was rejected so I don't know why it's in the app. Instead, the music folder/file listings come up on the player's Media Browser screen and can be selected at the front panel or by remote control.

Good news is that DSD is played (as it should be since all ESS DACs can do this) but disconcerting that although the .dsf file suffix is displayed 192kHz sample rate is flagged up, suggesting conversion to PCM. This may concern purists.

Missing from the front panel is a more accessible USB media socket, and also a headphone socket. Also missing is a software player in the app; it changes



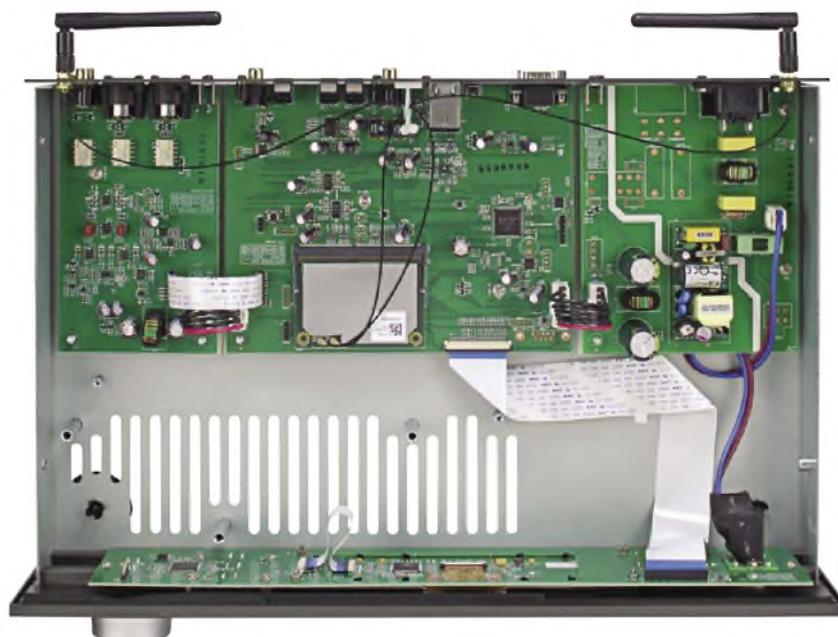
**The front panel Media Browser displays content on a USB stick. This does not appear in the app. Filters and other audio settings can be made here, as well as in the app.**

settings, including volume, but it does not play music. A phone's native player will do this however or, preferably, a dedicated freebie like Onkyo HF player.

Software can be updated by USB and there are numerous digital filters but differences between them are minor, measurement showed. MQA files are played and Roon end-point status exists.

**SOUND QUALITY**

Arcam's ST60 was connected to our Creek Voyage iA20 amplifier via Chord Company Epic balanced



**Compact low current switch-mode power supply at right and twin wi-fi aerials at rear that connect into a central wi-fi module. The DAC board and audio outputs are at left.**

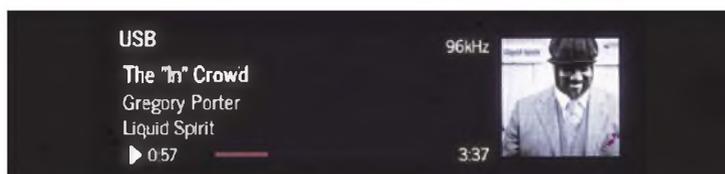
cables. Since the Creek has remote control of volume I turned off Arcam's control. In a rather sadly ironic coupling, our Oppo UDP-205D was used as a CD transport, connected into the Arcam through a QED Quartz glass optical fibre cable. The Oppo is not now available of course, but it still offers top quality from CD and I know its ESS sound well. Loudspeakers were Martin Logan ESL-X hybrid electrostatics connected via Chord Company Signature Reference cables.

Spinning Renee Fleming singing Un Bel Di Vedremo from Madame Butterfly (CD) made clear the silky smooth nature of the ES9038Pro DAC and its ability to inject a sense of depth and atmosphere into recordings of humans in front of microphones (rather than direct-to-desk electronically coupled instruments or synths). Was there any difference to replay

have been due to the difference in power supplies.

Bringing me to the inevitable question: would an Audiolab M-DAC+ with its ES9018 and linear power supply manage better? I fancy it would, especially with its superb filter set. However, the ST60 gets close enough for most people and the sonic differences I am talking about here are not only small but subjectively innocuous. They're also a matter of taste: different rather than better. Spinning through a wide selection of classical I heard the same traits: Nigel Kennedy's violin came over as having natural strings rather than ones made of steel and the London Philharmonic Orchestra playing Holst's Planets occupied a believably spacious Royal Festival Hall.

Moving onto something completely different and Lady Gaga's Bad Romance (CD) to



**The play screen showing source, song, artist and sample rate at top right.**

from the Oppo? The Arcam had a tad less warmth, slightly less body to its sound and this could well

check out the pounding synth and seismic lows. This track showed the Arcam has plenty of low end

weight of slightly drier nature than the Oppo – some might say better defined. At this point I also noticed some spitch in the high treble and realised the player was set to Brickwall filter; best results came from Linear Phase Slow and this helped suppress any slight sharpness, but the filters were not majorly different as measurement suggested.

Playing hi-res from a USB flash drive showed greater cohesion and body to the sound than is available from 16bit, a benefit the ST60 made clear. I was a bit taken aback by Diana Krall's Narrow Daylight (DSD) that is weighty and warm through the Oppo but drier and seemingly more focussed through the Arcam. There was intense speed to plucked guitar strings: they cut out of the loudspeakers in a way I have not heard before and did not realise existed in this recording. The Arcam was dramatic in this respect, if a little brutal; quite sheeny up top. At least it is able to bring very high resolution to the reproduction of hi-res though, where with some players the benefits of hi-res are not so obvious.

Sound quality from Onkyo HF player (Hi-Res version) on the iPhone was superb, quite obviously leveraging the 24bit resolution possible from an iPhone. Playing Cyndee Peters' House Of The Rising Sun (DSD) again revealed startlingly solid high treble as a struck triangle fired out at me.

More weirdly, music played from my Mac with Audirvana+ was seen as UPnP on the Arcam and in the Audirvana+ player, the latter signalling full DSD and hi-res replay ability to the ST60. Since Macs don't do UPnP I don't quite know how this was happening! The Arcam was correctly seeing PCM Audirvana+ was sending, but flagging up DSD as 192kHz again, suggesting conversion of DSD to PCM.

**CONCLUSION**

Superficially a streamer, Arcam's ST60 can do so much more it defies simple description. The super high quality ES9038Pro DAC gave superb sound quality with CD and

managed conspicuously better with hi-res, stretching out the difference between them. As informed Hi-Fi World readers might hope it gives high-end sound from CD if a player is hooked up digitally, answering the prayers of all those who want to get the best from their CD collection. Add in ability to play music stored on Mac or PC computers, Flash drives and mobile phones and the ST60 becomes a powerful multi-purpose digital player.

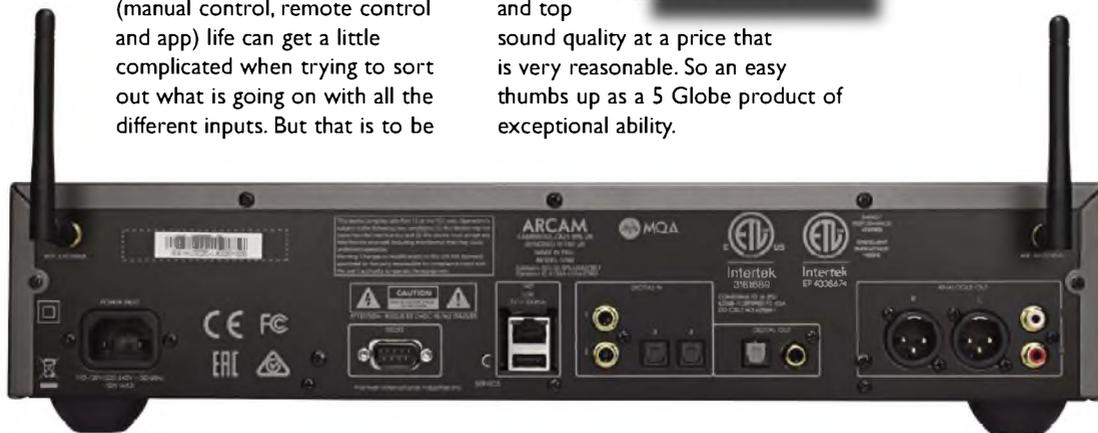
With ease of set-up there is little to criticise, except that with three methods of operation (manual control, remote control and app) life can get a little complicated when trying to sort out what is going on with all the different inputs. But that is to be

expected with the confusion of proprietary systems in action in today's digital melee.

None of this detracted from the fact that the ST60 offers massive ability and top sound quality at a price that is very reasonable. So an easy thumbs up as a 5 Globe product of exceptional ability.



*The app carries a large rotary volume control, can switch power and select input.*

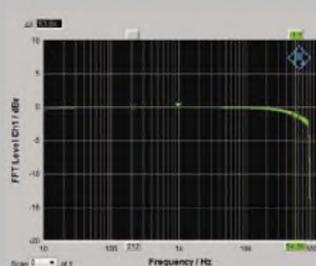


*At rear-centre lies the crucial ethernet RJ45 socket, with USB Flash Drive socket below. Twin wi-fi aerials aid stable reception. Centre-to-right: four digital inputs, two digital outputs – analogue outputs at far right.*

**MEASURED PERFORMANCE**

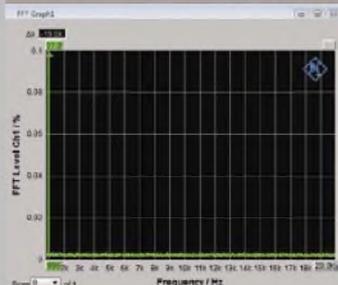
Frequency response of the Arcam ST60 with a 192kHz sample rate PCM input

**FREQUENCY RESPONSE**



**DISTORTION**

THD (all)	Level (dB)	Frequency
0.0201 %	4.3805 mV	997.00 Hz
OFF	OFF	OFF



extended to 54kHz (-1dB) with the Brick Wall filter and changed little with the other filters, even the Slow ones. The upper limit was 96kHz as expected.

Filter behaviour was much the same with CD where they altered amplitude response little. None introduced a usefully well damped slow response for CD – unlike those from Audiolab.

Distortion measured a low 0.02% at -60dB (24bit) as our analysis shows, and EIAJ Dynamic Range (24bit) a high 120dB from the internal ESS ES9038Pro DAC.

Output at maximum met Philips Red Book standard: 2V on the phono sockets and 4V on the balanced XLRs.

The ST60 delivered fine performance figures, up with the best. **NK**

**DIGITAL**  
 Frequency response (-1dB) **3Hz-54kHz**  
 Distortion (-60dB, 24bit) **0.02%**  
 Dynamic range **120dB**  
 Output (phono/XLR) **2V / 4V**

**ARCAM ST60**  
**£1200**  
  
**OUTSTANDING - amongst the best.**  
**VALUE - keenly priced.**  
**VERDICT**  
 Great multi-purpose network player able to do it all – and well.  
**FOR**  
 - top digital sound quality  
 - breadth of ability  
 - ease of set up  
**AGAINST**  
 - lacks sonic warmth  
 - very complex  
 - inadequate User Manual  
 Arcam  
 +44(0)1223 203200  
 www.arcam.co.uk

# You're in Charge!

Martin Pipe enjoys JBL's little Charge 5 speaker with a big sound.

I'm quite taken with the distinctive character of JBL's Charge 5 wireless speaker, which resembles a blimp with the ends cut off. In their place are what look like 65mm drivers. Could this little barrel of music be one of those rarest of things, a stereo Bluetooth speaker? Alas not; there'd be no point, as the close spacing - 210mm - is hardly the stuff of meaningful imaging. Those drivers at either end are actually passive bass radiators, that work with an internal long-throw 50 x 90mm bass/mid driver of custom design, augmented by a 20mm dome tweeter to aid

reproduction of highs.

According to JBL, they are respectively powered by 30W and 10W on-board amplifiers. Both of the transducers are nevertheless part of a single channel, fed by an internally-derived mix of left and right channels. In other words, it's mono. However, it can join forces with another Charge 5 to reproduce your music in glorious stereo.

The 960g Charge 5 is evidently pitched at lovers of the outdoor life, if its outer toughness and IP67-

rated water resistance are anything to go by. Connectors are waterproof or covered by sealed bungs, and the controls are rubberised. A slight flat is incorporated into the base so that the unit sits on a surface with its tweeter facing frontwards.

The beefy 27Wh lithium-polymer battery buried within the speaker is able to charge a 'phone, the base hiding



a USB-A port into which a USB charging cable is plugged. JBL supplies a USB-C cable for modern phones. Using the 'powerbank' capacity of the Charge 5 to charge devices will impact its running time as a speaker, which is claimed to be up to 20 hours of playback from a 4-hour charge.

Said playback is available only via Bluetooth – in this instance, version 5.1, with support for the A2DP 1.3 and AVRCP 1.6 profiles. There's no analogue input (another socket to worry about letting in water?), while the Charge 5's second port is a USB-C type purely for charging the internal battery; no charger is supplied.

I tried plugging the speaker into a PC with the supplied cable, hoping that it would take over audio duties, but Windows refused to recognise it. A pity, as this speaker could have been a potent alternative to a laptop sound system. However, it does

allow the PC to (albeit slowly!) charge the unit. Another drawback is that the sealed nature of the Charge 5 complicates repair or replacement of the battery. JBL recommends charging the unit "at least every three months...to protect battery lifespan".

Using the Charge 5 is simplicity itself. It's easy to set up for use with Bluetooth-enabled audio sources like smartphones, tablets, computers or even compatible hi-fi products including Pro-Ject's Phono Box BT E phono stage. After turning it on, simply hold down the backlit Bluetooth button to initiate pairing. Once paired, the Bluetooth device sends audio wirelessly to the Charge 5. The controls can raise or lower volume (the source device's own volume control is remotely-changed) and, depending on the capabilities of your source equipment, pause playback or skip tracks. Thanks to a feature

called 'PartyBoost' – enabled or disengaged with a button that resembles the BBC Sounds logo flipped sideways - you can use multiple JBL devices to play the same tracks. I can imagine that sort of thing going down well at festival campsites. Controls and actions are confirmed by various sound effects.

There's also a simple 'app' – JBL Portable – for Android and iOS devices. This would probably be a lot smaller than 52MB (in its Android form), were it not for the somewhat pointless 'faces' animation that kicks it off. JBL Portable allows you to update the unit's firmware, monitor battery level, turn off audio-feedback sounds and switch PartyBoost between its normal mode and one that allows two compatible speakers within range to 'join forces' and reproduce music in stereo (you can assign a channel to each).

Interestingly, JBL Portable would not install on my Pixel 3a until I had given it 'location awareness' permission – apparently this is a requirement for BLE (Bluetooth Low Energy) devices. I would be interested to learn if this property will eventually be harnessed by object-based audio technologies. Because their placement within your





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with TPE  
damping



NEW Motor  
suspension  
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connectors



8,6" one-  
piece carbon  
tonearm



Electronically  
regulated  
belt drive  
system



Pre-adjusted  
Ortofon 2M  
Red cartridge



Hi-Fi World,  
November 2020



Hi-Fi News,  
December 2020



Hi-Fi Choice,  
November 2020



AV Forums,  
November 2020



StereoNet,  
October 2020



**Rated at IP67, the Charge 5 can apparently be used at a depth of 1m for half an hour - a claim we didn't verify! Helping to achieve this is the hinged 'bung' that covers the 'power-bank' USB port. One can only assume that the adjacent USB-C port, which allows the Charge 5's 27Wh lithium-polymer battery to be charged, is naturally water-resistant.**

room is known, the positioning of various soundtrack elements could then accurately reflect the sound design of the content. With several such Bluetooth devices, you could get a convincing and immersive experience.

Even as it is, the Charge 5

is a rather startling performer. Although not hi-fi in the traditional sense, it certainly makes for enjoyable listening – for long a trait associated with JBL products – and sounds far, far bigger than you would expect from something so compact. I left the thing playing (via VLC) music stored on my Pixel 3a and, downstairs in the kitchen making a cuppa, nearly accepted that the noises coming from above were from conventional full-sized speakers!

I found that the Charge 5 even manages to hold its own with bass-heavy tracks like Link and e621's Antacid (The Theory of Evolution); the lower octaves of those analogue synths are given surprising room. Then again, the Charge 5 was designed primarily for those who listen to energetic dance and rock music, its presentation and tonal balance reflecting this. Sure, there are obvious practical limits – but the sheer scale of what the device can dish up is nevertheless a pleasant surprise. Treble is crisp and well-defined, with obvious benefits for the percussion that drives the music its target listeners enjoy; not even the dextrous polyrhythms of Talking Heads' Born under Punches (Remain in Light) posed much of a challenge to the Charge 5. There are traces of 'thickness', and a slightly cuppy colouration that can affect speech, but taken in context such limitations are not too serious.

### CONCLUSION

JBL seems to have worked some kind of miracle here, in terms of

the sheer scale of the sound the Charge 5 can deliver. Sure, it's only mono – but two can work together for stereo. Thanks to this PartyBoost feature, even more JBL speakers can be wirelessly linked to ensure that big sound can be heard around the house, dorm or campsite!



**At either end of the Charge 5 are what look like 65mm drivers, rubberised for water resistance and embossed with an element of the JBL logo for effect. However, they're actually passive bass radiators that work in conjunction with an internal long-throw 50 x 90mm bass/mid driver of custom design. For treble 'sparkle', JBL has also included an independently-driven front-facing 20mm dome tweeter. But the Charge 5 is mono (unless 'paired' with a second unit).**



**The Charge 5's controls are shaped 'bumps' on the waterproof skin, its central Bluetooth and standby buttons being backlit. They're flanked by volume adjusters that override your source device's own controls. The button that resembles the BBC Sounds logo flipped sideways engages 'PartyBoost', which allows you to use multiple JBL devices, while the 'arrow' pauses/resumes playback or skips tracks.**

### JBL CHARGE 5 £180



**OUTSTANDING - amongst the best**

#### VERDICT

Small and unobtrusive, the Charge 5 will fill your phone with juice – and your room with music!

#### FOR

- a wonderfully 'big' sound from a small object
- acts as a 'power bank', as well as a speaker
- neat waterproofed design (in a choice of 8 colours)

#### AGAINST

- lack of analogue connectivity
- USB port can't be used 'directly' for laptop audio
- sealed design makes repair difficult

JBL  
<https://bit.ly/3luRLOa>

# vinyl section

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OCTOBER 2021

[www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk)

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# news

## BILL EVANS TRIO

This one's a bit special because it's previously unreleased. 'On A Friday Evening' (Craft) is a double album gatefold set, mastered at RTI and transferred from the original master tapes of a live recording from 20 June 1975 at Oil Can Harry's, in Vancouver.

Spanning eight long tracks, with Eddie Gómez on bass and Eliot Zigmund on drums and captured for Canadian radio host Gary Barclay, who served as the evening's announcer on his popular CHQM jazz show, this is a well-recorded set.



## .38 SPECIAL

Two Snakefarm ([www.snakefarmrecords.com](http://www.snakefarmrecords.com)) reissues from the rock veterans include 'Wild-Eyed Southern Boys' (1981) and 'Special Forces' (1982) feature good time, catchy, Southern rock flavours, mixing roots with commercial tones being honed on 'Special Forces', especially.

## DUSTIN O'HALLORAN

Speaking of piano, O'Halloran's new neo-classical, double album gatefold, 'Silfur' (Deutsche Grammophon) is the man's debut for the label. It's a beautifully melodic album, recorded during lockdown isolation in Iceland. Occasional collaborations with the Soggi String Quartet, for example adds emotional texture.



## VERTAAL

Vertaal's new release, 'Paradigm Shifting' ([vertaaloofficial.bandcamp.com/album/paradigm-shifting](http://vertaaloofficial.bandcamp.com/album/paradigm-shifting)) juggles beat-ridden jazz with electronica twizzles across a continuous 'mix tape'. It combines cool, meditative beats with more complex jazz layers.



## HIATUS KAIYOTE

'Mood Valiant' ([Brainfeeder/Nirja Tune](http://Brainfeeder/NirjaTune); [www.brainfeedersite.com](http://www.brainfeedersite.com)) is another gatefold release. This Australian neo-soul/jazz quartet focuses on vocalist, Nai Palm. The beats and angular rhythms circle her voice in a cut up, fractured fashion that feels fresh, airy and inventive.

## REASONS TO BE CHEERFUL PART 2

Two 'Part 2' compilations for you from Demon ([www.demonmusicgroup.co.uk](http://www.demonmusicgroup.co.uk)). The first is Gary Crowley's 'Lost 80s Vol.2'. Its two discs include tracks by The Hinsons, Ellen Foley, Colourbox, The B52s and Pressure Point. This is a sprawling collection of 7" cuts, dance mixes and 12" rarities.

Eddie Piller's 'The Mod Revival Part 2' double disc collection on coloured vinyl includes tracks by The Moment, The Inmates, The Fixations and The Gents. Lots of moddish goodies here.



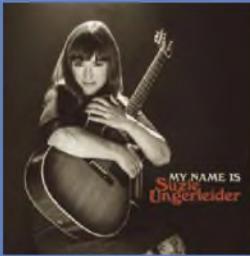


## THE MONTREUX YEARS

From the Claude Nobs (founder and general manager of the Montreux Jazz Festival) collections and presented as double album gatefolds.

The Nina Simone release covers concerts from 1968-1990. The recent stuff is OK, an ageing Simone struggles a tad, but the early recordings are wonderful in their angularity.

Etta James also has a set covering five concerts from 1977-1993. Her varying vocals shades are always entertaining.



## SUZIE UNGERLEIDER

Formerly Oh Susanna, Ungerleider's 'My Name is...' ([suzieungerleider.bandcamp.com/releases](http://suzieungerleider.bandcamp.com/releases)) covers alt-country using a simple, clear delivery that reminds me of a diluted Stevie Nicks. Expressive and direct.

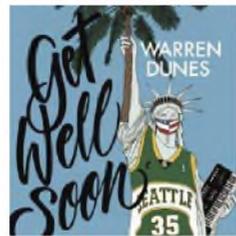
## ARETHA FRANKLIN

'Aretha' (Rhino) is a 2LP gatefold compilation ranging from 1956 to 2015 over twenty tracks as a highlights package to a larger 4CD, eighty-one track box set. The essentials are here: 'Respect', 'Chain of Fools', 'I Never Loved A Man (The Way I Love You)' and more.



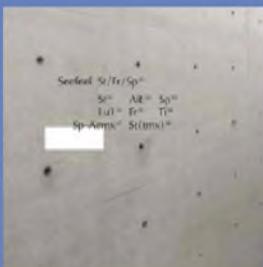
## WARREN DUNES

Offering a Housemartins ethic to music, pop-rock trio Warren Dunes' 'Get Well Soon' ([warrendunes.bandcamp.com/album/get-well-soon](http://warrendunes.bandcamp.com/album/get-well-soon)) is upbeat, smiley and happy-go-something. Perky. Energetic but also musing. Lots of invention. Definitely worth a listen.



## SARAH NEUFELD

'Detritus' is Neufeld's new album ([sarahneufeld.bandcamp.com/album/detritus](http://sarahneufeld.bandcamp.com/album/detritus)) from the sometimes member of Arcade Fire and Belle Orchestre. This solo outing sees the violin-sparked ambience span spacious soundscapes and accompanying playful beats.



## SEEFEEEL

The snappily entitled 'St/Fr/Sp' ([seefeel.bandcamp.com/album/st-fr-sp](http://seefeel.bandcamp.com/album/st-fr-sp)) compiles two non-album EPs that Seefeel recorded for Warp in 1994, 'Starethrough' and 'Fracture/Tied' plus a couple of rare mixes to boot. Combining electronic dub with avant melodies and tones, this collection features prime cut electronica. Marvellously meaty.



## KSCOPE

Two new releases from the label ([kscopemusic.com](http://kscopemusic.com)) include proggers Klone's gatefold release 'A Live'. A live double album collection from 2016 and 2019.

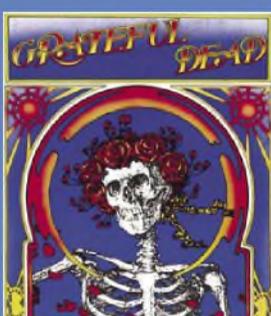
Pop pickers, White Moth Black Butterfly also have a new album out 'The Cost of Dreaming'. This is gloss pop, breathy female vocals from Jordan Turner undercut by Dan Tompkins (Tesseract) who sound terribly serious, earnest and just a bit overwrought.



## BREATHLESS

Pressed on coloured vinyl as a 30th anniversary edition, 'Between Happiness and Heartache' ([Tenor-Vossa](http://Tenor-Vossa), [www.tenorvossa.co.uk](http://www.tenorvossa.co.uk)) has been drawn from the original masters and arrives with a bonus track (Everything I See) via download.

The older they got, the more I heard Echo & The Bunnymen and The Cure in their work – the arrangements, perhaps? – with a Dominic Appleton, tired of explaining himself, giving it another go. It's an attractive and heady mix.



## GRATEFUL DEAD

The 50th anniversary of this second live release from 1971, 'Skull & Roses' (Warner) focused on the then newer material of the time. This beautiful edition feels substantial and hefty in the hand while the music itself has been remastered.

## ALL-NIGHT RADIO

Dave Scher and Jimi Hey's only LP together, 'Spirit Stereo Frequency' ([bigpotatorecords](http://bigpotatorecords), [bandcamp.com/album/spirit-radio-frequency](http://bandcamp.com/album/spirit-radio-frequency)) combines melodic rock with a sense of dreamy, hippy psychedelia with a West Coast flavour. This is music to lose yourself within.



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**Pro-ject's new Debut Pro has performance worth hearing, thinks Noel Keywood.**

# Performance

**T**he name says a lot about this turntable: Debut. Make an entry in other words, an entry into vinyl. That can be expensive but Project ease the pain by

pricing this complete package at just £699. For this you get turntable, arm and cartridge.

But why Pro? It doesn't have obvious Pro features, such as a stroboscope with fine speed

control for example. Measurement answered this question: the Pro is remarkably speed stable, especially for a simple belt drive – a topic I'll cover in more detail later.

Belt drive it may be but the

Debut Pro manages to provide three speeds: 33, 45 and 78rpm. A small three-way toggle switch at front left changes speed from 33rpm to 45rpm, passing through a central Off position; motor speed is changed electronically. Choosing 78rpm means a belt change to a larger pulley diameter, which is a bit of a faff around. The platter must be lifted off and a different belt threaded into place.

But to play 78s the cartridge must be changed, which is not easy in the fixed headshell arm. Ortofon make a 2M 78rpm stylus but it is not compatible with the 2M Red; the cartridge must be removed. So the Debut Pro will do 78, but not easily compared to an arm with a removable headshell.

Pro-Ject use their own



**Pro-Ject fit a Pick it Pro cartridge, their OEM version of Ortofon's 2M Silver MM cartridge. The thin headshell flexes at its root and needs stiffening.**

faster and easier than CD with a finger lift. But the Pro-Ject finger lift precludes this – I use it gingerly.

Another strange issue with our review sample was the arm pillar was not vertically constrained: it jumped upward when I placed the arm into its rest. Only gravity holds it down. Disconcerting. A grub screw or C-clip are needed here.

There is a simple weight-and-

hinges. Width measures 415mm, and depth 330mm with cover closed. However, opening the cover produces a rear overhang (as always) that extends depth to 400mm, consequential if there is a wall behind a shelf. The cover rises to 380mm when open so that's the clearance needed between shelves. Height with cover closed is 125mm (not 113mm as quoted, which is



**At rear a single adjustable foot, fully floating (electrically) phono socket outputs, and a 15V d.c. input. Simple friction hinges slot into a clear acrylic dust cover.**

wrapped carbon fibre arm on the Debut Pro and it is a strictly manual affair: there are no auto systems – such as auto shut-off – associated with the arm. Instead a conventional cue lever operates a damped lift/lower platter.

This arm is not a favourite of mine for many reasons, one being its flat finger-lift is barely usable. And I like to hand cue with a good finger lift; selecting LP tracks is



**A three position toggle switch provides 33/45rpm speed selection, with central Off position.**

"a sound stage with a sense of depth, as we hope for with LP"

thread bias system and the rear counterweight applies tracking force by moving forward or backward on a form of screw thread, but it was loose. The weight is uncalibrated so a tracking force gauge is essential, a simple one supplied. The whole assembly needs improvement to match common standard and sad to say the arm is structurally more resonant than most in spite of its seemingly rigid construction (see Measured Performance).

Pro-Ject take the plinth and platter main bearing assembly seriously though, providing a suitably solid assembly. There are three feet that can be adjusted for height, plus a clear acrylic dust cover that moves on friction

height without cover). These are all typical dimensions for a compact turntable. Weight was low at 6kg.

Power comes from an external wall-wart supply delivering in 15V d.c. connected by a short 1.2m (4ft) cable that barely reached the floor from the top of our rack. There is no mains earth; the earth pin is plastic. So an earth loop and hum are technically impossible, at least, at a simple level. The earth lead in the cable supplied just has to be connected to ground at the amplifier and any ground lift switch set to connect.

And finally Pro-Ject fit an Ortofon 2M Silver moving magnet (MM) cartridge. It's an OEM (Outside Equipment Manufacture) for fitment to turntables rather



**A simple weight and thread bias system, attached to the solid metal arm pillar.**

than direct sale to the public. So expect normal fare rather than anything to rock the roof. Yet at the same time Ortofon have been tuning this cartridge to improve its sound and under measurement it was very capable. When I measured the 2M Silver in May 2015 it had treble lift across a broad band and sounded bright, contrary to expectations from vinyl and unhelpful to its sonic milieu. Worse, raising treble emphasises distortions, making for uneasy listening. Ortofon seem to have changed their view: this latest sample had gentle reduction in treble to bring back that good old warm feeling, but without too much warmth, as I'll explain in Sound Quality. Tracking force is



**The motor drive pulley accepts a flat-ground precision belt at top for 33/45, and an O ring for 78rpm.**

1.8gms and the stylus elliptical. A replacement stylus is being quoted €89 – high for a budget MM. Alternative styli are 2M Red and 2M Blue, but not Bronze or Black so upgrade paths are limited.

They call it "Pro" and the reason is, I suspect, to bring speed accuracy and stability into

contention with Direct Drives from Japan, typically from Audio Technica and Technics. How to give belt drive the speed stability of Direct Drive is determined by the motor, the belt (flat ground in this case), platter concentricity and bearing precession (or lack of). Pro-Ject have conquered all the variability in these elements it would seem from our sample: it held speed perfectly. What this brings is a solidly pitch stable sound, free from wavering or wateriness of tone. It removes a gentle haze, shall I say, introducing

making continuity to rear ground terminal.

### SOUND QUALITY

The Pro-Ject Debut Pro was connected directly into the MM input of our Creek Voyage iA20 amplifier. Loudspeakers were Martin Logan ESL-X hybrid electrostatics connected through Chord Company Signature Reference screened cables.

Going straight into the "Pro" bit and my speculation that this refers to pitch stability, I placed



**The one-piece wrapped carbon fibre arm is light and its tube rigid, but undamped and resonant. The rear counterweight is uncalibrated so a stylus force gauge is essential.**

almost sterile rigidity – but that is correct. Some are upset (or have been in the past) by the sense of grip and the tonal cleanliness that appear, just to warn that not everyone is appreciative. But I am, that's for sure. More below.

There are no fancy output options, like digital, balanced or Line. The phono outputs are balanced in that each of the gold phono sockets is fully floating, unconnected to earth (they will be earthed at the amplifier). This means the outputs could be combined into an XLR for balanced connection. I noticed the pillar was earthed and the arm too, one cartridge screw

Alison Goldfrap's Supernature album on the platter. Being synth based it has pitch stability built in as it were – none of this wobbly stuff from humans (!) – and the Pro was truly Pro. The long, stabbing synth sustains in Let It Take You held rock steady, whilst underlying bass chords moved firmly out to



**A flat finger lift makes hand-cueing difficult. Too close to the LP for a finger – and too slippery too!**



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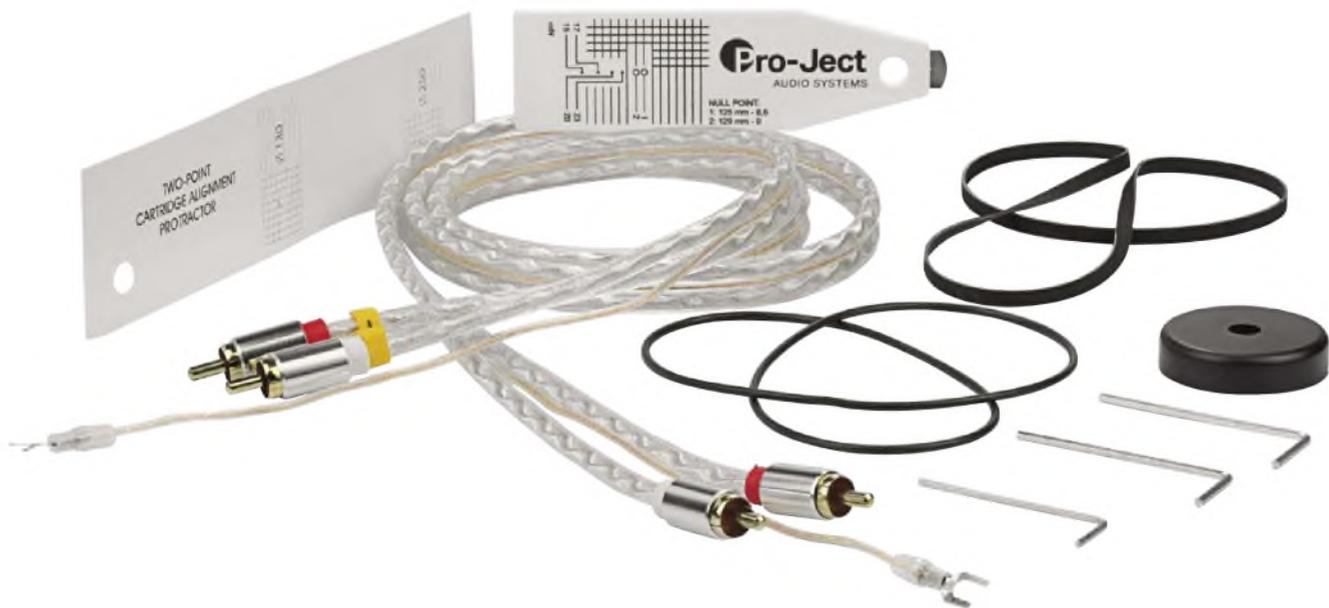
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**The parts supplied: two belts, one flat ground for 33/45rpm. The alternative O ring is for 78s. Three hex keys for arm adjustment, a 45rpm adaptor and a quality phono lead with essential earth wire. There is a simple stylus force gauge (top right) with protractor, plus another protractor at top left.**

take over the room. I liked this. Not only was the Pro rock-stable in pitch terms, it had that lovely solid, almost ethereal bass that LP can deliver.

Goldfrap's Ride A White Horse similarly came over as firm but forceful from the LP and even more grippingly dynamic from the 12in 45rpm single. Yet this track had imprecise imaging; the stage was wide but placement on it a tad vague. Not a major sonic issue perhaps but the arm I feel could usefully have been more stable and concise in this area. All the same, what I heard was convincingly analogue in its sense of depth and easy, natural flow, yet not unduly warm.

Staying with 45rpm I put Mobile Fidelity's re-master of Brothers in Arms on the platter and again got a nice slice of good analogue Rock, with a firm, steady 'thump... thump...' from kick drum, clear vocals and obvious but not forward cymbals; the 2M Silver strikes a nice balance here: clear yet amenable in balance. This is not a warm sounding cartridge, just easy and natural in tonal balance.

Spinning the recent re-master of Abbey Road was a relaxing business, yet there was lively pace in tracks like Polythene Pam and the Fabs were always set on a sound stage with a sense of depth, as we hope for with LP (and Abbey Road, the studio).

## CONCLUSION

The new Pro-Ject Debut Pro delivers very good vinyl sound with good sophistication. It has a very steady sound, pure of tone – its forte. The 2M Silver cartridge is also a great performer, with carefully honed tonal balance

that gives the traditional easy going milieu of vinyl without being obviously warm. Very good on inner grooves too I found. Pro-Ject's arm remains in need of improvement but it does a satisfactory job. Certainly a package worth hearing.

## MEASURED PERFORMANCE

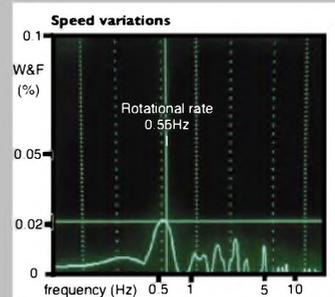
The 3150Hz test tone of a DIN 45-545 test disc was reproduced as a steady 3156Hz on our Wow&Flutter meter – close to perfect. Wander around nominal was small at 3Hz, making basic speed both correct and very stable. As a result variation values were very low for belt drive, wow measuring 0.06% and flutter 0.05%. Total W&F (European DIN weighted) came in at just 0.05%, falling to 0.03% with Japanese JIS weighting (for purposes of comparison). This is a very speed stable turntable, close to Direct Drive. Our analysis shows low variance at 33rpm (0.55Hz), with low harmonics and flutter to right – a fine result.

The arm had a strong first bending mode at 250Hz, with accompanying second and third-order related harmonic peaks, showing the wrapped carbon fibre tube to be stiff but undamped. A peak at 2000Hz may be caused by flexure where the headshell joins the arm tube. This is a lively arm with strong resonant modes and as such unimpressive.

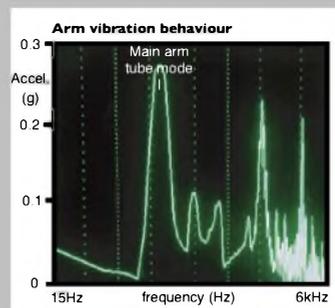
The turntable measured very well but the arm was resonant and needs damping. The headshell flexes and should not do so; it needs stiffening. **NK**

<b>Speed error</b>	<b>+ 0.1%</b>
<b>Wow</b>	<b>0.06%</b>
<b>Flutter</b>	<b>0.05%</b>
<b>Wow &amp; Flutter (DIN wtd.)</b>	<b>0.05%</b>

## SPEED VARIATION



## ARM VIBRATION



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# THE WEDDING PRESENT

SEAMONSTERS

RCA

"I've always been quite a driven person" The Wedding Present's lead singer and songwriter, David Gedge said to me when I interviewed him back in 2015. "It was more of a case of me starting bands and bringing people in rather than me being invited into other groups. I was always the one to organise it. I think I was on my own in that way. I don't remember too many people who shared my obsession. I've only really met those people subsequently, in bands and other professions where a similar ambition and drive is required. I do recognise those traits in other people. I see them and think – Yea, that's what I was like".

And you can hear that in his music. Of the music produced by this band and this album in particular. A sense of power and drive.

The Wedding Present often sounded like they wanted to be somewhere else and they're rushing to get to there from here. Here being where you are.

Lyrically, the band's songs sounded like the bloke who was about to get on a bus and crammed an A4 page worth of important information into your ear as he was fishing around his pocket for the correct fare.

Since they hit their immediate stride, back in 1985, when indie bands really were indie bands and not a convenient label that currently pays mere lip service to the concept, this guitar band mattered.

Not everyone took note, though. Back in the eighties, they sometimes received snide remarks allied to being a "John Peel Band" and the fact that they failed to become the new Smiths. A confusing denigration that I always considered oxymoronic or just plain moronic. I ultimately put this sort of talk down to 'look at me' NME writers who wanted to look good in front of Stuart Maconie.

Consisting of guitarist Peter Solowka, Keith Gregory on bass, drummer Shaun Charman and vocalist Gedge, The Wedding Present debuted with the well-regarded 1987 LP 'George Best'. Just after 'Bizarro' (1989) came this album in 1991, 'Seamonsters'.

The Wedding Present are a stubborn lot: "Everyone wants to be successful but

we were not really interested in making the changes that [others] were suggesting. I didn't want to say that this song was ruined because we had to get this big name producer and we had to use this particular sound".

Which was odd because they did use Steve Albini on the earlier Bizarro LP. "We released two singles from the album 'Bizarro: Kennedy' and 'Brassneck'. We decided to use Steve Albini for the EP. It was an experiment to see how we got on and found that it was a good relationship and so decided to go with him for the next album which was Seamonsters. 'Bizarro' sounds like an improved version of 'George Best' to me. The latter sounded like a bunch of demos and not being totally sure what we were doing, how to record them, how to arrange them. 'Bizarro' was the band moving on and learning from mistakes. It has more texture and variation with more extremities and more laid back elements. 'George Best' was almost like a live set".

That said, Gedge never thought that 'Bizarro' was the finished article, there was still something missing. A certain 'bigness' perhaps? "Working with Albini on 'Seamonsters' he provided that. Making 'Seamonsters' sound a bit more three-dimensional. It still splits the fans.

I think they were waiting for another 'George Best'. They wanted more indie pop and jangly guitar. 'Seamonsters' was darker. Unless you are an obsessive, if you quite like a band's sound, like a background thing, you probably want more of the same. I don't because, once you've got that album, why would you want it again?

'Seamonsters' proved to be powerful in emotional terms and Albini seemed to fit into that mode nicely. There's a real dynamic rage over much of this album layered by Gedge's bleak and heart-wrenching lyrical style. It's dark and serious and often not easy to listen to but...but, it's also one of the band's best. One of their very best.

The LP has now been reissued as a two disc vinyl set with four Peel Session tracks, single and EP tracks. A CD of the whole thing is included too. Overseen by Gedge, this is a 30th anniversary edition.

This album is one of the highlights of the eighties indie guitar band scene. **PR**



"they were waiting for another 'George Best'. They wanted more indie pop and jangly guitar"

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# Magic works

Spanning the genres, Paul Rigby looks at a weighty tome devoted to Captain Beefheart, another on The Orb with rocking Radio 1 bringing up the rear.

**T**he Beefheart book is an expanded reprint of a ten year-old publication. It's a book that is less biography than an analyst's report on the relationship between Beefheart and the author...with a supporting cast of thousands.

Packed with sometimes rambling information within its closely printed text, almost 100 pages are devoted to a remarkably detailed, track-by-track analysis of Beefheart's albums – plus CD out-takes releases. A book in itself.

The meat of this tome reflects on the exploitation, manipulation and bullying from the 'good' Captain, the people caught in the middle and the great music this negativity produced. A mix of creation and destruction, then. Myths are exploded here, truths unveiled.

French presents a narrative, he did this and she did that, then reaches into the story and says to that very person, give me your take on what happened there and explain your actions. Whereupon you'll get a bold quoted Q&A interview with each character, adding context to the event. There's a 'Here's what happened and here's the proof' aspect about this design. I love it.

Of course, this is Beefheart, so Frank Zappa fans also need this book. Ever wondered why Zappa man, Ray Collins left his band? It's all here. In short? Possibly the best Beefheart book ever written.

## THE ORB

'Babble On An' Ting' covers the history of Alex Paterson's legendary ambient dub outfit. We hear tales of his school bullying, his time as a punk, how he proposed to his girlfriend with a donut ring (smooth, Alex, very smooth) and becoming a roadie

for the band, Killing Joke, the classic, 'Adventures Beyond the Underworld' debut LP, the KLF connection and more.

Both 'Adventures' and 'U.F.Orb' were classics but 'Pomme Fritz' and especially 'Orbus Terrarum' exhibited Paterson's genius. 'Oxbow Lakes'? Pure perfection as Paterson subverted neo-classicism before the genre even got off the ground. And he is a genius, make no mistake. No surprise then that he was slated for both by Same Again Please fans, media (and the record label!). Paterson the genius fled to a place deep inside his head and was never seen again. Paterson remains upset. It's there in the book. A book in desperate need of an index. Nice discography, though.

## RADIO 1

'The Remarkable Tale of Radio 1' is a Curate's Egg. Sellars skims and crams. If this was 'The History', as claimed, then this book should have been three times the size. Doing so would have meant digging into fascinating corners – like Old Grey Whistle Test's Mark Ellen's time on the station, for example. His take on life as a stand in for John Peel and 'Kid' Jensen would have been interesting.

Also, despite the 'first hand interview' boast, there's not enough depth, not enough narrative. It's a book of bits, a casual fireside chat with too much reliance on cut and paste interviews. I can't see any new quotes from Annie Nightingale, Liz Kershaw or Janice Long for example (draw your own conclusions) and there's no author's notes explaining why. The book feels rushed. Live Aid coverage flies by in a few pages. New insights are few and far between. The book is...passable.

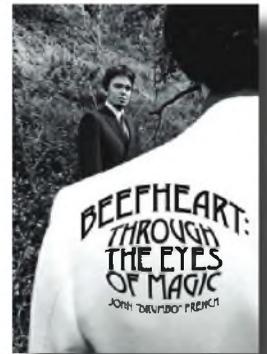
**Title:** Beefheart: Through the Eyes of Magic

**Author:** John "Drumbo" French

**Publisher:** The Last Music Co.

**Price:** £25

**Pages:** 864



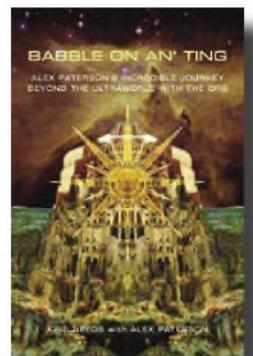
**Title:** Babble On An' Ting

**Author:** Kris Needs with Alex Paterson

**Publisher:** Omnibus

**Price:** £17

**Pages:** 341



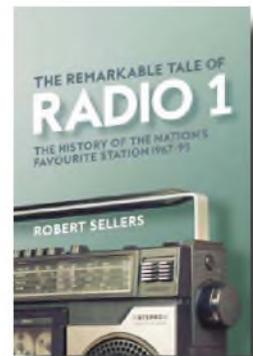
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**Author:** Robert Sellers

**Publisher:** Omnibus

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YAMAHA NS200 floorstanders, £100. Arcam Alpha 9, £100. Denon UDM31 Amp/Tuner/CD, £100. Akai AT2250L, black, tuner, £80. Marantz ST400 (120 volt) £80. Wanted: 8000M's, 8000 CD. Tel/ Text: 07845 231 992.

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WANTED:TOP quality Hi Fi separates and complete systems, Naim, Linn, Cyrus, PMC, Audio Research etc, fast, friendly response and willing to travel/pay cash Please call me on 0781 5892458 or Email me at [pogsonp@aol.com](mailto:pogsonp@aol.com)

KEF R500 SPEAKERS A1 condition, original boxes and packaging £1,500.00 ono. Tel: 07710467239 or Email: [keith.worsley2@gmail.com](mailto:keith.worsley2@gmail.com) (East Sussex)

CAMBRIDGE DAC Magic (working), Sony 611 cassette deck/Yamaha 2500 DVD player/Sony 47 CD player/Onkyo I-pod transport (needs attention). Free to collect. Tel: Tim 07785 724849. (Oxfordshire)

REGA P3-24 (white) +TTPSU. £250 ovno. Goldring Eroica LX MC cart £160 ovno. 3 metre pair Russ Andrews Crystal 24 speaker cable £150. All vgc limited use. Buyer collects deck. Tel: John Harris 07905 501 265 (East Sussex)

WHARFEDALE PRO Titan 12 Active speaker Good condition with mains cable £100. Tel: Paul Bickley on 07791261172 or Paul Bickley by Email: [paul\\_bickley@hotmail.com](mailto:paul_bickley@hotmail.com)

SONY XA5400ES CD/SACD player S/N 5500207 Almost new condition. Plays as well as ever with excellent quality. Original manual and remote. £340. Tel: Fred 07456 992 759 or Email: [fjf66@icloud.com](mailto:fjf66@icloud.com) Collect from Gwent, South Wales

EDWARDS AUDIO TT1 turntable in black with C100 cartridge. Purchased 2016 but rarely used, with all original packaging. £200 ono. Tel: Mike 07854 178012 or Email: [cilrsmith@hotmail.co.uk](mailto:cilrsmith@hotmail.co.uk) (Aldershot, Surrey)

ICON AUDIO MB845 Mk.I monoblock amplifiers. Upgraded to SE version with new Mundorf capacitors. New 845 valves on one amp. Boxed. Great powerful sound. Sensible offers. Email: [captain\\_b99@yahoo.co.uk](mailto:captain_b99@yahoo.co.uk) or Tel: 07717 752 288 (Bristol)

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NAKAMICHI 550 Dual Tracer portable tape deck as reviewed by Martin Pipe in March '21 issue. Working when stored in loft 25 years ago but now needs attention. Comes with mains PSU and service manual. Also Nakamichi microphones and add-on capsules Offers. Tel: Kevin 0779 602 1637 or Email: [kevingldg@btinternet.com](mailto:kevingldg@btinternet.com)

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# NEXT MONTH

## NOVEMBER 2021 ISSUE

### McINTOSH C8 PRE AMPLIFIER

### McINTOSH MC830

We look at the C8 valve preamplifier and MC830 solid-state mono block power amplifiers from U.S. high-end manufacturer McIntosh. An airy sound from valves yet 300 Watts per channel from transistors. Don't miss our review in the next great issue.



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...and much more.

This is a selection of what we hope to bring you, not a complete list. We regret that due to a wide range of issues, we cannot guarantee that all products listed above will appear.

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# BRYAN FERRY

## BOYS AND GIRLS

VIRGIN



'Boys and Girls' steps beyond the movie set-like mythic fantasy ambience of 'Avalon'.

**T**he suite of guest stars that occupy this album is quite a sight to behold, I have to say. Of course 'names' behind any album's star do not guarantee success. If anything, their egos sometimes get in the way. But here the talent certainly adds plenty of musical glitz and chrome to the Ferry style. David Gilmour, Omar Hakim (Bowie, Madonna et al), Neil Hubbard (Joe Cocker, B.B. King, etc), Mark Knopfler, Tony Levin, Nile Rodgers, David Sanborn and many more add star weight to the project. I'm not sure they were needed, though.

For many fans, this solo work – released in 1985 and the first solo release to appear from Ferry after the official demise of his band, Roxy Music – was actually a continuation of Roxy Music's final LP release 'Avalon'. Fan enthusiasm knew no bounds as this release was lifted towards No.1 in the UK charts. His megahit 'Slave To Love' certainly helped that album success while the follow-up single 'Don't Stop The Dance' didn't harm matters, despite it peaking at No.21.

It was a busy time for Ferry and one packed with creative quality. It was also one stuffed with personal emotion because, during the making of this album Ferry's father, Frederick Charles Ferry, died.

To properly understand this album, you have to understand 'Avalon'. Roxy Music hadn't got on for years (and years). Ferry wanted the group to be a vehicle for his ideas but the rest of the guys wanted a more democratic forum.

The subsequent friction was, for a time, welcomed by Ferry as grist to the creative mill. It produced great work, as it were. Nevertheless, Ferry thought that creative infusion had run its course at the end of Avalon "...it just got to the wrong side of being right" he said.

With those band break up memories still in his head, finding the right path for this subsequent solo effort was tough: "I really do want to sound different from other people" he stated during the album's recording, to Spin magazine. "Unfortunately, it means you spend 18 months making a record because

you think of an idea and then have to go beyond it and then go beyond that until it gets to the point where you think you're happy with it.

Then you think 'Have I gone too far?' I never reach the point where I think my records are completely perfect. Usually I just get exhausted and reluctantly let go of them, which is where a deadline helps".

It didn't though because this album was continually delayed, missing at least five of those deadlines before release.

Ultimately, leaving his music in an unresolved state was (is) the Ferry way that's at odds with the tabloid-friendly image of cool, collected suavity.

Yet, as with his Roxy times, that conflict fashioned a superb album. At times sounding like 'Avalon' redux, 'Boys and Girls' does try to step beyond the movie set-like mythic fantasy ambience of 'Avalon' to a more angular and leaner, funkier presentation.

While the tendrils of 'Avalon' do extend into the core of 'Boys and Girls' the feeling that Ferry has a new gang in tow is important to its overall sound. The break from the past can sound a little obvious and cack handed, though. Mark Knopfler's signature guitar work on the track 'Valentine', for example, helps Ferry to draw a line in the sand. Sure – but its effect is not exactly subtle. I would have liked to have seen Ferry dump the stars and the glitz and create a no-name backing band of his own. After all, it's what he's seemingly always wanted.

Even so, 'Boys and Girls' remains different enough to represent a turn in the road and a continued break with the past.

You can pick up this album, new, shiny and resplendent in the finest of shrink wraps, as part of a larger release project that covers Ferry's first six solo albums. They include 'These Foolish Things' (1973), 'Another Time, Another Place' (1974), 'Let's Stick Together' (1976), 'In Your Mind' (1977), 'The Bride Stripped Bare' (1978) and, of course, Boys and Girls (1985). Remastered from the original master tapes at Abbey Road Studios, cut by Frank Arkwright and featuring "enhanced versions of the original artwork" overseen by Bryan Ferry himself.

**PR**

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