EXCLUSIVE!

ABBEY ROAD INTERVIEW
The new Beatles In Mono LPs

NAIM SUPER NAIT 2 amplifier

QUAD 9AS ACTIVE loudspeakers

SONY NWZ-ZX1 hi-res Walkman

JADIS I-35 AMPLIFIER - MUNICH 2014 SHOW REPORT - MCRU NO.127 LOUDSPEAKERS - ORTOFON QUINTET BRONZE CARTRIDGE

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This month you won't help but notice our interest and involvement in The Beatles mono LPs release. The new albums are a technological update to improve sound quality and the historical record. My interview with Abbey Road cutting engineer Sean Magee on p83 teases out the fine details of the thinking behind this ultimate release. Next month we review the new LPs.

Our unique access to this album release comes indirectly through the fact that I've lived close to Abbey Road studios for most of my life, have known people there and have visited many times, welcomed in the past by Brian Southall, EMI director and himself a profuse journo. If you want to know more, get his book Abbey Road, available on-line at Amazon — and sitting on the desk in front of me as I type. I use it in conjunction with Mark Lewisohn’s The Complete Beatles Recording Sessions as a reference. It doesn't pay to get your facts wrong on this topic!

I installed a Quad 33/303 and pair of ESL57s into Paul McCartney's house around the corner from Abbey Road studios many moons ago. Linda McCartney showed me into an upstairs room, the children ran around noisily with the dogs and Paul arrived in his Lambo in suitably impressive style. They were charming and all went well I'm glad to say - nothing blew up – thank heavens for Quad.

Which brings me onto our lead review this month. Quad are alive and well, and their small 9AS powered active loudspeakers — see p10 — suitably impressed us. Connect them to the computer via USB and you’re away. Why have the terms Apple and Quad just come into my head? Also impressive this month were MCRU’s No I 27 loudspeakers. As they played away in our listening room we all came to like them. They were both accurate and exciting – a rare combo. See our review on p36.

The past has come back to haunt us — but that's fine. Turning over a few ghosts for this issue was fun for us — I hope you enjoy it too. The story continues next month...

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Beatles fans should make a date in their diary for Monday 8th September 2014. For that's the day the long-rumoured The Beatles In Mono box set and individual albums will finally be released – comprising the group’s nine UK albums, the American-compiled ‘Magical Mystery Tour’ and a three-disc ‘Mono Masters’ collection of non-album tracks.

All come on 180-gram vinyl with artwork faithfully replicated from the original pressings. The albums have been newly-mastered for vinyl from the quarter-inch master tapes at London's famous Abbey Road Studios by Grammy award-winning engineer Sean Magee and mastering supervisor Steve Berkowitz.

While the ‘The Beatles In Mono’ CD box set released in 2009 was created from digital remasters, the new vinyl collection was cut without using any digital technology. Instead Magee and Berkowitz employed the same techniques used in the 1960s – guided by the original albums and detailed transfer notes compiled by the cutting engineers at the time.

Working in the same room at Abbey Road where most of The Beatles albums were cut, the pair used a Studer A80 machine to play back the historic master tapes while the new vinyl was cut on a 1980s-era VMS80 lathe.

The albums were then pressed at the renowned Optimal Media plant in Germany. They are available individually or in a limited-edition 14 LP box set which includes an exclusive 108-page book featuring new essays and a detailed history of the mastering process by award-winning radio producer and author Kevin Howlett.

The book also contains many rare studio photos of The Beatles, fascinating archive documents and articles and advertisements sourced from 1960s publications.

The Beatles In Mono vinyl box set costs £288, while individual albums are £21.99 each apart from The Beatles (White Album) which is £31.99 and the Mono Masters set which is £32.99. All can be pre-ordered now at www.thebeatlesonline.co.uk/thebeatles/Mono-Vinyl.

* See page 83 for our exclusive Abbey Road behind-the-scenes feature on the production of the Beatles In Mono LPs.

In conjunction with the new and definitive The Beatles In Mono LPs release, taken from the master tapes, Ortofon of Denmark have announced a special cartridge to play the discs. Called the 2M Mono SE, it is a tuned mono version of their top-of-the-range 2M Black moving magnet cartridge, fitted with silver wiring and top-quality Shibata profile stylus. Tracking force is 1.4-1.7gms and body weight 7.2gms, so it will fit all arms. Price is €500, available September 2014.

Just announced by McIntosh are the MC152 and MC301 amplifiers as well as a new set of headphones. Each amplifier features McIntosh’s blue power meters and black chassis, at a slim 130mm height. Operating at 150W watts per channel, the MC152 is McIntosh’s smallest solid-state stereo amplifier to date. Similarly, the MC301 amplifier is McIntosh’s smallest monoblock solid-state amplifier, operating at 300 watts. McIntosh has also released a set of new headphones. Known as MHP1000s, there is little hard information on the new design but we will bring more information when we get it.

For more information, call 01202 911886 or click on www.jordanacoustics.co.uk.

Roksan’s K2 Series is the subject of a series of newly created system packages that will allow customers to save £500 when purchasing two items together in a ‘pack’: available with black or silver faceplates (speakers are available in gloss black only)

For example, the K2 integrated amplifier can be bought with the CD player for £1,250 instead of £1,750 while the K2 BT and TR-5 loudspeakers are available as a pair for £1,320 instead of £1,820.

Click on www.roksan.co.uk or call 020 8900 6801 for more details.
CABASSE LA SPHERE
Cabasse has unveiled the new 96kHz version of its reference loudspeaker system, La Sphère, which is supplied with a brand new processor designed for use with high-definition 96kHz files. La Sphère 96kHz also boasts a new amplifier, the Cabasse BC REF500, that has been developed to increase the dynamic capacities of the mid and treble sections of the co-axial four-way speaker system. The company also offers a bespoke solution for each La Sphère customer, presenting the option to select and match amplifiers, the four pairs of speaker cables and the interconnect cables between the processor and the eight amplifiers. The final tuning of the system at the owner’s home is performed in conjunction with the authorised dealer and a Cabasse team member who specialises in La Sphère set-ups. Each system optimisation takes a full day and takes into account the characteristics of each component, the acoustics of the room and the musical preferences of the new La Sphère owners.

Click on www.cabasse.com/en for more information.

GAMUT REVISED SUPERIOR
Gamut’s Revised Superior loudspeakers are available in four models. The curved enclosures in the RS-Series are based on an inner structure of birch plywood with an outer skin of real wood ash veneers. The RS3 is a full-range speaker designed for a smaller listening room. The RS5’s floorstanding design increases bass output compared with the RS3. The bass driver for the low frequencies is an entirely new construction with the cone made from woodfibre and dynamically optimised with a wood dust cap. The bass/midrange driver is a sliced paper cone woofer treated with a selected blend of oils. The RS7 marries the same tweeter used throughout the series with a DC-coupled midrange. Gamut’s own M250i mono amplifiers drive the RS9, the largest and most expensive model in the range. Prices are: RS3, £11,850; RS3 column (bolt-on stand), £3,550; RS5, £23,100; RS7, £29,050 & RS9, £74,000.

Click on www.gamutaudio.com or call 01202 630 066 for more information.

SLIC DIGITAL
New British hi-fi cable manufacturer SLIC Innovations has launched its first audiophile interconnect cable – the Eclipse C.
SLIC is an acronym for Super Low Interference Cable which is the philosophy that informs the design of Eclipse C. Focusing on the susceptibility of conventional audio cables to the ingress of electrical noise, Eclipse was designed to eliminate this.

The company says the new cable drastically reduces signal disturbances created when current flows through conductors and has been optimised to work across an ultra-wide frequency range. The Eclipse C costs £492 for a 1m stereo cable terminated in premium-quality RCA phono plugs. Other terminations and lengths are available. For further details see www.slicinnovations.co.uk.

HEED’S THESIS
Heed has announced a new range of components under the ‘thesis’ branding. The range is centred on the thesis alpha preamplifier, which features two analogue and four digital inputs. The external thesis x power supply unit powers the analogue stage of the thesis.

Also in the range is the phi phono pre-amplifier which caters for both MM and MC cartridges, and the thesis omega monoblocks. Prices are alpha pre £2850, thesis power supply £1600, thesis phono £2300 and omega monoblock £1750. More information at www.heedaudio.co.uk or phone 01242 511133.

AUDIO SUSPENSION MODULAR REFERENCE RACK
Audio Suspension’s new hi-fi shelving system sees platforms made from 20mm acrylic, hand-flame polished to give a mirror surface. Every shelf has a built-in spirit level as well as a cut-out on the back for cable management. All the legs are individually hand-turned and polished from the highest quality stainless steel and feature silicone seals at the top to further isolate the shelves. The spikes are Track Audio sourced.

The Modular Reference Rack starts at £1,200 for a two-tier rack and £2,400 for a four-tier rack.

Click on www.audiosuspension.com or call 01273 270613 for more information.
TEAC REFERENCE 301 & HEADPHONE AMP

TEAC has announced the Reference 301 series which includes the Al-301 DA amplifier fitted with aptX Bluetooth, compatible with 7.8MHz/5.6MHz DSD native playback and 32bit/192kHz high-resolution sound sources. It arrives with a Burr Brown PCM1795 DAC and is fitted with two 40W Class D amplifier modules.

Next is the UD-301, DSD-capable 32bit/192kHz DAC with USB input, asynchronous transmission mode capability and 192kHz up-conversion option. It's compatible with 7.8MHz/5.6MHz DSD native playback and 32bit/192kHz high-resolution sound sources. The USB DAC can be directly connected to a power amplifier or active speaker and the output level (XLR balanced, RCA) can be set to fixed, adjustable or off.

Finally, the LS-301 is a two-way coaxial loudspeaker system utilising a 10cm woofer and 2cm silk-coated tweeter with a rear bass reflex port.

The TEAC A1-30IDA and UD-301 are priced at £399, while the TEAC LS-301 is £299.

DYNAUDIO XEO

Danish outfit Dynaudio has announced the updated wireless Xeo loudspeaker. Now with the ability to accept high-resolution audio files up to 24bit/96kHz, the styling has also been updated with discrete screws, smooth satin lacquer finishes and magnetically attached grilles.

The new Dynaudio Xeo models include the compact Xeo 4 and floorstanding Xeo 6 wireless loudspeakers, the Xeo Hub wireless transmitter, the Xeo Extender and the Xeo Link - a device that receives the wireless audio signal and allows the Xeo system to add a subwoofer, headphone amplifier or any other analogue or digital component to a wireless Xeo system.

Virtually any component that can output audio can be connected to the Xeo Hub, which digitally transmits the wireless signal, without compression to the loudspeakers. The Hub includes optical, coaxial and USB digital inputs that each supports up to 24bit/96kHz resolution as well as RCA and mini analogue inputs.

Prices: Xeo 4, £1,550; Xeo 6, £2,700; Xeo Hub, £225; Xeo Link, £135 and Xeo Extender, £135.

Click on www.dynaudio.com for more information.

PURE JONGO UPDATE

Pure has announced that its Jongo wireless multiroom speakers can now be used with any music streaming service including Pandora, Rdio, Deezer and Spotify. This new update has been enabled through the integration of Bluetooth Caskeid, an enhancement to the synchronisation technology used in Jongo speakers. Globally, there are 500 different music services available across 100 territories, as well as thousands of radio apps, and this new approach allows users to stream their preferred music or radio service to multiple Jongo speakers throughout their homes.

USB BOX S+

The USB Box S+ DAC uses a XMOS chipset to handle asynchronous USB streaming up to 32bit/384kHz. The sample-rate of a playing file is displayed on the front panel but, in the device, all digital streams are up-sampled (i.e. 44.1, 88.2 & 176.4 sample rates are up-sampled to 352.8kHz; 48, 96 and 192kHz sample rates are up-sampled to 384kHz).

The compact device utilises a single PCM5102A chip from Burr Brown. The benefit of the 2.1V RMS output means the audio signal path after the chip is clear of unnecessary extra capacitors while two filter settings allow users to tailor the sound.

Set-up is as simple as connecting the device up and tweaking a few audio settings in the computer settings (a 24bit driver is provided on a disc with the USB Box S+ for Windows computers, Apple and Linux systems do not need any additional drivers). Price is £169.

Click on www.teac-audio.eu for more information.
Get Active

Jon Myles gives Quad's new active loudspeakers a thorough work-out – and comes away mightily impressed.

Active 'speakers have a lot going for them – and it's not hard to see why. For a start, it allows the designer to approach the critical amplifier/crossover/loudspeaker interface as a unified whole. No passive crossover resistors, capacitors or inductors between the signal and drive units to filter the frequency range. Instead that's done prior to amplification – meaning everything put out by the amp goes direct to the drive units of the speaker.

And then there's the price.

Building the amplifier and loudspeaker into a single enclosure is much more cost-effective than housing them separately – and also saves you the price of loudspeaker cables.

Just choose a front-end, pre-amplifier option and fire them up.
In the case of Quad's 9AS actives, even a pre-amp is unnecessary. They have a 24/96-capable DAC and an array of inputs to handle just about any source you could think of, plus remote control of volume.

When taken out of the box the 9AS's heritage is immediately obvious. Think the company's 9L mini-monitor — except on steroids.

The 9L heritage comes from the use of a 25mm dome tweeter housed in a proprietary waveguide allied to a 100mm mid/bass Kevlar driver.

It also means the same superb lacquer cabinet finish. Few, if any, loudspeakers at or around the price come close to matching the Quad L series in this respect.

As for the steroids — well, finned heatsinks at the base of each cabinet let you know these are active 'speakers.'

Beneath lies the amplifier section which outputs 65 Watts to the mid/bass and 35 Watts to the tweeter in pure Class A/B operation. Hence the heatsinks — there are no Class D modules here.

Together the loudspeakers operate in master/slave configuration — with the latter fed audio signals via a line-level output (of which more later).

The range of inputs at the rear of the main master unit is impressive. Alongside line level RCAs sit S/PDIF optical and coaxial as well as a USB — all capable of accepting file sizes up to 192kHz/24-bit.

Digital duties are handled by a Crystal CS4398 24-bit DAC similar to the ones utilised by Quad's high-end CD players.

There's also a small switch which provides bass EQ suitable for free-standing, desk mount or wall mounting.

Round the front of the master speaker a slim strip allows control of volume and input — while the basic, but functional, remote facilitates sofa-based adjustments.

Set-up is easy enough. Simply plug the two 'speakers into the mains and connect the pair via the supplied line-level lead. Except, unfortunately, the lead doesn't give you much leeway in terms of positioning. In short it's, er, too short — meaning trying to get the 'speakers anything more than four foot apart is nigh on impossible.

You can obviously use your own replacement — but Quad should seriously look at including a longer lead as part of the package.

That apart, everything else about the Quads exudes quality — even down to the pair of white gloves included in the box to save you getting dirty finger marks all over the high-gloss finish!

**SOUND QUALITY**

Quad's L Classic line of passive loudspeakers — on which the 9AS is based — have a distinctive house sound. They're smooth, civilised with a hint of warmth but an overall even balance and masses of detail.

"there's no doubt about it, at just £600 the Quad 9AS are outstanding value for money"

Indeed, I happily used a pair of Classic 12Ls for a number of years — the only caveat being they needed an amplifier with plenty of grunt and verve to really give of their best.

The 9AS active combination doesn't vary too much from that house sound — except there's an added degree of punch and vibrancy.

The immediate impression is of a dry, tight and essentially uncoloured sound.

Those relatively powerful on-board amplifiers tightly-coupled to the drive units gives the loudspeakers a good measure of grip and control of the music.

Playing Massive Attack's remastered 'Blue Lines' — a disc, incidentally, that shows how good CD can still be when done properly — via our resident Cyrus transport...
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Tony Bolton, Hi Fi World 2014

“I’ve talked a lot about Tellurium Q of late. I’ve also sung its praises constantly. To be honest, I wish I had something to grump about, it would make a change but when a company gets a series of products “this right” it is difficult to say anything negative.”

Paul Rigby, HiFi World 2012

“A certain magic when it comes to absolute sound quality”

Jimmy Hughes, Hi Fi Choice 2012

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www.telluriumq.com +44 (0)1458 251997
True, there’s no real low-end to speak of, due to the speakers small size, but the overall performance is such that you don’t really miss it. Instead they set the toes tapping with punch, tonal quality and all-round musicality.

Overall they have the even-handed quality of Quad’s Classic loudspeaker line except with added verve courtesy of the well-implemented active drive system.

MEASURED PERFORMANCE

The Quad 9AS active ‘speaker has an even on-axis response and worked well off axis too, largely due to the shallow horn around the tweeter. This can be

FREQUENCY RESPONSE

Green - driver output
Red - port output

DECAY OVER 200mS

important when listening close, at acute angles to the loudspeaker when it is part of a computer music system on a desk. The small main bass driver cuts off at 90Hz; the two small rear ports peaking at 80Hz to offer a bit of downward extension, but the 9AS does not go low. A bass boost switch on the rear introduces +5dB of lift at 100Hz, and a few dB more lower down, but the box and bass unit are not capable of delivering low frequency power so Quad haven’t tried to over-drive the system, to keep the 9AS fast and clean. A shelf setting cuts bass a little. A 200mS decay analysis showed the 9AS was very clean across the midband and treble. There’s a long decay at 100Hz; but that is all.

Sensitivity was high, 96mV rms being needed to deliver 90dB sound pressure level, which is loud. Since most portable players and mobile phones deliver 300mV they will drive the Quads very loud, to nearly 100dB. A 9AS is a neat active loudspeaker that proved accurate and smooth under measurement.

It is also uncoloured, so should match the all-round capabilities of the 9AS active loudspeakers.

MEASUREMENTS

- active loudspeakers
- smooth, even tonal balance
- DAC and pre-amp into the bargain as well. Destined to become a bit of a classic.

FOR
- interconnect should be longer

AGAINST
- small size means limited bass

www.quad-hifi.co.uk
HEAR LIKE A PRO

“These are supremely musical mini-monitors with astounding bass punch and rhythmic ability allied to class-leading resolution.”

Hi-Fi World, July 2013

To celebrate 50 years of groundbreaking innovation, our LS50 mini monitor applies KEF’s latest acoustic technologies from Blade and beyond to deliver the uncompromised sonic purity, accuracy and transparency we originally pioneered with the legendary LS3/5a professional studio monitor for the BBC. The good news is that you no longer have to be a sound engineer to enjoy the startling illusion of presence it creates.

www.kef.com/LS50
Golden lights

Rafael Todes goes all Gallic as he is bewitched by a new valve integrated amplifier from across the Channel.

As we all know, looks aren't everything - especially in the world of hi-fi components. There's no end of storied products down the years that have looked — on the outside at least — a touch well, utilitarian would be the word (think the likes of the NAD 3020 or original Naim Nast, for example).

So when something comes along that makes you go 'Wow!' as soon as you lift it out of the box and then continues to beguile once it's pressed into service, it deserves to be welcomed.

So, say a big hello to the Jadis I-35 integrated amplifier because it fulfills both those criteria.

Firstly, it looks superb. The family-owned Jadis company has been hand-building valve amplifiers in the Languedoc-Roussillon region of southern France since 1983 and it's fair to say their products have a distinctive, luxurious look that sets them apart from the crowd.

The main chassis is a combination of chromed steel with gold knobs and faceplate adorned with the scripted Jadis logo and weighing in at a hefty 31kgs.

It's a look that exudes quality without being overstated — just what you'd want from a £5500 amplifier.

Controls consist of volume, balance and input selector, along with an on/off rocker switch. A remote control is optional.

The valve complement includes five small-signal tubes — the central one being a 12AU7 dual triode that provides line-level gain for both channels of the active pre-amp stage. Two other 12AU7s serve as left and right channel phase splitters for the push-pull power section with a pair of 12AX7s driving the power tubes.

In our review sample the output section was fitted with KT88 tubes, but customers can also specify the more powerful and relatively new KT120 valves if they wish — see our box-out at the end of the article for more on this topic.

The push-pull output stage is biased to Class A and uses auto-bias, giving a claimed 30 Watts-per-channel of power. The output transformers are of Jadis's own design and hand-wound in house.

Round the back are five line-level RCA inputs (there's no phono stage) as well as two sets of 'speaker binding posts — which is where things get slightly unusual.

Despite a circuit diagram on the top of the output transformers indicating 4 and 8 Ohm 'speaker taps are available, as is customary on valve amplifiers, this is, in fact not the case.
Based on the multi-award winning Series V pick-up arm, the Series V-12 incorporates the same design and engineering that have made SME a byword for excellence. Coherent musical control is held over the entire frequency range in terms of tonal quality, stability and stereo imaging. Startling dynamic range, neutrality, structurally inert, the Series V-12 embodies every worthwhile feature in a pick-up arm. The 12 inch tone-arm is pressure die-cast in magnesium complete with an integrated headshell to eliminate tone-arm resonances in the audio spectrum and offers a 27% reduction in maximum angular error distortion over 9 inch models.

Listening: the benefits of minimal tracking error and harmonic distortion are clearly revealed.

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HI-FI WORLD
February 2013

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Instead the two sets of loudspeaker outputs in fact run in parallel — with Jadis stating the I-35s “load impedance is pre-adjusted in the factory for loudspeakers from 4 to 16 ohms”.

Our Measured Performance revealed the amplifier’s output transformers are most likely power matched for 10 Ohm loads. In fact power output dipped appreciably into 4 Ohms.

As most ’speakers these days use bass drivers of around 4 Ohms careful matching is going to be critical to getting the best out of the Jadis.

Also worth noting is that the I-35 inverts signal polarity — so for optimum sound quality the speaker connections should be swapped black for red and red for black on each channel (but you may not hear any difference — see our Letters this month for more about ‘absolute phase’).

A steel mesh valve cover screws to the chassis to protect those glowing tubes from inquisitive little hands or wandering pets — but, as with most tube amplifiers, the Jadis really does look better without it in situ.

Slide the unit into your rack and fire up those KT88 tubes and the Jadis conveys an undeniable pride of ownership — one which is only heightened as you begin to listen to the performance.

SOUND QUALITY

Slotted into my system and warmed up nicely, the Jadis immediately gives a good impression of itself.

Playing the Decca Solti recording of Mahler’s 9th Symphony, Scherzo, I am impressed with what the Jadis integrated is doing to the sound. It has good control over the orchestral textures — the violins are sweet with good weight to them and there is a beautifully classic valve twinge to the proceedings.

Where my reference VAC PHI200 monoblocks have more of a matt finish, this is veering towards gloss. It’s an attractive sound, engaging and intensely coloured like a saturated colour photograph.

As a listener I’m sitting halfway back in the concert hall with the Jadis. It means I’m not getting the intense detail the VACs provide which makes me feel I’m on stage with the performers.

But the Jadis sound is one I suspect will make for an easier listen for many.

It is simpler to get a perspective of the whole performance from this slightly more distant vantage point and the I-35 has the ability to bring the performance together into one seamless whole.

Yes, some amplifiers will give you more detail and a brighter spotlight on individual performers — but the Jadis has an easy, graceful sound that concentrates on the musical whole.

The Jadis also had more than enough power to easily drive my resident B&W 802Ds. It may not be the most powerful valve amplifier about but it coped well here.

However, although big, the B&Ws are relatively benign with a 90dB sensitivity and 8 Ohm nominal impedance. Switching to a pair of the impressive MCRU No 127s (see review this issue) and the Jadis struggled a little more. Yes, it could go loud with ease (the MCRUs are even more sensitive than the B&Ws) but the No 127s 4 Ohm impedance saw the sound start to harden as the volume knob was turned towards the 12 noon position. The sound never became offensive — but there was the sense that the Jadis was starting to run out of breath.

Back on the 802Ds and things returned to normal. Sound staging was impressive — with good right to left separation, although the Jadis didn’t have quite the front to back resolution of my VACs.

The bass is also fairly tight by the standards of most valve amplifiers I have heard. It isn’t gut-wrenching in the manner of a megawatt transistor amplifier but is present and correct with good definition. I wonder if perhaps they are putting beauty above truth?

Turning to a favourite Mozart piano concerto — No 18 in B flat major by Barenboim with the Berlin Philharmonic — and the orchestra has a rich tone which is both fulsome
Connect.
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K2 BT
- aptX Bluetooth streaming input
- Increased output for greater power and clarity
- Improved circuitry for greater efficiency
- Even better sound performance

ROKSAN
The award-winning Roksan K2 series has now been expanded to include a new integrated amplifier. The K2 BT improves on the original K2 Integrated with brand new circuitry and a higher output than ever before. The inclusion of aptX® technology also adds a whole new source input to the amplifier. Now you can stream your favourite music from a Bluetooth-enabled device in original 16-bit CD quality.*

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and very appealing.

There's just a hint of the amplifier straining in the loud orchestral tutti and I miss a little of the subtlety of orchestral interplay as the sense of the platform on which the musicians are performing is a bit more crowded than usual.

There is undoubtedly more jumble than I hear through my VAC amps with the dialogues between soloist and orchestra seeming to have less sense to them. This music is testing the amplifier's command, and revealing holes in its defences.

Having said that, the Jadis costs a quarter of the price of the VACs — and its level of detail is exactly what you would expect from an amplifier in its price range.

On a more mundane level, there is slight sonic leakage between inputs, which could cause a problem if you use several on at any given time.

I would have also appreciated a remote control as standard — not optional — at this price point, at least for volume if not for input.

And while the Jadis certainly looks the part with its distinctive blend of polished steel and gold detailing, why oh why make the decision to place three utilitarian capacitors and a heatsink to the left of the valves — spoiling what is, after all, any tube amplifier's shop window?

I like the sight of glowing valves as much as the next man. I can see the reasoning behind the looks, appreciate the bling factor of the silver and gold — but why the capacitors?

But those gripes aside — and, yes, I am being a little picky here — Jadis have produced a very attractive amplifier in the shape of the I-35, both in terms of looks and sound.

In a crowded market of some very fine valve amplifiers it is distinctive enough to stand out and offer real value for money.

**CONCLUSION**

The Jadis I-35 is a beautiful-looking amplifier that produces a rich, resonant sound. Detail is good for the price and orchestral textures well realised and fulsome.

Indeed the Jadis goes about its job with aplomb giving a rich, velvety sound that is typically valve-like and never less than musical.

The main drawback is its lack of 4 and 8 Ohm 'speaker taps which sees a dip in power into lower impedances and means potential buyers will need to take special care in loudspeaker matching.

**REFERENCE SYSTEM**

VAC PHI200s
B&W 8020s
Townshend Audio Isolda speaker cables
Esoteric K-05 CD player
PS Audio P10 mains rebuilder

**MEASURED PERFORMANCE**

| Power measured 29 Watts into 8 Ohms (2% distortion). This is the sort of power auto-bias provides when running KT88s conservatively (low-ish anode volts) to conserve their life. So valve life should be long, but power is not high. | KT88s are robust, sound good and cost little — around £40 each.
KT120s are a modern upgrade of the KT88 (bigger anode) needing more heater current: they are a plug-in replacement if this is available, as it is on the I-35. KT120s are robust, inexpensive but can sound clanky. KT150s are a new upgrade of the KT120 designed to sound good — but they cost £200 apiece! Because the I-35 can run KT120s it can run KT150s too — at a price. However, the amplifier's power output will not change by using these higher power valves, more HT is needed. |
|---|---|
| Frequency response | KT88s are robust, sound good and cost little — around £40 each.
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| Sensitivity was high at 150mV, so the I-35 will go loud quickly as volume is increased. Frequency response covered the audio band, treble rolling off smoothly above 20kHz, as is common with valve amplifiers. The I-35’s output transformers are not ideal for 4 Ohm loudspeakers. This under-utilises the KT88s that in the right environment can produce 40 Watts. Otherwise, measured performance was good, rather than exceptional. NK | Power measured 29 Watts into 8 Ohms (2% distortion). This is the sort of power auto-bias provides when running KT88s conservatively (low-ish anode volts) to conserve their life. So valve life should be long, but power is not high. |
| Power | 28 watts |
| CD/tuner/aux. Frequency response | 8Hz-20kHz |
| Separation | 65dB |
| Noise | -65dB |
| Distortion | 0.7% |
| Sensitivity | 150mV |
| Damping factor | 5.6 |
Muso is Naim's first wireless music system, designed to transform your music into incredible sonic experiences. Through its advanced connectivity, Muso will unleash your digital music, wherever it’s stored.

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A nyone with more than a passing interest in the history of hi-fi will no doubt be well acquainted with a decent smattering of some of the weird and wonderful designs loudspeaker engineers have dreamt up over the years.

From mini-marvels to giant horns needing just a few Watts of power to go deafeningly loud, the search for more accurate sound from transducers has ranged far and wide.

But take a trip to London’s Science Museum at the moment and you cannot help but be awe-struck by one design that dwarfs almost any other.

For the Denman Exponential Horn which dominates the establishment’s Virgin Media Studio is truly outstanding. As its name suggests the horn loudspeaker is truly massive — measuring some 27-foot long and spreading from 27mm at its source to more than seven feet at the mouth.

Stand in front of it and it’s hard not to be astonished at the sheer power, presence and sonic fidelity this monster can produce.

It’s perhaps even more astonishing to discover the horn is actually a reconstruction of one of the Science Museum’s most popular attractions from the 1930s.

The original was commissioned by the museum’s then curator of telecommunications Richard Denman and was designed to reproduce the widest possible sound frequency range.

Once a week it would relay programmes from the BBC’s London Regional Service to crowds of visitors at a time when the search for high-fidelity replay was in its very infancy.

Indeed, writing in the Audio Engineering Society Journal the audio experts Percy and Geoffrey L. Wilson were of the opinion that “no superior loudspeaker has to date been demonstrated in Britain”.

Now its majesty can be heard again after the Science Museum’s Workshops team spent months painstakingly recreating the giant loudspeaker for an installation by sound artist Aleksander Kolkowski entitled ‘The Exponential Horn: In Search Of Perfect Sound’.

Aleksander — who served as the museum’s Sound Artist in Residence during 2012 — is a composer and researcher who uses historical sound recording and reproduction apparatus as well as obsolete media to make new music.

His work invites people to listen to the present through the audio technologies of the past - via performances, installations, recordings and live historical re-enactments.

To demonstrate the capabilities of the Exponential Horn sound art and archive footage comes from a variety of contributors — including BBC History, Resonance 104.4FM, BBC Radio 3, Archive of the Now, the London College of Communication, the Royal College of Music and the Royal College of Art.

The genesis of the project dates back some six years, when the Science Museum’s Curator of Communications John Liffen guided Aleksander through the institution’s extensive collection of historical audio artefacts housed in its Blythe House storage facility in West Kensington.

There, lying on a row of filing cabinets, was a nine-foot long, tapered, black metal tube — all that remained of the original horn after it was almost totally destroyed in a demolition accident in 1949.

“The story of the horn and John’s extensive research on it sparked my interest” recalls Aleksander enthusiastically.

“I’ve always been interested in the potential of horn loudspeakers and the Denman really takes that to the limit. Luckily, when I became the museum’s Sound Artist in Residence it gave me the chance to initiate the horn’s reconstruction”.

Not that that was any easy task. But working from Denman’s own archived specifications the missing 18-foot section of the horn was painstakingly reconstructed — this time using fibreglass in place of the
Aleksander Kolkowski with the Denman Exponential Horn in situ at London’s Science Museum

original lead and tin alloy.

Over an eight-month period the giant assembly gradually took shape, the Science Museum’s expert craftsmen painstakingly smoothing the insides of the horn to ensure a smooth airflow with no unnatural resonances.

Then came the delicate task of choosing the right driver. The original employed a Western Electric 555W device — used extensively at the time for cinema sound systems and, according to John Liffen, still considered one of the greatest transducers ever produced.

The example used in the reconstructed exponential horn is from the Science Museum’s own collection — and dates from 1925!

“They really were exceptional drivers” says John. “It’s amazing to think something produced so long ago can still sound so good today”.

Not surprisingly, the reconstruction of Richard Denman’s groundbreaking horn passed with flying colours.

Stand in front of its seven-foot mouth now hung imposingly in the Science Museum’s Media Space and you can hear why.

“It’s a totally immersive sound” says Aleksander. “Very natural and true”.

The tested frequency range runs from 32Hz up to 6kHz but it’s the lifelike, totally organic sound that impresses most — and not just for hi-fi buffs.

On a number of my visits groups of youngsters were gathered around the horn listening rapt to the sounds of BBC presenters from a long-gone radio age.

And though it might not be practical for everyday domestic use, both Aleksander and John hope the Exponential Horn not only serves as an historical piece but also reveals just what can be achieved in the field of audio reproduction.

“It’s setting a benchmark” they say. “It’s saying this is what can be done.

“Hopefully people will take things from that and see what can be achieved”.

1932 – was used by BBC engineers for more than 30 years until the early 1960s to test and calibrate the frequency response of audio equipment such as its recording quality and large tonal range.

Not surprisingly, though, despite all the work and research, the first full test of the newly-constructed horn outside Blythe House was a nerve-racking experience.

“It was terrifying really” admits Aleksander. “There was no knowing exactly what it would sound like”.

“The main concern was whether there would be any resonances in the structure, which we couldn’t know properly until we tested it”.

And true to the whole project, that first test also delved back into the annals of British audio history.

“The first piece we used was the Henry Hall Orchestra’s ‘Teddy Bear’s Picnic’, because it has a great range of high and low frequencies” reveals Aleksander. “In fact it was used by the BBC as a reference for many years”.

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Here's your chance to win the superb Roksan K2 BT amplifier we reviewed in our April 2014 issue. Read the review excerpt below and answer the questions.

"Welcome to an integrated amplifier with built-in Bluetooth, no less. The new Roksan Kandy K2 BT loses its Tape input, but gains the ability to stream music from Bluetooth devices like a smartphone, iPad or similar. And it retains its MM phono stage.

Also rather different from the mainstream is the use of MOSFETs (specifically 2SK1529s and 2SJ200s) in the analogue output stage. Most other solid-state amps either stick with conventional bipolar transistors, or foray into Class D territory.

The K2 BT can be operated via the supplied 'RMX III' handset, programmable with codes from a computer/website via USB.

Roksan's specs claim that with both channels driven the K2 BT delivers 125W into eight ohms, or 200W into four.

It's not possible to upgrade an original K2 into a K2 BT, because they are rather different, insofar that the original K2 made provision for a recorder (tape, MD, etc.) but the K2 BT has no such tape loop. Sign of the times! In addition to dedicated CD and phono inputs are three line-level auxiliaries.

Two pairs of chunky binding-post speaker terminals carry the K2 BT's output to loudspeakers, while a screw terminal is provided for grounding a turntable. The final connection is for the stubby Bluetooth aerial, supplied in the package."

For a chance to win this great prize, just answer the four easy questions at right. Send your entries on a postcard only, by August 5th, to:

August 2014 Competition, Hi-Fi World magazine, Studio 204, Buspace Studio, Conlan Street, Notting Hill, London W10 5AP

entries will be accepted on a postcard only

MAY 2014 WINNER: CREEK EVOLUTION 50A AMPLIFIER
Lesley Rowell, of Cumbria

QUESTIONS

[1] The Roksan streams via -
   [a] Wi-Fi
   [b] a streamer
   [c] Bluetooth
   [d] a break

[2] In its output stage are -
   [a] MOSFETs
   [b] transistors
   [c] Nuvistors
   [d] BJTs

[3] It retains -
   [a] a phono stage
   [b] a tape loop
   [c] tone controls
   [d] a break

[4] Turntable ground is a -
   [a] screw
   [b] 4mm socket
   [c] croc clip
   [d] a break
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• nothing

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LETTERS & EMAILS

mail

Visit our website at www.hi-fiworld.co.uk or send your emails to letters@hi-fiworld.co.uk. Letter of the month wins a pair of KEF Q100 loudspeakers.

Answers by: NK - Noel Keywood; PR - Paul Rigby; TB - Tony Bolton; MP - Martin Pipe; HB - Haden Boardman; RT - Rafael Todes; RA - Rod Alexander; JM - Jon Myles.

For more advice see Letters from earlier issues at www.hi-fiworld.co.uk/letters

A pair of KEF Q100 loudspeakers are on their way to MARTIN BURGEES, Letter of the Month winner in our July 2014 issue.

Letter of the Month

BOY FROM THE BLACK STUFF

I tend to listen to vinyl but decided the time had come to throw off my Luddite tendencies and dip my aural toe into the murky world of digital audio. To get digital audio on my laptop, I've been ripping and burning (I've picked up the lingo) CDs to Windows Media Player for a while and transferring the files to MP3 players and mobiles with some success, so the road to hi-res beckoned. With the help of Google and Hi-Fi World I decided that FLAC was the one for me, so how to go about doing it?

I settled on Media Monkey and downloaded their free software without any problems and proceeded to rip my CDs. My euphoria was short-lived as — silly me — additional software is needed to play FLAC files, so at the moment I'm deciding between JRiver or Foobar.

In the meantime I downloaded the free version of Spotify and have found this to be a fantastic way of listening to music reviewed or recommended in Hi-Fi World and other publications to see if I like it. You can also download any old albums or songs you want, although the search sometimes needs either the artist or song/album title. The adverts are a bit of a pain but it's a small inconvenience considering it's free.

I was now getting carried away and decided I needed (wanted, really) a DAC to improve the sound and settled on the AudioQuest Dragonfly. This is where I crashed and burned. I excitedly unboxed the sexy looking USB stick and, contrary to what males usually do, decided to read the instructions as they were very short. To my horror I read that it was incompatible with Windows Vista and as, you've probably guessed, I run windows Vista, I ran windows Vista. However there was a way round it and that was to upgrade to a later version of Windows or step back to good old unsupported XP. Ho Hum again.

There now seems to be a third Hum in the offing as DSD is galloping over the digital horizon and even after reading Noel Keywood's explanation and the feature on page 36 and 37 of the April 2013 issue of Hi-Fi World (I must get a life) I haven't got the vaguest idea what it is or does. But then again, why should I?

I think I'm going to withdraw my toe for the time being and continue being a Boy From The Black Stuff until there is some commonality in all things digital, be it ALAC, FLAC, WAV, MP3 et al. but I'll carry on using WMP and

LETTER OF THE MONTH PRIZE

KEF Q100 LOUDSPEAKERS

Here's an inexpensive high-resolution system you can understand and afford: an Audiolab Q-DAC with ESS Sabre32 DAC chip fed by a cheap FiiO X3 digital player, connected through its digital audio output. Fantastic quality and easy — sort of — to use.
Spotify (for their convenience) and put up with the poor quality and use vinyl for serious listening sessions. Best regards, Dave Arnold.

Thanks for the warnings — and it’s interesting that yet again Spotify comes as a top recommendation. Use WAV files with 24bit resolution if you can, sample rate 48k upward. These will play through anything (data rate limitations excluded) and give you a smooth sound, if the original was true 24bit of course. I use popular and free XLD to sample rate convert.

The only class of digital device I have found truly easy to use and that would eliminate your difficulties is the portable digital player. They cost from £150 for a FiiO X3 up to £2200 or so for the Astell&Kern AK240 but they handle all files (if not necessarily DSD) and play at the press of a button. You can hook them up to the hi-fi too through their headphone output or digital output via a DAC. If you want to KISS (keep it simple stupid) then this is the way to do it!

I use an AK120 with optical digital output, the only small drawback being not all optical digital DAC inputs will play 192k digital; an electrical digital connection as used on the FiiO X3 would be better, because electrical does always handle 192k.

You could consider using a FiiO X3 working into an Audiolab Q-DAC: this is a devastating hi-res digital combo at a great price. The only drawback is the FiiO’s small screen and fiddly operation. And then again, I run these systems alongside LP — and guess which is most enjoyable? Ho Hum. NK

IS TECHNOLOGY KILLING HI-FI?

I agree with your editorial in the July 2014 issue: there is a real danger of too many technical terms and hard-to-use devices frightening off potential buyers/users of modern hi-fi.

As a computer person I understand the terminology used (most of the time), but (for the Astell&Kern AK240) having to manually solder up a 2.5mm plug for a pair of balanced headphones (I’m glad I didn’t have to do that — and nor should anyone else have to) is either a welcome return to the more DIY side of hi-fi, or a complete pain in the rear. "Having to manually solder up a 2.5mm plug for a pair of balanced headphones is either a welcome return to the more DIY side of hi-fi, or a complete pain in the rear", says John Malcolm about the Astell&Kern AK240 portable digital player we reviewed last month.

"The earthing as well — this is complete madness! Not The Nine O’clock News satirised the jargon of hi-fi over thirty years ago; imagine how much fun they could have with today’s kit — assuming people would understand the jokes!

Computers — well, to be more precise, the Operating System/Graphic User Interface — have had to get easier to use (...) no Microsoft, Windows 8 having big tiles like an oversized mobile phone does not make it easier to use!), and Apple have led the way here, but even so there is still much which can be improved.

And as to what Chord were thinking with their Hugo, well I shudder to think. People like things that are easy to use, simply laid out, and don’t require a dictionary of TLAs (three letter acronyms) to understand. When I got my Marantz amp I just wired up the speakers, connected the inputs and off I went — controls such as Bass and Treble may be redundant on modern amps but they are easier to understand than DSD-to-PCM and all the various sampling rates etc. Yes, digital needs urgently to standardise on a single rate — 96/24 would suffice for most people — and do away with all the jargon. What happened to Plug And Go?

So, after a period of simplification — from all the technical things you needed to know about playing an LP, to just popping a CD in the player — hi-fi is in danger of vanishing up its own backside in a mass of confusion, here-today-gone-tomorrow standards and stupid format wars, more numbers than an accountants’ convention, and even the merging of devices with computers, creating even more jargon and confusion.

All this is the intellectual equivalent of the rear of a top-of-the-range 11.2 home cinema amp, with all its connectors/sockets. People just switch off and walk away shaking their heads — is it any wonder hi-fi is not mainstream, even if people (when..."
Our Please Please Me stereo Factory Sample LP, new from Abbey Road and virtually unplayed to preserve its grooves. It is being used to run in a special Ortofon 2M Mono SE cartridge designed specifically for the new The Beatles in Mono LPs.

demonstrated to properly have the high-quality equipment (their ears) to appreciate it? It's a real shame.

John Malcolm

Hi John, I understand Astell&Kern can now supply adaptor leads for the AK240 but as I have broken a few 2.5mm jack plugs in the past, they are so small and weak, I suspect this is only half of a good idea. There are other connectors that could better be used. One is a mini-XLR that may just fit the case.

The curious issue of the AK240 is that it was optimised for balanced output in design but then ill equipped to deliver it in any practicable form through the physical connectors in practice.

An easy-to-use output arrangement would make both balanced headphones and balanced-input hi-fi amplifiers easy to use and have obvious appeal to buyers who would see it as a clear benefit (USP) of the product.

Astell&Kern could also consider re-packaging this portable into a dynamite stand-alone high-resolution digital player, a bit like the Aune S1.

I agree that 24/96 should be a recognised hi-res standard although it has become a 'de facto' standard in any case: nearly all devices can play 24/96 PCM. NK

THE BEATLES CD REVIEW

Tony Bolton insists in giving me good advice and this time I have to thank him for the information on the Art du Son cleaning fluid which shall prevent me from using aggressive fluids to wash my LPs and 78s with the advantage of not having to replace the fluid on my record cleaning machine whenever I decide its 78s washing day. Thank you Tony, again and again, for your sound advice.

I was born in 1954 therefore I'm proud to announce that I belong right inside the Beatles generation. Yeah, the one that grew up listening to their records night and day, grew their hair to shocking lengths, wore leather boots with elasticised gussets, knew all Beatles lyrics by heart and whistled along to every guitar solo George Harrison ever played; had all their records and saw religiously their cartoons at noon on TV and their movies at the neighbourhood theater twelve to twenty times in a row.

The loft was our kingdom. My brothers and I kept our model railroad there along with a Dansette, our records, Enid Blyton's books and the bicycles which were hoisted up and down by means of a hand-winch (my youngest Brother, the Irish Setter Derry and my grandmother's cat Spitfire were regular passengers too).

I was ten when I got my first Beatles record. In fact, not one but three American LPs (two of them are mono records but 'Something New' is a High-Fidelity one already), an EP and two singles. All these goodies were provided by my aunt T who was obtaining her PhD in New York, specialising in the rehabilitation of blind people. A year later she would be at the London University Hospital still completing her studies and then I got in the mail The Beatles first - an LP featuring Tony Sheridan and the very suspicious Beat Brothers. As a bonus the Rolling Stones single 'I Wanna Be Your Man' came along and was soon discarded by my brothers and I after having decided it was a fake. Well, The Beatles first was

What Mario Kopke Tuilo in Portugal – and many others around the world – are waiting for: The Beatles mono studio albums, remastered from the original mix-down master tapes. They were launched 16th June 2014. A 14 LP boxed edition as well as individual albums will be available.
almost never played because it oddly didn’t sound like them at all.

In 1966 my Aunt T, who was 18 years older than I, was back in Portugal launching in Lisbon a rehabilitation centre for the blind and she gave me ‘Rubber Soul’ in the summer and my grandmother gave me ‘The Beatles for Sale’ that very same year for Christmas. Three years latter aunt T died tragically in a car crash driving from Lisbon to Porto where she was to attend the opening of her Oporto Home for the Blind. She was 31 years old.

The first three Beatles American LPs and the European versions of all the remaining Beatles records have traveled along with me during the last fifty years. Their music has been my soul’s skin in happy times and painful times as well. Whenever I listen to their music all my old feelings surface once again. Good and bad memories merge in a bittersweet state of mind allowing my dead to resume their places among the living in my heart and mind. There really are people, places, states of mind, smells, sounds, the afternoon sunlight through the windowpanes in the loft that, in my life, can only be revisited to the sound of the Beatles American records.

I was therefore delighted to read Paul Rigby’s article on the reissue of the Beatles USA records and was thrilled to know that this CD box resulted in a true audiophile uncompressed rendition of their music. I can’t but thank him for a professionally-done job with this review which I appreciated to a deeper extent than the one of a well-written review on any other subject.

Though, feeling an urge to order the USA CDs now, due to the heavy investment I recently made in my vinyl and 78s reproduction separates (restoring and upgrading turntables, buying cartridges, tone arms a phono pre-amp and a Graham Slee Elevator) I will probably wait for the vinyl versions that, I assume, must be on their way.

Best regards and thanks to all of you guys.

Mario Kopke
Tulio,
Portugal.

Thank-you for your informative and touchingly personal letters too, Mario.

I’m sure all of us relate songs to people and events in our past – and they bring back moving memories.

You’ll like to know, I imagine, that we have been talking to Abbey Road and Universal for some time about the new Mono Master LP box set and individual albums, and we should be reviewing them in our next issue. You will find my introductory interview on p83, explaining the situation.

I live close to the studios, have known people there for many decades and have a Factory Sample set of stereo LPs as a result (won’t say how, but it was legit!).

We’re playing ‘Please Please Me’, their first LP, in the office right now with an Ortofon 2M Black stereo cartridge and a new 2M Mono pre-production sample, made specially for these forthcoming The Beatles Mono LPs, that uses the Black’s Shibata stylus and silver wiring. This is preparatory to receiving the new Mono LP box set in a week or so.

Our ‘Please Please Me’ LP sounds

A Dansette Major Deluxe 21 record player. If it evokes memories, then go to http://www.dansetterevolver.co.uk where you can get plenty more pics and even videos showing the things playing - with sound! You can buy players and spare parts here too.
letters On-Line!

You can now read our Letters on-line, from the last issue back to March 2010. That’s a treasure trove of information and advice to our readers, as well as a fascinating catalogue of reader’s systems and views. There’s mountains of buying information, all just a click away on your computer or i-Pad. Have fun!

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Your experts are -
• SIP David Price, editor; • Neil Keywood, publisher; • PB Paul Rigby, reviewer; • TB Tony Bolton, reviewer; • JF Jack Fisher, reviewer; • AB Adam Smith, reviewer; • DC Dave Cawley, Sound Hi-Fi, World Design, etc.

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Post Preview
clanky and bright. There's no body in the sound, even with a system strong in this area, comprising Icon Audio PS3 valve phono stage, Quad QMP monoblock power amplifiers and MCRU No142 and Quadral Aurum Wotan VIII loudspeakers. But as you'll likely know, the first album was recorded in a rush, Mark Lewisohn's bible on the subject tells us. So perhaps we must expect 'Please Please Me' to sound bad. But then perhaps not perhaps the new mono LPs will have more body and life to them at least when compared with our Factory stereos. This is difficult to predict. And what do we make of Tony's comments below? I suspect not all 'Please Please Mes' are the same!

To play these new LPs at their best requires a suitable system. We will use both the forthcoming Ortofon cartridge made for the purpose, known as the 2M Mono SE, through an Icon Audio PS3 phono stage with Mono switch. We will also use a Cadenza Bronze stereo moving coil I expect.

Because Beatle's LPs were monitored on Tannoy's, a pair of new Tannoy Kensington Gold Reference loudspeakers are on their way to Hi-Fi World towers (we hope – they keep selling the things to the Japanese!).

I hope you'll find all this interesting. There's so much going on with LP these days that I think you'll find your amazing system will only become ever more valuable to you as time goes on. NK

Hi Mario. It is good to hear from you again and to find that my suggestions have given you satisfactory and pleasing results.

I am also awaiting the release of the Beatles LPs with interest. I am lucky enough to have found copies of first pressings of the first six LPs over the years. Some are in very good condition, the copy of 'Please Please Me' looks frighteningly bad but plays surprisingly well, with some inevitable pops and bangs. However, the sound is so fresh and vivid that I refuse to part with this disc and enjoy every minute of listening to it. I have compared it with more modern mono and stereo pressings, in far better condition, and none of them come close to the sheer presence and drive to the sound of the music on my original. I shall be most curious to compare it to the new edition.

I can reassure both you and Noel that it is not lacking in bass performance in any way, with a full-bodied and very lucid sound right across the frequency range. TB

A CLASSIER OPTION

I find myself approaching fifty years of age and never having bothered before with anything hi-fi, I find myself wanting a classier sound without going silly with money. I simply have a large number of songs on my phone, my family loading them on for me and Queen being my favourites, and I'm fed up with it sounding tinny all the time.

I'm not clued up about what to do here. I know I don't want cables and wires and I must be able to move around with it. I am thinking about

"I was considering using the 8 Ohm taps for the treble section and the 4 Ohm taps for the lower section", says Martin Mason about his Icon Audio Stereo 60 MkII amplifier.
Spotify but not through my 'phone speakers, no way.

Hopefully I don't sound like a thicky, compared to all you clued up people and hope that you can make a suggestion or two.

Mick Broadbent.

I presume you are listening exclusively through your 'phone's 'speakers and are finding them "tinny". Most 'phones these days have a Bluetooth transmitter. You can send your music to a hi-fi with this using a Bluetooth hi-fi receiver such as the BT100 from Cambridge Audio. Just connect this into an amplifier. Or you can buy Bluetooth equipped loudspeakers and transmit directly to these. The Frankenspiel FS-X loudspeakers with BMR technology impressed us and they would do fine.

With Bluetooth you can walk around but it is deliberately a short-range transmission system, usually — but not always — confined to the room you are in. If you want to walk around whilst playing music stored on your 'phone then you need headphones for better sound quality. Big, over-the-ear phones give strongest bass; on-ear phones have less bass but are light, portable and easy to wear, whilst in-ear phones are usually cheap and uncomfortable, but not always — Sennheiser make some very good, if expensive, in-ears. If you want to be free of headphone wires then Bluetooth headphones are a solution; just be aware they need re-charging, as do Bluetooth speakers. NK

**BI-WIRING**

Would you be kind enough as to give me some advice about bi-wiring. I have just bought some Tannoy Definition DC8Ts and am driving them with an Icon Audio ST60 Mk2 valve amp with QED XT400 cabling (17 metres total, left and right channels) and silver-plated OFC jumper leads and a fifth wire earth cable connected.

Still wanting to improve the sound, I am contemplating bi-wiring with QED Silver Anniversary XT rather than use the same wire that I currently use i.e. the XT400 on the logic that a 1.5 mm² cross sectional area should be O.K. for the treble section with a 4 mm² cross sectional area for the lower regions. Is this sensible?

I was considering using the 8 Ohm taps for the treble section and the 4 Ohm taps for the lower section, which from your review was a 2.7 DCR and a 4 Ohm rating in this lower part of the frequency range (on your review of the DC8T you suggested a 4 Ohm loudspeaker rating rather than the 8 Ohm rating given by Tannoy. However your graph suggests that the higher section of the frequency range is the 8 Ohm rating, as claimed by Tannoy). Will the use of the two taps be beneficial by using different windings for the two sections of the loudspeaker?

Our in-house turntable and arm, alongside an Astell&Kern AK120 portable, hi-resolution digital audio player. Technically, the AK120 is way ahead, but LP remains a beguiling listening experience.

The Martin Logan CLS2 is a full-range electrostatic launched in 1989 and now discontinued. "With what should I drive it?", asks Jesper Andreasen.
LETTERS & EMAILS

Hi Martin. The answer to your question is ‘No’. The 4 Ohm tap swings less voltage than the 8 Ohm full winding so you will make the loudspeaker sound brighter than it is meant to sound. Nice idea all the same – and you can try it if you wish, as no damage will be caused. Otherwise, stick with standard bi-wiring.

If you want to tune the DC8Ts, the foam port bungs will alter bass level usefully and are worth experimenting with. If fully-in gives too little bass and out too much bass, then try introducing an ‘air leak’, meaning a small resistive venturi. A good start is a drinking straw.

And don’t forget the fascinating art of tube rolling. Icon Audio know a lot about the sound of different valves and are worth consulting on this. NK

LOW LIFE

I’ve been living a low-res audio lifestyle lately, using YouTube and an ASUS laptop as a source, feeding shielded solid-core cables into a rebuilt (by my father) Leak Stereo 20 amp with high-quality plastic capacitors in the power supply and Black Gate capacitors throughout the circuit.

This powers a pair of Fostex speakers, the full-range drivers that are made from pulped Banana skins. The sound! More than satisfying.

pays testament to John Bornford’s Rear-End theory, where the most important components are the speakers and amplifier. Though it is not entirely valid, it’s a good theory.

Ivor’s Garbage-in/Garbage-out analogy was apt for the analogue age, where high-quality engineering was required to elicit a high-quality sound. In the digital age the burden of performance shifts more to the speakers.

I’m old enough to remember taping my favourite songs off the radio with mouldy old tapes and a crappy tape recorder, so YouTube is like the stuff of science fiction. I’d be interested to know what percentage of people use it as their main source.

On to another subject … walking down the street, I passed a pile of garbage and sensing audio booty (Ed – I think you mean ‘bounty’ here; ‘booty’ is something not quite the same!) I dived in head first, Adam Smith-style. While it failed to yield any audio equipment, I found 20 years worth of Audio Journal Yearbooks, featuring all of the components released that year. Further digging only revealed, tragically, a hearing aid.

Upon reading the Journals it seemed their previous owner had grand plans for his system. Mega-dollar components were circled, big money, hideously complex solid-state preamps which would sell for little money today, it’s interesting to see how components age. Their asking price when new often has little to do with their ultimate value.

For the first time in years I feel satisfied with my system. While in the past I dream of infinite upgrades, now I listen to music. Crazy right? I would never have guessed that a laptop and grainy low-res files would lead me to audio nirvana.

My turntables sit dormant. In the new millennium they are just too

"Having recently purchased a lovely pair of Naim SBL loudspeakers in a fetching walnut finish for a modest sum, I am mightily impressed with them", says Tony Hodgkinson.
laborious, expensive and cumbersome. My Elite Townshend Rock Turntable is a great example of that. While playing records I found they would skip at a certain point. I couldn’t figure out why. Ultimately extensive investigation revealed that an insect had drowned in the silicon trough and turned translucent, fouling the paddle.

Can you imagine the kids today tolerating that kind of faffing? They want infinite access to music on the go. It’s that kind of blue sky dreaming that fuels audio developments — and why not?

Ben North

Damping paddles on an arm always were messy and inconvenient. I was never sure they made so much difference either, in spite of their theoretical benefits. I use an SME312S 12in arm at home and we all use an SME309 9in arm in the office listening room, mounted on a Sound Hi-Fi modified Technics SL-1210 — and no one finds this a difficult combo to use. No matter how good hi-res gets it never eclipses the sound of LP, which emerges from the loudspeakers with a sense of power and depth that’s a delight. LP is easy and hassle-free in its own way, unlike some modern digital ‘music systems’ that border on daft.

I freely admit to loving YouTube for music. The old music videos in particular can be fascinating, especially the grainy black-and-white TV appearances of bands long gone, like Peter Green’s Fleetwood Mac and other now completely forgotten UK Blues bands like Ten Years After. YouTube seems to have it all, except quality of course. Most of the sound is compressed MP3 or AAC and this bit of it is mediocre. Love it late at night on headphones all the same.

NK

NAIM SBLs

May I suggest a slot for a future Olde Worlde feature — Naim’s SBL loudspeaker.

Having recently purchased a lovely pair of Naim SBL loudspeakers in a fetching walnut finish for a modest sum, I am mightily impressed with them. While they may not be everyone’s cup of tea they have sorted out many issues I have had with most ‘speakers I have owned over the years.

I recognised that the only speakers I have ever really got along with were all infinite baffle, closed designs and took a hunch I may just like the SBL. My hunch was correct and I am now enjoying music like I haven’t for a long time.

What’s also interesting is the design of the SBL — and with parts still readily available and modest asking prices for a pair, it makes them a steal.

I purchased a new pair of tweeters from ScanSpeak and new crossovers from Naim, again for modest sums just so I can keep these speakers running indefinitely. They are easy to site, respond well to what comes at the beginning of the chain and have the chance to take them active, so what’s not to like?

But most of all, gone is the bass shudder but it is simple, cheap and does not have them. While they may not be everyone’s cup of tea they have sorted out many issues I have had with most speakers I have owned over the years.

I use an excellent Woodside (nee Radford) valve preamp (SC 26) which can also handle the 1 Ohm load at 20kHz, which will cause transistor amps to expire with obscene haste. NK

ABSOLUTE PHASE

I have a couple of queries re: apparent phase. For the last few years I have been aware of some recordings sounding ‘trebly’ with inferior timing. If I reverse the loudspeaker connections on both loudspeakers — hey presto! Better harmonic/musical timing, no fatiguing treble and better bass/tonal colour. So would I benefit from a pre amp which has a ‘phase/polarity reverse’ facility?

I use an excellent Woodside (nee Radford) valve preamp (SC 26) which I have had for some years and do not really wish to change it. However, this apparent phase sensitivity is at times highly irritating.

I did enquire with a couple of engineers about modifying the Woodside but the advice was to leave well alone (I was also politely informed by one engineer that, in theory, I really should not be able to hear phase changes).

Would it be possible for a phase/polarity reverse facility to be built as a separate box for connection between a pre and power amp or source and pre-amp when required?

The system I use is: old 1 bit Phillips CD, Linn/Zeta/Radikal/Koetsu, Woodside pre and power valve amp (also an excellent SET modified Lowther power amp) and Tannoy Silver 12in monitors. I am not an engineer or competent with electronics.

Yours sincerely,

Bruce Williams.

Hmmmm... that’s an interesting one. As the engineers say, absolute phase is generally regarded as undetectable, although some say otherwise. I’ve never been convinced I have heard any useful difference but perhaps, as you say, only some recordings seem to benefit. It isn’t easy to swop ordinary unbalanced phono lines around, as one line is a ground. Balanced lines can be changed around without difficulty but your system does not have them.

Technically, the cartridge can be swopped, providing one line is not grounded or the loudspeakers. As you have a valve amp with probably at least 1 Ohm output impedance, you could put a changeover switch in the speaker lines. Purists may shudder but it is simple, cheap and should work.

You likely won’t get a heavy duty (a few amps) four pole changeover, so may need to use two two-pole changeovers. Buy the switches from Maplins, mount them in a plastic or alloy box then get someone to wire them up. Just ensure there is no wiring error as it would be possible to short a channel, although a valve amp will withstand this for a short time at least. NK
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from my Astell&Kern AK120 portable digital player through our Audiolab M-DAC, the No127s imparted a suitable sense of scale, deep organ notes coming across as solid and well defined; these ‘speakers really do have quality bass.

The choir stretched broadly across the end of our listening room, in an image that moved beyond the outer edges of the loudspeakers. This gave an expansive quality to the performance, which suited it well, yet at the same time there was enough focus to pick out the choral sections. With no upper treble in the recording, the No127s sounded generally large, powerful yet smooth.

With standard rock having plenty of not-so-sweet upper treble, meaning Tom Petty’s ‘Refugee’ (24/96), drums had punch and upper treble was obvious but not overpowering, tweeters up full. Petty sung from a stage that had a good sense of depth to it and the Hammond organ swirled around clearly. It was a gusty, smooth, fast-paced and impressive performance.

Harmonica in Marta Gomez’s Lucia (24/96) also had a nice free quality to it, floating in space seemingly unanchored to the physical loudspeaker cabinet, yet as an instrument it was rich and full bodied: it was a very attractive presentation. The No127s also time very well, making explicit the Latin tempo of this song.

CONCLUSION

The longer I listened to the No127s the more I liked them. They’ve been honed to produce a beautifully balanced, tightly-controlled sound with the bass depth and dynamic punch so many of us crave. There’s no flabbiness, no excess and no overhang; they’re temporarily tight, relaxingly clean in the time domain and yet viscerally strong too. They have a masterful balance here and there was a lot of freely-offered praise from other listeners at Hi-Fi World towers – always a good sign! This is how you want and hope a loudspeaker might sound.

Weaknesses? Treble from the forward-firing planar magnetic tweeter could be smoother perhaps, but I suspect most listeners will like their ‘bite’ as it is. This was no big issue.

On balance, I felt the No127s had a great sound and were exciting with both rock and classical. Big sounding, with clean, deep bass and a wide open soundstage, going very loud with ease from a few Watts they have a raft of strengths rivals at double the price struggle to match. I thoroughly enjoyed them, coming away impressed. These are speakers definitely worth hearing.

MEASURED PERFORMANCE

Close up, at or within the usual 1 metre limit of the measuring microphone, the MCRU No127 did not look so good, due to a large dip in its frequency response between its treble unit and top bass/midrange unit, around 1.5kHz. This looked like a phase dip, suggesting the tweeter was connected out-of-phase. Reversing tweeter phase lessened the problem, producing a flatter midrange, but did not eliminate it. Turning up the rear tweeter output to maximum helped fill in to a useful degree also, but again it did not eliminate the dip completely. It is an amplitude dip – meaning the bass/midrange unit is unable to reach the lower limit of the magnetic planar treble unit.

The measuring microphone had to be moved relatively far (1.5 metres) from the No127 before it started to look integrated, meaning it integrates best in the far field. That’s not a problem in real life because most people sit 3 metres away or more but it is worth noting. The dip means that, subjectively, there is no midrange harshness, softening out the sound a little. The fill-in from the rear tweeter is ambient energy that contributes to midrange in particular, and this was audible in use; turn the tweeter down and the dip gets larger.

Our published frequency response curve otherwise shows strong upper treble output from the planar tweeter, a slightly lumpier lower midrange due to internal cabinet resonances seen in the red port trace, and both strong and extended bass that reaches down to 30Hz with ease. The bass peak at 80Hz will ensure bass is both obvious and ‘fast’.

The port is well damped and works around 40Hz, having reasonably strong air well, helping the No127 produce a very loud 91dB from one nominal Watt (2.8V) of input, although a low measured impedance of 4 Ohms helped toward the figure. The No127 will go very loud at low volume settings of transistor amplifiers as a result; valve amps must have a 4 Ohm tap. High powers are not needed, 40 Watts being more than enough for high volume.

As a load the No127 is impressively resistive; it has none of the reactive elements of most loudspeakers, so is a good load. Whilst low impedance suggests high current draw, high sensitivity means the opposite; the speaker is efficient and will be easy to drive.

A 200ms decay spectrum showed quite a lot of bass overhang from what appears a lively cabinet, but overhang is always greater when a loudspeaker produces strong bass from a compact cabinet.

The MCRU No127 is very distinctive when measured. It is wideband, has strong upper treble, powerful bass, is extremely sensitive so needs little power. It will well match any amplifier able to drive 4 Ohms. Sound quality will be ‘impressive’ with this combination of properties. NK

VERDICT

Powerful, wide-band sound, with firm deep bass and precise treble, the No127s are exciting to hear. Temporally clean and well-defined, they have pace, as well as bass.

FOR

- punchy sound
- need little power
- go loud cleanly

AGAINST

- unprotected rear tweeter
- strong high treble
- some midband warmth

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AUGUST 2014 HI FI WORLD

39
Naim's revised Supernait integrated amplifier has lost its digital inputs — but gained a whole new level of musical insight, says Jon Myles

Whatever you think about Naim, you can never accuse the Salisbury-based outfit of simply following the crowd.

This was, after all, the company that held out for ages before producing its first CD spinner — arguing that it didn’t want to rush to market until it could produce something significantly better than what was then on offer.

In contrast, it embraced computer-based and music streaming with an almost evangelical zeal while some other companies were content to watch from the sidelines.

Now that market is expanding exponentially with new amplifiers sporting all sorts of digital inputs what has Naim decided to do? Yep, remove any semblance of them from its flagship integrated.

But for those shaking their heads in bewilderment, it has to be said that there’s plenty of clear-headed thinking behind Naim’s decision.

For a start, they already produce a comprehensive range of award-winning DACs and streamers at a variety of prices — from the small UnitiQute to the state-of-the-art wallet-busting NDS.

So, they argued, why duplicate those functions in an amplifier? Instead they decided to re-engineer their Nait range of integrateds (the Nait, Nait XS and Supernait) to simply make them the best amplifiers Naim could produce at their respective price points.

As such the Supernait 2 loses its predecessor’s digital inputs but gains a whole raft of interior revisions all aimed at helping it do its primary job of driving loudspeakers just that little bit better.

Chief among these is a new power supply section. The 80 Watts per channel output is the same as the previous model but a larger toroidal transformer has been employed to improve the amplifier’s dynamic abilities.

The power supply for the preamplifier section also makes use of Naim’s discrete regulator technology — which is said to improve impulse response and lower noise.

Other changes include hand-wired inputs which are all individually decoupled for better microphonic isolation, upgraded components in critical areas such as the power amp stage and new PCB and wiring loom layouts.

On the outside the new amplifier retains the familiar Naim black aluminium triptych-fronted casing of the original Supernait with volume and balance controls to the left — but the 3.5mm headphone socket has been (thankfully!) replaced by a full-size 6.35mm version driven from a new Class A headphone amplifier circuit.

Round the back the comprehensive range of connection options include both RCA as well as Naim’s preferred DIN inputs as well as a USB socket — although this is reserved for software updates only.

And true to the company’s ethos there’s also the facility to add a power supply upgrade in the future — ranging from the £775 Flatscap XS to the luxury Supercap at £3800.

Slide the unit into your equipment and in typical Naim fashion it looks understated yet purposeful — and its 13.4kg weight testifies to the solidity of the casing and size of the new transformer.

**Sound Quality**

It’s fair to say the original Supernait was always something of a special performer at its price point. I’ve had one in my main system for a number of years and it’s a muscular, beefy performer that doesn’t lack for detail or subtlety when the music demands it.

Analogue art
The Supernait 2 builds on those attributes but is a much more musical performer all round with an added degree of sophistication that befits its position as Naim's top-of-the-line integrated.

Play some bass-heavy big beat tracks such as The Propellorheads' appropriately-titled 'Deckseasound sandrockandroll' and the Supernait pounds out the rhythms with an authority and conviction that few rival amplifiers can match.

Driving our reference Quadral Aurum Wotan Vlls, the Naim displayed prodigious low-end power but did so with a calm authority that never once threatened to collapse into an unpleasant blur of bass bloom when the volume was turned up.

Instead what you get is a firm foundation on which the rest of the music can build with the all-important midband taking on a greater solidity and realism as a consequence.

And it's here that the Supernait really shines. The Quadral's ribbon tweeter and metal-coned midrange driver can be rather unforgiving at times - but with the Naim they sounded clean, clear and precise without ever straying into the harshness or unnecessary zing that some other amplifiers can induce.

Instead, on the likes of Sinead O'Connor's 'Sean Nos Nua' there's simply a delicious air and delicacy to the Irish singer's vocals and sparse backing band that brings a live feeling to the proceedings. There's also plenty of detail - O'Connor's intakes of breath between verses and subtle changes in key all beautifully captured.

Those who still (mistakenly) believe Naim amplifiers are more suited to hard-charging music will be amazed at the subtlety on display here.

It's clear the removal of the digital sections and improved power supply has given the new Supernait a more open, spacious sound - as though an extra level of insight has been added.

Yes, it will drive your speakers to wall-shaking levels without strain if so desired - but it will also bring out the subtlety and micro-dynamic details in gentler pieces of music.

And it does so while hanging the elements together in a beautifully-realised soundstage.

Take Jan Garbarek's 'In Praise Of Dreams' collection. Here synthesisers, drums and viola provide an atmospheric, echoing grounding for Garbarek's soprano and tenor saxophone explorations and through the Naim/Quadral combination it takes on a magical, almost ethereal quality.

Instruments are hung precisely in front of you - the sax parts soaring high above the 'speakers while the sweeping electronics backing spreads right and left to envelop the room.

When Kim Kashkashian's sonorous viola cuts in as a counterpoint to the main sax lines the interplay between the instruments is deeply etched and portrayed with tremendous finesse.

It's clear that the Naim engineering team's decision to strip back the Supernait to its basic analogue amplifier function and concentrate on getting the best from this configuration has paid dividends.

Visionary coach Dave Brailsford famously introduced the concept of marginal gains into British cycling - that is making small improvements in every area of an athlete's ability to bring huge leaps in overall results.

It seems Naim have taken that philosophy to heart and translated it to electronics with the Supernait 2. The digital inputs may have gone but the attention to detail, improved component specification and revised circuit design that have gone into the Supernait 2 have wrought real benefits in terms of overall ability.

CONCLUSION

To say this is the best integrated amplifier Naim has ever produced is something of an understatement. It's actually among a select group of amplifiers that can take on rivals costing twice the price - combining taut, powerful low frequencies with a lightness and delicacy of touch that lends itself to any genre of music you care to play.

MEASURED PERFORMANCE

Power measured 100 Watts into 8 Ohms and 156 Watts into 4 Ohms, plenty enough power for most loudspeakers in most rooms.

Like all Naims though, the Supernait 2 has a low damping factor that will tend to inflate bass a little; very high damping factors subjectively don't work so well with loudspeakers that are acoustically well damped, so low damping factor suits many loudspeakers, if not all.

FREQUENCY RESPONSE

Distortion levels were low at all frequencies and outputs, measuring a low 0.02% maximum at 1 Watt output at 10kHz, where amplifiers produce most distortion.

Another feature Naim have retained in the Supernait 2 is curtailed high frequency response, at all volume level settings output was -1dB down at 20kHz - much like a valve amplifier. The Supernait 2 will definitely avoid any semblance of brightness in its sound.

Sensitivity was high too, measuring 180mV for full output, from the CD input, so the Supernait 2 will reach full output at fairly low settings of its volume control. It also means it will work with low gain external phono stages and because there is no phone input this will be important to anyone wanting to play LP.

The Supernait 2 is powerful and follows Naim design rules, so will give a classic Naim sound our measurements suggest, smooth with solid bass and an easy-going gait. NK

NAIM SUPERNAIT
2 £2850

OUTSTANDING - amongst the best

VALUE - keenly priced

VERDICT

Naim's traditional pace, rhythm and timing strengths allied to a deliciously open mid-band make for a winning combination

FOR
- dynamic presentation
- taut, tuneful bass
- rhythmic integrity
- build quality

AGAINST
- no digital inputs (!)

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Centrance supply a nice set of high quality loudspeaker leads with the system.

clear with the atmospherics of the recording venue well captured.

In absolute terms, however, there’s a slight graininess to the midband and treble from the unit’s Class D amplification modules. While not so much as to smear the overall sound, there isn’t quite the same clarity and smooth delivery you get from a good Class A/B design.

In practice this translates to a slight warmth to the system’s overall sonic signature. It’s not unpleasant but is certainly noticeable.

For their size the Masterclass speakers do an admirable job.

Obviously there’s not masses of bass on offer — their small size and the laws of physics prevent this — but they sound lively with a good degree of sonic punch on offer.

Push the volume control on the DACmini PX too far and the speakers will start to complain and become distinctly ‘boxy’ sounding. But as the system is specifically designed for near-field listening this really shouldn’t be necessary — unless your desk happens to be the size of a tennis court!

What low end there is, is never less than taut and tuneful. You’ll miss the last octave of Peter Hook’s bass on New Order’s ‘Bizarre Love Triangle’ but the system does resolve the propulsive thrust of his fretwork pretty well considering its size.

Playing the same New Order track through the headphone output via a pair of Grado SR80i headphones and the lower end became more prominent — showing the DACmini PX’s Class A phones output is no mere afterthought.

Indeed, headphone replay is extremely good — making the most of the DAC’s resolving abilities with a well-judged balance of rhythmic thrust and midband detail.

Overall, almost everything in the Audiophile Desktop System seems pretty well-judged.

Importantly, the DACmini PX hooked up to a MacBook Pro, iPhone and iPad 4 (via camera connection kit) without fuss, as well as serving CD-playing duties from a Cyrus transport — so whatever source you choose there should be no connectivity problems.

The star of the show is the DAC which combines high-resolution playback with a clean, clear and open sound. Give it some hi-res files to feed on and it really starts to shine.

And while the Class D amplification module employed shows some of the traditional drawbacks of all but the very best of the breed, the overall sound is never less than pleasing and eminently musical. The partnering loudspeakers are lively and entertaining with a good level of detail despite their relatively small size.

CONCLUSION

The CEntrance Audiophile Desktop System is a well-engineered product that while small in size is capable of a big musical performance.

It doesn’t have the resolution or all-round sonic ability of a full-size separates set-up — but that’s not the point. Instead it’s a discrete, user-friendly package designed for those seeking high-quality sound in relatively small spaces.

And to that end, it succeeds admirably well with a nicely-judged sound which errs towards the warm side but still retains a good degree of detail.

Anyone looking to add a decent-sounding system to their desktop should take a listen.

MEASURED PERFORMANCE

The little CEntrance DACmini Class D amplifier produced 18 Watts into 8 Ohms and 32 Watts into 4 Ohms. Because the speakers measured around 5 Ohms, we’ve rated it as a 30 Watt amplifier.

Distortion was high at low signal levels, as is common with Class D. It was also on the high side into a 4 Ohm load, especially at high frequencies where 1.6% was measured into 4 Ohms at 1 Watt output - see below. Frequency response varied with load, again a Class D problem due to its output network, and into 4 Ohms the upper limit was 8kHz - see our analysis - output measuring -4dB down at 20kHz, enough to produce a warm sound balance. As the loudspeakers were 5 Ohms at 20kHz, this will occur in practice.

The DAC was very good, delivering just 0.04% distortion at -60dB and managing a decent 113dB EIAJ Dynamic Range. The S/PDIF electrical input worked up to 192kHz sample rate, but the optical receiver managed 176.4kHz maximum, failing with 192kHz.

The speakers were neat enough, with a bit of bass and treble lift to add life, but nothing excessive. There was obvious boxiness under test.

The CEntrance system turned in a decent performance in most areas, only the Class D amplifier showing weaknesses of the breed. N.K.

**CONCLUSION**

A desktop system that sounds bigger than it looks and never fails to satisfy;

**F**or - clean, clear sound - small footprint - excellent dynamics

**A**gainst - no deep bass - not the cheapest solution

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Belt, braces and Bluetooth

Those whose audiophile aspirations are fettered by modest incomes can thank Cambridge Audio for supplying them with hi-fi equipment that is well-constructed, generously-specified and sounds good — yet is affordable. The Azur 851 Series takes pride of place at the top of Cambridge’s current line-up. Despite employing some cutting-edge technology, none of these sells for more than £1500 each; not an awful lot in the world of audiophile gear.

In terms of sophistication, the £1,200 Azur 851D is a different kettle of fish to Cambridge’s popular budget DACMagic models. It takes as its basis the 851C that was introduced a couple of years ago. But out goes the disc transport and in comes a clutch of audio enhancements and tech-driven conveniences. Among the latter are a pukka headphone amplifier, extra digital inputs and Bluetooth streaming.

In place of the disc-tray is a large screen with dimmable backlight. This is flanked on either side by tiny buttons designed to access functions indicated on the adjacent areas of screen space. Beneath, the sampling rate (but alas not resolution) of the selected audio source is shown. The screen’s central real-estate, meanwhile, is given over to a dB-calibrated volume-level indicator. It works in conjunction with a massive control knob that’s coupled to a shaft-encoder rather than a high-quality pot; that shouldn’t shock you, given the 851D’s emphasis on all things digital.

Cambridge hasn’t opted for digital control of volume in the analogue domain, as exemplified. Instead, confirms product manager Sam Ellenby, the volume control is implemented in the digital domain. According to Ellenby, “the signal is upsampled to 32-bit floating point and then rescaled”. This use of DSP (common in pro gear and software) should help to minimise non-linearities and loss of resolution at low volume levels — although ultimately you’re going to be restricted by the 24-bit resolution of the DACs, a pair of Analog Devices AD1955As, one for each channel, working in differential mode.

If you’re connecting the Azur 851D to a preamp or integrated with its own volume control, as opposed to a power-amp or active speakers,
then you can bypass the volume control. An independent volume-adjustment is sensibly available for the headphone amplifier, which goes far beyond the type of circuitry you'll find in the average DAC or CD player. Built onto a dedicated circuit board, the 851D's headphone amp has its own 'belt-and-braces' power supply circuitry and complementary-pairs of medium-power transistors that drive the transducers of your choice. As much attention has been lavished on just one aspect of the 851D's functionality as you'll find in a good budget solid-state offboarder. There's plenty of audiophile design evident elsewhere in the 851D. Its internal power arrangements start with an over-specified toroidal mains transformer that, after rectification, supplies current to multiple regulators. Components are high-grade (e.g., metallised polypropylene signal caps, audio-grade electrolytics, high-grade Burr-Brown op-amps and low-noise metal-film resistors) while board layout is neat. Much of the digital signal processing takes place in an Analog Devices ADSP-BF32 ('Blackfin') 32-bit DSP running proprietary 24-bit/384kHz upsampling algorithms developed by the Swiss company Anagram. However, the DAC only supports sampling rates of up to 192kHz. The post-DAC analogue filters are linear-phase Bessel designs. The 851D also gives you a choice of digital-filter characteristics - 'linear-phase' (time-coherent, but with some 'pre-ringing'), 'minimum-phase' (a slightly higher 'group-delay') and 'steep' (a little ringing, but a linear-phase, and courtesy of a slight high-frequency roll-off, a strong rejection of 22.05kHz aliasing artifacts). Cambridge's advice is pragmatic; it suggests 'experimenting with the filters to determine which sounds best to your ears' with each programme source.

The company has also been pragmatic as far as the rear-panel is concerned. You get two inputs with coaxial (phono) and optical (TOSlink) connectivity, two optical-only inputs, a BNC coaxial-only input and a professional AES/EBU terminal. Coaxial and optical outputs convey the selected input unaltered (i.e. with no upsampling, volume adjustment or filtering performed). Useful for those with digital recorders or separate AV systems, I guess.

The rear panel analogue outputs take the form of balanced (XLR) and phono (unbalanced) sockets. It's a shame, considering the 851D's preamp possibilities, that no provision for analogue sources has been made. But that would have meant building in an analogue-to-digital converter and thus upping the price. Interestingly, the unit's AD1955A DAC can accept DSD - a feature that's not harnessed here.

The supplied remote handset is distinctly Cambridge - solidly-built high-quality DAC with your computer (Windows and Mac, although some Linux distros are compatible). Users with Mac and Linux systems can 'plug and play'; Windows users (XP/Vista/7/8) may need to download the necessary driver.

A second USB port is provided for the supplied Bluetooth dongle needed to play audio files held on your phone or tablet - you can't, alas, use it to play music files on USB storage devices. A pity; I suspect it would have cost Cambridge little if anything to support playback of uncompressed (e.g., WAV/AIFF) files or for that matter FLAC (lossless) ones.

Practically any digital source can be fed into the 851D. There are no fewer than six digital audio inputs plus a pair of USB ports for computer DAC and Bluetooth use. The analogue output is available in unbalanced (phono) and balanced (XLR) form. The 851D also makes provision for custom installation (RS232, remote in, 12V DC trigger out and Cambridge's control bus).
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with a pleasant feel. It provides access to all of the 851D’s functions and will operate some other Cambridge gear.

**PERFORMANCE**

I tried the 851D with a number of digital sources that included a Cambridge Azur 751BD disc player and Squeezebox Touch streaming/SD/USB player; both fed via the coaxial inputs. A Samsung Galaxy S4 Mini was used to test the unit’s Bluetooth capabilities. A Linn LK280 amplified the DAC’s output, driving my trusty Acoustic Energy AE109 floorstanders. I also tried the headphone output, alternating between Sony MDR-1Rs and Onkyo ES-HF300s. First, playback from disc. Initially, I tried a Blu-ray audio disc (Supertramp’s ‘Breakfast in America’) but sadly couldn’t get anything more than 48kHz PCM audio – a clear case of ‘downsampling’ being imposed to prevent the disc being used as a high-res medium for pirates to work with!

However, even the enforced 48kHz output yielded a fair degree of musical insight – albeit with the overly-incisive treble traditionally associated with this classic slice of late-70s art-rock. I guess that if you have something close to the master tape to downsample, then the results are going to be good. A self-made DVD-A disc containing careful 24/96 transfers of various LP material was more revealing and showed that the full potential of such material can be conveyed via the digital inputs.

All well and good, but as for most of us, CDs make up the bulk of listening. I gave these a spin – the original 44.1kHz/16-bit format being upscaled to the 192kHz/24-bit supported by the DAC.

First, then, to a copy of Can’s sprawling but hypnotic Krautrock epic ‘Tago Mago’. Overall impressions were ones of neutrality and transparency; you’re given an uncoloured musical insight. The otherwordly ‘Mushroom’ was defined by a fulsome and coherent bass performance – nothing lightweight or overblown here – coupled with a taut handling of percussive matters. With ‘Tago Mago’ and ‘Halleluualuhah’ you’re given an insight into the track’s makeup and painstaking editing. Yet despite such analytics, you can still enjoy the music for the total freakout it is!

With a 1987 digital Naxos recording of Mussorgsky’s ‘Pictures At An Exhibition’, the rich orchestral textures and hues are identifiable and contribute to a gloriously-detailed fuller picture.

Throughout the review process, I experimented with the various digital filters. Their effects are subtle, to say the least. With electronic music, the ‘minimum-phase’ setting had a slight (and I mean slight!) edge. Rather more beneficial in practical terms is the headphone amplifier, which is capable of plenty of oomph and drive. Headphones also show off the Azur 851D’s imaging properties to full effect.

The Bluetooth feature is easy enough to use; scan for devices and pair with the newest one found. It sounded more than acceptable – especially with losslessly-compressed tracks – although absolute sound quality is being traded for the convenience of accessing music held on a mobile device. The musical balance was even, although some of the finer detail of complex tracks was masked.

**CONCLUSION**

You get an awful lot of DAC for your money, and better still the numerous features (among them, a worthy headphone amp and wide connectivity) are backed up with a convincing sound quality.

That’s not to say the Azur 851D is perfect; at very low listening levels, there’s a slight veiling of dynamics caused by the digital control. This isn’t an issue, of course, if you are driving amplification that makes its own provisions.

---

**MEASURED PERFORMANCE**

**Frequency response** was flat to 60kHz with a 192kHz sample rate digital input, the filters making little difference either at this sample rate or at 44.1kHz sample rate (where ‘slow’ filters can roll off high treble). The optical S/PDIF input receiver accepted 192kHz, where many still do not – a good point since many digital devices use optical only.

**Audio output** from the phono sockets (unbalanced) and the headphone output measured a standard 2.2V, and from the XLR sockets (balanced) 4.4V. Higher output from the latter bestowed the 851D with 116dB EIAJ Dynamic Range, a good if unexceptional figure, whilst from the phono sockets this dropped 1.5dB to 114.5dB.

Top DACs now manage 122dB, to get this into context, but CD (i.e. 16bit) manages 100dB, so the 851BD exploits high-resolution digital well, offering clear benefit over CD, but it isn’t quite up with the best, notably Audiolab’s M-DAC (and Q-DAC) with its ESS Sabre32 chip. Distortion levels were very low all round.

The Cambridge Audio Azur 851D digital preamp measured well in all areas, giving very similar results to earlier Cambridge DACs based on the Wolfson DAC chip, but rivals march ahead. NK

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**CONCLUSION**

The Cambridge Audio Azur 851D DAC/preamp is this BT100 ‘dongle’, which plugs into a dedicated USB socket on the rear panel. With it, you can play music stored on your tablet, smartphone or other portable device.

---

**REVIEW**

Cambridge Audio

AZUR 851D DAC/PREAMP, £1,200

EXCELLENT - extremely capable

VERDICT

It sounds good, looks good and continues the Cambridge Audio philosophy of offering the best possible value for money. There are criticisms, but in the great scheme of things they’re fairly minor.

FOR

- a sensible design, well-built
- a hint of the high-end at a mid-range price
- capable headphone amplifier

AGAINST

- volume control (defeatable) implemented digitally
- no provision for analogue inputs

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The Audiolab M-DAC has received some excellent reviews and offers very good performance for the £600 asking price—but as with anything, there is always room for improvement. So Huddersfield-based MCRU has stepped in to offer a free-standing outboard power supply unit for it.

Designed by engineer Nick Gorham of Longdog Audio, the unit features a split-rail, fully regulated, linear power supply. It boasts a Furutech rhodium-plated IEC inlet socket and a Furutech Audiophile Fuse. It connects to the M-DAC via a 1m long captive lead that transmits the 13.8V 0.5A power required by the DAC.

The metal casework sits on a set of Acoustifeet, which are claimed to absorb resonances and improve the isolation properties of the PSU. The case is available in either black or the silver of this example.

Before I started listening to the effect of the PSU I spent an evening getting acquainted with the Audiolab M-DAC running on its own transformer-based power supply. I was impressed by the performance for the price, particularly the way it managed to extract a respectable sound from discs burnt from MP3s.

Fed with pre-recorded Red Book standard CDs I found the sound offered me a well laid-out analysis of the music with a satisfying amount of bass weight without it being at the expense of midrange or treble clarity.

Having got thoroughly tuned into the sound of the M-DAC, I then plugged in the LongDog Audio/MCRU power supply. The lead was long enough that I was able to site the PSU away from the DAC thus avoiding any risk of stray electromagnetic fields from the power supply unit upsetting the signal processing in the DAC.

This was one of those occasions when the term ‘night and day difference’ really had meaning. The sound adopted a totally different character with vastly improved sonic textures being displayed.

I felt more able to place the various sections of the Philharmonia Orchestra as they played through a selection of Rossini Overtures with Giulini at the helm (HMV 7 67804 2). String tones, in particular, gained a more realistic timbre, while the potential for trumpet blare was reduced.

At the other end of the musical spectrum, Morcheeba’s ‘Big Calm’ (Indochina ZEN017CD) — with its mix of smoothly luxuriant vocals, samples, real instruments and electronic sounds — seemed to spread out in front of me, awaiting my perusal across a bigger and better defined staging area.

As I discovered last month with the Meridian Prime Headphone Amp, an external PSU has the capability to transform an already good sound into an excellent one and this MCRU device is a particularly good example of the benefits of a properly designed external power supply unit.

It lifts already good performance into the thoroughly excellent league. Although it might not seem logical to spend another 72% of the cost of the product on enhancing it, the perceived improvement in performance makes it a worthwhile investment.

Audiolab’s M-DAC

Tony Bolton is impressed with the new MCRU external power supply for Audiolab’s M-DAC.
Since 1948 Ortofon have introduced nearly 100 different moving coil pick-up cartridges to the hi-fi market. Their latest models in this long and proud heritage are the Quintet Series.

All Quintet cartridges use the same ABS thermoplastic bodies and neodymium magnets, but each model in the range has its own sonic expression that reflects its status. From the well-rounded Quintet Red, through the smooth Quintet Blue and spacious yet dynamic Quintet Bronze up to the pure audio excellence of the Quintet Black, this series offers something for every discerning listener at a very attractive price.

The Quintet Series also includes a true-mono cartridge, for accurate reproduction of older mono recordings.
Sony says...

Sony’s NWZ-ZX1 portable digital player promises high-resolution playback in an attractive package. But Sony deliver their own view of hi-res, Noel Keywood finds.

The NWZ-ZX1 is Sony’s top portable, high-resolution audio player. For this player they’ve even milled out an aluminium alloy chassis. Does it feel good? You bet! This is a very sexy player to hold and use: it is slim, as rigid as an iPhone and it has a gorgeous high-resolution screen. It should have high-resolution sound too, but this was a bit more contentious. It plays high-resolution files alright. but like the considerably less expensive NWZ-F886 reviewed in our May 2014 issue it does not provide high-resolution sound quality I found.

Since the NWZ-ZX1 costs a hefty £550 it eyeballs the Astell&Kern AK100 MkII so I can make direct comparisons to illustrate the issues – and they are very different. Like the NWZ-F886 the ZX1 appears to be based on Sony’s Xperia mobile phones. It lacks their phone functionality of course but it otherwise shares their lovely screen, internet access, web browser and all else. This is far beyond the AK100 MkII: it has no internet access nor all that comes with it. But whilst the Astell&Kern lacks all this, audio wise it is in another league.

The headphone output delivers massive output of 1.8V, six times more than the Sony. This gives it an impressive dynamic range of 116dB, far higher than CD, against the ZX1’s miserable 91dB – far lower than CD.

There’s a 25dB difference in dynamic range between these players – and they cost the same. This is so gross it is almost implausible. But there are reasons that I think it is useful to explain. They are technical but I’ll keep it simple.

Portable MP3 players, mobile phones and such like use headphone drive chips whose design rationale is to drain the battery as little as possible. Quality is not a priority; it just needs to be adequate to feed cheap ear-bud headphones or lightweight portables.

Also, I learnt recently but have yet to confirm, a British Standard suggests headphone output is limited to 0.3V to avoid hearing damage and this standard has been rolled into a global IEC standard. This would explain why large global companies like Sony feel it prudent to stay within this Standard, whilst the predominantly Chinese manufacturers of high-resolution players, such as Fiio, iBasso etc, ignore this limitation. Instead they use headphone drive chips of far higher quality and far higher output. In their £150 X3 player Fiio use an Analogue Devices AD 8397 to drive headphones and it delivers no less than ten times more output than the ZX1, our tests showed.

So the ZX1 is a high-resolution player in that it plays high-resolution digital files of all common types, up to 192kHz sample rate, except Sony’s own DSD. But it has a low-resolution headphone drive chip that strangles performance. It’s DAC doesn’t look so good either.

Now onto its basic functionality. Connected to the Internet via wi-fi the ZX-1 is more like a phone or tablet than an audio player. It has a web browser, a full suite of web services including location, YouTube, music download, an array of Google sites (because it uses Android OS), even airplane mode. Like the NWZ-F886 it plays mpeg4, WMV9 and AVC(H.264) video and shows photos (jpeg, png). Sony’s music store is not loaded, nor is iTunes. Ours had a vinyl carrying case but not the noise cancelling ear-buds of the NWZ-F886.

Measuring 60mm wide, 122mm high and just 15mm deep the NWZ-ZX1 is pocketable. Weight on our scales was 136gms – quite light.
Vinyl is black!

The Evo! What an evocative name and rightly so too! The SL-1200 evolved from a Hi Fi turntable into a DJ deck and now we turn it back into a Hi Fi turntable again! Fitted with the legendary SME 309 tonearm and the Audio Technica AT33EV your emotions will run wild. The AT33EV is itself an evolutionary cartridge hence its EV suffix and matches the SME 309 so well. We have worked with direct drive turntables and moving coil cartridges for 33 years and the EVO has evolved into a mature product that is quite simply a world beater. We can supply completely new units with 6 year guarantees, used ones with 5 year guarantees, or we can convert your own...

The T.01MC moving coil phonostage has been designed to work with every moving coil cartridge from a DL-103 to a Clearaudio Goldfinger Statement. Two reviewers use the T-01MC for their reference system and another compared it favorably to a £9.5K stage noting it was almost as good and with a lower noise floor! The design comes from Dave Cawley who designed and built his first MC phonostage in 1981. Building on his experience Dave has now produced a dual-mono phonostage with not a single integrated circuit or npn/pnp transistor in sight! No less than 16 FET's are used including a FET discrete power supply. The input FET's are laboriously hand tested and categorised before being inserted in blocks of 8 into the PCB. In stock now at £995.00

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VERDICT
New minimalist phonostage, that sonically, punches well above its weight:

FOR
- open and precise
- plenty of emotion
- plays old mono records well

AGAINST
- only available in black

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- WDKEL84 15 watts per channel ultralinear push pull stereo amplifier. Single input power amp or integrated with multi-input relay switching
- WDPHono3 All triode passive equalization valve phono-stage. Dual input option. MC step-up transformers available. Requires WDPSU3 power supply
- WDPRev3 Transformer coupled single ended valve pre-amplifier. Low output impedance. Multi-inputs utilizing relay switching. Requires WDPSU3 power supply
- WDPUS3 High performance choke power supply
- WDDH05 Transformer coupled single ended valve headphone amplifier. Multiple settings for headphone impedance matching.

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56 AUGUST 2014
There's an on-board loudspeaker, a Bluetooth short-range radio connection and NFC (Near Field Communication), for short-range (1 cm) file transfer or music streaming to NFC equipped devices the player is placed against. 128GB of on-board memory is fitted plus a non-user-replaceable lithium-ion battery charged over USB; no charger is supplied. It can play computer music files using DLNA. Music must be loaded using an Android loader.

The NWZ-ZX1 will play FLAC, WAV, ALAC and AIFF. We checked this and 24/192s in the formats stated all played.

There are no external memory card slots and there is no S/PDIF digital output for an external DAC nor a line output for a hi-fi amplifier so the headphone output signal is too low and noise too high, limiting dynamic range. The task of delivering a high-resolution signal is almost certainly due to performance variation in the headphone output chip used on these players that is not up to the full blast of the orchestra's power. The NWZ-F886 that measured 96dB. This was beautifully manicured, absolutely concise in its progress and free of blemish it seemed. Unfortunately, with this recording and classical generally, where level is lower than rock, volume levels reached 'modest' with volume up at maximum, with the NWZ-F886, it is a low-res portable audio player equipped to play high-resolution audio files.

The ZX1 has 10dB less dynamic range than CD when other hi-res players have at least 10dB more. That leaves it hopelessly behind and out of touch with the competition.

It sounded smooth and easy and also very insightful, if dynamically constrained. It has the same internet connectivity as a mobile phone, however, so if this is what you want from a music player, then it will satisfy.

SOUND QUALITY
In a nutshell the ZX1 (all sound processing of) was dynamically gentle in its delivery, if revealing across the midband. It had little dynamic push with the Pink Floyd’s ‘Wish You Were Here’ into my Philips Fidelio X1 headphones or Oppo PM-1 magnetic planar headphones when compared to the Astell&Kern AK 120 I use. Even with the Philips, which are a tad lively up top, the Sony verged on sounding warm with this track. This is fine by me, when digital gets good it does become smoother than expected but in this case dynamic contrasts were not reproduced by the Sony; it lacked life, pace and punch. Switching in Clear Sound just added some midrange glare that wasn’t very nice.

The Eagles ‘Busy Being Fabulous’ (CD) was clean and smooth – it slid along with a firm bass line and clean time domain contrasts; it was well timed. Again the ZX1 sounded a little laconic; it lacked rhythmic snap, speed or pace. The Astell&Kern AK 120 made this track sound bally, stretching its contrasts to introduce some rock’n’roll punch.

The ZX1 sounded refined in many areas; with Lucía Gomez singing ‘Lucía’ (24/96) it was more revealing across the midband than the AK 120 but it again it lacked dynamic contrasts and punch as a result. I moved through a host of review tracks I know well and got this result consistently; the ZX1 was smooth, well-timed and insightful but lacked punch.

Imaging was superb, sudden centre-stage drum strikes in ‘Misery’ from Dave’s True Story stabbing into my head with head-lacerated precision. The player is strong here and I suspected the strong upper treble, as revealed by measurement, sharpened image precision. The effect was sonically striking.

The Minnesota Orchestra’s ‘Dance of the Tumblers’ from Rimsky-Korsakov’s ‘Snow Maiden’ (24/96), was beautifully manicured, absolutely concise in its progress and free of blemish it seemed. Unfortunately, with this recording and classical generally, where level is lower than rock, volume levels reached ‘modest’ with volume up at maximum, with my Philips Fidelio X1s. So I never got the full blast of the orchestra’s power that I enjoy on the AK 120.

MEASURED PERFORMANCE
Output from the headphone socket was a low 0.3V, much like that of the less expensive NWZ-F886 tested in our April 2014 issue. This is typical of portable players but ten times less than the 3V or so from high-resolution portables. There was no digital output or line output for a hi-fi amplifier so the headphone output must be used, or Bluetooth.

FREQUENCY RESPONSE
Dynamic Range (EIAJ) from a 24bit file measured a low 91dB, even lower than the NWZ-F886 that measured 96dB. This is almost certainly due to performance variation in the headphone output chip used on these players that is not up to the task of delivering a high-resolution signal. Output is too low and noise too high, limiting dynamic range.

This clearly shows the NWZ-ZX1, like the NWZ-F886, is a low-res portable in its basic electrical topology but able to play high-res files. It does not, however, have the low noise or high linearity needed to exploit the quality of 24bit audio, falling short of CD by 10dB.

Frequency response with 192kHz sample rate files extended to a very high value of 80kHz, strong peaking above 20kHz revealing this is the same circuitry as used on the NWX-F886.

The NWZ-ZX1 conveys none of the benefits of high-resolution audio files except wide bandwidth. NK

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<td>Output</td>
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CONCLUSION
The NWZ-ZX1 is a nice player to use, and a nice player to listen to. Nice being the operative word. As with the NWZ-F886, it is a low-res audio player equipped to play high-resolution audio files.

The ZX1 has 10dB less dynamic range than CD when other hi-res players have at least 10dB more. That leaves it hopelessly behind and out of touch with the competition.

It sounded smooth and easy and also very insightful, if dynamically constrained. It has the same internet connectivity as a mobile phone, however, so if this is what you want from a music player, then it will satisfy.

GOOD - worth auditioning
VERDICT
A gentle and insightful delivery makes the ZX1 enjoyable, but it lacks both volume and dynamic power. Good for general entertainment though.

FOR
- hi-res touch screen
- wi-fi and web
- portable and light
- plays YouTube and video

AGAINST
- insufficient volume
- no S/PDIF digital audio output
- low dynamic range
- no DSD

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Sony’s Walkman goes Pro

In the late 1970s, Sony chief and co-founder Akio Morita had a brainwave. A keen music fan, Morita had always wanted listening on the move. Portable radios were an everyday mainstay and, indeed, Sony had played a pivotal role in developing and popularising the pocketable ‘tranny’. But they played someone else’s choice of music.

Sony produced stereo radio/cassette recorders too and also large and heavy battery-powered stereo cassette decks, but although transportable, none of these options were convenient enough to fulfil Morita’s vision of something he could listen to on his frequent plane journeys.

At that time, Sony also marketed pocketable cassette recorders. These mono units were intended for the (non-broadcast) press who would tape interviews with them for later transcription. They were sturdy and reliable but hardly hi-fi. Morita suggested adapting one of these units to his chief audio engineer Nobutoshi Kihara. Out went the microphone and recording electronics and in went a stereo playback head, preamp and headphone amplifier.

The first model, the snappily-named TPS-L2, was launched in 1979 with a matching pair of lightweight open headphones. It looked tellingly similar to the journalistic tool that spawned it, but generated enough interest to spur development of new models. These successors – starting with 1981’s WM2 – would be smaller and built from the foundations for portable playback. And thus was born the phenomenal Sony Walkman, the iPod of the 1980s.

We should not forget that the Walkman was not the result of focus-grouping, market research or similar corporate methodology. It was instead the realisation of one man’s personal vision - and one that paid off handsomely.

Nearly 400 million Sony Walkmen of various types were sold between 1979 and 2009, changing forever how we listened to music. Some of these machines were very

Inside the original version of the WM-D6C. The cylindrical motor can clearly be seen as can the surface-mounted chips that provide the Dolby B and C noise reduction systems. Later revisions tidy things up thanks in no small part to the greater use of surface-mount technology.

The greatest cassette portable of all time? Martin Pipe certainly thinks so!
sophisticated. Across a decade of Walkman ranges we were treated to models with in-built radio tuners, advanced mechanisms with quartz-locked motors, Dolby noise reduction, form-factors little bigger than the cassettes being played, weather-resistance, fashion-led design and even solar power.

Oh, and there was also recording. You could buy a Walkman with basic recording capability as far back as 1982. The WM-R2 in question had built-in electret microphones (which also captured handling and motor noise!) and a tape counter but no manual control of recording level, ability to cope with quality non-ferric tapes or any form of noise reduction. It was not a hi-fi model – just a decent player with a serviceable stereo recording function good enough for occasional and non-critical use. Doubtless, a handful were smuggled into various concerts for the clandestine practice of bootlegging...

A machine further up the 1982 range would have been of more interest if you had deeper pockets – in more senses than one. With dimensions of 181x40x95mm, the expensive (£230) WM-D6 outsized by some margin the WM-R2 and WM-2 models but it was far closer to hi-fi. Out went the in-built mics – just a decent player with a serviceable stereo recording function good enough for occasional and non-critical use. Doubtless, a handful were smuggled into various concerts for the clandestine practice of bootlegging...

The record-playback head specified for the original WM-D6 and earlier versions of the WM-D6C was a specially-developed amorphous type. Sony switched to a cheaper permalloy oscillator allowed the WM-D6 to record onto decent high-bias chrome/pseudochrome tapes, such as TDK SA and Maxell UDXLII, or even one of the new metal-particle tape formulations that widened still further dynamic range and frequency response.

A superb amorphous record/playback head, developed and made in-house, also enabled the potential of such tapes to be realised. Recording level was set manually with a peak-reading five-LED bar graph that also indicated battery condition. A superb amorphous record/playback head, developed and made in-house, also enabled the potential of such tapes to be realised. Recording level was set manually with a peak-reading five-LED bar graph that also indicated battery condition.

Over the years, many WM-D6Cs have been damaged by accidental reverse-polarity DC connections; the motor speed-control chip is particularly vulnerable (and replacements are difficult to obtain nowadays).

In other respects, the WM-D6C is – like so much Japanese equipment of the 70s and 80s – very reliable. The grease used in various parts of the mechanism can harden, necessitating a strip-down (if your machine won’t take up or wind/rewind properly, this is a common cause).

My own machine, bought for around £20 on eBay some years back, was in this condition. The record-playback head is very...
What you’ll see if you strip down a WM-D6(C) mechanism. Here we see the motor, which couples the brass flywheel via Sony’s ‘disc drive’. The belt drives the cassette’s takeup or feed reels. Resilient although you shouldn’t use the admittedly handy cue/review facilities unless necessary. Mechanical bits like nylon gears can fail as can board-mounted sockets and potentiometers. If you have the protective leather case use it to keep dust at bay. As with most portable equipment always remove batteries when it’s not in use. Leakage can cause catastrophic corrosion.

The WM-D6C was produced until 2002. A lifespan of eighteen years for a product from a large multinational corporation is almost unheard of! But then again, there was nothing to touch the WM-D6C (for a while Sony did however produce the WM-D3, a more compact Walkman Professional; this could come close to the performance of the more substantial unit although this ‘baby’ model was Dolby B-only and would only work with ferric or chrome tape).

The newer WM-D6Cs replaced the amorphous head with a cheaper type and made more use of machine assembly-friendly surface-mount electronics. This simplification did make the machine easier to service; most of the wiring looms you can see in the photo of my first-gen unit disappeared! It also meant that Sony could keep the retail price remarkably constant (around £250) for nearly two decades. Hardly surprisingly, many were sold and put to all manner of tasks. Until Minidisc and solid-state recorders gained ground in the 1990s they were the bootlegger’s tool of choice; many an ‘audience recording’ of a 1980s or 1990s concert started its furtive journey on one of these and a compact stereo electret microphone (often also Sony, not least because it was compatible with the recorder’s ‘plug in power’ system).

Print journalists used WM-D6Cs for interviews and conferences while local radio recorded vox-pops with them. Some commercial recordings (notably a spoken-word album by American cultural icon Henry Rollins) were made with one of these machines.

Yes, the sound quality really was that good: with a decent pair of headphones, you’ll marvel how Sony managed to push the boundaries of mobile cassette playback so far. A broad and even frequency response does justice to the throb of the double-bass and the crispness of electronic percussion alike, while the Dolby noise reduction systems all but kill hiss. Even sustained organ notes or complex piano passages are played without any wavering of pitch.

A decent microphone is necessary for live recordings, in keeping with the ‘garbage in, garbage out’ philosophy. Unfortunately, the mic preamp is rather on the noisy side; some modified their units with lower-noise components or fed an external mic preamp into the line input.

Which brings us to one of the most famous bootlegs of the ‘80s, allegedly-taped with a Walkman Professional. In 1986, US alt-folker Michelle Shocked gave an impromptu campfire-side performance at the Kerrville Folk Festival. Shocked had given permission for her performance to be taped by English music enthusiast Pete Lawrence. She thought no more of it until being congratulated on her chart success in England; the recording had been released here without her permission as ‘The Texas Campfire Tapes’. The resulting exposure helped Shocked to secure the recording contract that brought us 1988’s ‘Short Sharp Shocked’ LP.

Although the music on ‘The Texas Campfire Tapes’ is beyond reproach, the recording quality is ropey. It sounds too fast because the batteries in Lawrence’s Walkman were dying, causing the mechanism to run slow and no pitch correction was carried out during the transfer to LP. But the lack of dynamics, harsh edge and tape hiss lead me to believe that Lawrence wasn’t using a Walkman Professional but a cheaper model.

A WM-D6/D6C or WM-D3, with decent offboard mics, is capable of so much better in terms of sound quality.

Sony’s top portable stereo cassette decks grouped together. To the left of the WM-D6C is the WM-D3. This less expensive Walkman Professional option is about the same size as a play-only Sony unit of that time and uses a very similar mechanism. Like the bottom machine that dwarfs both - a compact (but non-Walkman) TC-D5 Pro portable used by BBC TV in the early 1980s - the WM-D3 is capable of making decent recordings.
A brazen celebration of the working class — now where did they go to? eh! Re-branded as the ‘Shameless’ CHAVs, to be mocked and derided! Stripped of pride and history? Lancashire-based Harp & A Monkey are an English folk outfit for the 21st Century that have no problems contemplating the past while retaining a steady eye on current events and life in general. Take the blended ‘Walkin in the Footsteps of Giants’ which celebrates a ‘right to roam’ victory in Derbyshire but also blends archival interview footage of a chap who volunteered to fight Franco during the Spanish Civil War.

His words on struggling up the Pyrenees was a different sort of ‘right to roam’. The delightfully monikered ‘Tupperware and Tinfoil’ tells of family trips to the seaside. My own childhood was covered in blasted tinfoil. My mother would

released in 1973, this album acted as a window onto cracks in the T. Rex empire. The album was farsighted and adventurous in its use of souful backing singers along with horns, providing a blend of genres that added a new dimension to the sound. That said, the hits were not quite as big and the performances not as exciting as those seen within 1971’s ‘Electric Warrior’.

The rock’n’roll extravagances were also starting to catch up with the band in terms of work (i.e. touring) and excesses (i.e. drugs). You can hear the core of the classic T. Rex oeuvre in this album. Tracks such as ‘The Street & Babe Shadow’ and ‘Born to Boogie’ are from the Bolan song chest. There are a few surprises, though, such as the first track off the album ‘Tenement Lady’ which could almost be Fab Four-like in its structure, plus the beautiful ballad ‘Broken Hearted Blues’.

The LP is in the news because Edsel has re-released the album alongside ‘Zinc Alloy and the Hidden Riders of Tomorrow’ (1974) as part of a five-disc deluxe box set that combines new Visconti-remasters of both albums. Each album is offered across two CDs and comes with a wealth of bonus material including A-sides, B-sides, demos and out-takes. The DVD offers ‘Top Of The Pops’ performances, promo films and other TV appearances. The 12” x 12” hardback book comes with new notes by Mark Paytress and Tony Visconti. Also look out for other deluxe editions of T. Rex work, including T. Rex (1970) which features ‘Beltane Walk’ and ‘Is It Love’ with Bolan in not-quite-swaggering mood taking a pastoral air, while ‘A Beard of Stars’ (1970) includes ‘Pavilions of Sun’ and ‘Elemental Child’ and sees Bolan beginning to transform from hippie to rock star.
It didn’t last long but the group went through a whirlwind of changes. Eventually a UK prog band, Heavy Jelly didn’t even exist when a jokey, fictitious review appeared in the magazine Time Out. Fiction begot fact when heightened interest resulted in, bizarrely, two record labels, Island and Head, creating two versions of the band after the event, with singles to match.

The Island version of the group was actually the established outfit Skip Bifferty. The Head release was arguably more interesting. In a rather smirking reference to the original advert the single ‘Time Out (The Long Wait)’, was released in 1969. The Head incarnation were not entirely inexperienced: John Morshead (guitar/vocals) and Alex Dmochowski (bass) were known from their time with the Aynsley Dunbar Retaliation. A drummer, Carlo Little, and someone called Rocky completed the line-up.

As a result of the single, which did decent business, the label’s managing director, John Curd, registered the Heavy Jelly name and Morshead and Dmochowski looked again at the line-up.

The early album sessions featured Chris Wood and Jim Capaldi from Traffic but they soon left to be replaced by ex-Animals drummer Barry Jenkins and vocalist Jackie Lomax, who joined after a stint at the Beatle’s Apple Records label. The Heavy Jelly album was doomed never to be released; however, and Lomax left to start a solo career.

Featuring Badfinger members Pete Ham and Tom Evans along with the Rolling Stones wind section of Bobby Keys and Jim Price the album has a blues-infused prog presentation but there is a lightness of spirit in the delivery. Exhibiting admirable songwriting, it has an almost Beatle-esque edge to the music. No doubt aided by the band members and their own musical philosophies. A fine album with Lomax stamped all over it.

The new Up Country label is the home of a range of country genre re-issues that provides a value for money, two albums pack on a single CD.

Diffie may not be known to many general music fans but in country circles he is regarded as a quality vocalist sometimes singing novelty songs with a rock edge or plaintive ballads.

He signed with Epic and released his debut album ‘A Thousand Winding Roads’ in 1990. Taken from that album his first single ‘Home’ struck immediate success, shooting to No 1 in the country charts, as did his second single ‘If the Devil Danced (In Empty Pockets)’. Two further singles, ‘If You Want Me To’ and ‘New Way (To Light Up an Old Flame)’ hit the No 2 spot.

The second album on this CD was also Diffie’s second album release. ‘Regular Joe’ packed in all of the familiar aspects of a nineties country album but there are plenty of high-quality songs and also great performances that lift those songs to another level.

Take the title track which approaches Haggard-like levels of energy while ‘Ain’t That Bad Enough’ is roughed up by Diffie and transformed in the process. A superb pair of albums.

Other albums in this duo series include Brooks & Dunn’s ‘Brand New Man’ (1991), a superb debut with top-quality songs that broaches into pop and rock, alongside ‘Hard Workin’ Man’ (1993), a worthy successor. Clint Black’s ‘The Hard Way’ (1992) feature a host of great singles while ‘No Time To Kill’ (1993) features a Wynona Judd duet. Finally, Linda Davis’ ‘Shoot For The Moon’ is her steamy blues 1994 release while ‘Some Things Are Meant To Be’ sees her finally live up to her promise.
Tony Bolton travels to Germany to take in the audio delights of the 2014 Munich High-End Show

This year’s High-End Show at the MOC show venue in Munich, the 33rd, was particularly successful. Visitor numbers were up by 10% (17,855 visitors, excluding trade and press) and the exhibitor numbers also increased by 25% with 452 from 40 countries. British audio products were well represented and I was pleased to report that the variety of equipment on display from all corners of the globe reflected the hugely diverse ways that we have found for carrying out that seemingly simple task of reproducing music in our home environment.

All tastes were catered for, whether it was horn loudspeakers or state-of-the-art digital reproduction. I was also interested to note that a number of companies were displaying open-reel tape decks as sources while others were offering pre-recorded tapes for sale.

So without more ado, here are some photographs of the more interesting items on display.

**British mains purification and accessory specialists, IsoTek/Blue Horizon, were displaying their Vortex prototype record cleaning machine.**

[www.bluehorizonideas.com](http://www.bluehorizonideas.com)

**This is the Primary Control Reference arm available in either 9", 10.5" or 12" sizes.**

[www.primarycontrol.de](http://www.primarycontrol.de)

**Lutz Precision were showing a Studer B62 tape deck demonstrating their direct copy mastertapes. Available music includes Oscar Peterson.**

[www.analog-audio.eu](http://www.analog-audio.eu)

**German valve and amplifier manufacturer Elrog displayed these unusually shaped 1m tall ER211 amplifiers.**

[www.elrog.com](http://www.elrog.com)

**German valve and amplifier manufacturer Elrog displayed these unusually shaped 1m tall ER211 amplifiers.**

[www.elrog.com](http://www.elrog.com)
These beautifully styled Uniwersum horn loudspeakers are made by Auto-Tech, based in Lublin, Poland. [www.horns.pl](http://www.horns.pl)

Arthur Khoubesserian of the Funk Firm showing a Funk Vector 5 turntable. [www.thefunkfirm.co.uk](http://www.thefunkfirm.co.uk)

German Physiks had a range of loudspeakers on display including these PQS-302 Omnidirectional models. [www.german-physiks.com](http://www.german-physiks.com)

Silbertone were demonstrating a pair of 1926 Western Electric 12A horn loudspeakers originally installed in cinemas for the release of the world's first talking picture "The Jazz Singer".

The horns are driven by this 555 Receiver driver by G.I.P. Laboratories. [www.giplaboratory.com](http://www.giplaboratory.com)

The impressive Air Force 71vco turntable from TECHDAS of Japan. [www.techdas.jp](http://www.techdas.jp)

This is the impressive Air Force Two turntable from TECHDAS of Japan. [www.techdas.jp](http://www.techdas.jp)

The 170,000 Extreme loudspeakers from Estonian company Estelon. The height of the angled top unit can be adjusted between 1.77-2.07m tall by remote control for optimised listening. [www.estelon.com](http://www.estelon.com)
Xpression Carbon

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The Xpression Carbon is the latest version of Pro-Ject Audio Systems' original turntable, the Pro-Ject 1. This new model employs a brand new carbon fibre tonearm with an Evolution-inspired support structure. The superior motor, with isolation blobs designed by Ortofon, drives a high-quality platter that can be fitted with either a Cork or Felt mat. The plinth is available in three stunning finishes*, and the arm is rounded off with an Ortofon 2M Silver cartridge to create a comprehensive package that would suit any system.

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* Bordeaux finish shown
Switzerland's Boenicke Audio were showing their W5 and W8 (Anna) loudspeakers to great effect.  
www.boenicke-audio.ch

Corum Audio from Italy displayed their impressive loudspeakers which stand over 1.5m tall.  
www.corumaudio.com

Serbian company Auris Audio were showing their gorgeous-ly-finished Forte 6550 monoblocks.  
www.aurisaudio.rs

The Angelo loudspeaker from The Varios of Italy. This is the largest unit of a range that includes desk-top sized speakers.  
www.thevarios.com

Swedish company Engstrom and Engstrom showed their Lars Type 2 300B monoblock amplifiers costing 55,000.  
www.theiars.se

This is the Bergmann Sindre Airbearing turntable fitted with their linear tracking airbearing tonearm.  
www.bergmannaudio.com

These are the soon to be announced H128 headphones made by ADL of Japan. They will be available in three finishes. Estimated price will be around £300.  
www.adl-av.com

Corum Audio also showed their matching Bass Unit and processor/amplifier.
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Don't you find it interesting how one person can influence another? If you look over the history of music, for example, you will see a complex spider's web of links and connections where bands form and split, people enter and leave the business, join and leave bands, come together and so on.

Music history has this on-going flow and change. Yet, in the middle of the seeming chaos of creativity there are nodes. Big, big points that beam out from the spider's web as significant times in music's development. These nodes are very important. They connect many elements of the web together.

In fact, they are responsible for much of the web itself. Elvis Presley is one such node, Bing Crosby is another, The Beatles are a third. From these acts, a mountain of new artists arise. 'Influenced' by these dominant figures.

I was flicking through the catalogue of a neat little UK record label, Rollercoaster (www.rollercoasterrecords.com) of late and three of these nodes screamed at me all at once.

The first is Buddy Holly, I would argue that Holly was an even greater influence to rock than Elvis Presley because he was a revolutionary and pioneer, a professional among amateurs. Considering that his work was recorded on such primitive equipment in the most basic of circumstances, Holly had no right to be producing the quality of 'That'll Be The Day', 'Peggy Sue', 'Oh Boy' and 'Not Fade Away' - songs that sound just as fresh and vital today. Talk about influences, Holly was a major influence of the core of current rock history. How about this for a list? The Beatles, Rolling Stones, Bob Dylan, the Byrds, The Who, Bruce Springsteen...need I go on?

Each one of these artists are themselves seen as significant influences, so what does that make Holly? He is seen as being the Father Of Rock.

But how can anyone hold such a title and die at twenty-two? Just let that sink in for a minute. Twenty-two! This is a man, a very young man, who is responsible for a multi-billion pound industry, in effect, and for the production of some of the most sublime music. Twenty-two! The 'what if' questions that you have to ask yourself almost beggar belief.

Is it any wonder that Rollercoaster spent time digging up a whole host of rarities on CD ('Ohh! Annie!' featuring previously unreleased material from 1956 sessions over two CD discs) and a 10" vinyl disc called 'That Makes It Sound So Much Better' that improves a selection of rarities to audiophile standard.

Another 'node' is Link Wray, an American rock 'n' roll guitarist who was a star in the late 1950s. Wray had the knack of over-driving his guitar, creating one of the first distorted electric guitar sounds. The power chord was his invention, for example.

Wray is seen as the 'father' (there's that word again) not only of heavy rock but also punk rock. Of course, he was also one of the world's best guitarists out there so you can imagine who might have been influenced by the man. Both Iggy Pop and Jimmy Page admired Wray's rebel attitude and Pete Townshend 'blames' Wray for making him pick up a guitar in the first place.

"I remember being made very uneasy the first time I heard it and yet excited by the savage guitar sounds" says Townshend.

Listen to Wray, then spin a Hendrix record and easily find the links.

Rollercoaster has a great CD on the man called 'The Swan Records Singles Collection' featuring twenty-six nasty guitar songs. Budding Pete Townshends out there should brace themselves.

Speaking of guitar heroes there's also Davey Graham - one of the most important figures in the British folk revival during the sixties. Despite his introverted nature and wish not to pursue fame he, nevertheless, struck a chord (literally) in the hearts of many future folk stars such as Pentangle, Fairport Convention, John Martyn, Martin Carthy, Bert Jansch, Wizz Jones, John Renbourn but also the likes of Paul Simon and Jimmy Page.

The problem with Graham was that he had a life. A life outside of music, that is. He was a truly rounded individual, despite struggling with drugs. Hence, his extensive work for charity (he was on the executive council of MIND, the mental health charity, for example) and his study of languages.

He was also interested in social history, loving to collect old folk songs and poems. His cultural knowledge often spilt into his work as his albums featured an eclectic mixture of musical styles.

Rollercoaster's official bootleg, 'After Hours at Hull University, 4th February 1967' is a perfect insight into Graham the relaxed musical intellectual.

The ability of the artist to break the template, to make unexpected connections and ignore the pattern produces shockwaves within any genre.

The exciting thing about them all is that each had to start somewhere. Look around, one budding genius might be lurking at the bottom of a pub gig bill near you. 😁
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Over the years I have introduced a variety of components into both of my hi-fi systems until I have got to the point where the sound from them gives me both immense listening pleasure and satisfaction. I run a core set up that regular readers will be familiar with from the 'Equipment used' section that is included in most of my reviews.

Periodically a piece of equipment comes along that has such a dramatic effect upon the sound that reverting to my normal set-up after the review leaves me with a sense of dissatisfaction with what I previously considered to be an enjoyable and involving presentation of the music.

This happened a little while ago when I reviewed the IsoTek Sigmus EVO3 mains purifier. I ran the upstairs system with the new Sigmus in place for a couple of weeks before it had to go back to the manufacturer and I reinstalled the G2 version which has fed power into this system for the last eight years.

Unfortunately there are some changes that are made to a system that are not reversible – and so I found it to be with the Sigmus EVO3. In the review (HFW April 2014) I commented on how dramatic an improvement the performance of the EVO3 version was over the G2 unit and that owners of the older unit would find such substantial benefits in upgrading to the new model that the expense was more than justified.

Having said that, it will come as no surprise to you to learn that I have just taken delivery of the new EVO3 Sigmus. I just found that I could not live without it.

I plugged it in last night and for the first time since the review sample left this house I was sitting grinning with pleasure at the sounds that were flowing out of my Kelly KT3 loudspeakers.

In the same issue I also reviewed the Vinyl Passion Unity 2 sub-chassis and armboard for the Linn Sondek. Again, the improvement in sound quality was so profound that I found reverting to the standard Linn steel subchassis and MDF armboard proved impossible to live with. I also found none of the other aftermarket options that I have tried could match the performance improvement offered by the Unity 2 so my Sondek now sports the Vinyl Passion set-up as a permanent fixture.

The other change that has happened to the upstairs system was the installation of the SME M2-9R arm for a review. It took the place of my Hadcock 242 Cryo which has given good service for over 10 years. Again, the sonic improvements that the SME brought to the sound of my turntable made it impossible to live without, so that has replaced the Hadcock to become the reference arm on that turntable.

As a tool for this job it is first-class, having detachable heads on that make comparing cartridges very easy. It is also able to accommodate cartridges weighing up to 38g using the SME headshell, or 46g using other plug-in heads such as Ortofon SPU's so I cannot think of any cartridge that this arm will not allow me to use with ease.

Having said that, eagle-eyed readers may have noticed that in this and the previous issue of this magazine I have been using the Linn Ittok LVII that was the original fitment on the LP12 when I bought it second-hand some 14 years ago. This has occurred since I wanted to refresh my memory of how the arm sounded and at the same time try out the SME on the Clearaudio Master Solution turntable on the downstairs system. This has brought some interesting aspects of the sound to my attention.

Now that I have the Sigmus EVO3 powering the system, the Vinyl Passion Unity 2 installed in the Sondek and an arm that gives me excellent sound and makes this job easier, I am currently a man who has regained my previous level of contentment with the sound of my hi-fi. I have no doubt that at some point in the future my equanimity will again be disturbed but until then I am happy with things as they are.
Sometimes you just can't see the wood for the trees when you’re buying hi-fi.

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Happy Shopping...
Many months ago I saw the need for a dedicated mono cartridge to play the forthcoming Beatles mono LPs. The forums were getting into a twist about this issue because Beatles mono LPs are notionally definitive renditions of the Beatles music, in original format, meaning LP of course. Was a mono cartridge necessary for these LPs?

Ideally, you do need a mono cartridge to play them – but there's a problem. Many modern mono cartridges are available to play mono LPs — they ignore stereo groove noise — but their stylus are clunkers proportioned for early mono grooves. They were wider than later stereo grooves used on these LPs, necessary to suit modern stereo cartridges.

I realised this when testing an Ortofon 2M Mono a while back. Its 18µm spherical stylus has a relatively large side-radius contact face, when compared to Ortofon's top Shibata stylus with a side-radius one-third the size, just 6µm. An 18µm radius is too large to read the short-wavelength modulations in a groove at high frequencies, especially on inner grooves where mechanical wavelengths are shortest. On a microgroove test LP the 2M Mono reached 8kHz or so, where conventional stereo Ortofons easily reach 20kHz, like most modern cartridges. Not good.

Worse, the 2M Mono did not track stereo well either, and mistracking causes groove damage. That's hardly what Beatles collectors want to suffer with their brand new, definitive mono box set that will cost £288.

A fully worked-out solution was needed and the answer was obvious: take an Ortofon 2M Mono cartridge, remove its mono stylus, and replace it with the 2M Black's Shibata profile stylus, Voila! A Beatles mono cartridge, more than able for the job.

Abbey Road liked the idea, because they genuinely wanted to avoid all of the criticism aimed at them over the stereo LPs. And Ortofon liked the idea — it was a goer.

At this point we need to take a rain check. The Beatles remain one of the world's most famous bands. It isn't easy to resurrect anything from them without running into fierce criticism and global controversy if it isn't done properly. Which is to explain the attention to detail I'm talking about here.

There's good justification for carefully re-creating original circumstances and conditions when what is being done now is likely to become a future historical record. The original recording tapes — especially 'Please Please Me' — are shedding their oxide coating; they are not going to last forever.

Replaying these tapes threatens their survival and digital copies become poor replicas as digital improves — high-resolution MP3s you could say. Abbey Road, stung by criticism, have now created a set of new analogue tape masters as a result, just to avoid this issue. Oh the grief!

With this level of attention and care paid to the analogue source, it seemed foolish to me to fall at the last hurdle — the playback cartridge. Nowadays the forums crucify such mistakes — rightly I feel.

What's wrong with playing the new mono LPs with a stereo cartridge, like an Ortofon 2M Black? Basically, nothing. You will get full bandwidth, great tracking and no groove damage.

The same comment applies to Ortofon's moving coils, including the Cadenza Mono with its 8µm side-radius stylus. But stereo cartridges read vertical information in the groove — and that means groove noise.

The new LPs are unlikely to be very noisy because they are made with virgin vinyl and the lacquers, masters and stampers are all new and will probably see little use; they won't be stamping thousands. So there's no big problem here, but still a mono cartridge will sound better than a stereo and that's enough for Beatles purists — mono it has to be!

Why not get a pre-amplifier with a mono switch and use that? The Icon Audio PS3 valve phono stage we use has just such a switch. This is a simple and effective solution — but most phono stages lack such a switch.

Rather than trade in the hi-fi, the purest solution is to use a mono cartridge — and this I realised raises the horrible possibility of Beatles enthusiasts playing their new, definitive mono LPs with the wrong sort of mono cartridge and damaging them.

I could see a hot potato. Wise advice: don't play your new Beatles mono LPs with a mono cartridge. This would set the forums alight.

You can play these new LPs on your current hi-fi, using a stereo cartridge. But for best results Ortofon will be releasing a 2M Mono SE (Special Edition) moving magnet cartridge with silver wiring and Shibata stylus.

I thought it should be called the Hi-Fi World Beatles cartridge of course, but didn't bother to suggest this to Abbey Road, as I didn't want to engage in discussion with Apple Corps legal department.

Hopefully we will be reviewing this unique new cartridge, carefully labelled the 2M Mono SE, in our next issue.

The Beatles are a difficult subject to cover, but it's well worth the effort.  

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"Beatles mono LPs are definitive renditions of the Beatles music"

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THE BEATLES MONO LPS 83
In a Hi-Fi World Exclusive, Noel Keywood gets the full story behind the latest Beatles mono LP re-masters box set.

ORTOFON QUINTET BRONZE 89
Classical music fans will find plenty to enjoy in Ortofon's latest Quintet cartridge, says Tony Bolton.

BCR Nashville also release Waylon Jennings' 'Right For The Time (Remembered)', a straight reissue of 'Right For The Time' (1996), a laidback outing in which Jennings tries to make some sense of life. A little known joy.

Indie supergroup Divine Fits (ex-Spoon, New Bomb Turks and Wolf Parade/Handsome Furs members) have a new live outing. I have misgivings of the band - they don't really 'fit'. Jamming as friends? Fine. But they don't move forwards. Yet it's beautifully recorded at Third Man Records (thirdmanrecords.com), in 2013.

Finally look out for the Siichi Sugiyama Band's 'The Smokehouse Sessions'. A Tokyo-born, British blues rock fan, this album is too short but he still shows Joe Bonamassa a thing or two.

Via Blue Duchess and Shining Stone (www.shiningstonerecords.com) is Scott Hamilton's 'Remembering Billie', focusing on her pre-WW2 works. A rare treat for jazz fans to soak in his languid tenor tones.

THE HEAT OF THE SUN

A series of real gems for you from Sundazed (www.sundazed.com) including Lula Reed's 'Blue And Moody'. Her sultry blues ballads with Sonny Thompson feature additional sides from 1952 ad 1956.

Two little-seen, early LPs from Nilsson now: "Pandemonium Shadow Show" (1967) was adored by The Beatles, with its 'Sgt. Pepper' feel. Highly inventive, it is an addictive listen. 'Aerial Ballet' mixes psychedelia, cabaret and pop. This is where you will find the beautiful version of 'Everybody's Talkin'"

MORE MO-FI

Heavyweight in all senses from Mobile Fidelity (www.mofi.com), the star attraction is arguably Ryan Adams' 3LP version of 'Love Is Hell' featuring top-notch mastering and seven extra songs previously only found on the Japanese-issued bonus disc.

Next, the 45rpm edition of Bob Dylan's 'The Times They Are A-Changin' (1964) where we saw Dylan's first collection of original tracks, featuring protest songs of great energy, passion and quality. Dean Martin’s superb 'This Time I'm Swingin' (1960) benefitted from the Nelson Riddle touch. Martin exhibited great confidence, finally coming to grips with the album format.

Also look out for Jerry Garcia & David Grisman (1991; with Jim Kerwin and Joe Craven) on an acoustic double album of standards, folk and bluegrass. Emmy-award nominated, this album sparked the progressive bluegrass movement.

SPEAK NOW

A staggering selection from the German audiophile outfit Speakers Corner (www.speakerscorner.de) starts with Paul Desmond & Gerry Mulligan's 'Two Of A Mind' (1962) featuring wonderful, piano-free, interplay and common chord changes.

'The Sound Of Wilson Pickett' (1967) features a slew of singles from the great man. His finest album, watch out for the impressive 'Love Is A Beautiful Thing'.

Aretha Franklin's 'Live At Fillmore West' (1971) is a sparkling performance, dramatic in tone and wholly satisfying with a brilliant backing. Even Ray Charles pops up!

Finally, via the French-based Sam Records, check out the Barney Wilen Quintet featuring the tenor sax swing player in lyrical mood.

...AND FINALLY

'If Music 2.0' (Ninja Tune; www.ninjatune.net), features rarities and unreleased mixes and is an exclusive for Record Store Day.

Davidge's 'Slo Light' (7Hz Recordings;www.7hzrecordings.com) features electro-pop fronted by a range of guest vocalists including Sandi Shaw. Excellent beats – but I could have done without the voices.

Hans Chew’s 'Life & Love' (At The Helm; atthehelmrecords.bigcartel.com) features blues rock-infused boogie with Chew’s piano leading the way. Arm flingingly energetic.

Also check out The Ministry Of Wolves’ 'Music From Republik Der Wölfe' – a collective retelling of the Brothers Grimm fairy tales via poet Anne Sexton. An intoxicating cloak of adult gothic.
SOUND SYSTEMS

Audio Note Zero R (NOS) pre amp £350
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We are about to be treated to yet another set of Beatles album releases. I'm not going to catalogue the many that have gone before, so much as describe in fine detail for Beatles aficionados — and the rest of us! — the thinking behind this new release of a box set, as well as individual albums. This release is just about the ultimate in authenticity, insofar as any re-master can be. I visited Abbey Road Studios and spoke to mastering engineer Sean Magee to find out more.

The Beatles music was first released on LP, so this LP box set is the original music delivery format — unlike recent CD re-releases for example, including a 2009 mono CD box set.

Mono was the dominant recording method at the time of 'Please Please Me', their first LP, a 1963 UK release. At that time and for some time after, Beatles songs were mixed for mono: the final master tape was mono. To produce new-fangled stereo required a different mix down and this was done hastily after the mono mix because at that time stereo was a small market commercially.

So the mono mix was the
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- Red Rose 5 integrated valve amp Mark Levinson Quad 405 £195
- Quad 34 pre amp phono version £225
- Quad II Valve amp rebuilt and re-valved £995
- Ayre V-5XE power amp 18mths old £1995
- Audio Innovations classic 25 integrated boxed immaculate £2750

**RECORDS**
- Vinyl records: Joe Henderson Bobby Hutcherson At the Jazz corner of the world Toshiba EMI Blue Note Amazing Bud Powell Time Weght Toshiba EMI £20
- Led Zeppelin BBC Session 200g £295
- (downsizing my collection excellent as new condition)

**SPEAKERS**
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- Nakameht receiver 2 £125
- Ferrograph logic 7 open reel 10' £245
- Gerdes reference tonearm cable £495
- Cardas golden ref 8 5mtr balanced interconnect £495
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- Mission 600 30A 6 months old ex demo £245
- Monitor Focus 352 ex demo £245
- Monitor Audio reference 700 £395
- Rotel RB909 Electra black finish boxed £195
- Red Rose RD Ribbon bookshelf speaker new £1200
- Red Rose RD10 black £995
- Red Rose RD15 black £995
- Sentiment early 60's speaker pair £245
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- Sennheiser HD598 headphones £495
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- Sennheiser HD660 headphones £495
- Sennheiser HD660S headphones £495
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**RECORDS**
- Various: please ask...
Abbey Road Studios and Studio 2 where The Beatles recorded their music.

LP production at Optimal Media, Robel, Germany. Clean conditions are used to avoid dirt and fingermarks.

primary source into which most artistic effort had been put on early LPs; stereo was secondary. This new LP set is mono, referring back to notes made by Harry Moss for the original mono mix-down. The music on these LPs is therefore as the original artists and engineers intended. Re-mastered mono LPs have not been released before.

A set of re-mastered stereo LPs were released in 2011. There were concerns from Beatles enthusiasts — especially the USA where re-mastering historical back catalogue is an art form bordering on religion — that these stereos were derived from a 24/192 digital archive master recording made back in 2005. The taint of digital was smelt and rejected.

To be authentically valuable re-masters, the new, definitive mono LPs had to be derived from the original analogue master tapes — and that’s what this new box set does. Yes, they got out the master tapes and re-ran them for these LPs — a heady thought. Also a dangerous one — what if an old tape breaks, sheds its oxide or whatever? Items like this are national treasures; Abbey Road is a listed building by the way (but the zebra crossing is not yet listed!).

The new LPs are,
therefore, about as close to the
originals, or even closer, than any LPs
before.

How can they be closer than
before? Because the replay signal
chain is technically better and the
final LPs are stamped into better
vinyl from new stampers. What you
get now, then, is of higher basic
quality than was available in 1963.

Intriguingly, because the music
on these LPs has not been digitally
processed it also has not been
cleaned up; buyers get a 'warts-and-
all' version as close to the masters
as possible. This is not to say the
LPs are unequalised from the master
tapes; they have been equalised
following the original studio notes
and against copies of the digital
masters, so the sound balance has
not been altered.

How Abbey Road and Universal
got to decide upon such an
audiophile release is fascinating. In
response to enthusiasts’ insistence
that digital could not come into it,
Sean Magee re-cut 'Please Please Me'
from the original analogue master
tape to a lacquer acetate (not a metal
master) just before Christmas 2012,
using the Studer A80 tape recorder
and Neumann VMS80 lathe with SX-
74 cutter head seen in our pictures.
The audio was not passed down a
digital delay line to allow the lathe
to adjust groove spacing; instead a
900mS pre-read head on the Studer
was used to derive this control signal.
What was cut into the acetate was
pure analogue.

After Christmas 2012 Jeff Jones

Sean Magee told me this cut
"had a life to it" that impressed
all those who heard it

From these tapes and the
originals, audio from the A80 was run
through the mixing desk you can see
in our studio shots. Equalisation was
applied in real-time as the tapes ran,
as done in the past. The signal was
then cut to an acetate; Sean said they
had not heard a metal master that
sounded as natural as an acetate and,
in any case, a DMM would destroy
the authenticity of this release.

And the LPs themselves? They
are made by Optimal Media, based
in Robel, in what was once East
Germany (http://www.optimal-media.
com/en/press/vinyl). Sean told me
they produced a consistently high
quality product — difficult with the LP
where stampers become damaged as
they wear out and vinyl quality can
vary.

The vinyl used is virgin, not re-
cycled, and the LPs are 180gms, with

At left of cutting engineer Sean Magee is the Neumann VMS80 lathe with SX-74 cutter head, used to
cut the latest mono LPs. In front is the mixing desk and behind him a B&W 800D studio monitor.
The Studer A80 tape recorder with mono replay head used to re-run the mix-down master tapes. Sean Magee fingers a specially fitted manual azimuth adjustment control to ensure the replay head aligns with the tape’s recorded azimuth.

a lip, similar to the originals. Sean assured me the centre hole is always well aligned - so no ‘swingers’ and the LP is flat, not dished, a problem caused by differential cooling when the LP is taken prematurely from the press. The sleeves and covers are identical to the originals; Optimal Media even used original folding machines!

At the time of writing (April 2014) the LPs were being pressed. A release date has been set as September 2014. A box set costing £288 and individual LPs will be made available.

We hope to be bringing you a review in the next issue.

The information in this article comes directly from Universal Music and Abbey Road studios. All facts have been checked by them for accuracy, so the article is an accurate and reliable record.

A SPECIAL BEATLES MONO CARTRIDGE

Reading internet forum discussions about how best to play The Beatles mono LPs and holding in my hand a new Ortofon 2M Mono cartridge that we reviewed in our August 2013 issue, I realised that there was potentially a problem here. It’s best to play these LPs with a true mono cartridge, because it produces no vertical information, meaning groove noise.

However, these new mono LPs are cut for a stereo microgroove stylus so as to be playable with a modern stereo cartridge of the sort we all have.

An Ortofon 2M Mono and other modern mono cartridges have large spherical styli to suit old mono LPs. On new microgroove LPs they will sound dull, especially on inner grooves, distorted and may jump out of the groove because they ride too high in a microgroove and track poorly as a result. This would damage the new The Beatles mono LPs – not a great idea when they need to be preserved!

The simple solution to this I realised was, in outline, to fit an Ortofon 2M Black Shibata microgroove stylus to a 2M Mono body producing, in effect, a dedicated, high-quality mono cartridge for these LPs; one enthusiasts could buy secure in the knowledge it was perfectly tailored for the task.

I contacted Ortofon who said they could do it and Abbey Road who thought they would like it. As a result a special Ortofon cartridge will become available for the new The Beatles mono LPs. You can of course play them with a normal stereo cartridge but a mono produces less groove noise and gives better sound quality — authentic Beatles mono sound quality! This is a top-quality moving magnet cartridge, perfectly suited to such high-quality LPs.

A SPECIAL BEATLES MONO CARTRIDGE

Some preamps, such as those from Icon Audio, have a mono switch that parallels the channels of a stereo cartridge, cancelling out-of-phase noise. Why not use this instead of a mono cartridge?

Differences between the stereo generator coils make cancellation incomplete. And most preamps lack such a switch. A mono cartridge is a better choice, if less convenient.
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Paul Rigby, Hi-Fi World, March 2013

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Classic bronze

Tony Bolton finds himself charmed by Ortofon's new Quintet Bronze moving coil cartridge.

Following on from my review of the new £649 Ortofon Quintet Black cartridge (Hi-Fi World, May 2014) I have managed to get hold of its £499 sibling, the Quintet Bronze. It is housed within a similar ABS (Acrylonitrile/Butadiene/Styrene) thermoplastic body to the Black model, but in a colour that looked more orange than bronze to my eyes. Internal specification includes neodymium magnets and coils of 99.99% pure copper.

Apart from the colour, the main difference between the cartridges is the stylus profile, the Bronze using a nude Fine Line profile while the black is graced with a nude Shibata diamond.

The straight lines of the body and the good visibility around the stylus and cantilever made setting up the cartridge on my Linn Ittok LVII very easy. Tracking force is a not insubstantial 2.3g – but since this is spread over a large contact area between the stylus and groove wall record wear should be minimal.

As with all cartridges the first few hours of playing allowed the sound to loosen up and expand so that the rather tight and bassless presentation of music was replaced after about 25 hours of use with a more open and lucid sound.

I soon realised that this cartridge had a very different take on the presentation of music to its more expensive counterpart. Whereas the Quintet Black had quite an assertive way of displaying instruments the Bronze seemed to have a more laidback and relaxed approach.

I wandered on through my collection, finishing the evening’s listening with 'Electric Ladyland' by The Jimi Hendrix Experience. The music sounded pleasant but it lacked a certain edge that enthusiastically played electric guitars need to sound truly realistic. The opening chords of 'All Along The Watchtower' sounded a little too 'nice', lacking the raw energy that the Black would have produced when playing this track.

Stereo placement was good and I was able to pinpoint a performer accurately on a quite wide and reasonably deep soundstage.

The next day I explored classical sounds and found the Bronze gave a far better account of itself. The 1954 mono recording of Wagner's 'Die Meistersingers' sounded far fresher than the age and condition of the record should have allowed. Any surface noise
Statement. The London Debut.

28 - 29 May 2014

Naim's flagship amplification system arrives in London for the first time, exclusively at KJ West One. This is your chance to hear the pinnacle of performance in hi-fi through the Statement NAC S1 preamplifier and NAP S1 mono power amplifiers driving Focal Grande Utopia loudspeakers. There will also be a range of accessible systems from both Naim and Focal on demonstration for you to enjoy.

Places are limited so make sure you book early by email or telephone to avoid disappointment.
was presented as a minor intrusion that was barely noticeable and the focus of the sound was very much on the music contained within the grooves, rather than their physical condition. Tonal colours were well displayed as the orchestra moved from solo instruments to the full ensemble, with a certain correctness about the pacing of the music that left me feeling that I had a better understanding of Knappertbusch’s direction of the orchestra, and therefore of the music itself.

Curious to find where else the Bronze’s musical strengths lay I explored the folk section of my record collection and found a real synergy between the sound of this cartridge and the style of music played by the likes of Bob Dylan before he went electric.

I found the sound very focussed and felt almost as though I was present at a private performance of him singing ‘All I Really Want To Do’. Dylan’s voice is anything but smooth and I was pleased to find myself being presented with a realistic take on how he sounded, with the characteristic rawness of his vocals displayed intact. The accompanying guitar also sounded both right and quite real.

Some cartridges are all-round performers offering a satisfactory presentation of all musical genres. This one was rather more choosy. The cartridge rides reasonably high on an LP and vertical tracking angle was 32 degrees. Only on inner grooves (red trace) does it give very even tonal balance, without either top end brightness due to tip mass resonance or — more likely with frequencies beyond 10kHz it will hardly be noticeable. The cartridge is capable, delivering a healthy at 0.7mV at 5cms/sec rms.

The Quintet measured well enough to give good practical results, even if it does have some imperfections. NK

The ABS thermoplastic used for the body is a lightweight, impact and scratch resistant material. The cartridge weighs 9g in total

### MEASURED PERFORMANCE

Our frequency response graph, using a JVC TRS-1007 test disc, shows an almost ruler flat result from 20Hz to 20kHz, meaning the Quintet Bronze will give very even tonal balance, without either top end brightness due to tip mass resonance or — more likely with higher up the range models from Ortofon — some slight high end loss and warmth. Only on inner grooves (red trace) does output roll away a little but as this is above 10kHz it will hardly be noticeable.

The cartridge’s tracking ability (300Hz) was high as a result, measuring 32 degrees. This adds quite a lot of second harmonic distortion to left and right signals, measuring 5%, but it isn’t easy to detect subjectively. Channel balance was a bit out too, according to our Shure TTR-109 test disc, at -17dB and -29dB, but an average figure of 23dB is fair enough.

Tracking was good at low frequencies and fair in the mid-band (1kHz), if not up to that of more expensive moving coils, including the Cadenzas from Ortofon. Output was healthy at 0.7mV at 5cms/sec rms.

The Quintet measured well enough to give good practical results, even if it does have some imperfections. NK

### SYSTEM USED

Linn LP12/Ittok LVII arm.
Luxman E200 phonostage
Townshend Audio Allegri pre-amp
2 x Quad 303 power amps
Kelly KT5 loudspeakers.

### MUSIC USED

Wagner: ‘Die Meistersinger Von Nurnberg’
Knappertbusch conducting Vienna Philharmonic Orchestra, Chorus of Vienna State Opera, with Schoeffier, Guedon, Edelmann. Decca Records. LXT 2659 - 64. 1954.


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### VERDICT

Relaxed and easy-going sound from Danish built cartridge. At its best with classical and acoustic sounds.

FOR
- smooth, well-mannered sound
- very forgiving of record condition
- at its best with classical/
- excellent grasp of rhythms

AGAINST
- less good with rock, punk or electronic

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Digital Chord

Resident analogue head Tony Bolton finds some digital interconnects that tickle his musical tastebuds.

From their base on Salisbury Plain, near Stonehenge, the Chord Company have been busy creating a new range of digital interconnects using their "Tuned ARAY" technology. They are tight-lipped about the details of this new configuration so I can only give you basic details about the construction of these cables.

But, suffice to say, anyone who believes digital interconnects don't make a difference should take a listen to these.

After running the cables in for 150 hours I listened to a range of music and settled on a CD of Janis Joplin performing at Woodstock Festival in 1969 (Columbia/Legacy 88697 48243 2) for the comparative listening. This was played via my Njoe Tjoeb 4000 Reference CD player with the interconnect sending the signal to my Teddy DAC (which upsamples to 24/192).

The most affordable of these three leads is the Anthem. This cable is made with solid core silver-plated conductors, insulated with PTFE and shielded with foil and a high-density braid. This is covered with a PTFE outer jacket. The plugs are Chord's own VEE 3 RCA plugs with an ABS outer shell and silver-plated connectors.

Compared to the cables supplied by most manufacturers with their equipment this cable is light years ahead in every aspect of the sound. I found Joplin's vocals projected forward of the musicians and disentangled from the morass of sound that had previously surrounded it.

The bass sound gained definition and allowed me to follow the rhythm more accurately, while treble sounds were far smoother and more palatable.

After such a good performance I was interested to see how much it could be improved and was not disappointed by the results when I plugged in the Signature interconnect.

This is a bulky lead that uses high-purity, single crystal solid core conductors, insulated with gas-foamed polyethylene. There is a dual layer composite shield, a high-density braided shield offering 95% coverage in conjunction with a semi-conductive shield layer. Chord's own ultra-low mass RCA plugs are used.

Although it costs nearly twice as much as the Anthem, I felt the Signature offered excellent value for money with a performance that was, to my ears, twice as good.

The soundstage seemed to become a lot bigger, with space and a little depth visible between the performers.

The bass sound gained a little in weight but a lot in descriptiveness, letting the boogying nature of the bass line on "Try (Just a Little Bit Harder)" really getting going.

The vocals gained in clarity and I was aware of the background hums and noises from the equipment for the first time.

The Indigo interconnect uses a polished silver-plated copper conductor, insulated by PTFE and surrounded by a combination shield of high-density silver-plated copper braid and heavy gauge silver-plated foil. Precision machined acrylic plugs with PTFE insulation are fitted.

Now I found the sound had a depth and vibrancy that I have not heard through this part of my system before.

Micro details of Janis Joplin's gravelly voice and her relationship with the microphone were obvious - as was the speed of the attack of the guitar notes. Drums had real punch behind their sound and I felt the timing had much more cohesiveness.

I felt that the Signature offered the best combination of sound-per-pound, the Anthem giving a dramatic improvement over stock cables. But the real delight was the Indigo. It offered insight and musicality and made listening to digital sources a far more involving experience.

The Indigo was supplied by most manufacturers an ABS outer shell and silver-plated conductors, insulated with gas-foamed polyethylene and a high-density braid. This is covered with PTFE and shielded with foil. There is a dual layer composite shield, a high-density braided shield offering 95% coverage in conjunction with a semi-conductive shield layer.

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Yamaha have updated their sumptuous piano-finish Soavo loudspeakers to new F901 status. They're sitting in our office right now looking glorious. Find out how they sound by reading our comprehensive review in the next issue.

...and we will also be running an in-depth review of the Beatles In Mono LP box set, complete with a review of the matching Ortofon 2m Mono Special Edition cartridge purposed to play them.

Also, we hope to bring you —
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Thorens TD206 Turntable
Bayan Audio X3 soundbook
Invicta Mirus DXD DSD DAC
The Beatles in Mono LPs review
Arcam FMJ AVR 750 AV Amplifier
Sony SRS-X9 hi-res loudspeaker
World Design HDS3 headphone amplifier
Ortofon 2M Special Edition 'Beatles' mono cartridge
Graham Audio BBC License LS5/9 monitor speakers

...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, such as failure under review, we cannot guarantee that all products listed above will appear.
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SEPTEMBER 2014 - 8TH JULY 2014
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A pioneering girl group, the Shirelles were the first major successful female vocal outfit of the rock era. Spouting a mixture of doo wop and pop with added R&B for good measure, the group also broke new ground because they appealed to white audiences in addition to their core black fans. They also provided a focal point for that phenomenon in songwriting prowess the Brill Building – a centre of excellence that featured such legendary names as Gerry Goffin & Carol King, Burt Bacharach & Hal David, Van McCoy, Neil Diamond, Jerry Leiber & Mike Stoller, Phil Spector, Laura Nyro, Paul Simon, Barry Mann & Cynthia Weil, Sonny Bono, Marvin Hamlish and more.

The Shirelles were a four-piece consisting of Doris Coley, Addie Harris, Shirley Owens and Beverly Lee.

"We were all friends and baby sitters" said Owens. "We originally considered forming a duet Beverly and myself. Then we thought we could put a group together because what we really wanted was that beautiful harmony and it's difficult for two people to do that".

"So we decided to get two more friends, Doris Coley, whose dad was a preacher and Adie Harris. We were fooling around in the school gym one day, singing and our gym teacher said 'Either you sing in the upcoming talent show or you are staying in after school.' So we picked the talent show".

It was Sceptor Records owner Florence Greenberg (the first lady to run a record label and who included the likes of Dionne Warwick, The Isley Brothers and the Kingsmen – remember 'Louie Louie'? - on her roster) who changed the group's name from the Poquellos to The Shirelles. The name was a combination of Shirley Owens first name with top vocal outfit of the time the Chantels.

"Greenberg had one tiny little office in New York, she had just started out", said Owens. "We sang for her. In fact, we sang our own composition 'I Met Him On A Sunday' at a party for her son, who was blind. She subsequently signed us up".

The band always maintained a sense of grace and charm when they performed, a fact that band member Beverley Lee alluded to, "We were proud of what we did" she says. "We always carried ourselves in a very ladylike manner, very professional. We dressed in a certain way – didn't want to be cleavage and all that".

In-house producer, Luther Dixon was assigned to the group after two initial single flops to give the outfit their signature sound. The Shirelles' first album was a glorious dedication to young love and their teenager-generated, small-minded approach to life: complete with sweet harmonies. Those small aspects of life that hover around desire, potential relationships, girlfriends, boyfriends, dates and more were all consuming with a gay insouciance for the rest of the world's problems. You won't find a Bob Dylan/Pete Seeger-like tale of woe on this platter.

The album, which was released in 1961, was unusual for its time in one respect. That is, it was totally ruled by the quality of the singles. This balance – or lack of balance – in the content of the album would be emulated by much of what came later via the likes of Motown and other imitators of the group.

So with this significant album, you hear the dominant title track but also 'Will You Love Me Tomorrow' and 'Dedicated to the One I Love'. '...Tomorrow' was initially released in 1960 and became the first female vocal group No 1 of the rock era. But that wasn't all, on this album you will also find the track 'Boys'. Ring a bell? It was included on the B-side of 'Will You Love Me Tomorrow' but was also a song that The Beatles turned almost into a pop standard on their own debut album, 'Please Please Me'.

The album is by no means a shallow bucket of singles. There are tracks such as the smoking 'You Don't Want My Love' while Dionne Warwick would later sing another album cut, 'Unlucky'.

Often under-appreciated, the group never fail to send shivers down the spine with an often raw, stripped vocal delivery that speaks of cutting emotion.
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Sensitivity: 87 dB @ 1 watt / 1m
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Behind the scenes
Dr. Joseph D'Appolito a world renowned authority in audio and acoustics designs the crossover and performs prototype testing/final fine tuning for Usher Audio. Consulting to a couple of famous audio companies, Joe always finds the tremendous value Usher Audio products represent a delightful surprise in today's high end audio world.

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PrimaLuna's Prologue and Dialogue ranges continue to expand, featuring ground-breaking advances such as the unique Adaptive AutoBias™ circuit that allows easy switching between valve types and the jitter-reducing SuperTubeClock™, exclusively incorporated into PrimaLuna's CD players. These innovations help create a benchmark-setting suite of products that builds on the marque's past triumphs, combining excellent sonic definition with a beautifully balanced tonality.

Aesthetically stunning to look at, with a hand-polished black or silver faceplate, PrimaLuna consistently fulfils Herman's original promise of creating the best you can get for the least you can pay.