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EDITOR

Noel Keywood
e-mail: editorial@hi-fiworld.co.uk



It's always nice to come across a product that takes us by surprise – and this month we got lucky with the JE Audio amplifiers, designed and built in Hong Kong. These days the old Crown Colony is a desperately modern city that reflects China's technological emergence. The region supports a lot of audio manufacturing and Hong Kong itself has Kings Audio, who produce the excellent Kingsound electrostatic loudspeakers. JE Audio join them in my view, with their thoughtfully designed

and beautifully built VM60 power amplifier and VL19 preamplifier. Rafael Todes, an expert on valve amps but a man that's hard to please, was genuinely taken aback and excited by them. You can read what he thought of these lovely amplifiers on p54.

Less of a surprise were the Martin Logan Summit X hybrid electrostatic loudspeakers featured this month, on p10. We've reviewed the Ethos, Montis and Electromotion models from Martin Logan and the Summit X enjoys the same formula of XStat electrostatic panel atop a small bass cabinet. As their top model, however, Martin Logan have used an interesting technological trick to best integrate these two units – and it works. The Summit X is a fabulous high-fidelity loudspeaker.

NXT never made it to hi-fi loudspeakers, ignoring the Cyrus Ikon. But the idea lives on in Balanced Mode Radiators: flat panels driven by a motor. Old hands have seen this before, from Sony for example who once made flat panel drivers. BMR is different though, and far more complex, relying on an understanding of panel behaviour early panels lacked. BMRs are still a new technology needing development; many have nasty treble peaks. Cambridge have tackled this issue well in their new Aero BMR loudspeakers. The Aero 2 is an innovative design that shows what the future is likely to bring in loudspeakers. And you may be interested to learn this technology came out of Britain's Defence Research Agency.

So this month I'm pleased to say we're featuring some superbly innovative hi-fi products. I hope you enjoy reading about them – and perhaps getting to hear them too.

Noel Keywood, editor.

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

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

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

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

verdicts

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email:news@hi-fiworld.co.uk

news

SPENDOR D1

The new Spendor D1 is the smallest loudspeaker in the Spendor D-line and has been designed to deliver a naturally balanced sound, even when it is installed close to a wall or placed on a bookshelf.

At the heart of the D1 is a pair of Spendor D-line drive units. Low frequencies are handled by a new 15cm Spendor bass/mid unit while treble is reproduced by Spendor's new LPZ tweeter, featuring a sequential geometry micro-foil that operates like an acoustic lens.

Finishes include Spendor Dark, a diamond polished gloss lacquer over a dark natural wood grain; Spendor White and Dark ebony. Spendor has also designed a matching stand, a rigid, light, non-resonant structure.

Price is £1,795 per pair. The optional stand is £595 per pair.

Contact www.spendoraudio.com or call 01323 843474 for more information.



SEVENTIES TRAD TEAC

Teac is launching a 1970s-style music centre. The retro LP-P1000 audio system houses a turntable, CD player, AM/FM tuner and a wireless Bluetooth connection for smartphones and tablets. Supplied with matching speakers, the LP-P1000 is available in cherry or black wood grain finishes.

The turntable boasts an auto-return tonearm, plays vintage 78s (as well as 33s and 45s), has a rubber mat and a sapphire-tipped ceramic cartridge (there's an optional SP-type diamond stylus too).

Powered via the LP-P1000's 25W amplifier, the system also features a built-in AM/FM tuner (with forty presets) as well as a CD player that's compatible with CD-R/RW discs. Both sources can be activated via the built-in digital clock's on/off timer.

Optional connections include two auxiliary stereo inputs (one via phono sockets, another via a mini-jack) plus a headphone socket and a remote control. Price is £450.

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

GENEVA'S MODEL XL WIRELESS

Featuring a six-driver 350W Class D, stereo design in four discrete acoustic chambers and custom powered by dedicated DSP controlled amplifiers in a single glossy cabinet, the Geneva Model XL Wireless is equipped with aptX Bluetooth streaming, DAB/DAB+/FM radio, a top-loading CD plus a remote, touch sensitive controls and LED display. External sources can be added via RCA inputs.

Support exists for external audio streaming devices such as AirPlay with Apple AirPort Express plus Sonos and more via the stereo mini connector.

Available in red, black and white piano-lacquered finishes alongside a premium walnut, it can also be mounted to its optional brushed aluminium stand. Price is £1,749 (Walnut finish is £1899 while the optional floor stand is £189).

Click on www.genevalab.com or call 0843 5236344 for more information.



ARCAM BLU-RAY

Arcam's new BDP300 Blu-ray player uses a Wolfson Audio 8741 DAC, coupled with a linear phase Bessel output filter and re-clocking system. The power supply has been specially designed too. Discreet sub-regulated power supplies on the drive, audio and DAC boards are featured.

Arcam has also used its 'Mask of Silence' techniques to shield important signal paths. The BDP300 benefits from a critically-damped cover and chassis to address microphonic vibration.

In addition the BDP300 has been optimised to make the journey from disc insertion to playback as fast as possible. The BDP300 also features a full suite of discrete IR and RS232 codes for integration within a home cinema installation.

Price? Arcam owners, until the end of January 2014, can trade in any type of Arcam disc player against the BDP300 and purchase it for £500. Non-Arcam owners can purchase the player for £600 by trading in any form of old disc player from any manufacturer.

Click on www.arcam.co.uk for more information.



BLACK RHODIUM ACT 4

The ACT4 speaker cables attempt to fill the position vacated by the company's Ninja model.

Ninja was made by using four wires in a 4-core cable as a single conductor and twisting two cables to give both positive and negative conductors.

To create ACT 4, four 2-core sheathed cables are used. Two 2-core cables are twisted together to create a single conductor of 12 sq. mm. Then each pair of cables is twisted in the opposite direction. By twisting the individual cables in one direction and the cable pairs thus created in the opposite direction, the conductors are effectively placed further apart from each other than if the cable pairs are twisted in the same direction as they were twisted to make each pair.

The opposite direction twist for the cables pairs gives the same geometry as if the cables were braided together.

Prices include: 3m pair terminated with rhodium plated locking 4mm plugs, £2250; 5m pair terminated with rhodium plated locking 4mm plugs, £3650. For bi-wiring: 3m pair terminated with rhodium plated locking 4mm plugs, £2360; 5m pair terminated with rhodium plated locking 4mm plugs, £3750.

Call 01332 342233 or click on www.blackrhodium.co.uk for more information.



CLEARAUDIO MASTER INNOVATION TURNTABLE

Derived from Clearaudio's flagship Statement turntable, the Master Innovation features a floating main platter assembly. A two-piece main platter, an upper magnetic drive platter and a two-piece lower magnetic drive platter. A narrow gap separates the upper and lower magnetic drive platters so they do not physically touch. Instead, a ring of powerful magnets, embedded in each, transfers drive from one to the other so that the entire main platter assembly rotates floating on, and driven by, nothing but a magnetic field.

The Ceramic Magnetic Bearing (CMB) technology uses opposing magnets to suspend the main platter. A ceramic shaft serves only to centre the revolving platter and continues through the magnetic bearing where it is attached to the upper magnetic drive platter.

The Master Innovation's drive system employs Clearaudio's patented Optical Speed Control (OSC) technology.

It is available with a variety of finishes and materials: black or silver anodised aluminium components; clear or high gloss black lacquered Panzerholz and black POM or clear acrylic platters.

Price is £14,500 (wood) and £15,400 (black). Call 01276 501 392 or click on www.soundfoundations.co.uk for more information.

BRUNOCO DIVA

The DiVA is a small footprint, 40W integrated amplifier using a DDC (Digital to Digital Converter) that takes the incoming PCM signal (Pulse Code Modulation) and converts it to a PWM signal (Pulse Width Modulation) that can then be amplified whilst remaining in the digital domain.

The DiVA is fed by a large adapted analogue transformer, oversized reservoir capacitors and twenty-four presets allowing for room tuning. Four internal clocks are included to help eliminate jitter from source equipment while the included USB connection is detected by PC or Mac, no drivers are required. Coaxial and optical connections are also included.

The DiVA has been designed for use with digital equipment but analogue equipment is catered for via RCA into an on-board ADC (analogue to digital converter). The DiVA has an aluminium chassis and has been sand treated, brushed and anodised. Price is £499. Click on www.brunoco.co.uk for more information.



ATC SCM 19 AND SCM 40 LOUDSPEAKERS

Featuring the new ATC designed and built 25mm soft dome tweeter, updated bass/mid drivers and crossovers housed in a curved, laminated cabinet, the second wave of ATC closed-box passive loudspeakers has arrived.

The SH25-76 tweeter employs a dual suspension system suppressing rocking modes even at high power output levels. The ATC configuration of a short edge-wound voice coil in a long, narrow, magnetic gap aims to keep distortion low. The tweeter's neodymium magnet has a black heat-treated top plate, which dissipates heat away from the voice coil to maintain high power handling and low power compression.

For the SCM 19, ATC's SH25-76 soft dome tweeter is joined by the company's linear 150mm mid/bass driver. It features a 75mm soft dome and a 9kg high-energy, 'Super Linear' magnet system, which includes a 75mm flat wire voice coil.

The new SCM40 features ATC's SH25-76 tweeter with ATC's 75mm soft dome mid-range and a 164mm short coil/long gap (under-hung) bass driver. The new model also benefits from crossover revisions that have improved the loudspeaker's overall balance and mid-high frequency integration.

The SCM19 is priced at £1,996 while the SCM40 is £3,275. Call 01285 760561 or click on www.atclouddspeakers.co.uk for more information.



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Paul Holby, HiFi World 2012

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Mains cable Product of the Year 2012
Cables, amplifiers and the unexpected!

"Whatever you do, don't audition the Ultra Black. As I said before, once you do, there's no going back."

Steve Dickenson, Hi Fi Plus 2010

"The Iridium mines details other amplifiers only dream about"

Noel Keywood, Editor, HiFi World 2012

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NANO iDSD

The iDSD is a small, portable (only 163g) battery-powered DAC with a built-in headphone amplifier that plays high-res formats including PCM (44.1-384kHz), DSD (5.6/6.2MHz) and DXD (352.8/384kHz). The nano iDSD includes a 1400mAh on-board lithium-polymer battery. Price is £165. To find more about the iDSD, click on ifi-audio.com.



JARRE AEROSKULL HD

Well, it will certainly break the ice at parties. Available in eleven colours: black chrome, matt black, pink, purple, blue, green, yellow, orange, red, glossy white and chrome, the skull has been created by Jean Michel Jarre of 'Oxygene' fame. The AeroSkull HD can be docked with all i-devices with a lightning dock. Bluetooth and NFC are also included along with aptX codecs. A Line In will connect other MP3 players, computers or CD/DVD players. Price is £379. www.jarre.com



PURE D2 IN WHITE

The most compact member of the Pure Evoke family, the Evoke D2, a portable DAB digital and FM radio, has now been issued in white.

Features include 20 presets (with four quick access buttons), kitchen and sleep timers, tone or radio alarm, stereo headphone socket and aux-in. Click on www.pure.com.

RAZER GOES METAL

Razer's new top-of-the-line headphones are the Razer Kraken Forged Edition. Crafted with ear cups machined out of aircraft-grade aluminium and finished with a matte texture, the Razer Kraken Forged Edition features 40mm bass-heavy drivers, leatherette ear cushions lining the ear cups, fully adjustable headband and a lightweight, foldable design. It also includes a swappable cable with an in-line microphone. Price is €299.99.

For more information click on www.razerzone.com



STAGER SILVER SOLIDS

Stager Sound has released a set of pure silver analogue and digital interconnect cables. The unshielded symmetrical cables offer low capacitance via its .999 pure fine silver solid core wire. Hand polished to a grainless surface, lead free silver solder is used at all contacts, along with colour-coded Polyolefin heat-shrink protected ends and Caig DeOxit Gold is applied to the silver for enhanced electrical contact.

Canare F-10 RCA connectors with a machined solid brass centre, Teflon insulators and 24k gold plated contacts are also included.

Stager Silver Solids are also available in a three-wire balanced configuration with gold tipped Neutrik XLR connectors. Price for the Canare configuration is \$150 per metre. The Neutrik variant is \$210 per metre.

Click on stagersound.com/silver or call 001 212 595 4065 for more information.



KLIPSCH STATUS HEADPHONES

Built from Grilamid TR (often used in high-end eyewear) with a gloss finish, Status headphones are over-the-ear models with memory foam ear pads and Dynamic Moving Coil 40mm Speakers. A microphone plus three-button remote is also contained. Featuring a 3.5mm connector plus airline adaptor, it also includes a carry case. Price is £199.

Also look out for the KMC3 music system, the result of collaboration between Klipsch and Live Nation, featuring 15W drivers plus 35W subwoofer as a bi-amped system. Presented within a bass reflex chassis, the box runs on batteries with a twenty-six hour life (eight hours on full volume) using eight 'D' cells. The KMC3 arrives in either black, white, blue, red or purple. Price is £350.

Click on www.klipsch.co.uk



SHARP GX-BT3

Sharp has released a new wireless Bluetooth speaker.

Featuring near field communication (NFC) tags, you can position the tags up to 10 metres from the speaker to stream your smartphone's music library.

The GX-BT3 has been optimised for Android phones, using Android's Open Accessory Protocol, to allow transmission of a PCM digital signal from phone or tablets instead of just compressed audio files. The BT3 also supports all iPhones, iPads and iPods.

The GX-BT3 is a curvy, double cylinder shape, with an 8cm subwoofer at each end and priced at £120.



CORRECTION

In our January issue the website for the Usher Dancer Mini X-Diamond loudspeakers should have read www.decentaudio.co.uk.

Peak Power

Martin Logan's top hybrid electrostatic, the Summit X, is a powerful technological statement, Noel Keywood finds.

quality loudspeakers go.

And here we are talking quality with a large Q, as delivered by a very special see-through drive unit that uses a fine Mylar film – think Clingfilm – driven by electrostatic forces to move air. It looks magic – and its looks don't deceive: it is magic.

This is Martin Logan's wonderful XStat panel, the electrostatic bit. Beneath it lies a compact bass cabinet in which, on the Summit X, are two bass units, one firing forward and one downward.

Both are driven by on-board power amplifiers, in order to deliver powerful bass from a small box no wider than the panel above it.

And that's why the Summit X is defined as a 'hybrid' electrostatic; the electrostatic part covers most of the audio band, from the highest of highs down to the lower midband, below which the forward firing, internally powered bass driver takes over to handle all the lows, aided by a downward firing unit.

What you get with this premium model is Martin Logan's largest and best XStat panel – quoted as 44in tall and 11.3in wide (Imperial units because Martin Logan are a U.S. company), or 111.8cms x 28.7cms.

Full range electrostatics that produce all the audio band – including bass – from an electrostatic panel are necessarily wide and visually intrusive. See Martin Logan's own CLX, Quad's 2905 or Kingsound's King III for examples. The narrow Summit XStat panel, however, visually better blends into a room, helped by its transparency – and this is the advantage of a hybrid: they are room friendly.

Martin Logan say the panel works down to 270Hz, covering just a bit more of the lower midband than the Montis

Electrostatic loudspeakers have a clarity and a purity that is both obvious and stunning. They also have a gloriously large sound stage on which instruments and singers are placed with eerie precision.

But on the negative side, they struggle to produce bass and struggle to remain unseen! And I've struggled to get them to work in my home for longer than I can remember.

Martin Logan's budget (£3.5k) Electromotion hybrid electrostatics work for me, however. So how would their top-of-the-range Summit X costing £15,000 perform I wondered?

Yes, that's expensive, but not as top

(340Hz) and our measurements confirm this.

The Summit X stands 61in high to the top of its panel, so it is high by any standard, but at 32.2cm wide (nearly 13in) and 21in deep including rear terminals, it can be squeezed into a room of modest size, unlike bigger panel speakers

I've run Electromotions for some time now in my 17-foot long lounge and they blend in and work well (with acoustic absorption panels behind).

The Summit X will suit rooms of medium size like this, or larger of course, and its bass controls facilitate room tuning

Although large, the Summit X is easy to accommodate, its transparent electrostatic panel blending in nicely. Having once run Quad ESL-63s for many years I appreciate this; full range electrostatics like the Quads are visually dominant and the ESL-63s ate up too much of my precious lounge floor space I decided in the end.

Martin Logan's XStat panel is truly innovative and – better – it doesn't just look the part, it works flawlessly in practice.

Over the years, the company has steadily smoothed its response our measurements show, and they've improved its consistency over a wide forward angle, so the panel sounds the same sitting down or standing up.

A big panel like this one moves a lot of air and projects well across a room and the Summit X was superb in this respect.

Like the Montis I have reviewed, it does project strongly right up to 20kHz and can be very analytical. That makes it a great reviewer's tool, but you do have to bear in mind that it does not flatter poor digital in particular, like compressed MP3, m4a files and such like.

You ideally need top-quality sources, both LP and digital, and a suitable amplifier because the panel connects directly to it (well, through an audio transformer), even if the bass bin does not.

There are many problems big electrostatic panels can suffer – from poor dispersion to limited power handling, film damage and flashover.

My Braun electrostatics, for example, would crackle and spark merrily as I played them and were barely usable, but they still sounded amazing and were an education on just what electrostatic loudspeakers can (could!) do.

The Summit X panel has moved the game well ahead since the Brauns (Quad ESL-57s) existed. They can accept amplifier powers of up to 300 Watts, Martin Logan say, and their curved front minimises phase cancellations and improves lateral dispersion of the sound.

And because the stators are coated, they cannot and do not flash over, so no blue sparks in everyday use!

Apparently, no vacuum sweeper can tear the film because it is so tough, and even a sharp object poked through it will cause damage but little affect on the sound, Martin Logan say (download the Summit X User Manual and read the Q&A section for further information).

Apart from these unusual practical issues that surround electrostatics – which also influence performance in the tropics as we've been told by Hi-Fi World readers – our measurements clearly show the XStat panel smoothly covers the audio band, like no other loudspeaker.

Having no crossover at 3kHz it also lacks phase anomalies and character changes between bass/midrange unit and tweeter that afflict conventional box loudspeakers

This consistency contributes much to their exceptional imaging and, for example, gives violin in particular a sense of being a one-piece physical instrument rather than a mellifluous representation.

But I must not keep talking about the XStat panel, or even electrostatics.

For the Summit X also has a compact bass cabinet and progressive phase cancellation toward higher frequencies that, Martin Logan say, makes the bass transition from monopole to dipole radiation at the crossover frequency.

Put more simply, this means the panel which fires sound forward and backward (dipole), out of phase, better matches the bass bin (monopole) where no such forward/backward cancellation occurs.

I did once use a true bass dipole, the Celestion SL-6000, to match an electrostatic dipole, Quad ESL-63s, but it was a horribly complicated arrangement and viciously demanding of bass amplifier drive power.

I did get ultra-low, near-perfect bass – but what a hassle! Which is why Martin Logan's less complex blending approach on the Summit X struck a chord with me.

There is just one set of loudspeaker terminals, so



The rear panel carries 25Hz and 50Hz bass level controls, a lighting control and an LED down-light, no less!

LEDs also show auto-power status. Note the need for mains power through an IEC socket.

bi-wiring is out.

The terminals fitted accept 4mm banana plugs or bare wires. Above them are three control knobs, controlling very low bass at 25Hz – subsonics really – and deep bass at 50Hz. These interact with room modes, controlling room boom in effect. The idea is to avoid boomy bass, but alternatively bass power can be increased to add extra oomph, according to taste.

Alongside the two bass level controls, that provide both lift and cut, is another rotary switch that controls three lights, to give seven settings for them, including a down light, no less. Response shaping is digital: the signal passes through an ADC, is processed, and is then converted back to analogue for the bass power amplifiers.

One bass unit moves slowly out of phase with the other as frequency increases to smooth the transition from monopole to dipole and our response graph does show a shallow dip in output above 100Hz due to this effect.

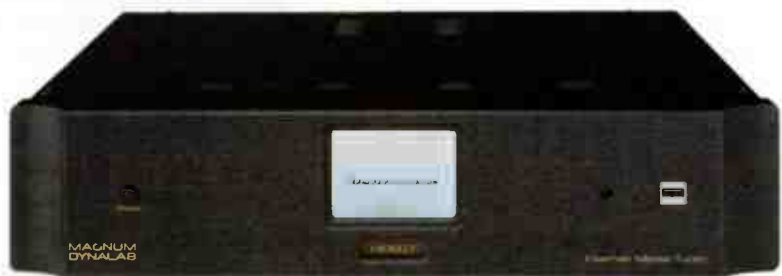
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MD 807T Internet Media Tuner



MD 209 FM Stereo Receiver



MD90/90Triode FM Analogue Tuner

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frequency scale, because the big panel runs flat to 20kHz, our measurements show, it puts out a lot of acoustic power at high frequencies and tilting back using the adjustable feet will lessen this a little. I also used an Audiolab M-DAC with optimised time-domain filtering for CD, to roll down treble smoothly.

I used acoustic absorption panels against the rear wall, a few feet behind each Summit X, to absorb rear radiation. An obvious partnering amplifier is the solid-state Quad QMP Elite monoblocks I used, or Quad II-eighty valve power amplifiers. Generally, a good valve amplifier with 4 Ohm tap is a fine match for an electrostatic and I used my own WAD 300B amplifiers. Beware of powerful transistor amps having bright treble: the big XStat panel reveals their limitations and this isn't a match made in heaven.

SOUND QUALITY

The Summit Xs are big, yet at the same time they fitted my lounge easily, either side of a large Victorian fireplace. This is a fairly typical set-up and the speakers slotted in nicely – a big plus point as high quality electrostatics go, because traditionally they don't fit into my home easily, nor any home where space is limited.

Driven by Quad Elite QMP monoblock power amplifiers fed by an Astell&Kern AK120 high-resolution digital player, the most immediate and impressive aspect of the Summits was their vast sound stage.

In my room the cabinets were 7ft apart, and since each is 5ft high when seated, I was listening upward to a celestial image in front of me, of a size few loudspeakers can manage.

Because the entire XStat panel radiates coherently the full area is alive and Diana Krall had a looming presence at the end of the room, singing 'Narrow Daylight' (24/96).

This is largely down to the panel being an acoustic line source, not a point source; the XStat panel is different from most loudspeakers in this respect.

The panels image more emphatically than conventional drive units, giving singers a visceral presence, with supporting instruments laser-etched in their location. I decided to raise the rear of the cabinets a little, using the adjustable feet, to get full treble extension, because this directed more treble energy at me, making the Summit Xs exceptionally

analytical – as reviewers like it!

In practice I have found the Electromotion panel allows me to clearly identify the image imprecision jitter in digital sources causes and the Summit X panel is even more overwhelmingly 'obvious' in its presentation when set to fire down like this. To be technical about it, the large XStat panel radiates more high frequency acoustic power than other loudspeakers and that makes treble very obvious, although the Summit X can't be described as "bright".

It is brutally analytical though and, as I found with the Montis, this means you have to be understanding about what your source and signal chain is doing.

When I played old CDs like

sound, completely free of colour, in a way that only electrostatic loudspeakers can do.

With no box coloration, and no phase anomalies, the Summit Xs tell it like it is – and other loudspeakers struggle to get close.

In describing basic presentation, however, I will mention that the Summit X does not have the chesty lower midrange warmth of big box loudspeakers – and some listeners don't appreciate this. Which brings me to the bass cabinet.

Running the two bass units progressively out-of-phase to mimic dipole dispersion at crossover reduced energy in the crossover region and this can be seen as a shallow dip in upper bass in our



Firing downward is a 10in aluminium cone bass unit, as well as white LEDs for floor illumination. This unit progressively moves out-of-phase with the forward bass unit at higher frequencies to improve matching to the dipole XStat panel.

Gerry Rafferty's 'North & South' album (1988), ripped to the AK120, treble frequently sounded hard, but this is old digital for you; both LP from my Garrard 401, SME312S arm and Ortofon Cadenza Bronze cartridge set-up, and high-resolution recordings from the AK120 were fine.

CD was best heard via the Audiolab M-DAC using its optimised time domain filters.

Martha Gomez hung in space between the big panels, singing 'Lucia' (24/96), plucked guitar strings sounding sweetly resonant, whilst accordion had size and presence to one side of the sound stage.

The line source nature of the tall panels gave images life-like dimensions and this contributed strongly to the overall impact of the Summit X's sound staging.

Martin Logan's XStat electrostatic panels are about the best in the business – delivering an airily clear

measurements. In use this does make integration smoother and more harmonious between bass monopole and panel dipole; I was less aware of there being two separate entities – bass and all else – with the Summit X than with other Martin Logan hybrids.

With twin, independently-powered 10in bass units the Summit X goes low in obvious fashion. Playing the Eagles 'Somebody', from their CD 'Long Road Out of Eden', I have rarely heard so much subsonic power from the kick drum but at the same time it sounded well-defined and lacked any sign of being overblown.

I tried various bass settings and ended up, not unexpectedly, with -2dB bass cut at 50Hz to de-emphasise room modes and the 25Hz control at flat, because my 17ft room is starting to attenuate bass this low.

Jackie Leven's 'Clay Jug' (LP) best demonstrated the low-end kick of

Platinum series



QUAD's reputation as a manufacturer of hi-fi products that deliver musical accuracy through technical prowess is legendary and is nowhere more evident than in the Platinum series of components. Platinum is the pinnacle of QUAD design, a series of CD/DAC Pre and Power amplifiers that provides everything you need, bar the loudspeakers, to replay music recordings as they were meant to be heard – naturally. Platinum is the flagship of the QUAD range, a new set of electronics from a brand that has been famous for quality amplification since 1936. Like all QUAD designs, Platinum's purpose is the 'closest approach to the original sound' – in Platinum's case closer than ever before.

the Summit X, bass drum having a delicious power and presence, whilst the bass guitar strode along authoritatively.

With Jackie talking and singing down at me I was more than impressed by the Summit X and its sense of firm bass control.

Not only did the bass on rock tracks sound deep and powerful but orchestral kettle drums had scale and presence too: on Rimsky Korsakov's 'Snow Maiden, Dance of the Tumblers' (24/96), a massive kettle drum strike shook my room firmly.

The bass units of the Summit X not only produce prodigious subsonic power, they also manage to sound tight and clean at the same time.

Marianne Thorsen playing violin with the Trondheim Soloists (24/96) showed how the big XStat panel brings a sense of firm body and clear outline to string instruments, due to its consistent phase behaviour.

The sense of detail and insight provided was enormous, partly because upper midrange output is so strong and consistent.

However this does make the Summit X a revealing listen rather than warm and cuddly.

But although some of my older

and well worn LPs sizzled conspicuously as the Ortofon Cadenza Bronze tracked the lead-in groove, I also realised I was playing very loud most of the time and this noise was soon submerged by the music.

CONCLUSION

For me, Martin Logan's biggest XStat panel is a tour-de-force of loudspeaker engineering – one that works every bit as well as they claim, measurement and listening show.

"on Rimsky Korsakov's 'Snow Maiden, Dance of the Tumblers' (24/96), a massive kettle drum strike shook my room firmly"

You simply cannot get better clarity than this, you can't get a more even sound free from phasiness and you'll never hear violin sounding as it is meant to, except from this big XStat panel.

It's line source nature paints up a massive sound stage, one on which images are pin sharp. Again, I've never heard better – and I cannot imagine

being able to.

The challenge with the Summit X was to get the panel to integrate seamlessly with the powered bass cabinet and this Martin Logan have managed to do through ingenious electronic tinkering.

In practice it makes the Summit X an understated 'audiophile' design, sound-quality wise, when correctly matched into the room.

It has a correctness about it that I loved, because I want a loudspeaker

not only to work perfectly, but acoustically disappear too – and this the Summit X almost did.

Only its down-light, projecting a bright glow onto the floor below, made clear that there's an unusual but amazing loudspeaker above, one I would suggest you hear if you can. Loudspeakers don't get much better than this.

MEASURED PERFORMANCE

The big XStat panel of the Summit X measured almost flat over its working range from 270Hz to 20kHz, our analysis shows. There's some summation from the bass unit and panel above 300Hz, irrespective of bass control settings, although they were set to zero for this analysis. The peak lowered slightly off axis, however, as dipole panel output lowered, so this is unlikely to be of great subjective importance in use, although if anything it will add to lower midband (voice) warmth and body, which electrostatics are often accused of lacking, so it might be beneficial.

XStat panel output is very smooth all the way to 20kHz, suggesting even tonal balance and low coloration, as well as strong detailing from sustained output in the usual loudspeaker crossover region of 3kHz where there's often a dip (as well as phase anomalies).

Martin Logan have this big electrostatic panel working beautifully, with even output over a wide range of measuring-microphone positions in front of the panel, where in the past there was variation (as is common from panels due to phase cancellation), which meant seating position affected sound quality.

The Summit X will sound consistent

over a wide forward angle and shouldn't change too much even when standing; traditionally big panels have sweet spots but the XStat largely eliminates this problem.

The bass unit runs strongly right down to 30Hz, so subsonics will be quite obvious. The 25Hz and 50Hz level controls provided substantial lift and cut below 100Hz, and did not affect upper bass.

From the side, output from the monopole bass bin rose smoothly above that from the panel, the transition between them being smooth.

However, the bass bin is a monopole, not a dipole like Celestion's SL-6000 that I once used with Quad ESL-63s, so it does not have to be steered.

Sensitivity measured a reasonable 87dB sound pressure level at one metre from one nominal Watt of input (2.8V). Our impedance plot shows the panel is connected direct to an external amplifier, not via an internal amp, and being a capacitor its impedance falls steadily toward high frequencies to become the input transformer's DCR value of 1 Ohm or so at 20kHz – quite a challenge for transistor amplifiers (or their protection circuits should I say). Because the bass unit is powered little current is drawn

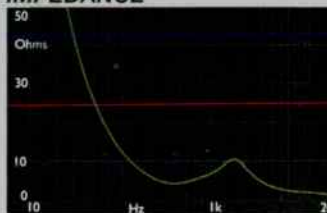
below 100Hz. Amplifiers of around 40 Watts upward are needed to go reasonably loud, and 100 Watts or so is sensible for high volume, bearing in mind the amplifier is not driving the bass unit, only the XStat panel. Valve amps with a 4 Ohm output tap are a good choice; transistor amps need to be able to deliver current at 20kHz without protection circuits interfering (or, worse, failing).

The Summit X measures well in all respects. Its XStat panel looks superb and the bass unit a tight match. **NK**

FREQUENCY RESPONSE



IMPEDANCE



MARTIN LOGAN SUMMIT X £14998



OUTSTANDING - amongst the best

VERDICT

Fabulous hybrid electrostatic loudspeaker that fits into even medium-sized rooms, can be tuned to suit and gives a sound that is unmatched for quality. Stunning!

FOR

- awesome clarity
- massive sound stage
- powerful bass

AGAINST

- large
- need mains power
- demands top quality amplification

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Box clever!

Pro-Ject's latest streamer uses valves in the output stage to give a distinctly different sound. Jon Myles takes a listen and sees the light.

Mention the name Pro-Ject and most hi-fi enthusiasts' thoughts will immediately turn to affordable, well-designed and great-sounding turntables.

Recently, though, the brand has been building a parallel reputation with its compact 'Box' range of separates. Latest to join the family is the Stream Box RS – which, as the name would suggest – is a UPnP media streamer aiming to bring full network functionality to an existing hi-fi system.

Like many rivals, it offers 24bit/192kHz capability over both wired and wireless connections, as well as access to thousands of internet radio stations.

But the Stream Box is also

looking to bring a little bit more to the party. Hence, take a look at the unit's rear and not only will you find the usual digital connections – but an analogue input as well.

Also nestling there is a small button which when pressed brings the volume control on the front panel into play to enable the Stream Box to operate as a full preamp via the rotary volume control on the front.

And just to distinguish itself a little bit more, the output stage of the RS uses a pair of 6922 (E88CC) triode valves in dual mono configuration. While tube outputs are not unheard of in streamers (Consonance, for one, have done similar), they are certainly unusual enough to make the Stream Box RS something of a rare beast.

Aside from that feature, the RS also boasts both balanced XLR and unbalanced RCA outputs as well as USB inputs on the front and rear panels.

Housed in Pro-Ject's familiar compact 206 x 72 x 200mm (W/H/D) chassis, the front of the unit is dominated by a large colour display screen – which is used to display system information, album artwork and station identity logos when streaming internet radio.

Flanking it are an on/off toggle switch, USB socket and the volume control – meaning most control functions are handled by the supplied remote control or the recently-released smartphone app.

The remote is small but functional – however, the likelihood is most Stream Box purchasers will



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Hi-Fi World, July 2013



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gravitate towards the free mobile app for everyday use.

Thankfully, Pro-Ject has provided both iOS and Android versions and – while lacking some of the sophistication of, say, Naim's nStream or Linn's Kinsky controllers – it works well in practice with fast access times and a clean and simple interface.

Out of the box, set-up of the Stream Box was smooth and easy – the only faff being a rather cumbersome method of inputting the home network password.

Once done, though, the Pro-Ject discovered my NAS drive running Twonky within seconds and from then on remained rock-solid, never dropping the connection even when streaming hi-res 24/192 files.

SOUND QUALITY

Set the RS playing and it soon becomes obvious those 6922 valves are not merely for show.

The Pro-Ject has a tonal quality quite different from most other streamers – and it translates into a quite beguiling sound.

Its overall quality is smooth, relaxed and rather warm with little evidence of any digital sharpness. But that doesn't mean it is soft or lacking in rhythmic ability – just that it doesn't throw everything in your face as some other streamers do.

A Certain Ratio's funk-infused 'Down, Down, Down' sounded delicious as the Pro-Ject really settled into the groove and ran with it.

There was no lack of detail on offer, with the subtle guitar and electronic embellishments being well delineated while the underlying bass work was rock solid.

Point the Stream Box towards some intimate jazz and it really comes into its element.

A high-resolution FLAC download of Empirical's Eric Dolphy tribute album 'Out 'n' In' has terrific tempo, tone and timbre to it – the interplay between the vibraphone and sax extremely well portrayed. Like Dolphy's own work, this collection has real warmth and passion but for real effectiveness it demands a player that can also render the various musicians' timing effectively – and the Pro-Ject is more than up to the task.

That innate smoothness, though, does mean the Stream Box hasn't quite the same bite and attack as some rival machines.

My everyday streaming set-up is built around a Naim system – which

presents music in a much more forthright manner. In comparison, the Pro-Ject is less dynamic and more considered in its portrayal.

On the opening of The Clash's 'Jimmy Jazz', for example Paul Simonon's walking bass line has a weight and definition on the Naim that the Pro-Ject can't quite match. Instead the Stream Box trades warmth for outright definition.

This does mean, however, that lower quality or harsh-sounding recordings fare better. Oasis' 'Definitely, Maybe' had some of its rough edges knocked off without losing the verve and aggression that characterised the band's early days.

Stereo width is decent too, the Stream Box laying out a fairly broad soundstage with good definition of where individual musicians are situated on the appropriate recordings.

Interestingly, the basic character of the Pro-Ject remained broadly similar however it was used.

Turning on the preamp function and running it into a power amplifier revealed the same overall warm

character with a smooth, civilised performance.

Trying some high-resolution tracks through the front USB connection brought a marginally cleaner and more finely-etched sound compared to UPnP streaming, but not so much as to make a huge difference.

Instead the Pro-Ject just goes about its work in the same even-handed yet thoroughly musical way,

CONCLUSION

The Pro-Ject Stream Box RS is a refreshingly different addition to the ranks of music streamers. It has a smooth, relaxed and thoroughly civilised sound without ever straying into the realms of blandness.

There's no doubt the valve output stage adds a distinctive flavour to the sound – and one which should find favour with many listeners. Its analogue input and preamp facilities also add to the value, while the free smartphone control app is well-designed and fuss-free too. Add it all together and you have a very tempting package indeed.

MEASURED PERFORMANCE

Frequency response extended to 35kHz with 96kHz and 192kHz sample rate signals, through the electrical S/PDIF input. A hard cut off at 48kHz with 192k sample rate data suggests it is subject to 96k filtering. The optical S/PDIF input accepted 96kHz sample rate maximum. The Streambox RS offers the sort of extended bandwidth expected from high sample rates.

More importantly, with 24bit resolution distortion at -60dB fell to a low 0.05%, a good result for a budget product. Top DACs manage 0.02% and budget ones around 0.1%, so in this field the Streambox RS performs well.

Only the presence of some low level noise from the valves restricted dynamic range to 109dB. This is better than CD (102dB) if not close to the very best DACs.

Output from the phono sockets was a low 1V, but the balanced XLR output offered 2V, the same level as a CD player. This is not normal: 2V from Phono and 4V from XLR is standard, so output from the Streambox RS is -6dB low. Valves can swing much more than this.

The Streambox RS measured well for its price. It has no technical weaknesses and returned a good set of figures. **NK**

FREQUENCY RESPONSE

DISTORTION

THD	0.0522 %	2.1594 mV	199.00 Hz
THD	OFF	OFF	OFF

Frequency response (-1dB)

192k	4Hz - 35kHz
Distortion	(%)
0dB	0.01
-60dB	0.05
Separation (1kHz)	112dB
Noise (IEC A)	-108dB
Dynamic range (EIAJ)	109dB
Output (Phono,XLR)	1V, 2V

PRO-JECT STREAM BOX RS £1,099

OUTSTANDING - amongst the best

VERDICT
A refined and smooth performer that brings something different to the ranks of music streamers. Preamp capability is also a useful addition.

FOR

- smooth, sophisticated sound
- analogue input
- preamp facility
- good control app

AGAINST

- not the most forceful presentation
- nothing else

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Jeff Dorgay, Tone Audio Magazine, January 2013



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Paul Rigby, Hi Fi World, March 2013



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WIN CAMBRIDGE AUDIO'S STREAM MAGIC 6 IN THIS MONTH'S GREAT GIVEAWAY!

Here's your chance to win the superb Cambridge Audio Stream Magic 6 in this month's Hi-Fi World competition.

We gave the Stream Magic 6 a glowing a five globes rating in our August 2012 issue. Here is your chance to win on one of these superb digital network media players.

Simply read the excerpt from our review below and then answer the four simple questions on the right to have a chance of winning.

"The Stream Magic 6 from Cambridge Audio is quite a box of

tricks – and very easy to use from an Apple iPhone communicating through a domestic wi-fi link. With the free iPhone application I could easily sit back and dial up music at leisure. The app even provides control of volume from the phone.

As a network player the Stream Magic 6 is designed to plug into a home computer network so it can play music from computers or storage devices on the network, and also access the internet to get internet radio and streaming services.

It will also play music files from a memory stick, sockets being available on both front and rear.

Not only are there phono socket

analogue outputs, but balanced XLR outputs too. Performance from its on-board Wolfson DACs was superb and sound quality from the analogue outputs beyond criticism.

I was taken aback at some of what I heard, such as full 24/192 replay from a MacBook Pro. As if all this was not enough Cambridge also add another option – a Bluetooth link using aptX or A2DP protocols.

The Stream Magic 6 is a must have. It does so much so well".

For a chance to win this great prize, just answer the four easy questions on the right regarding the Stream Magic 6's capabilities and then send your answers on a postcard only, by February 12th to:

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Hi-Fi World magazine,
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QUESTIONS

[1] It has which analogue outputs?

- [a] Phono/XLR
- [b] USB
- [c] HDMI
- [d] None

[2] What DAC is used?

- [a] Philips
- [b] Wolfson
- [c] BurrBrown
- [d] Texas

[3] What Bluetooth protocols are used?

- [a] aptX/A2DP
- [b] Colgate
- [c] TCP/IP
- [d] Electric brushing

[4] We controlled it with what device?

- [a] Thought waves
- [b] Magic wand
- [c] Apple iPhone
- [d] touch pad

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Golden days

Antelope Audio has an impressive track record in high-end audio – now it's bringing its expertise to bear on the home market with the Zodiac Gold DAC/preamp. Jon Myles listens in.

If one segment of the hi-fi separates market has enjoyed exponential growth over the past few years it's that of the outboard DAC.

Not only are new products emerging at a dizzying rate, they come in a variety of shapes and sizes – ranging from thumb-drive sized devices which plug into a computer's USB slot to considerably more exotic, higher-specced units with price tags to match.

Antelope's Zodiac Gold fits firmly into the latter camp – being a DAC/preamp/headphone amp in one box costing £2,595. The optional power

supply as provided for the review costs another £765 – although the pair can be bought as a package for a discounted £3,095.

Not exactly cheap, then. But, to be fair, there are DACs costing much more and when you look at the technology Antelope has packed into the Zodiac Gold then things begin to make sense.

If the name Antelope is new to you, suffice to say the company has a large and respected presence in the pro-audio world through founder Igor Levin's innovative work in digital clocking and audio processing technology.

Indeed, it recently provided the playback, lighting, sound effects and vocals clocking system for Rihanna's recent Diamonds tour – which, I believe it's probably safe to assume, was no small job.

Not that pro-audio credentials necessarily translate into great sound in a domestic environment but it shows the background behind the Zodiac Gold, especially when it comes to the digital domain scheme of things.

So the Zodiac is a full 24-bit/384kHz capable DAC utilising Antelope's proprietary "Open Control" clock.



Which, to put it in layman's terms, means the clock is housed in a shielded container where the temperature is kept constant – Antelope believing this brings significant benefits to the detail, dynamics and stereo placement of the audio.

Jitter management is also handled by the company's proprietary Acoustically Focused Clocking technology (AFC) as implemented in all its professional master clocks.

As befits Antelope's pro-audio background the unit itself is sturdily built and reassuringly hefty despite its relatively compact 165mm/112mm/190mm (H/W/D) dimensions.

That compact size means almost every inch of the rear panel is taken up by the various connection options – befitting the Zodiac's ability to form the heart of even the most complicated audio systems.

The six digital inputs consist of USB, one AES/EBU, two coaxial S/PDIF and two Toslink. In addition there are both balanced and RCA analogue inputs which by-pass the digital circuitry to be fed directly to the preamp's volume control.

Output options consist of both

balanced and unbalanced analogue as well as both AES and S/PDIF digital.

Inputs are selected by toggling through the options via the source button on the front – and intelligently the Antelope's circuitry auto-senses what connections are in use and ignores redundant inputs.

The fascia also features a pair of full-sized headphone outputs with their own dedicated volume control as well as power, mute, mono and standby buttons.

A small multi-function LED display at the top can be set to show incoming sample rate, main volume level, source, headphone amplifier impedance and various information regarding the USB mode being used.

The simple, all-metal remote control is well laid-out and gives access to power on, source, mute, mono and volume controls. Alternatively Antelope also has a control PC/Mac app for the DAC which can be downloaded from its website and sends commands via the USB connection.

A single lead connects the Zodiac to its matching-style but slightly smaller Voltikus power supply. This is said to deliver a purer, more stable DC power feed to the Zodiac

Gold and so produce a noticeable improvement in sound quality.

Paired together on a hi-fi rack the two units do have an attractive, and undeniably high-end look and feel.

SET-UP AND USE

Despite its variety of input and output options, once connected the Zodiac and Voltikus pairing is admirably easy to operate.

All the buttons on the remote and fascia are firm and responsive while switching between sources is fast and easy – helped by the auto-sensing feature which ignores unused inputs.

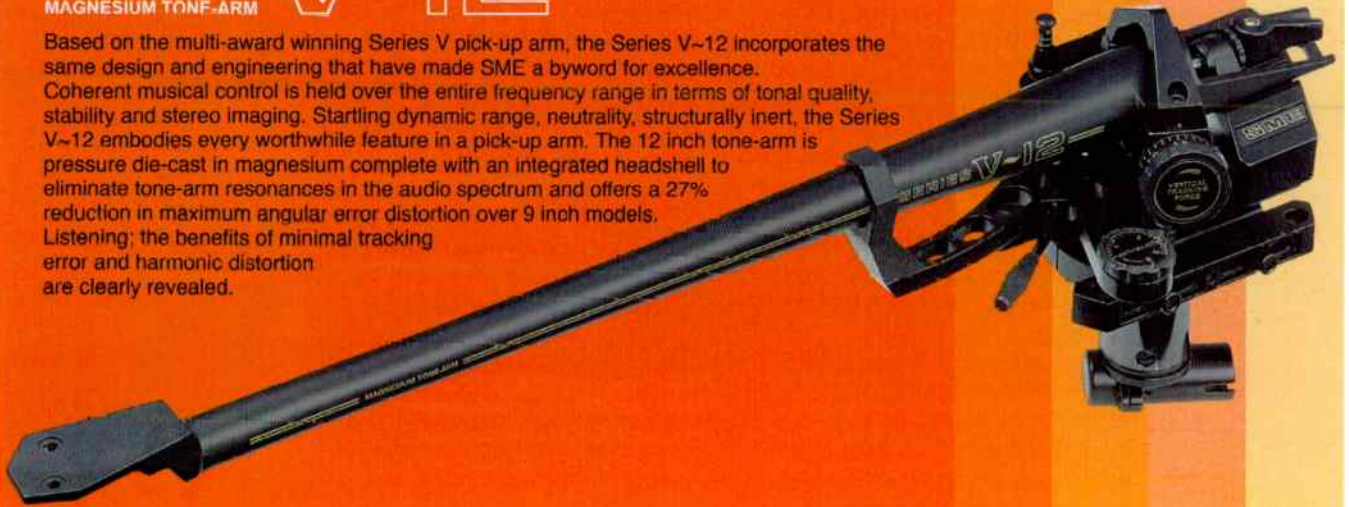
The volume control is well-weighted too, with fine adjustments easy to make from the remote control – a feature not common to all DAC/preamp combinations. Incidentally, volume adjustment is carried out entirely in the analogue domain to avoid any loss of resolution.

The only noticeable quirk is



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a series of relay clicks when the volume knob is turned. This is a consequence of Antelope's use of a hard contact relay volume controller rather than a simple potentiometer – a decision the company says was made for sound quality reasons.

SOUND QUALITY

Unlike some other DACs, the Zodiac Gold seems to take a good 90 minutes or so to come on song from stand-by – sounding slightly soft at first.

Presumably, this is a feature of the "Oven Control" clock philosophy (see above). Once warmed through, though, that first impression quickly disappears.

What appears instead is a thoroughly refined, smooth and authoritative sound.

Chief among its attributes is detail retrieval and instrument placement. Anyone who likes to hear exactly where the performers are placed in a good orchestral recording will find the Antelope to their liking.

A 24/96 file of the San Francisco Symphony's 'Mahler No. 2' was powerful and expansive – with each section of the orchestra placed precisely within the soundstage.

Here, the Zodiac seemed to pull off the impressive trick of combining outstanding levels of data retrieval with a cohesive, rounded presentation that conveyed all the emotion and force in the music.

Not all DACs can manage that – with some sounding detailed yet a little sterile while others sacrifice that last ounce of musical insight for a lush, more romantic sound.

The Zodiac Gold, by contrast, manages to tread a fine line between the two.

The timbre of instruments is supremely well-rendered – Charles Mingus's bass sounding suitably rich and resonant on the classic 'Mingus Ah Um' while Nils Lofgren's guitar work on 'Keith Don't Go' was suitably crystalline.

In fact there's a general agility and confidence about the overall sound that works well with all sorts of music.

Massive Attack's 'Safe From Harm' from their remastered 'Blue Lines' romped along with vigour. The bass was suitably deep and powerful while Shara Nelson's sweet, soulful vocals soared into the room.

Cranking the volume up on this track and fed into a Naim power amplifier the Antelope DAC/preamp

retained its composure even at the highest levels.

Switching to the headphone amp and the Zodiac retained its open and balanced presentation with a noticeable absence of grain.

Listening through a pair of the excellent Philips Fidelio XIs and the sound was beautifully airy and spacious with Cowboy Junkies' 'Trinity Sessions'.

CONCLUSION

The Antelope Audio Zodiac Gold/Voltikus combination is an impressively-engineered package that ranks among the best DACs I have heard.

It boasts class-leading resolution allied to a musically-coherent, rich presentation that brings music to life whatever genre you throw at it.

Add in the preamp facility and analogue inputs and the Antelope becomes a must-hear for anyone considering a DAC at this price level.



MEASURED PERFORMANCE

The Zodiac Gold manages some large figures under measurement, showing it is an advanced design. The XLR output gives a massive 9.8V output swing and best dynamic range as a result, by keeping signal above the noise floor of the output amps. The EIAJ Dynamic Range value was an impressive 123dB with a 24bit resolution signal, with either power supply. Through the phono socket (unbalanced) outputs that deliver 2V maximum, this fell a trifle to 121dB, so the Zodiac Gold looks impressive in this

important area.

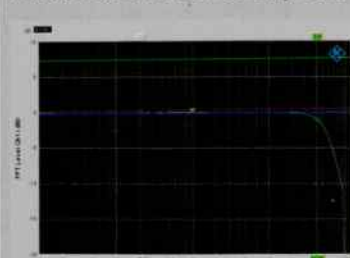
The electrical S/PDIF input worked to 192kHz but the optical input to 96kHz maximum. Frequency response reached 43kHz with 192kHz sample rate, before rolling off smoothly to 96kHz our analysis shows, so the Zodiac Gold exploits high sample rate well.

Distortion was the lowest we have measured to date, just 0.016% at -60dB with a 24bit resolution signal, and this held at all sample rates. With 16bit (CD) the figure was a low 0.2%.

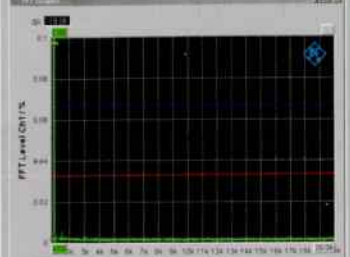
There is no gain from analogue input to output and the output overload ceiling is 2.6V. There is x4 gain from the analogue input to the balanced XLR output however, and a 13V maximum output swing. So the XLR output can be used as a preamp with gain, but the phono outputs have no gain; the volume control affects both.

The Zodiac Gold measures very well in all areas, being up amongst the best designs currently available, so sound quality is likely to be of an equally high standard. **NK**

FREQUENCY RESPONSE, 192k



DISTORTION, 24bit



Frequency response (-1dB)

CD	4Hz-43kHz
Distortion	%
0dB	0.001
-60dB	0.016

Separation (1kHz)	116dB
Noise (IEC A)	-116dB
Dynamic range	123dB
Output	9.8V XLR, 2V Phono

ANTELOPE AUDIO ZODIAC GOLD/ VOLTIKUS £3095



OUTSTANDING - amongst the best

VERDICT

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FOR

- great detail
- refined presentation
- flexibility
- wide soundstage

AGAINST

- not the cheapest
- nothing else

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LETTER OF THE MONTH PRIZE



KEF Q100 LOUDSPEAKERS

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 **JULIAN REEVES**, Letter of the Month winner in our JANUARY 2014 issue.

Letter of the Month

FLIPPING & RIPPING

I have lots of sympathy with Kingsley Flint and Remi Balestie, whose letters you printed in the December 2013 edition. I too love listening to LPs, CDs and audio cassette tapes, if only in the car for the latter. I also like to browse through LP booklets etc. whilst playing music. I also love computer based music; it sounds just as good as a CD or an LP if it is recorded and played back with good equipment. A CD player is after all a computer which is dedicated to the processing and playback of a digital music file stored on the Compact Disc.

A laptop gives me the flexibility to archive my analogue recordings to digital files. All my old LPs and cassette tapes, which cannot easily be sourced by pre-recorded CD, are now available for playing via the laptop or in the car on a CD which I have made for myself. The three brand new LPs which I possess have also been digitised so this means that I only need play them again on a turntable on a special occasion. This reduces the risk of the record being damaged or being worn out.

With regard to scratches, I have bought second hand and new CDs which were so scratched that some of the tracks were unplayable. This was easily fixed by ripping the CD to a hard drive and allowing the error correction software to do its business and repair the tracks so that they were playable again. You cannot do this with an LP; if a

dBpoweramp CD Ripper

CD Ripper is a corner stone of dBpoweramp's suite of audio tools, designed to meet the needs of hobbyist, enthusiast or professional, one ripper to rule them all. CD Ripper has over the years ripped over 100 million CDs.



Secure CD Converter

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Ripping and encoding uses all CPU cores simultaneously (as required). Multi-Encoder encodes to many formats at the same time.

No Malware

Free Rippers come with a little extra spyware toolbar Trojan, malware, or virus. dBpoweramp has never bundled in 15 years. Those wanting a CD Ripper, get just that and only that. No Trojan, no malware, no viruses.

PerfectMeta™

AMG, CD3, SonarDB, MusicBrainz & freedb, provide rich names & high resolution album artwork.

DSP Effects

Process the audio with Volume Normalize, or MDCT decoding to 24 bit. dBpoweramp is a fully featured CD Ripper.

Advanced

C2 pointers, HTOA, removal of drive offset & audio cache, advanced features expected to rip with optimum efficiency.

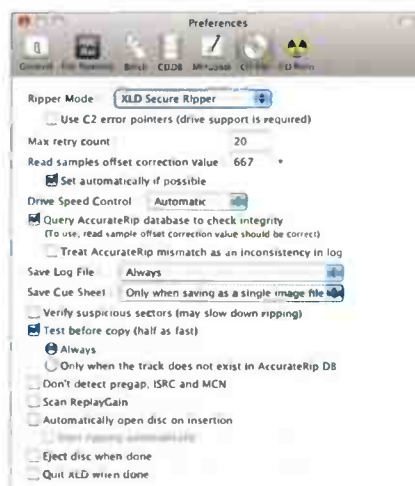
Rip CD using 'Accurate rip' routines in dbpoweramp for PC (above) and XLD for Mac (right). They are slower and more complicated than Windows Media Player and iTunes, both of which burst-rip CD, but have better error detection and correction.

track is so scratched that it is unplayable your only solution is to buy another record.

I like the idea of a reversal of the planet's magnetic polarities. However, if the effect of that was so strong that it knocked out computer hard drives and electronic chips, would it not do the same to moving magnet and coil cartridges and the electronic chips of a CD player and amplifier? We could

be reduced to listening to records on a Dansette with a ceramic cartridge and a valve amp. Maybe that would not be such a bad thing.

Better still, we could gather around the fire and listen to shellac LPs on a wind up player with a horn and burn the kid next door's MP3 player. It would



bring some sociability back to music listening.

My favourite artists are: John Fahey for his superb guitar playing; Maria Callas for her superlative and sublime singing; The Doors because they are hip and The Pink Floyd The Piper At The Gates of Dawn is especially cool and far out. And, of course the Beatles, so what more can I say?

Yours sincerely,
Trevor Morgan
London

The reversal of the earth's magnetic field is an interesting new twist on threats to high fidelity! Luckily, it seems this happens once every 100,000 years or so and it takes at least 1000 years for the field to flip. Hard drives don't last that long, and master tapes aren't good for much past 50 years it seems, so the medium will fail before the field does! I think we can all go to bed without having to worry too much about this. **NK**

ABOUT BUBBLES

Tony Bolton's article on the use of bubble wrap as a means of isolation goes back to the dawn of hi-fi time, well almost! What isn't apparent in the article, is how he coped with levelling the finished isolation unit. For a turntable to give good results it must be level. Turntables have an uneven weight distribution too.

Also, he will find that over a period of time air will escape from the bubbles and the isolation effect will be reduced. Bubble wrap is cheap enough to replace though. The next step from this will be to experiment with a bicycle tyre!

Regards,
Mike Bickley

Hi Mike. I agree that it is essential for a turntable, or CD player for that matter, to sit level. Since the turntable in question was a fairly lightweight model, certainly nowhere near the weight of my Sondek, for example, I found little problem in getting the deck level on the bubble wrap/ bread-board combination. Heavier units are likely to be more unbalanced and I have found that small layers of bubble wrap inserted in appropriate places (where the extra/ unbalanced weight is) will counteract this. It is not a perfect solution, but merely a cheap and cheerful, and reasonably effective, way of trying out the benefits of air

isolation of hi-fi equipment without having to invest much money.

Bicycle tyres are more prone to uneven inflation unless contained within a cabinet, as in my VooDoo Airtek equipment supports, which is why I choose the bubble wrap option when setting up budget, home made isolation.

As I said in my column, these home made solutions are not a substitute for properly built equipment supports, but I am sure that there are readers who have not tried these techniques, and having experimented with their effectiveness, may well go on to buy the real product, having reassured themselves that the principle works.

TB

SONY AND BUBBLES!

With reference to the letter from Clive Walker in the December 2013 issue I would like to mention that I have owned a Sony PCMM10 for over 3 years and regularly use it when recording the Sound of 17 big band based in Ealing West London. I use a coincident pair of Behringer condenser mics. connected to and powered by an HNB Portadisc MD recorder and the PCMM10 is connected to the line out to provide a 16/44 recording as well. I used to use a Zoom H4 for this purpose but was won over by the Sony as it had a real knob to adjust recording levels. Both the Zoom and Sony produced very good recordings but the battery life of the M10 has proved to be so much better, in fact I have managed to record more than 5 big band sessions on two AA cells compared to one session using the Zoom (without using it as a phantom power source).

On another subject and referring to Tony Bolton's piece on bubble wrap turntable isolation, I have been using four rectangular foam pot scourers under my 401 plinth to good effect but then I suppose they should clean up the sound a bit!

Regards,
William Dudman

PAPST DIRECT DRIVE

The two-part article on Direct Drive turntable motors by Dave Cawley was very interesting. Thank you for publishing that. I have two NOS samples of the Papst GS 38.09 Two-phase low-speed-brushless D.C. motor with variable reluctance auxiliary torque. The original version of this was apparently manufactured from 1974, and later used in the first Oracle



Sony PCMM10 digital recorder that William Dudman uses for recording big bands.

turntable. My samples are of a later version, and have November 1987 date codes on them, thus I am hoping they are the improved version over the original which apparently had speed stability under load problems, similar to those Dave Cawley described for some other motors.

I ask here, can Mr Cawley or any other knowledgeable person comment about this 1987 version Papst motor, either in comparison to the MkII Technics motor, or in any other aspect?

In addition to speed stability under load, my other priority is vibration from motor not interfering with music replay. This Papst motor can be adjusted to run over a range of speeds, thus torques. As it is a mechanical device it will have a self-resonant frequency, and that will coincide with one particular rotational speed. My concern is that if operated at, or close to, that speed, will the then excited mechanical resonance interfere with the action of the Servo that controls the motor speed?

Yes, the motor could be coupled to a mounting on the turntable plinth in such way as to change the mechanical resonant frequency, however one first needs to determine the optimum speed to operate the motor at for minimum self-vibration but which also provides adequate torque to drive the platter under load.

Yes, a DIY designer can choose the gear ratio when deciding drive pulley diameter versus drive diameter of the sub-platter, however this all a lot to think about, thus any comments will be welcome?

Yours sincerely,
Alan Barnes

Hi Alan. The Papst GS 38.09 is a very simple direct drive motor, like many of 1970's. The data sheet for that exact part number is dated 1974, if there were a change in design I would have expected that it would have a new part number.

It is not quartz locked or phase locked, so it will not have the speed stability you might desire. Yes, there is a servo, but it is not a PLL. The bearing is integral and I'm sorry to say – that is all that is bad with early Direct Drive motors. However, no belt drive turntable can exhibit the speed control I described in my article, although SME and others get very close.

As Noel says, it will not be naturally resonant and if both the motor and the platter are well balanced there should be no real issue here. There are new motors available for the LP-12 that you might find offer better performance.

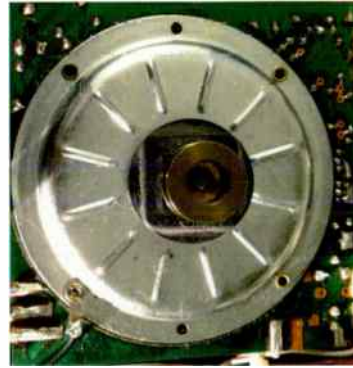
Dave Cawley

Hi Alan. Because the Papst motor is a mechanical device doesn't mean it will have a self-resonant frequency. Resonance in the classic sense demands compliance transferring energy to mass, and vice-versa, over a cyclical period, the resonant frequency. A brushless D.C. motor is unlikely to have much compliance in its rotor.

Vibration may come from motor cogging effects, insofar as the Papst brushless D.C. motor will suffer this – I really do not know, having no knowledge of this motor. If so, the vibration will be related only to motor speed.

If you mount the motor on compliant grommets, as is common to provide mechanical isolation, then you introduce compliance into the system. If you connect motor to platter via a belt you also introduce compliance into the system. Such systems will then have a natural resonant frequency. It isn't necessarily a disaster, but you do have to be aware of what you are creating and what problems may be expected to arise.

I recently watched a turntable manufacturer change belts from cheap to expensive and speed variation (wow) dropped dramatically, from over 0.3% to 0.15%, almost certainly because the better belt was more consistent in compliance along its length. The behaviour of your masses and compliances has to



Bottom and top views of the Papst two-phase low-speed-brushless D.C. motor Alan Barnes is using to power a belt drive turntable. But it isn't quartz-locked or phase-locked, says Dave Cawley.

be arranged/controlled so as not to interfere with the music.

I suggest you run the motor and see how much it vibrates. First, hold it in your hand! Then listen to it using a stethoscope. If you either feel vibration or hear a drone then you have a problem. Ideally, you should attach an accelerometer to it and check it out with a spectrum analyser. Most people would just mount the thing, however, to a belt drive mule, and see what happens! You will need to know the motor's speed range, and where you want to use it in this range, to work out pulley diameter. I suggest running it at various speeds to find if vibrational signature changes and choose the quietest speed. Have fun! **NK**

AUTOCHANGE

I have a separate Mono system that contains the following equipment:- Goldring Lenco GL59/L70 Arm, Ortofon OM78 cartridge with D25M and 5E styli. Technics amplifier, Celestion Ditton 15XR or Wharfedale/Denton W20D speakers to play with. I do play 45s and 78s sometimes, but this a bit irksome

only being able to play one at a time.

I would like the idea of using an autochanger (preferably Garrard), with one of the cartridges you discussed in your article. I already have a spare Ortofon OM body, which the above styli would fit on. I also have a phono stage with both RIAA and 78 equalisation on.

I was also thinking about buying a good quality radiogram as you are thinking of doing. Not sure which way is the best to go as playing a stack of either 45 or 78 does appeal to me. Any information or advice you have would be of great value to me in what to do next.

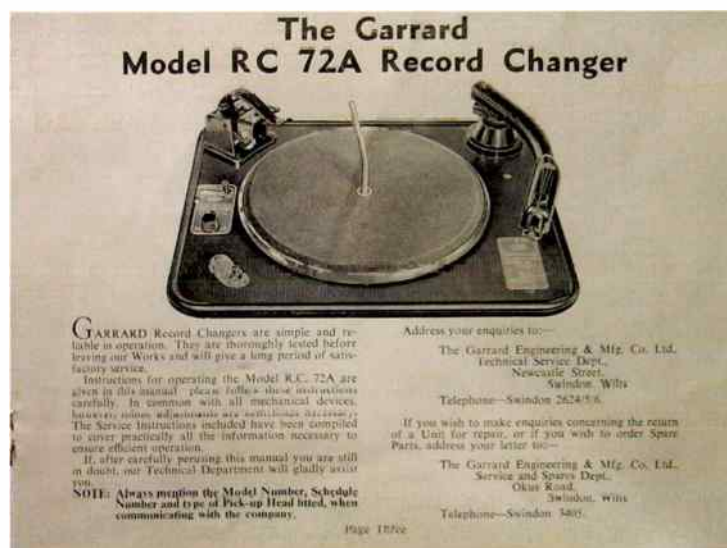
Thanks again for your inspiring article.

Yours,

Malcolm Wilson

CYRUS COMPLAINT

You recently reviewed the Cyrus Audio Xa streamer and this set me thinking about getting one. I was impressed by the reviewer's assessment of the quality of the BBC Radio 3 320kbps stream. I have a full Cyrus system. Having version 1 of the Streamer X, I had never been able to receive the HD stream, always being shown a 57kbps bit rate for Radio



Playing one record at a time is a "bit irksome", says Malcolm Wilson. "I like the idea of using an autochanger, preferably Garrard" – perhaps like the Garrard RC 72A shown here.



How much pressure does my Roksan Shiraz impose, asks Guy Pettigrew?

3 on the n-remote. I had queried this problem with Cyrus right from day 1 of use (May 2011), as I had been able to receive all of Linn's broadcasts at 320k. Cyrus initially told me that the Radio 3 HD broadcasts were in a wrapper i.e. non-standard. When I went back 6-12 months later I was told that the Streamer didn't show the correct bit rate for Radio 3 i.e. it was defective but I might be getting the good stuff! I waited patiently, so patiently that 2 years passed. Upset at hearing that reviewers could receive the 320k stream on Cyrus streamers, I tried to contact Cyrus to see if there was a route for me to obtain the 320k stream on my current streamer. I found that Cyrus had developed a we don't want to speak to customers approach, being referred back to the dealer. I contacted the dealer and found that they did not have much of a clue as to how I could cure the problem. Back to Cyrus and their customer service manager (persistence might pay). We explored the behaviour of Tunein, Cyrus's chosen agent for internet radio. They claimed that there was an issue with all the BBCs HD broadcasts but they had a fix. It didn't work and the customer service manager thought that the firmware on my machine might need an update.

OK, so I had had a defective firmware since purchase, surely Cyrus would sort it for me? Not on your life. Go back to your dealer, take your machine in and get them to upgrade the firmware. But my dealer is 50 miles away and going there is a half day exercise. Well perhaps you can take it to your nearest dealer in Coventry, Frank Harvey. Started a conversation, and they came back in 2 days with a "yes we can do it for £50". Cyrus customer service manager reckons he has influence with Frank Harvey. Back comes the offer £50 or we'll do it free if you spend £1250 with us for the Xa! I never want to give them any business in future!

Searching the internet, I found a firmware upgrade (obviously not known to the Cyrus customer service manager) on the Cyrus website for customers

to upgrade their firmware! After 15 minutes, I had upgraded the firmware and could get Radio 3 at 320kbps.

Given the very poor customer service and the lack of problem solution knowledge, do I want to buy additional products from Cyrus Audio? Do you think that you should also rate dealer and manufacturer support for their products?

Regards,
Frank Rietz

Cyrus say -

In line with our policy of constant improvement, Cyrus Audio is occasionally able to offer firmware updates to our streaming products in order to improve the user experience further still. Unfortunately it is not possible for an end-user to conduct a full firmware update (though they can indeed update a portion of the firmware through our website as Mr Rietz states). However, we would always recommend fully updating the firmware whenever possible in order to ensure that the product is up to date and performing to its absolute best.

In order to reduce any inconvenience to the user, we allow our entire network of UK retailers access to this firmware and clear instructions on how to complete it so that they can do so in the store without the need for the product

with the purchaser and therefore be very invested in providing top-quality customer service, as a customer should expect with any Cyrus product. All UK Cyrus retailers can update the product, but those who did not sell the unit may wish to charge for doing so, given that they have not profited from a sale and thus there may be no benefit to them for their time and efforts.

We're pleased to hear that Mr Rietz is now enjoying top-quality BBC broadcasts via the TuneIn service on his Stream X, but we would still recommend that he visits his retailer in order to have the firmware fully updated in order to ensure that his streamer offers the best possible experience.

It's also worth noting that our new product, Cyrus Lyric, has been designed so that it can be updated by the user in their home, providing an even more convenient and enjoyable consumer experience.

Cyrus Audio continues to offer world class customer support and any queries directed to us by e-mail will be answered swiftly and efficiently by our Service and Support team, who can be contacted at service@cyrusaudio.com.

Kind regards,

Hannah Jones
Marketing and Website
Coordinator



My Cyrus Streamer X would not get BBC Radio 3 320kbps stream, says Frank Rietz.

to be returned to the factory. This allows the customer to take the unit in at a time of their choosing and have it updated while they wait, ensuring that they aren't inconvenienced by being without the unit for any period of time.

We would recommend that the customer makes contact with the retailer from whom they bought the product as they will be familiar

UNDER PRESSURE

Here's a query that has been bothering me for as long as I've been listening to music, which is a long time!

Cartridge tracking weight is given in grams. Mine, a Roksan Shiraz, tracks at 2.3g.

When the stylus is on my electronic stylus gauge and it reads 2.3g, what surface area is touching the plate on the gauge? Or to put it another way, how

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!

You can reply to Letters using the e-mail link at the top of the page -

World Mail June 2011 issue

Write to us! E-mail → letters@hi-fiworld.co.uk

Letters are published first in the magazine, then here in our web archive. We cannot guarantee to answer all mail, but we do manage most!

Or comment in the Comment section at the bottom of each page.

Your experts are -
 DP David Price, editor; NK Noel Kaywood, publisher; PR Paul Rigby, reviewer; TB Tony Bolton, reviewer; RT Rafael Torres, reviewer (Allegri String Quartet); AS Adam Smith, reviewer; DC Dave Cawley, Sound Hi-Fi, World Design, etc.

...or the reply pane at the bottom of the page.
 Replies will go on-line and in the magazine if suitable.

Add your comment

Your name:

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Post Preview

The screenshot shows the HI-FI WORLD website interface. At the top, the 'HI-FI WORLD' logo is prominent. Below it, there's a navigation menu with 'LATEST', 'MAGAZINE ISSUE DATE', 'FRONT PAGE', 'REVIEWS', 'FEATURES', and 'CONTACT'. The 'MAGAZINE ISSUE DATE' section is expanded, showing a list of issues from September 2011 back to March 2010. A 'Display' dropdown menu is set to 'All'. On the right side, there are several promotional banners, including 'COMPETITION PRIZE' for the August 2011 issue, 'SEVENOAKS' audio equipment, and 'audio T'.

Just go to www.hi-fiworld.co.uk and click on Letters in the left hand menu list, under the FEATURES category. This will take you to the individual months of issue. To see the full list set the 'Display' drop-down list to 'All'.

The Audio Research VSi75 works well with B&W 802 Diamonds. Is this luck, asks Adam Riess?



Arms with interchangeable head shells are quite rare nowadays, but watch this space because we are planning a review of one such arm in the near future. **TB**

AUDIO RESEARCH

I recently read your review of the Audio Research VSi75 valve amplifier in the October issue of *Hi-Fi World* to which I subscribe. As an owner of a VSi75 myself, I was intrigued to read of your very different experiences with the Sonus Faber and then the Tannoy speakers.

In my system I am using the VSi75 with a pair of B&W 802 Diamonds and I have been very pleased with the result; excellent midrange, accurate bass with good extension, overall very musical. However, I must confess I did not put very much thought into speaker/amplifier matching! Based on

your experience with Sonus Faber and Tannoy I was wondering if I was just lucky, or if you would expect a good pairing with the VSi75 and the B&W 802 Diamonds? How can one anticipate such a pairing? (I also had an excellent result with the B&W 804 Diamonds which I had before the 802's).

Best,
Adam Riess

It is very difficult to anticipate any final outcome between amplifier and loudspeaker. The finite output impedance of a valve amplifier also makes its frequency response a little impedance dependent, so for example the steadily falling impedance of an electrostatic will also cause treble from a valve amplifier to fall slightly. There are so many other factors though, such a

The recently introduced KT150 valve is an upgrade of the KT120 and sounds smoother. Can be used as a plug-in replacement.



low feedback in a valve amp making it far less sensitive to a reactive load which most speakers are. In your case the B&Ws are well engineered, are sensitive and work well with valve amplifiers, and the VSi75 copes with loudspeakers like this well. Both have a lively and dynamic presentation that, put together, will keep you on the edge of your seat.

Don't forget that the new KT150 is a plug-in replacement for the KT120 and sounds a lot smoother, being offered as an upgrade by the New Sensor Corporation (New York). Both are issued under the brand name Tung-sol and come from the Russian Reflektor factory, Saratov, Russia. I was amazed to learn recently that New Sensor is owned and run by a certain Mike Mathews, who financed the early days of Jimi Hendrix, being the money behind Chas Chandler as it were. Anyone into valves and Hendrix (me!) will be suitably amazed. But the rest of the world... **NK**

CD BURNING

I have just followed your comment about copying CDs. The improvement in the sound quality I find quite remarkable. Why is this? Do lasers gradually run out of steam and need the extra sparkle that a newly burned disc may provide?

My heavyweight Electrocompaniet CD player received top billing from reviewers, but despite changes to the rest of my system, always had the usual CD sound drawbacks and was semi-retired. It is now in full time service and giving a sound quality that I feel needs no improvement. I copied in FLAC using an old laptop running XP, a basic Roxio programme, and burned in 4X. I also used battery for ripping and mains for burning as battery life is a little short. I found CD-RW discs unusable so I stay with CD-R. The original CDs are kept as there is internet debate, but little evidence, about the durability of CD-R. Many thanks for your tip.

Roy Tummons.

Hi Roy. No, lasers don't run out of steam, at least as far as I am aware, although they do get dirty, especially from tobacco smoke, and become optically weak.

The reason rips sound better than the original CD is because the digital signal is re-clocked in the process, and this cleans up its timing. If it is then replayed by more modern equipment, jitter from the source player may well be lower too, although your Electrocompaniet was

good in this area, I recall.

Like you, I found ripping on a battery driven laptop, in my case a MacBook Pro, gave the best result, when running from battery rather than external switch-mode power supply.

I ripped with XLD and Max but found little convincing difference between them.

Another new trick to play with CD is to run it through an Audiolab M-DAC or Q-DAC, using the Time Optimised filter set. This gives an entirely different result to that from CD as we know it: warmer but cleaner and more stable, or solid. Many would say more analogue-like because the hard treble quality of CD is wafted away.

I now listen to CD ripped onto my digital player, an Astell&Kern AK120, and then passed through an Audiolab M-DAC – and it hardly sounds like the original CD at all, because jitter has been removed and digital filtering improved. It's still CD, but it isn't – it is a lot better. **NK**

ACRONYMS AND ABBREVIATIONS

I've long been aware of the plethora of acronyms, initialisms and abbreviations that fly around the world of hi-fi ... see? We have recently been looking at buying a television and were assaulted by even more than those that I already knew existed in hi-fi.

May I make a simple suggestion? Would it not be a good idea for you to include, from time to time, a Hi-Fi and Home Cinema Dictionary of them within your pages? Full definitions may not be needed but some explanation would be required. I currently flounder. Every time I read FLAC I half expect to read Ack Ack somewhere in the article.

Best regards

David Mills
Highams Park
London

For younger readers, Ack Ack threw up Flak, the first being an anti-aircraft gun and the second what it fired! FLAC now means Free Lossless Audio Codec – just shows how times have changed. It's an alternative to APÉ, from Monkey's Audio, codecs being a subject that would drive anyone bananas. We put together our own list of these digital file format acronyms, separating them by their creator to show why there are so many that appear to do the same job. I hope readers find this approach more illuminating than usual.

NK



Use an Audiolab Q-DAC (top) to hear CD as it is usually heard, with a frequency domain optimised filter, or in more 'analogue' form using a time domain optimised filter.

DIGITAL AUDIO FILE FORMAT ACRONYMS

MICROSOFT

wav - Waveform Audio File Format, known as wav because of its .wav identifying extension. Uncompressed Linear Pulse Code Modulation digital in raw form that is universally compatible and should play on any device. However, it is a big file with a high data rate and budget products, like portables and phones, will not play 24/96 or higher wav as a result. Very good, but challenging.

wma - Windows Media Audio. This was Microsoft's version of MP3. It is a data-reduced (lossy) audio file that degrades audio quality, to achieve low data rate. Not good. Now in lossless form too, which should be good.

APPLE

aiff - Apple Interchange File Format. This is Apple's equivalent to wav and is basically Linear Pulse Code Modulation in Apple's proprietary environment. As such it offers uncompressed digital audio of highest quality, but file size and data rate are very high. It should play on wav compatible devices, but it often does not due to licensing issues. However, aiff converts to wav through a file format changer, easily circumventing this problem. Good, but Apple only.

aac - Advanced Audio Codec. Think of it as a higher quality version of MP3. It is a data-reduced music file format developed by the Fraunhofer Institute, Germany, at the time led by Karl Heinz Brandenburg, and used by IEC as part of their Motion Picture Expert Group (mpeg) standards. It is also used by Apple, in iTunes. Not so good.

m4a, m4p - Similar to aac, it is used by Apple in iTunes Plus files that can be played on almost any device. It is data-reduced (lossy) format. Not so good.

alac - Apple Lossless Audio Codec and similar to FLAC. This is a losslessly compressed version of aiff, so has smaller file size (about half) and data rate. Good, but little used.

DOLBY

ac-3 - Dolby's equivalent to MP3, but multi-channel. It is a data-reduced (lossy) audio file format used as sound track to films. Not so good. Common on DVD videos.

TrueHD - True High Definition. A losslessly compressed multi-channel PCM audio file format. Very good. Used on Blu-ray.

DIGITAL THEATRE SYSTEMS (DTS)

HD MA - High Definition Master Audio. DTS equivalent to Dolby's TrueHD. It is a losslessly compressed multi-channel PCM audio file format. Common on Blu-ray.

THE REST ...

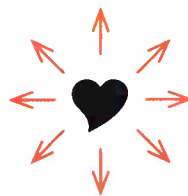
flac - Free Lossless Audio Codec. The best and most popular alternative to wav. It offers lossless compression, so audio quality is maintained. It has metadata handling (album, artist, genre info etc) and album artwork tagging. Half the file size of wav and half the data rate too. Very good.

aptX - A data-reduced (lossy) audio compression scheme that uses a novel compression method and modest 4:1 compression. Used mainly in Bluetooth audio to reduce data rate. Good.

ogg vorbis - A data-reduced (lossy) file format with better quality than MP3. Displaced by MPEG formats like AAC, mp4a, etc. Not good.

ape - A losslessly compressed file format using the extension from Monkey's Audio, commonly called Ape. Good, but overtaken by flac.

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Diamonds are forever

Tony Bolton has his definition of good sound revised by the flagship interconnect and speaker cables from Tellurium Q.



Back in the March 2012 edition of this magazine, fellow

scribe Paul Rigby went so far as to describe the Tellurium Q Graphite speaker cable as the "best speaker cables I have ever heard".

Following such a ringing endorsement I was more than a little curious to hear the company's cables for myself so I arranged to borrow the range-topping Black Diamond leads in both speaker and RCA interconnect form.

Tellurium Q are reticent about revealing the technology employed in their cables so I am unable to tell you much except that the plugs are made to their own specification and include in their construction the rare earth mineral that gives the company its name.

Once they were run-in – a very long job with these cables – I compared them with my resident Philosophy Cables Organon speaker leads and Nebrion interconnects. These have stayed in place on the downstairs system for over eight years because I have not found anything that could match the combination of tight timing, detail, smoothness and texture that these leads allow the system to display.

However, after listening to the Black

Diamonds I am forced to recalibrate my

perceptions.

They offered everything that I have just listed but in a way that made the Nebrion's sound a little restrained and masked.

It is fair to say that the Black Diamond interconnects were the most sonically invisible cable that I have ever used. I am, quite frankly, amazed that there could be such a difference from what was already excellent performance to the level at which I am currently listening.

The speaker cable, when introduced into the system, seemed to build on this by matching the smoothness of the Philosophy's sonic delivery. It also seemed to have a wider perceived bandwidth, a bigger soundstage, and the ability to present transient detail even more effortlessly. Timing seemed noticeably tighter, with notes stopping and starting more precisely. The change was akin to the

difference between driving a car with modern handling and all-round disc brakes as opposed to the softer suspension and disc/drum set ups of cars of days of yore.

The lack of overhang to the beat made rhythmic music seem more natural in timing and the silences between notes more defined.

I could not fault the texture or tonality of even complex sounds such as pianos and harpsichords. They just sounded real and right – as did vocals – with subtle micro-detailing to the sound that lifted it away from the system and left me feeling that it was an independent entity present in my listening space.

I am both surprised and impressed with these cables. They seem to offer everything that I have enjoyed about my current cables but build on their strengths.

In short, I can honestly say the Tellurium Q Black Diamond interconnects and speaker cable are the very best leads that I have ever had in my system.



**TELLURIUM Q
BLACK DIAMOND
SPEAKER CABLE
£630 PER MONO
METRE.**



OUTSTANDING - amongst the best

VERDICT

A big and quite bulky speaker cable that offers the most natural and composed sound that I have yet had on this system.

FOR

- smooth, flowing sound
- excellent timing
- wide soundstage

AGAINST

- nothing, not even price!

**TELLURIUM Q
BLACK DIAMOND
INTERCONNECT
£890 PER M. PAIR**



OUTSTANDING - amongst the best

VERDICT

An interconnect that seems to allow the music to flow in a particularly natural way.

FOR

- smoothness and detail
- excellent tonality
- tactile textures

AGAINST

- nothing

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World Radio History



Noel Keywood gets active with a pair of KEF's new X300A computer loudspeakers – and likes what he hears.

COOL KEFS

I've had numerous computer loudspeaker systems – and I remember them as a tangle of wires, connecting plastic cabinets with, somewhere, an in-line volume control that failed after a year or so of use. One did have potential: its NXT panels showed me that quality was worth having in this role, but the bass bin was rubbish and the volume control fell apart on-cue.

Since then I've joined the headphone generation, running Jays V-jays from an Epiphany Acoustics

E-DAC linked into my Mac Mini. That was until KEF suggested I try their new X300A computer loudspeakers, reviewed here. Empty spaces the NXT panels once occupied, on a solid shelf above the desk where I am typing this, awaited them. So I was set to go.

Based on the popular LS50 mini studio monitors, the X300As use a single KEF Uni-Q drive unit that combines a 130mm magnesium/aluminium cone bass/midrange with a centrally mounted aluminium dome tweeter. The Tangerine waveguide

surrounding the tweeter eliminates interference effects between tweeter and woofer as well as adding visual interest. So what appears to be a single drive unit is in fact two-in-one and covers the entire audio band.

Being what is known as a 'point source' radiator, the sound effectively comes from one point and maintains its evenness from wherever you are listening – ideal when the speakers are on a high shelf, as they would be in my set-up. Listening from below to a normal loudspeaker just doesn't work: cancellation between the drive

units distorts treble quite severely. The KEFs largely avoid this problem.

Each X300A has a pair of Class A/B (i.e. not Class D!) power amplifiers inside, one (20 Watts) driving the treble unit, the other (50 Watts) the bass unit; an active crossover feeds them. Add in a conventional linear power supply and you end up with a heavy 'speaker indeed, each one weighing 7.5kgs.

Active loudspeakers are inevitably heavy, but to maintain quality by avoiding cabinet resonances KEF have made the X300As very solid. Their avoidance of Class D amplifiers fed by Switched Mode Power Supplies, a preferred solution nowadays that saves weight and minimises heat, also adds greatly to weight, as well as cost. The external heatsinks of the X300As, as well as their internal mains transformers, are expensive items.

As active desktop monitors go the X300As are a normal enough size, but as computer monitors go they are large, 240mm deep, 180mm wide and 284mm high. That made no difference on my (unfortunately named) Ikea Jerker desk system with strong 350mm deep shelves on which sit spectrum analysers and the like, but it may be too much weight for some compact home setups. With 70 Watts on-board each cabinet, the X300As also go loud and generate powerful bass, something to be borne in mind. Most computer loudspeakers have a single (mono) bass cabinet; the X300As produce twice the bass power.

The cabinets are 'handed' meaning there's a left-hand master cabinet and a right-hand slave. Each cabinet needs a mains supply, fed in through an IEC mains cable that is supplied. The left cabinet carries Mini-USB digital and 3.5mm jack analogue inputs, and cables are supplied for both connection routes to the computer. The speakers are also inter-connected digitally by a USB cable and the left cabinet has a small level control at rear that affects volume in both loudspeakers; the right cabinet carries a balance control. It's best to turn gain (volume) down of the left speaker, KEF told me, to a level where volume on the computer is near to maximum, in order to get maximum resolution from the computer's digital volume control. If you don't do this, with CD at least, distortion and noise will rise to significant levels if you run at low volume settings on



Rear heatsinks indicate the presence of a pair of Class A/B amplifiers inside each speaker — a 20 Watts unit driving the tweeter while a 50 Watts amplifier serves for the bass unit. Other controls include balance and volume as well as a bass reduction switch.

the computer.

There is a small slide switch to reduce bass when playing on a desk, and also two-part foam bungs to damp bass, to suit preferences and conditions. However, the X300As are not intrinsically bass heavy as you might suspect from this.

IN USE

Inevitably perhaps, the USB cables were the wrong length for me. I needed the 2m USB supplied to reach the computer, so had to use the 1m cable supplied between the speakers and this was a tad too short (I needed 4ft). So some may need to buy a long USB-to-Mini USB B cable.

A vertical extension piece on my desk put the X300As well above my ears (2ft), but I still got high treble; standing up made the sound balance brighter, but not by much.

The X300As excellent dispersion suited my circumstance well and I was aware of their full bandwidth straight away when playing music. For listening purposes though I moved the speakers down to a shelf above the monitor, where they fired almost straight at my ears.

Running from a Mac Mini was easy enough. Just plug in, select sound output as X300 in the Sound panel, System Preferences and ensure that it is set in the Audio/Midi panel, in the Utilities folder.

The Mac has a fixed but

selectable output sample rate and converts up or down to whatever is selected, 96kHz being the maximum available for the KEFs. So 192kHz sample rate files can be played but they will be down-converted to 96kHz, although this is no big issue I feel. You still get 24bit resolution, even when playing from iTunes, providing it's a 24bit recording of course!

What you cannot do is connect via S/PDIF, because the X300As don't have an S/PDIF input. This prevented me running my Astell&Kern AK120 portable high-resolution player in digitally (USB did not work) via an optical cable; I had to connect up through the analogue cable. This worked fine but the USB input takes precedence and analogue doesn't work until the USB cable is physically pulled out. As I have a USB hub on the desk I could simply pull the plug out of its front sockets to get music from the portable playing, so it was no big deal for me, but in some set-ups things may not fall so conveniently.

I did not need a remote control, nor an in-line volume control; KEF's simple and straightforward arrangement minimised clutter and I appreciated this.

SOUND QUALITY

These are the biggest and most powerful loudspeakers I've ever

ZODIAC *Platinum*^{DSD} DAC & VOLTIKUS PSU

Unlock the full detail, dynamics, imaging and clarity of DSD and PCM by adding platinum-standard conversion to your signal path. Zodiac Platinum & Voltikus combine high-rate, quad DAC architecture with unique audiophile upsampling features, exceptional power, ultra stable clocking and versatile control.



Custom, ultra-low jitter USB for streaming up to DSD128 and 384 kHz PCM, plus comprehensive analog and digital I/O – including fully re-clocked and de-jittered digital outputs and analog pre-amp inputs – ensure absolute input integrity.

64-bit precision 8x linear phase PCM upsampling using a dedicated FPGA, plus Quad-conversion architecture guarantee absolute sonic detail and natural stereo imaging.

Acoustically Focused Clocking (AFC) technology coupled with an ultra-low jitter, oven-controlled crystal oscillator puts proven professional performance at the heart of the Zodiac Platinum. An incorporated 10MHz input gives access to the legendary Antelope 10M Rubidium atomic clock for ultimate accuracy.

New 256X DSD upsampling releases the true potential of Direct Stream Digital by upsampling lower-rate DSD to DSD256 for stunning accuracy, transparency, imaging, and dynamics. DSD is converted direct-to-analog, not via PCM first.

The Voltikus PSU, 2nd generation, triple regulated power supply with integrated power line filtering uses a precision, laser-trimmed voltage reference and custom wound transformer for uncompromised power.

High precision relay attenuators for fast, quiet, precise, and dedicated control of main outputs and dual variable impedance headphone outputs.

Comprehensive control with dedicated aluminum IR remote and PC, Mac, and mobile control applications.



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hooked up to the Mac and having them playing 2ft just above my ears was almost disturbing at first. So close, they had the power and presence I associate with big Tannoys; music was loud without even trying it seemed, and bass had real strength.

I've become used to weedy or disjointed sounding computer speakers I suppose; suddenly having full power, hi-fi loudspeakers a couple of feet away is an altogether different experience, an eye-popping one.

The X300As have a mild balance, as measurement suggested they would, and they calmed some of my coarser tracks, such as Within Temptation's m4a encodings from iTunes. The rhythmic drumming and driving bass line of 'Sinead' had so much punch and pace it was like standing alongside stage monitors at a Goth rock concert. The complex arrangements get messy in these compressed iTunes files and the X300As did a good job of keeping it all under reasonable control.

With a cleaner and more composed CD rip from the Eagles album 'A Long Journey Out of Eden' and 'I Love to Watch a Woman Dance' Glen Frey's vocals were nicely centred and the sound stage well composed. The overall balance was mild but upper treble was still audible. I did at this point import a few tracks into the free Audacity music editor, equalise them to raise treble smoothly and then run a few 'before and after' comparisons. Running clean 24bit files like 'Misery' from Dave's True Story showed the X300As have sweet treble and could well do with a bit more high-end zest.

Doing the same with the equaliser in iTunes, playing a variety of CD rips and m4as (iTunes Plus files) did however make clear that increasing treble from a typical computer set-up playing compressed music files isn't always too successful.

KEF have chosen to give the X300As a calming influence, rather than an analytical one and this may not suit everyone. As computer music players these days commonly have optional equalisers, the effect can be counteracted, but not so if a CD player is connected up via the analogue input. I should point out that the analogue input is very sensitive and will work from an iPhone's headphone output, for example.

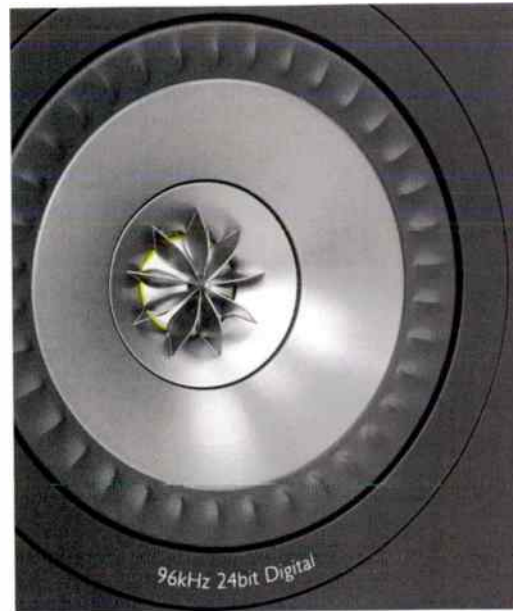
I got the best results – not unsurprisingly – from my Astell&Kern

AKI20 portable player feeding the analogue input. The X300As were silky smooth and utterly svelte reproducing the violins of the Trondheim Soloists playing 'Mozart's Violin Concerto No 3' (24/96). The orchestra had scale and yet was smooth and full bodied in nature; the KEFs were a picture of civility.

I was smiling listening to Otis Redding singing 'Respect' from the right speaker, the Muscle Shoals horns at left, taken from the master tape in a 24/192 transcription. It's with an old but gold analogue recording like this that I could appreciate the KEF's easy ability, their strong bass and grip on rhythm.

CONCLUSION

The X300As are active hi-fi loudspeakers, fitted with a USB computer connection. Bringing full hi-fi quality to computer music, in KEF's classy fashion where ability is assured, they offer lovely sound quality that's leagues ahead of typical computer 'speakers, although their price reflects this. I can't help feeling, however, that treble is too reticent; I quite like a little treble roll-off, but the X300As take this too far.



KEF's sculpted Tangerine waveguide eliminates interference effects between tweeter and woofer

Optical and electrical S/PDIF inputs would be useful too, so external digital sources can be connected, and a front power button and volume control would be convenient.

All the same, if you want a powerful musical blast from your computer, the KEF X300As are a good way to go. I have experienced little like them and was impressed.

MEASURED PERFORMANCE

A surprise of the X300As is that they have gently falling treble output, our frequency response analysis shows, and will have a soft or mild-mannered sound as a result. There is what looks like a crossover dip between bass/midrange and treble unit, around 1.5kHz, as if the bass/midrange can't quite reach high enough to meet the tweeter, and this will add to the speaker's mild delivery. It may well be KEF have decided that typical compressed music files (e.g. MP3, AAC) need smoothing as they are generally seen as having excessive

treble energy. Results were the same via the analogue input and USB input. The bass shelving function fitted, to improve results when standing on a desk, was very mild. Output from the bass unit extends down to 90Hz, below which the port, narrow tuned around 60Hz, takes over. This will add fast but punchy bass, that reaches down to 40Hz before rolling down quickly, so deep bass is plentiful but subsonics absent.

The 200mS decay spectrum was clean across most of the audio band, suggesting low colouration. Bass was a little 'hot' in places but overhangs at 120Hz and 50Hz were not great.

Sensitivity was high, just 0.13V rms (pink noise) being needed to generate a loud 90dB at 1 metre distance from the measuring microphone. Nearly all preamps can generate a level as low as this, as can iPhones, portable players and such like. The X300 As possess smooth frequency response, but slow treble roll-off does mean they will sound mild mannered. NK

FREQUENCY RESPONSE

Green - driver output
Red - port output



KEF X300A £600

EXCELLENT - extremely capable

VERDICT

High-quality active loudspeakers for computers, with an easy-going sound and plentiful bass. Short on facilities.

FOR

- powerful bass
- smooth and rich
- well built and finished

AGAINST

- warm sound
- no S/PDIF digital
- no front volume control

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WORLD CLASSICS

Here is our list of the great and good from audio's glorious past, products that have earned their place in hi-fi history. You'll also see some oddities which aren't classic as such, but are great used buys. The year of introduction is given, alongside the original UK launch price.

TURNTABLES

EAT FORTE 2009 £12,500
Lavishly finished two box, two motor turntable with gorgeous Ikeda 407 tonearm bundled. Exceptionally stable and unfussy performer with a relaxed but highly enjoyable gait.



FUNK FIRM VECTOR II 2009 £860
Innovative engineering gives a nimble, pacy and musical sound that's one of the best at the price.

REGA P2 2008 £300
Excellent value for money engineering, easy set up and fine sound.

MCINTOSH MT10 2008 £8,995
Big, expensive, controversially styled and glows more than some might consider necessary, but an astonishingly good performer.

REGA P3-24 2008 £405
Seminal affordable audiophile deck with fine bundled tonearm. Tweakable, and really sings with optional £150 outboard power supply.

ACOUSTIC SOLID ONE 2007 £4,050
Huge turntable, both in terms of sheer mass and sonic dynamics. Fit up to three arms and enjoy, just don't damage your back moving it...

AVID VOLVERE SEQUEL 2007 £4,600
Stylish high end vinyl spinner with industrial strength build quality and a sound to match. Sound is edge-of-the-seat stuff.

MICHELL GYRODEC SE 2005 £1,115
Design icon with superlative build. Sound is beautifully smooth, effortless and exceptionally expansive.

MARANTZ TT-15S1 2005 £1,299
Cracking all in one deck/arm/cartridge combination, this must surely be the best sound+plug and play package at this price point.

MICHELL TECNODEC 2003 £579
Superb introduction to Michell turntables - on a budget. Top quality build and elegant design mean it's still the class of the mid-price field.



MICHELL ORBE 1995 £2,500
The top Michell disc spinner remains a superbly capable all rounder with powerful, spacious sound that's delicate and beguiling.

SME MODEL 10A 1995 £4,700
Exquisitely engineered deck and SME V tonearm combo that's an extremely accomplished performer with classical music.

LINN AXIS 1987 £253
Cut-price version of the Sondek with LVX arm. Elegant and decently performing package. Later version with Akito tonearm better.

TECHNICS SL-P1200 1987 £800
CD version of the Technics SL-1200 turntable. Massively built to withstand the rigours of 'pr' use and laden with facilities - a great eighties icon.

ROKSAN XERXES 1984 £550
Super tight and clean sound, with excellent transients. Less musical than the Sondek, but more neutral. Sagging plinth top-plates make them a dubious used buy.

DUAL CS505 1982 £75
Simple high quality engineering and a respectable low mass tonearm made for a brilliant budget buy. Polished, smooth and slightly bland sound.

MICHELL GYRODEC 1981 £599
Thanks to its stunning visuals, this bold design wasn't accorded the respect it deserved. Clean, solid and architectural sound.

TOWNSHEND ROCK 1979 £ N/A
Novel machine has extremely clean and fluid sound. Substantially modified through the years, and capable of superb results even today.

MARANTZ TT1000 1978 £ N/A
Beautiful seventies high end belt drive with sweet and clean sound. Rare in Europe, but big in Japan.



REGA PLANAR 3 1978 £79
Brilliantly simple but clean and musical performer, complete with Acos-derived S-shaped tonearm. 1983 saw the arrival of the RB300, which added detail at the expense of warmth. Superb budget buy.

SONY PS-B80 1978 £800
First outing for Sony's impressive 'Biotracer' electronic tonearm. Built like a tank with a clean and tidy sound, albeit lacking involvement. Scarily complicated and with no spares support - buy with caution!

TRIO LO-7D 1978 £600
The best 'all-in one' turntable package ever made. Clean, powerful and three-dimensional sound, ultimately limited by the tonearm.

ADC ACCUTRAC 4000 1976 £300
Bonkers 1970s direct drive that uses an infra red beam to allow track selection and programming. More of a visual and operational delight than a sonic stunner.

PIONEER PLC-590 1976 £600
Sturdy and competent motor unit that performs well with a wide range of tonearms. Check very thoroughly before buying due to electronic complexity and use of some now-obsolete ICs.

PIONEER PL12D 1973 £36
When vinyl was the leading source, this brought new standards of noise performance and stability to the class, plus a low friction S-shaped tonearm. Later PL112D was off the pace compared to rivals.



TECHNICS SP10 1973 £400
Seminal Japanese engineering. Sonics depend on plinths, but a well mounted SP10/II will give any modern a hard time, especially in respect of bass power and midband accuracy.

LINN SONDEK LP12 1973 £86
For many, the Brit superdeck; constant mods meant that early ones sound warmer and more lyrical than modern versions. Recent 'SE' mods have brought it into the 21st century, albeit at a price

ARISTON RD11S 1972 £94
Modern evolution of Thorens' original belt drive paradigm, Scotland's original super-deck was warm and musical, albeit soft. Still capable of fine results today.

GOLDRING Lenco GL75 1970 £15.6S
Simple, well engineered motor unit with soft, sweet sound and reasonable tonearm. Good spares and servicing support even today.

GARRARD 301/401 1953 £19
Tremendously strong and articulate with only a veiled treble to let it down.



THORENS TD124 1959 £ N/A
The template for virtually every 1970s 'superdeck', this iconic design was the only real competition for Garrard's 301. It was sweeter and more lyrical, yet lighter and less impactful in the bass

TONEARMS

REGA RB251 2009 £136
Capable way past its price point, the new 3-point mount version of the classic RB250 serves up a taut and detailed sound. A little lean for some tastes, but responds well to rewiring and counter-weight modification.

HELIUS OMEGA 2008 £1,595
Stylish and solid lump of arm with fabulous build quality, that turns in a dynamic and weighty performance.

AUDIO ORIGAMI PU7 2007 £1,300
The classic Syrinx PU3 updated to spectacular effect. Hand made to order, with any mass, length and colour you care for. Fit, finish and sound truly impressive.



GRAHAM PHANTOM 2006 £3,160
Sonically stunning arm with magnificent bass dexterity and soundstaging. Build quality up to SME standards, which is really saying something!

TRI-PLANAR PRECISION 2006 £3,600
Immaculate build, exquisite design and one of the most naturally musical and lucid sounds around.

MICHELL TECNOARM A 2003 £442
Clever reworking of the Rega theme, using blasting, drilling and rewiring!

SME 309 1989 £767
Mid-price SME comes complete with cost-cut aluminium armtube and detachable headshell. Tight, neutral sound with good tonality, but lacks the IV's pace and precision.

NAIM ARO 1987 £1,425
Charismatic unipivot is poor at frequency extremes but sublime in the midband; truly emotive and insightful.

SME SERIES V 1987 £2,390
Vice-like bass with incredible weight, ultra clear midband and treble astound, although some don't like its matter of factness!

NAIM ARO 1986 £875
Truly endearing and charismatic performer - wonderfully engaging mid-band makes up for softened frequency extremes.



ALPHASON HR100S 1981 £150
First class arm, practically up to present-day standards. Buy carefully, though, as there is no service available now. Totally under priced when new, exceptional.

SME SERIES III 1979 £113
Clever variable mass design complete with Titanium Nitride tube tried to be all things to all men, and failed. Charming nonetheless, with a warm and inoffensive sound.

TECHNICS EPA-501 1979 £ N/A
Popular partner for late seventies Technics motor units. Nice build and Titanium Nitride tube can't compensate for middling sound.

LINN ITTOK LVII 1978 £253
Japanese design to Linn specs made for a musical, rhythmic sound with real dynamics. The final LVIII version worth seeking out.

AUDIO TECHNICA AT 1120 1978 £75
Fine finish can't compensate for this ultra low mass arm's limited sonics - a good starter arm if you've only got a few quid to spend.

HADCOCK GH228 1976 £46
Evergreen unipivot with lovely sweet, fluid sound. Excellent service backup.

ACOS LUSTRE GST-1 1975 £46
The archetypal S-shaped seventies arm; good, propulsive and involving sound in its day, but ragged and undynamic now.

SME 3009 1959 £18
Once state of the art, but long since bettered. Musical enough, but weak at frequency extremes and veiled in the midband. Legendary serviceability and stunning build has made it a cult, used prices unjustifiably high.

PHONO STAGES

CREEK OBH-8 SE 1996 £180
Punchy, rhythmic character with oodles of detail makes this a great budget audiophile classic. Partner with a Goldring G1042 for an unbeatable budget combination.

MICHELL ISO 1988 £ N/A
This Tom Evans-designed black box started the trend for high performance offboard phono stages. Charismatic, musical and punchy - if lacking in finesse.



LINN LINNK 1984 £149
Naim-designed MC phono stage built to partner the original Naim NAIT - yes, really! Fine sound, although off the pace these days.

INTEGRATED AMPLIFIERS

NAIM NAIT XS 2009 £1,250
With much of the sound of the Supera at half the price, this is powerful, articulate and smooth beyond class expectations.

MUSICAL FIDELITY PRIMO 2009 £7,900
Seriously expensive, but one listen explains why. Wonderfully exuberant sound that can only come from a top quality tube design.

SUGDEN A21A S2 2008 £1,469
Crystalline clarity, dizzying speed and forensic detailing. Power limited so needs sensitive speakers.

CREEK OBH-22 2008 £350
Brilliant value budget passive, with remote control, mute and input switching, plus an easy, a neutral sound.

CAMBRIDGE 840A V2 2007 £750
Version 2 addresses version 1's weaknesses to turn in a mightily accomplished performance, offering power, finesse and detail.

SUGDEN IA4 2007 £3,650
Goody amount of Class A power, icy clarity and a breathtakingly fast, musical sound make this one of the very best super-integrateds.

NUFORCE P-9 2007 £2,200
Impressive two box preamp with superb resolution and an engaging sound.

MELODY PURE BLACK 101D 2007 £3,295
The clarity and openness of valves plus firm grip and fine detail make this a preamplifier masterclass.

AUDIOLAB 8000S 2006 £400
In another life, this sold for three times the price, making it a stand-out bargain now. Very clean, powerful and tidy sound.

MCINTOSH MA6800 1995 £3735
Effortlessly sweet, strong and powerful with seminal styling to match.

DELTEC 1987 £1900
Fast, dry and with excellent transients, this first DPA integrated is the real deal for eighties obsessives. Ridiculously punchy 80W per channel from a tiny, half-size box. Radical, cool and more than a little strange.

EXPOSURE VII/VIII 1985 £625
Seminal pre-power, offering most of what Naim amps did with just that little bit extra smoothness. Lean, punchy and musical.



AUDIOLAB 8000A 1985 £495
Smooth integrated with clean MM/MC phono stage and huge feature count. Extremely reliable, too. Post '93 versions a top used buy.

VTL MINIMAL/50W MONOBLOCK 1985 £1,300
Rugged, professional build and finish allied to a lively and punchy sound (albeit with limited power) make them an excellent used buy.

MUSICAL FIDELITY A1 1985 £350
Beguiling Class A Integrated with exquisite styling. Questionable reliability.

MISSION CYRUS 2 1984 £299
Classic 1980s minimalism combines arresting styling with clean, open, lively sound. Further upgradeable with PSX power supply.



NAIM NAIT 1984 £350
Superb rhythms and dynamics make it truly musical, but tonally monochromatic. Fine phono stage, very low power.

CREEK CAS4040 1983 £150
More musical than any budget amp before it; CAS4140 loses tone controls, gains grip

MYST TMA3 1983 £300
Madcap eighties minimalism, but a strong and tight performer all the same.

ROTEL RA-820BX 1983 £139
Lively and clean budget integrated that arguably started the move to minimalism.

NAD 3020 1979 £69
Brilliantly smooth, sweet and punchy at the price and even has a better phono stage than you'd expect. The archetypal budget super-amp.

ROGERS A75 1978 £220
Lots of sensible facilities, a goody power output and nice sound in one box. The later A75II and A100 versions offered improved sonics and were seriously sweet.

A&R A60 1977 £115
Sweet and musical feature-packed integrated; the Audiolab 8000A remains a classic.



SUGOEN C51/P51 1976 £130
Soft sounding early Sugden combo with a plethora of facilities and filters. A sweet and endearing performer but lacking in power and poor load driving ability.

SUGOEN A21 1969 £ N/A
Class A transistor integrated with an eminently likeable smoothness and musicality. Limited inputs via DIN sockets.

ROGERS CAOET III 1965 £34
Sweet sounding valve integrated, uses ECL86 output valves, even has a half useable phono stage, sweet, warm a good introduction to valves

CHAPMAN 305 1960 £40
Smooth pre/power combo with a sweet and open sound. Not quite up to Leak/Quad standards but considerably cheaper secondhand.

POWER AMPLIFIERS

ELECTROCOMPANET NEMO 2009 £4,995 (EACH)

Norwegian power station as cool as a glacier tonally, yet impresses with sheer physicality and fleetness of foot. 600W per channel.

NUFORCE REFERENCE 9SE V2 2006 £1,750
Brilliant value for money monoblocks with massive power and super-clean, three dimensional sound.

QUAO II-80 2005 £6,000 PER PAIR

Quad's best ever power amplifier. Dramatic performer with silky but dark tonality, blistering dynamics, serious power and compellingly musical sound.



QUAO 909 2001 £900
Current-dumper has a smooth and expansive character with enough wallop to drive most loads. Not the most musical, but superb value all the same.

NAIM NAP 500 2000 £17,950
Flagship amplifier will drive just about any speaker with ease. Factor in the company's trademark pace, rhythm and timing and it all adds up to one effortlessly musical package.

MARANTZ MOEEL 9 1997 £8000
Authentic reproduction monoblocks still more than cut the sonic mustard. Highly expensive and highly sought after.

MICHELL ALECTO 1997 £1989
Crisp, clean and beautifully controlled with gorgeous styling. Partnered with the £1650 Orca this sounds delicious!

MUSICAL FIDELITY XA200 1996 £1000
200W of sweet smooth transistor stomp in a grooved tube! Under-rated oddity.

PIONEER M-73 1988 £1,200
Monster stomp from this seminal Japanese power amplifier, complete with switchable Class A and Class B operation. Clean, open and assured sounding, albeit a tad behind the pace on high speed dance music. Rosewood side cheeks and black brushed aluminium completes the experience.

KRELL KMA100 II 1987 £5,750
Monoblock version of the giant KSA-100 is one of the seminal 80s transistor power amplifiers. Massive wallop allied to clean and open Class A sound makes this one of the best amplifiers of its type.

RAOFORD STA25 RENAISSANCE 1986 £977

This reworking of Radford's original late sixties design was possessed of a wonderfully rich, old school valve sound with enough power (25W) and lots of subtlety.

QUAO 405 1978 £115
The first of the current dumpers is a capable design with smooth, effortless power and a decently musical sound. 606 and 707 continue the theme with greater detail and incision.

HH ELECTRONICS TPA-500 AMPLIFIERS 1973 £110

Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain

LECSON AP1 1973 £ N/A
Madcap cylindrical styling alluded to its 'tower of power' pretensions, but it wasn't. Poor build, but decently clean sounding when working.

QUAO 303 1968 £55
Bullet proof build, but woolly sound. Off the pace, but endearing nonetheless. Some pipe smoking slipper wearers swear by them!

LEAK STEREO 20 1958 £31
Excellent workaday classic valve amplifier with decent power and drive. Surprisingly modern sounding if rebuilt sympathetically. Irrepressibly musical and fluid.



LEAK STEREO 60 1958 £N/A
Leak's biggest valve power amp offers 35 Watts per channel and more low end welly than the smaller Stereo 20. Despite concerns over reliability rarity value means high price.

QUAO II 1952 £22
The all-time classic valve amplifier, with a deliciously fluid and lyrical voice. In other respects though, it sounds hopelessly dated. Low power and hard to partner properly

LEAK POINT ONE, TL10, TL12.1, TL12 PLUS 1949 £28
Early classics that are getting expensive. Overhauling is de rigeur before use, using original parts if possible. Surprisingly crisp and musical. Deeply impressive in fine fettle.

PRE AMPLIFIERS

AUDIOLAB 8000C 1991 £499
Tonally grey but fine phono input and great facilities make it an excellent general purpose tool.

CROFT MICRO 1986 £150
Budget valve pre-amp with exceptionally transparent performance.

CONRAO JOHNSON MOTIV MC-8 1986 £2,500
Minimalist FET-based preamplifier is brilliantly neutral and smooth with a spry, light balance in the mould of Sugden. Something of a curio, but worthwhile nonetheless.

AUDIO RESEARCH SP-8 1982 £1,400
Beautifully designed and built high end tube pre-amplifier with deliciously sweet and smooth sound. Not the last word in incision or grip.

LINN LK-1 1986 £499
A brave attempt to bring remote controlled user-friendliness to hair-shirt audiophile hi-fi. Didn't quite work, but not bad for under £100.

NAIM NAC 32.5 1978 £ N/A
Classic high end pre. Brilliantly fast and incisive sound that's a joy with vinyl but a tad forward for digital.

LECSON AC-1 1973 £ N/A
Amazing styling courtesy of Allan Boothroyd can't disguise its rather cloudy sound, but a design classic nonetheless.

QUAO 33 1968 £43
Better than the 22, but Quad's first tranny pre isn't outstanding. Responds well to tweaking/ rebuilding though...

LEAK POINT ONE STEREO 1958 £ N/A
Good for their time, but way off the pace these days. Use of EF86 pentode valve for high gain rules out ultra performance. Not the highest-fit!

QUAO 22 1958 £25
The partner to the much vaunted Quad II monoblocks - cloudy and vague sound means it's for anacrophiles only.

LOUDSPEAKERS

WHARFEOALE DIAMONO 10.3 2010 £290
Great small standmounters for audiophiles on a budget; dry punchy sound with impressive sound-staging at the price.

YAMAHA SOAVO 1.1 2009 £3,000
Musical, transparent with impressive dynamics and cohesion. Excellent build and finish.

USHER BE-10 2009 £10,500
Clever high end moving coil design with immense speed and dizzying clarity allied to epic punch. Needs the best ancillaries to fly, though...

SPENOOR A5 2009 £1,695
Multi-talented floorstanders with generous scale and punch and Spendor's classic mid-range detail. Deliver a sound that thoroughly engages whatever you care to play.

MONITOR AUDIO PL100 2008 £2,300
The flagship 'Platinum' series standmounter has a lovely warm and delicate sound with superlative treble.



MARTIN LOGAN SOURCE 2008 £1,600
Brilliant entry level electrostatics, giving a taste of loudspeaker esoterica for the price of most moving coil boxes. Tremendous clarity, evenness and delicacy, although not the world's most powerful sound.

PMC OB11 2008 £2,950
Cleverly updated floorstanders give scale and solidity in slim and well finished package.

ISOPHON GALILEO 2007 £2,100
Big standmounters that really grip the music and offer quite startling dynamics and grip.

ONE THING AUDIO ESL57 2007 £1,450
One Thing Audio's modifications keep the good old ESL57 at the very top of the game.

MOWGAN AUDIO MABON 2007 £3,995
Massively capable loudspeakers that offer dynamics, scale and clarity in an elegantly simple package. Wide range of finishes, too.

B&O BEOLAB 9 2007 £5,000
Technically impressive and visually striking loudspeakers with sound quality that more than matches their looks.



ISOPHON CASSIANO 2007 £12,900
Drive units featuring exotic materials allied to superlative build quality result in an immensely capable loudspeaker. Not an easy load to drive, however.

B&W 686 2007 £299
Baby standmounters offer a sophisticated and mature performance that belies both their dimensions and price tag.

QUAD ESL-2905 2006 £5,995
The old 989 with all the bugs taken out, this gives a brilliantly neutral and open sound like only a top electrostatic can; still not a natural rock loudspeaker, though.

B&W 801D 2006 £10,500
In many respects, the ultimate studio monitor; dazzling clarity and speed with commanding scale and dynamics.

REVOLVER CYGNIS 2006 £5,999
Revolver pull out all the stops and show what they can do with this magnificent flagship loudspeaker. A superb monitor that is like a mini B&W 801D in many ways.

USHER BE-718 2007 £1,600
Beryllium tweeters work superbly, allied to a fast and punchy bass driver. The result is subtle, smooth and emotive.

USHER S-520 2006 £350
Astonishingly capable budget standmounters that offer detail and dynamics well beyond their price and dimensions.

ACOUSTIC ENERGY AE1 CLASSIC 2006 £845
Brilliantly successful remake of an iconic design; not flawless, but surely one of the most musical loudspeakers ever made.



MISSION X-SPACE 1999 £499
The first mass production sub and sat system using NXT panels is a sure-fire future classic - not flawless, but a tantalisingly unboxy sound nevertheless!

MISSION 752 1995 £495
Cracking Henry Azima-designed floorstanders combined HDA drive units and metal dome tweeters with surprisingly warm results. Benign load characteristics makes them great for valves.

TANNOY WESTMINSTER 1985 £4500
Folded horn monsters which sound good if you have the space. Not the last word in tautness but can drive large rooms and image like few others.
CELESTION SL6 1984 £350
Smallish two way design complete with aluminium dome tweeter and plastic mid-bass unit set the blueprint for nineteen eighties loudspeakers. Very open and clean sounding, albeit course at high frequencies and limp in the bass. Speakers would never be the same again...

HEYBROOK HB1 1982 £130
Peter Comeau-designed standmounters with an amazingly lyrical yet decently refined sound. Good enough to partner with very high end ancillaries, yet great with budget kit too. A classic

QUAD ESL63 1980 £1200
An update of the ESL57, with stiffer cabinets. Until the 989, the best of the Quad electrostatics.

MISSION 770 1980 £375
Back in its day, it was an innovative product and one of the first of the polypropylene designs. Warm, smooth, clean and powerful sound,

ACOUSTIC RESEARCH AR18S 1978 £125
Yank designed, British built loudspeaker became a budget staple for many rock fans, thanks to the great speed from the paper drivers, although finesse was most definitely not their forte...

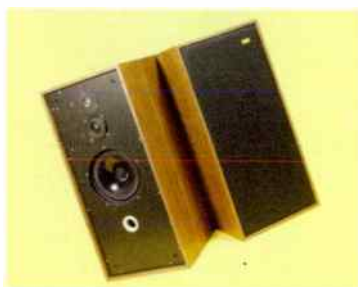
YAMAHA NS1000 1977 £532
High tech Beryllium midband and tweeter domes and brutish 12" woofers in massive sealed mirror image cabs equals stunning transients, speed and wallop allied to superb transparency and ultra low distortion. Partner carefully!



JR 149 1977 £120
Cylindrical speaker was ignored for decades but now back in fashion! Based on classic KEF T27/B110 combo as seen in the BBC LS3/5a. Doesn't play loud, needs a powerful transistor amplifier, but has clarity and imaging,

KEF R105 1977 £785
Three way Bextrene-based floorstander gave a truly wideband listen and massive (500W) power handling. A very neutral, spacious and polite sounding design, but rhythmically well off the pace.

SPENDOR BC1 1976 £240
Celestion HF1300 tweeter meets bespoke Spendor Bextrene mid-bass unit. The result is a beautifully warm yet focussed sound. A little bass bloom necessitates careful low-stand mounting.



IMF TLS80 1976 £550
Warm and powerful 1970s behemoth with transmission loading and a mixture of KEF and Celestion drive units. Impressively physical wideband sound but rhythms not a forte.

HH ELECTRONICS TPA-50D AMPLIFIERS 1973 £110
Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain. Not exactly stylish, however.

BBC LS3/5A 1972 £88
Extremely low colouration design is amazing in some respects - articulation, stage depth, clarity - and useless in others (both frequency extremes). Came in wide variety of guises from various manufacturers building it under licence.

LEAK SANDWICH 1961 £39 EACH
Warm sounding infinite baffle that, with a reasonably powerful amplifier can sound quite satisfying.

QUAD ESL57 1956 £45 EACH
Wonderfully open and neutral sound puts box loudspeakers to shame. Properly serviced they give superb midband performance, although frequency extremes less impressive. Ideally, use in stacked pairs or with subwoofers and supertweeters.

SYSTEMS

MERIDIAN SOOLOOS 2.1 2010 £6,990
Crisp styling, bright, colourful touchscreen, plus excellent search facilities. This is one hard disk music system with a difference. Best partnered to Meridian active loudspeakers.



NAIM UNITIQUE 2010 £995
Great little half width one-box system with truly impressive sound allied to a wealth of source options.

ARCAM SOLO MINI 2008 £650
Half the size and two-thirds the price of a full-sized Solo, the Mini gives very little away in terms of performance to its bigger brother.

SHANLING MC-30 2007 £650
Quite possibly the cutest all-in-one around with fine performance from the CD player, tuner and MP3 player input. Very low power, though.

MERIDIAN F80 2007 £1,500
Fantastically built and versatile DVD/CD/DAB/FM/AM unit, designed in conjunction with Ferrari. Ignore nay-sayers who sneer that it isn't a 'proper' hi-fi product. Just listen.

AURA NOTE PREMIER 2007 £1,500
Lovely shiny CD/tuner/amplifier with fine sound quality and dynamic abilities.



MARANTZ 'LEGEND' 2007 £22,000
The combination of SA-7S1 disc player, SC-7S2 preamp and MA-9S2 monoblocks delivers jaw-dropping performance.

ARCAM SOLO NEO 2006 £1,100
Excellent all-in-one system, with a warm, smooth and balanced sound to match the features and style.

PEACHTREE AUDIO IDECCO £1,000
Excellent sounding iPod dock, impressive DAC and fine amplifier section make this an excellent one box style system.

TUNERS

ARCAM FMJ T32 2009 £600
Excellent hybrid FM/DAB+ tuner with a smooth, engaging sound. Factor in its fine build and it's a super value package.

MAGNUM DYNALAB MD-100T 2006 £1,895
One of the best ways to hear FM that we know; superbly open and musical sound in a quirky but characterful package.

MYRYAD MXT4000 2005 £1,000
Sumptuous sound and top-notch build quality make for a tempting AM/FM package. Warm and richly detailed on good-quality music broadcasts.

NAIM NAT03 1993 £595
The warm, atmospheric sound is further proof of Naim's proficiency with tuners.

CREEK CAS3140 1985 £199
Excellent detail, separation and dynamics - brilliantly musical at the price. T40 continued the theme...

QUAD FM4 1983 £240
Supreme ergonomics allied to a pleasingly lyrical sound with plenty of sweetness and detail made this one of the best tuners around upon its launch.



NAD 4040 1979 £79
Tremendously smooth and natural sound allied to low prices and good availability make this budget analogue esoterica.

MARANTZ ST-8 1978 £353
Marantz's finest radio moment. Warm, organic sound plus an oscilloscope for checking the signal strength and multipath.

YAMAHA CT7000 1977 £444
Combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

SONY ST-5950 1977 £222
One of the first Dolby FM-equipped tuners, a format that came to nought. Still, it was Sony's most expensive tuner to date, and boasted good sound quality with brilliant ergonomics.



ROGERS T75 1977 £125
Superb mid-price British audiophile design, complete with understated black fascia. Smooth and sweet with fine dimensionality.

SANSUI TU-9900 1976 £300
A flagship Japanese tuner. It boasts superlative RF performance and an extremely smooth and lucid sound.



TECHNICS ST-8080 1976 £180
Superb FM stage makes for a clean and smooth listen.

REVOX B760 1975 £520
The Revox offers superlative measured performance although the sound isn't quite as staggering as the numbers. Fine nonetheless, and surely the most durable tuner here?

SEQUERRA MODEL 1 1973 £1300
Possibly the ultimate FM tuner. Massive in terms of technology, size and features dedicated to extracting every ounce of performance from radio, including impressive multi-purpose oscilloscope display.

LEAK TROUGHLINE 1956 £25
Series I an interesting ornament but limited to 88-100MHz only. II and III are arguably the best-sounding tuners ever. Adaptation for stereo easy via phono multiplex socket. Deliciously lucid with true dimensionality.

HEADPHONE AMPLIFIERS

GRAHAM SLEE NOVO 2009 £255
Dynamic headphone amplifier with a great sense of timing. Crisp, clear treble and warm midrange gives an involving sound.



MUSICAL FIDELITY X-CAN V8 2008 £350
Open and explicitly detailed sound plus serious bass wallop. A great partner for most mid-to-high end headphones.

CD PLAYER/RECORDERS

MUSICAL FIDELITY TRIVISTA 2002 £4000
When playing SACDs, the sweetest, most lucid and lyrical digital disc spinner we've heard. Old school stereo, pure DSD design. CD sound is up in the £1000 class, too! Future classic.

MARANTZ SA-1 2000 £5,000
The greatest argument for SACD. This sublime Ken Ishiwata design is utterly musically convincing with both CD and SACD, beating most audiophile CD spinners hands down.



SONY MDS-JE555ES 2000 £900
The best sounding MD deck ever, thanks to awesome build and heroic ATRAC-DSP Type R coding.

PIONEER PDR-555RW 1999 £480
For a moment, this was the CD recorder to have. Clean and detailed.

MARANTZ DR-17 1999 £1100
Probably the best sounding CD recorder made; built like a brick with a true audiophile sound and HDCD compatibility.



CAMBRIDGE AUDIO CD4SE 1998 £200
A touch soft in the treble and tonally light, but outstanding in every other respect.

SONY TCD-8 DATMAN 1996 £599
Super clean sound makes this an amazing portable, but fragile.

LINN KARIK III 1995 £1775
The final Karik was a gem. Superb transport gives a brilliantly tight, grippy dynamic sound, albeit tonally dry.

NAIM CDS 1990 £ N/A
Classic Philips 16x4 chipset with serious attention to power supplies equals grin-inducing sonics.

MARANTZ CD73 1983 £700
A riot of gold brushed aluminium and LEDs, this distinctive machine squeezed every last ounce from its 14x4 DAC -super musical



MERIDIAN 207 1988 £995
Beautifully-built two-box with pre-amp stage. Very musical although not as refined as modern Bitstream gear. No digital output.

SONY CDP-R1/DAS-R1 1987 £3,000
Sony's first two boxer was right first time. Tonally lean, but probably the most detailed and architectural sounding machine of the eighties.

CAMBRIDGE AUDIO CD1 1986 £1500
Inspired Stan Curtis redesign of Philips CD104, complete with switchable digital filter. Lean but tight and musical performer.



MERIDIAN MCD 1984 £600
The first British 'audiophile' machine was a sweeter, more detailed Philips CD100. 14x4 never sounded so good, until the MCD Pro arrived a year later.

SONY CDP-701ES 1984 £890
Sony's first bespoke audiophile machine used a 16x2 DAC to provide a clinically incisive sound; supreme build quality allied to the pure unadulterated luxury of a paperback-sized remote control.

YAMAHA CD-X1 1983 £340
Nicely built 16x2 machine with a very sharp and detailed sound; sometimes too much so. Excellent ergonomics, unlike almost every other rival of the time.

SONY CDP-101 1982 £800
The first Japanese CD spinner was powerful and involving. Brilliant transport more than compensated for 16x2 DAC, and you even got remote control!

ANALOGUE RECORDERS

AIWA XD-009 1989 £600
Aiwa's Nak beater didn't, but it wasn't half bad nonetheless. Massive spec even included a 16x4 DAC!

NAKAMICHI CR-7E 1987 £800
The very best sounding Nakamichi ever - but lacks the visual drama of a Dragon.



SONY WM-D6C 1985 £290
Single capstan transport on a par with a Swiss watch, single rec/replay head better than most Naks. Result: sublime.

PIONEER CTF-950 1978 £400
Not up to modern standards sonically, but a great symbol of the cassette deck art nonetheless.

YAMAHA TC-800GL 1977 £179
Early classic with ski-slope styling. Middling sonics by modern standards, but cool nonetheless!

SONY TC-377 1972 £N/A
A competitor to the Akai 40000 open reel machine, the Sony offered better sound quality and is still no slouch by modern standards

REVOX A77 1968 £145
The first domestic open reel that the pros used at home. Superbly made, but sonically off the pace these days.

COMPACT DISC TRANSPORTS

ESOTERIC PO 1997 £8,000
The best CD drive bar none. Brilliantly incisive, ridiculously over engineered.

TEAC VRDS-T1 1994 £600
Warm and expansive sound made this a mid price hit. Well built, with a slick mech.

KENWOOD 9010 1986 £600
The first discrete Jap transport was beautifully done and responds well to re-clocking.

DACs

DCS ELGAR 1997 £8500
Extremely open and natural performer, albeit extremely pricey - superb.

DPA LITTLE BIT 3 1996 £299
Rich, clean, rhythmic and punchy sound transforms budget CD players.

CAMBRIDGE AUDIO DAC MAGIC 1995 £99
Good value upgrade for budget CD players with extensive facilities and detailed sonics.

PINK TRIANGLE DACAPO 1993 £ N/A
Exquisite; the warmest and most lyrical 16bit digital audio we have ever heard.

QED DIGIT 1991 £90
Budget bitstream performer with tweaks aplenty. Positron PSU upgrade makes it smooth, but now past it.

CABLES

MISSING LINK CRYO REFERENCE 2008 £495/0.5M
High end' interconnects, with deliciously smooth, open and subtle sound without a hint of edge.

TECHLINK WIRES XS 2007 £20
Highly accomplished interconnects at an absurdly low price. Stunning value for money.

VDH ULTIMATE THE FIRST 2004 £250
Carbon interconnects that help you forget the electronics and concentrate on the music. Miraculous transparency. Tight and tuneful bass mixed with air and space.



WIREWORLD OASIS 5 2003 £99/M
Excellent mid-price design with a very neutral, silky and self-effacing sound. Superb value for money.

TCI CONSTRICTOR 13A-6 BLOCK 2003 £120
Top quality 'affordable' mains outlet block, with fine build and good sonics. Well worth the extra over standard high street specials, which sound coarse and two-dimensional by comparison.

CLASSIC CONTACTS

When a classic goes 'poof' your troubles have just started, but there may be a good ending. Replacing failing parts can improve the sound, so here is a short listing of all these companies who specialise in getting a classic up and running again after its deposited a small ring of soot on your ceiling!

GT AUDIO

(Graham Tricker, Bucks)
Quad and most classic tuners, radios and amplifiers restored, repaired.
Tel: 01895 833099
Mob: 07960 962579
www.gtaudio.com

TECHNICAL AND GENERAL

(East Sussex)
Turntable parts - wide range of spares and accessories, plus arms and cartridges.
Tel: 01892 654534

CARTRIDGE MAN

(Len Gregory, London)
Specialist cartridge re-tipping service and repairs. High quality special cartridges.
Tel: 020 8688 6565
Email: thecartridgeman@talktalk.net
www.thecartridgeman.com

QUAD ELECTROACOUSTICS (Cams)

Quad's service department, able to repair almost all Quad products, from the very first. (Also Audiolab, Mission & Wharfedale).
Tel: 0845 4580011
www.quad-hifi.co.uk

OCTAVE AUDIO WOODWORKING

(Bristol) Unit 2, 16 Midland Street, St Phillips. Bristol. Tel: 0117 925 6015
www.octave-aw.co.uk

Dr MARTIN BASTIN

(Shropshire) Garrard 301/401 restoration, renovation and service. Special plinths; rumble cures, etc.
Tel: 01584 823446

ARKLESS ELECTRONICS

(Northumberland)
Specialist in repairs, restoration and modifications to all amplifiers, valve or solid state, ancient and modern.
Tel.: 01670 530674
Email: info@arklesselectronics.com
www.arklesselectronics.com

CLASSIQUE SOUNDS

(Paul Greenfield, Leicester)
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Mob: 0116 2835821
Email: classique_sounds@yahoo.co.uk
www.flashbacksales.co.uk/classique

WEMBLEY LOUDSPEAKER

(Paul MacCallam, London)
Comprehensive loudspeaker servicing.
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www.wembleyloudspeaker.com

CLASSIC NAKAMICHI

(Paul Wilkins, Worthing, West Sussex).
Restore, Repair & Service Nakamichi Cassette Decks.
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www.bowersandwilkins.co.uk

ONE THING

(Coventry) Specialist in electrostatic panel manufacture and repair. Can refurbish ESL 57s and 63s as well as Leak Troughlines and Quad IIs.
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www.onethingaudio.com

LORICRAFT AUDIO

(Terry O'Sullivan, Bucks)
Garrard 301/401 and their own 501 repair, spares and service.:
Tel: 01488 72267
www.garrard501.com

EXPERT STYLUS COMPANY

(Wyndham Hodgson, Surrey) Stylus replacement service for all types of cartridge. Including precise profiling for 78s. Tel: 01372 276604
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REVOX

(Brian Reeves, Cheshire)
Revox tape recorder spares, service and repair. Accessories also available.
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Email: brian@revoxservice.co.uk
www.revox.freeuk.com

SOWTER TRANSFORMERS

(Brian Sowter, Ipswich)
Large range of audio transformers for valve amps, cartridges, line drive, interstage plus all associated services.
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www.sowter.co.uk

LOCKWOOD AUDIO

(London)
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Tel: 020 8 864 8008
www.lockwoodaudio.co.uk

ATV AUDIO

(Henry Dulat, Surrey)
Repairs, restorations and upgrades to valve and transistor amps and all analogue audio including Revox.
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The Prime of life

Tony Bolton explores the capabilities of Meridian's impressive new headphone amplifier and DAC, the Prime.



Meridian have an enviable reputation for building very good digital equipment, some examples of which have even caused a devout vinyl-head like me to make admiring comments.

So I was more than a little enthusiastic to get my hands on the company's new Prime headphone amplifier, which comes with a built-in DAC as well.

This is a user-friendly device, accommodating two headphone users via the 1/4in jack sockets on the front panel, and there is a 3.5mm socket if required.

Beside these are two silver buttons. One selects the input, from a choice of analogue through a rear mounted 3.5mm mini-jack, analogue through line level phono sockets, or digital through USB.

There is also an analogue output,

enabling the Prime to be used as a pre-amp, feeding a power amp or active loudspeakers. This output, and the headphone volume, are controlled by an Alps potentiometer.

The second silver button selects either of the two ASP (Analogue Spatial Processing) settings or disables this facility entirely.

"On a couple of occasions it caused me to jump when a sound appeared unexpectedly, seemingly from behind me"

Holding the power button down until the light glows green disconnects the analogue output and, as a final nod to the purists, the digital circuit is only activated when the USB socket is used so there is

the minimal chance of contamination of the sound quality.

The casework is executed to Meridian's normal high standard and is held together by hidden magnetic catches.

Inside is a 24bit/192kHz-capable DAC and a circuit that automatically upsamples any 44.1kHz or 48kHz

USB signal to 88.2kHz or 96kHz before it is decoded.

Power comes from a wall-wart plug, although there is an option for upgrading this with the £800 Prime power supply unit.

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I connected the Prime to the analogue tape output of my Leema Acoustics Tucana II amplifier and started off listening to my favourite Morcheeba album, 'Big Calm', spun on a Leema Antilla CD player. Plugged into the Prime was a pair of ADL H118 headphones. The sound that greeted my ears left me in no doubt that the electronics inside the unit matched the looks.

I found the Prime delivered one of the most effortless sounds that I have heard through these headphones. Bass quality was good, with a deep and detailed but controlled sound that provided a solid, but fast-moving basis for the rest of the music to ride on. The midrange, especially vocals, were well displayed with Skye's voice appearing in the centre of my head, guitars and synths surrounding her vocals. Small sounds in the treble region were detailed and smooth.

This experience left me feeling the Prime is one of the most enjoyable headphone/ head amp combinations I have yet sampled.

I switched over to the computer, connected digitally via USB, and set to work exploring old pop videos on YouTube. A lot of these are of fairly indifferent sound quality and I really appreciated the upsampling of the signal before it was decoded by the DAC. It filled in a lot of the rougher edges that I am used to hearing on these files.

I also used the Prime when catching up on last week's episodes of 'Borgen' on the BBC iPlayer. I am used to watching this on TV, with the sound playing through the hi-fi, and was quite amazed at the level of ambient detail that the DAC managed to extract from the soundtrack.

It had the effect of making the programme even more immersive than I usually find it and on a couple of occasions caused me to jump when a sound appeared unexpectedly, seemingly from behind me.

Throughout all of this listening I kept investigating the ASP settings. Despite my initial suspicions of anything with the name 'signal processing' in it, I actually found the effect to be subtle and generally an enhancement to already good sound.

Central images became stronger and the soundstage seemed to move a little forward so, although I wouldn't go so far as to say it was 'out of my head' listening, it certainly seemed to create more believable sonic images in my mind.



There are three types of input catered for; line level analogue via the RCA sockets on the left, the 3.5mm mini jack labelled as input 2 and the USB socket which activates the onboard DAC. The line level analogue output enables the Meridian Prime to be used as a pre-amplifier when plugged into either active loud-speakers or a power amp.

CONCLUSION

The Meridian Prime is a very well designed and considered piece of equipment. The only drawback that I can see is the lack of any other digital input apart from USB. Otherwise it looks and sounds very good.

The build quality is excellent and the connectivity allows it to be used as a headphone amp, as an analogue and digital pre-amp or as a DAC.

Definitely one for my list of recommended products that offer something a little special for the money.

SYSTEM USED

MacBook Pro.
Leema Acoustics Antilla 2S Eco CD player and Tucana II amplifier.
ADL H118 headphones.

MUSIC USED

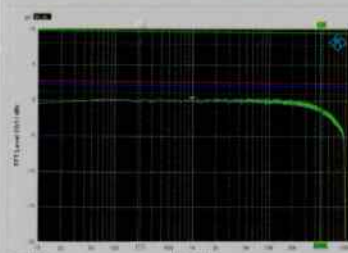
Morcheeba. 'Big Calm'.
Indochina Records.
ZEN017CDX. 1998.
YouTube
BBC iPlayer

MEASURED PERFORMANCE

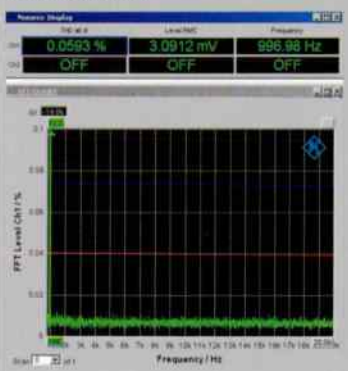
Gain through the analogue stages measured just x1.5 (+3.5dB), against a typical figure for a preamp of x3 (+9.5dB) so the Prime offers limited gain.

Output was 4V maximum, enough to drive a power amplifier as most need

FREQUENCY RESPONSE



DISTORTION



1V for full output. Frequency response through the analogue stage reaching a minimum of 65kHz (-1dB) at full volume. Unusually, bandwidth at less than full volume was greater, reaching 100kHz.

The USB input handled 192kHz sample rate but lost lock intermittently. It was stable with 176.4kHz and lower. Frequency response extended to 46.6kHz our analysis shows, so the Prime exploits the bandwidth available from high sample rates.

Distortion levels were low, measuring 0.002% at 0dB and a low 0.06% at -60dB, good results. EIAJ Dynamic Range was a high 111dB – very respectable.

The Prime exploited high sample rates and 24bit resolution well, producing good all-round figures under measurement. **NK**

Frequency response (-1dB)	
192k	4Hz - 35kHz
Distortion, 24bit	(%)
0dB	0.002
-60dB	0.06

Separation (1kHz)	113dB
Noise (IEC A)	-110dB
Dynamic range (EIAJ)	111dB
Output	4V

MERIDIAN PRIME HEADPHONE AMPLIFIER
£1200.00



OUTSTANDING - amongst the best

VERDICT

- excellent sounding head amp, DAC and preamp from a respected UK digital specialist

FOR

- detailed and musical sound
- well thought-out ASP circuit
- choice of uses

AGAINST

- only USB digital input

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Perfect balance

Rafael Todes discovers a taste of the high-end at a reasonable price in the shape of JE Audio's new VM60 valve monoblocks and VL19 preamplifier.

Valve amplifiers come in various flavours: traditional, technological, modernist and even decorative. The JE Audio valve preamplifier / power amplifier combination reviewed here are none of those: they are innovative. Few valve amplifiers are designed fully balanced all the way through, even though fully balanced working is becoming ever more popular in audio, slowly seep-

ing through its technological fabric. It eliminates hum and noise problems, and cancels interference. The result is a sound of pristine cleanliness.

In the VM60 power amplifier JE Audio have come up with what is a modern design, beautifully made and finished, but using a fairly standard, sensible and practical circuit arrangement where two pairs of KT88 power valves work in push-pull. You get 60 Watts from this, which is

more than enough unless really high volume is going to be used.

You also get a monoblock power amplifier that is reasonably compact, measuring 352mm wide, 395mm deep and 120mm high, and at 20.5kgs apiece (45lbs) can be lifted by one person. It has 8 Ohm and 4 Ohm outputs and sturdy accompanying loudspeaker sockets.

The input is fully balanced, entering through an XLR socket. An



unbalanced input has been provided too, as a convenience, but at this level the whole system should be run balanced, meaning use of a balanced preamplifier like the JE Audio VL19 we used. As each monoblock is sensitive, needing just 400mV for full output our measurements show, a fully balanced transformer preamp like those from Music First Audio would also suit.

So what you get here is a modern design following current trends, that uses a tried, tested and reliable circuit topology, yet is quite different from almost all other valve amplifiers in being fully balanced from input through to output.

VL19 PREAMPLIFIER

VL19 is a balanced line stage preamplifier with digital remote control employing two 6H30Pi triodes per channel in wideband balanced topology for signal amplification.

There is only one stage of gain, as opposed to the conventional three stages. This avoids some of the phase-shift problems that can occur with multi-staged preamps. There is no global feedback. Wideband MOSFETs are also used, along with pure silver interconnecting cables, copper foil In oil capacitors with an R-core power transformer.

Digital volume control can be finely graded with 99 steps to chose from.

The preamp features three sets

of balanced (XLR) inputs and three sets of unbalanced (RCA) inputs. A small remote control unit provides access to the six inputs, volume, and the ability to darken the display. There is a tantalising delay of 30 seconds before the amplifier starts working, with a red LED display counting down the seconds until lift-off. Allowing the valves to warm before applying HT helps to prolong valve life.

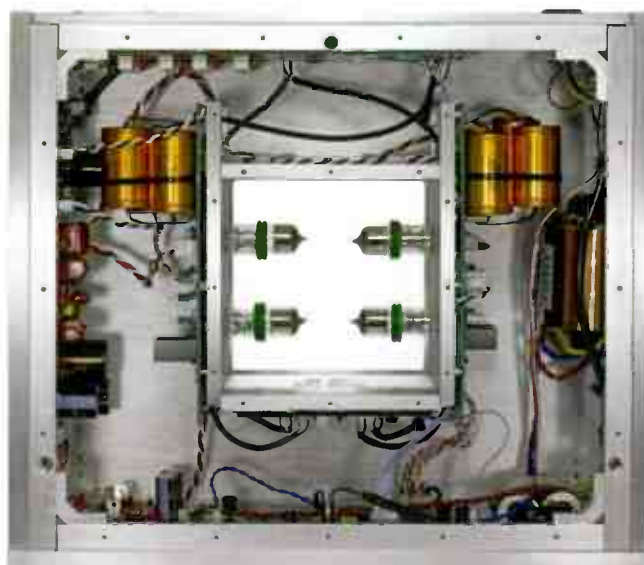
VM60 POWER AMPLIFIER MONOBLOCKS

Fully balanced operation is achieved by employing patented Dual Balanced Feedback Topology (DBFT). The

positive input and negative output signals are first fed to the input stage that is formed by two 12AX7/ECC83, configured in such a way that the first stage will amplify the input signals as well as two pairs of feedback signals in an orderly manner.

The output stage contains four KT88 power tubes and a balanced output transformer. The feedback signals are taken in pairs so that balance can be maintained.

The first feedback pair is taken from the outputs of the second stage. A small amount of feedback is used so that the bandwidth, distortion and output impedance of the first two stages combined are improved. This



Two 6H30Pi per channel are used in the VL19 pre-amplifier. These are Chinese triodes for which there are no substitutes. They are available online.

The monoblocks are well built, using modern, high quality, audio grade components.



small amount of feedback also sets the signal gain of the combined first two stages.

A second feedback pair is taken from the transformer outputs. Again, a small amount of feedback is used to further improve the bandwidth, distortion and output impedance of the overall amplification.

The amplifiers are supplied with Gold Lion KT88s, with all tubes burned in for at least 50 hours before they are tested and carefully matched. The monoblocks are rated at 60 Watts per channel.

SOUND QUALITY

Cranking up my Inspire Monarch turntable, with an Aesthetix Rhea Signature phono stage, and turning to classic jazz album, "See You At The Fair", Ben Webster on tenor

sax et al, the combination of the pre and power amps yields an instantly pleasing sound. It's a bit like opening a door and smelling garlic! The sound has an easiness to it, bouncy, delicate, and beautifully crafted with a feeling of sitting in a favourite armchair.

The tenor sax is rich and full without being bloated, the hi-hat is accurately metallic-sounding, stopping on a dime. Perhaps the most impressive bit of the equation for this valve combination is the delivery of the bass for the small forces on this recording. The double bass pizzicatos are tangibly real, tight, but containing weight and substance. The overall impression is of a sumptuous sound, no hard edges, but with bite and guts to it.

The combination passes the small forces test with flying colours, but

how does it cope with the challenges of larger scale?

The 'Scherzo' or 'Mahler's 9th Symphony' contains sardonic wit by the bucketload. Grotesque one minute, tender the next. The pre/power team really captures the humour in the music. It picks up the facial expressions of the players, so to speak, to reveal the nuances together with the meaning in the music. It is not only gripping to hear the wonderful range of Mahlerian orchestral colours, but it exudes a confidence and solidity that illuminate the music brilliantly. I have rarely heard this movement sound so convincing.

One of my favourite recordings of Dvorak's 'New World Symphony' is conducted by a young Leonard

Bernstein on the CBS label. It can sound a bit dry and dusty, a tendency of the 1960s' CBS sound, but I am pleasantly surprised to see the JE combination comes as close as I've yet heard to extracting huge amounts

of musical and timbral detail, to humanise this tricky recording. The slight graininess of the recording disappears in favour of a master tape-like sound. There is solidity, oodles of the raw excitement of the developing musical argument, and you can even hear the conductor jumping up and down on the podium as he gets a bit over-excited! The woodwind sound rounded and golden, the strings powerful and mellow, and the overall presentation is accurate, involving, and seemingly effortless. These monoblocks clearly have no problem whatsoever in driving my B&W802Ds. I'm not sure I can think of a solid state team that can produce this quality at this price point.

Over to some opera, Verdi's 'La Traviata, Kleiber and Cotrubas', on DG. The JE combination really manages to capture the drama of the overture, together with the sweetness of Cotrubas' voice. When



Balanced XLR input at top should be used to get benefit of all-balanced circuitry.





Preamp connectivity features three sets of balanced XLR inputs as well as a trio of unbalanced RCA sockets.

the choir enters, a moment of such huge forces can sometimes cause a system to screech. The JE team copes admirably, conveying the power of the moment. I notice that there is better side-to-side resolution than back to front. The instruments and singers have good textural separation, which in turn is more sophisticated than the spacial separation.

Taking out the JE preamp, and substituting it with the Allegri Transformer Passive Preamp, yields some interesting results. The sound is leaner, less lush, but more crystalline. The back to front imagery improves noticeably. I have seen far more expensive preamps felled by this relatively simple device, but the JE really does very well, all things considered, and shows its class as a really fine preamp.

Using a top-shelf front-end CD source, the Esoteric K-05 together with the DCS Debussy DAC, and listening to a miraculous early String Symphony No 11, written by a teenaged Mendelssohn, and performed by Concerto Köln, I seem to obtain far better results with the Allegri Passive Preamp than with the VL19. The valve preamp seems to smudge the clarity of this period-instrument group in a way that obscures the textures, particularly in the bass department. The superb clarity of the digital reproduction is better suited to the minimum of interference that a passive preamp brings to the table.

The preamp has an odd habit of making a 'zing' every time you change input. It is presumably the relays vibrating and the valves' microphony amplifying! Initially I went into shock on hearing this, as it is a similar sound to a valve failing. I have now grown accustomed to this noise, but in future versions of this preamp, it is an issue that could be usefully addressed. On the subject of extraneous noise, it is also worth noting that the output transformers of the power amps also make a

noticeable noise, humming, a bit like a neighbour vacuuming. I am not sure if this is an issue of my mains supply and its evils, but it's not a problem I see with my reference VAC Phi 200 amplifiers.

CONCLUSION

I thoroughly enjoyed my time with these components. They have a delightful way of drawing the listener into the heart of the music they are reproducing, and capture

the character and essence of it beautifully. They are not without their quirks, but will appeal to a wide range of both thermionic fans, and a proportion of solid-state users alike. I particularly liked the preamp when used with vinyl, over its contribution with CD. Great value for money and a taste of the really high-end at a reasonable price.

REFERENCE SYSTEM

- Inspire Monarch Turntable
- SME V arm
- Ortofon Cadenza Bronze cartridge
- Townshend Seismic Platform
- Aesthetix Rhea Signature Phono Preamplifier
- Townshend Allegri Preamplifier
- VAC Phi 200 Monobloc amplifiers
- B&W 802d speakers
- Tellerium Q speaker cable
- Esoteric K-05 CD player
- DCS Debussy DAC

MEASURED PERFORMANCE

The VM60 produced 60 Watts under test (1% thd), from both its 8 Ohm and 4 Ohm windings. This is quite conservative from a pair of KT88 power valves, so they should have a long life.

Frequency response extended smoothly to 20kHz where it was -1dB down, from both 4 Ohm and 8 Ohm outputs. So bandwidth is limited, but that is not unusual with valve amps. There was full gain down to 5Hz and some sign of subsonic gain below there,

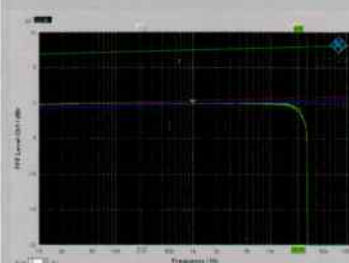
usually caused by feedback ceasing to work at low frequencies because open-loop conditions have not been optimised. This will not be an issue with digital, but severe LP warps may cause loudspeaker cone flap and transformer core saturation.

Distortion levels were very low – just 0.01% at 1 Watt and 0.4% at full output (1kHz). Even at 40Hz distortion hovered around 1% and was mainly second harmonic, with little sign of the usual triangulation caused by magnetic hysteresis. So bass will sound clean and, with a damping factor of 6 from the 4 Ohm winding, quite well controlled too. In all, at high and low frequencies, from low to high outputs the VM60s produced little distortion and looked good under measurement.

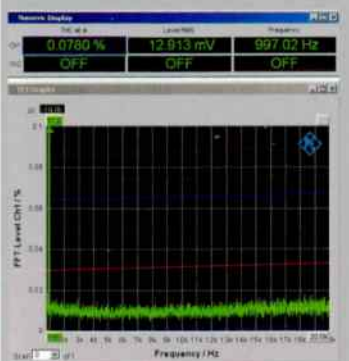
Full output was developed from 400mV input, making the VM60s sensitive, as most power amps need double this.

The VM60s measured well in most areas. There were no obvious weaknesses, other than a small amount of subsonic gain that is unwanted in any valve amp, but affects only behaviour with warped LPs. NK

FREQUENCY RESPONSE



DISTORTION



Power	60watts
Frequency response	5Hz-20kHz
Separation	71dB
Noise	-93dB
Distortion	0.4%
Sensitivity	400mV

JE AUDIO VM60 POWER AMPLIFIER £4500

JE AUDIO VL19 PREAMPLIFIER £3500



OUTSTANDING - amongst the best

VERDICT
Innovative all-balanced valve amplifiers with great sound. Impressive.

FOR
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- clean sound
- reasonable price

AGAINST
- big
- Chinese triodes
- microphony

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What's in a Naim?

Naim takes on the growing computer audio market with its new DAC-V1. Team it with the company's NAP 100 amplifier and it's a match made in heaven, says Jon Myles.

To say Naim's research and development department has been on a bit of a roll recently would be something of an understatement. It's just under four years ago that Salisbury's finest unveiled the groundbreaking Naim Uniti all-in-one player. Yet since then the company's digital streaming range has expanded to include no less than eight more

players or systems in various forms, the nServe ripping/storage device and the well-regarded Naim DAC.

Conspicuously missing from the range, however, has been any form of dedicated computer audio unit, either for those who like to listen while sitting at their computer, or who use a Mac/PC plugged directly into their hi-fi. Until now, that is.

For the latest device from the

Naim production line is the DAC-V1, the first of the company's range to feature an asynchronous USB connection to make the best of a computer output.

But, in true Naim fashion, there's more to it than just that.

For the V1 can also do service as a complete preamplifier with five more digital inputs on offer. There are three electrical inputs – two

using phono sockets, one a BNC connector – and two optical Toslink sockets. Output is via the usual choice of stereo phonos or Naim's favoured locking DIN sockets. These can either be set to fixed output – to run the DAC-VI into another preamp or integrated amp – or at variable level using a precision analogue volume control for connection straight into something like Naim's NAP 100 power amplifier (of which more later).

Inside, is a Burr Brown PCM1791A DAC chip as found in the NDX streamer, allied to digital filtering with Naim-authored code.

Naim says the VI will work up to 24bit, 384kHz resolution via USB, the conventional S/PDIF digital inputs accepting files of up to 24/192kHz. (see Measured Performance).

Housed in a half-width case a la Naim's own UnitiQute, the front panel features a bright green OLED screen, two rows of input selectors along with a volume control on the left of the fascia and headphone socket. All functions are accessible from the supplied, dedicated system remote.

As mentioned above, Naim recommends pairing the VI with its own matching £650 NAP 100 power amplifier for regular hi-fi duties and apart from headphone listening this was how it was used.

Together, the pair make an attractive 'lifestyle-looking' package and are a breeze to use. Little details such as touching the illuminated Naim logo to mute the units add to



The NAP 100 power amplifier (top) has 4mm loudspeaker sockets only.

The DAC-VI has a BNC socket, for best S/PDIF impedance matching, as well as electrical phono and TOSLINK optical inputs. A USB B 'printer cable' input connects to a computer, PC or Mac.

the overall quality feel.

The OLED screen also offers up a wealth of information on system performance such as buffer capacity, file resolution etc, and Naim also supply a BitPerfect test to ensure files are reaching the DAC at the correct resolution.

USB set-up with a MacBook Pro was as fuss free as ever – a matter of simply selecting the output device in Sound Preferences and then setting the software player to the same. For Windows users, the necessary drivers are available for download from the Naim website.

SOUND QUALITY

Right from the off the DAC-VI makes a convincing case for itself.

Whether used as a standalone DAC/headphone amp or in full preamplifier set-up with the NAP 100, music was grippy, rhythmic yet commendably smooth.

Hooked up the MacBook Pro and listened to via a set of B&W P3 headphones there was a terrier-like sense of dynamism to the VI.

The high-resolution (88kHz/24bit) download of Daft Punk's 'Random Access Memories' was captured perfectly – with a wonderful sense of timing to the various rhythmic undulations of the musicians. Drums were particularly crisp and tight while the bass was deep and clear. Detail was also finely honed, individual instruments being finely etched without veering into any unpleasant edginess.

Switching to some classic Herbie Hancock in the shape of 'Rockit' and there's a big, expansive soundstage with the complex drum machine patterns located solidly in the mix, the vocoder-saturated vocals sitting firmly centre stage.

There's no sense of stress or strain, just an easy musical flow that makes it easy to while away many an hour listening to the VI on your desktop.

Bring the NAP 100 into service and the sense of musical coherence continues. Naim rate the little power amplifier at 50 Watts, but in true company fashion it has more than enough grunt to drive most speakers.

Not surprisingly there's an



Naim's new DAC-VI and NAP 100 package sees the company's first asynchronous USB DAC paired with a matching power amplifier.



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(from top to bottom) SME M2-12R, SME 309, SME Series V, SME V-12



(top) McIntosh MT5, (bottom) McIntosh M110

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World Radio History

obvious sense of synergy between the DAC-V1 and the NAP 100. Put together they did a superb job of bringing the best from Acoustic Energy's new entry-level 301 standmounts.

The low pipe organ notes from Mattias Wager's rendition of Bach's 'Tocatta & Fugue' had real resonance with clean reverberation, and the Naim combination did an excellent job of picking through the multi-layered complexities of Nitin Sawhney's 'Beyond Skin' collection.

The days when Naim amplification was criticised for sounding good with rhythmic material and nothing else are long gone and this combination seems to revel in whatever form of music you care to throw at it.

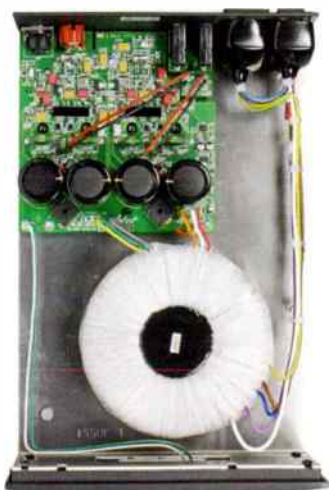
If there's any criticism to be made it's that the DAC-V1 doesn't offer the various digital filter options of some rivals such as the Audiolab M-DAC (reviewed in October 2013 issue) and at £1,250 it's not exactly cheap.

What it does offer, though, is a superb musicality and effortless presentation. Partner it with the NAP 100 and you have an ideal combination for getting the most out of your digital sources, be it computer, CD transport, games console or whatever.

CONCLUSION

The DAC-V1 is another impressive product from Naim. It takes much of the excellent bits of the pricier Naim DAC, adds a fine asynchronous USB input as well as a volume control

The NAP 100 has a big toroidal mains transformer (white), feeding a linear power supply. Power output transistors sit under the main board.



and combines it all in a neat and flexible package.

Partner it with the NAP 100 and the whole thing seems much more than the sum of its parts in sound quality terms.

Factor in Naim's usual high standards of build quality and reliability and computer music replay has never seemed so easy or accessible.



A big linear power supply with circular black toroidal transformer, sits inside DAC-V1. It feeds a web of digital circuitry.

MEASURED PERFORMANCE

Frequency response measured flat to 26kHz at 192kHz sample rate, our analysis shows, through the electrical S/PDIF input, a relatively restricted bandwidth considering a -1dB analogue bandwidth value of 65kHz or so is not uncommon.

The optical input receivers accepted 96kHz sample rate maximum and bandwidth was again limited to 24kHz. Even though USB invokes 384kHz as maximum available sample rate on a MacBook Pro, a 192kHz sample rate test signal gave exactly the same result as S/PDIF, so high sample rates will provide no benefit over 96kHz, through any input of the DAC-V1. There are no filter options to adjust this.

Consistency between inputs worked in the DAC-V1's favour with noise from USB, which was as low as that from S/PDIF. USB receivers can be noisy but

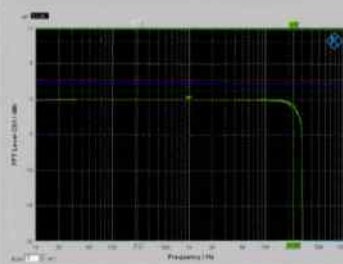
the DAC-V1's EIAJ Dynamic Range value, which sums noise and distortion, was 107dB with a 24bit signal, through USB as well as S/PDIF inputs. This is not a class leading result – more than 120dB is possible – but it is respectable. With 16bit, Dynamic Range measured 102dB, the best possible result determined by quantisation noise.

Maximum output measured 7.2V and was reached with a full level (0dB) digital signal at 90 on the volume control, where 100 is maximum. If volume were to be set above 90 output overload would occur on peaks. However, no power amp needs more than 2V (the NAP 100 needs 0.8V) so this is an unlikely scenario. The output can be set to fixed, CD level maximum of 2V.

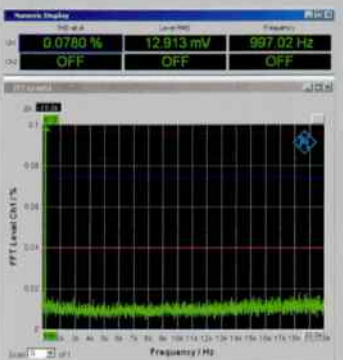
The small NAP 100 power amplifier provides 60 Watts into 8 Ohms and 85 Watts into 4 Ohms, from 0.82V input so it has plenty enough voltage gain for the DAC-V1. Distortion was extremely low, even at 10kHz where 0.02% was caused by a trace of second harmonic. Damping factor was low at 13, as usual with Naim, and this will warm bass just a little.

The DAC-V1 measured well through all inputs, but frequency response was band limited Naim-fashion. Dynamic range was not class leading. It does make a good partner with the NAP 100 power amplifier as a neat computer audio system with a high quality USB input. **NK**

FREQUENCY RESPONSE



DISTORTION



Frequency response (-1dB)	
CD	4Hz - 24kHz
Distortion	16bit / 24bit
0dB	0.02 / 0.02
-60dB	0.24 / 0.08
Separation (1kHz)	108dB
Noise (IEC A)	-107dB
Dynamic range	102/107dB
Output	7.2V

NAIM DAC-V1
£1,250



OUTSTANDING - amongst the best

VERDICT

It's not cheap, but the V1 is a seriously impressive product for anyone looking to make the most of their digital music collection. Pair it with the NAP 100 power amplifier and you have the basis of a seriously impressive and flexible system.

FOR

- excellent asynchronous USB
- flexible connection options
- tight, eminently musical sound

AGAINST

- not cheap
- no digital filter options

NAIM NAP100
£650



OUTSTANDING - amongst the best

VALUE - keenly priced

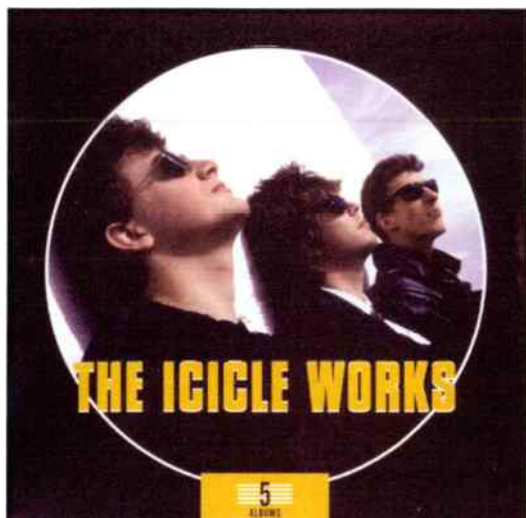
FOR:

- tight, grippy sound
- sounds more powerful than its specification
- partners superbly with DAC-V1

AGAINST:

- nothing at the price

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THE ICICLE WORKS

5 Album Box Set
Beggars Banquet

One of my musical highlights was seeing The Icicle Works play live at Liverpool's Royal Court Theatre in, what, 1985? 1986? Somewhere around that date. Original drummer Chris Sharrock performed a fine vocal of The Clash's 'Should I Stay Or Should I Go', I recall. This five-album set, contained within a clamshell box, brought back a heap of memories of that occasion. The set features some cracking albums including: 'Icicle Works' (1984), 'The Small Price Of A Bicycle' (1985), 'If You Want To Defeat Your Enemy Sing His Song' (1987), 'Blind' (1988) and 'Live At the Town And Country Club, 1986' (2001) plus many rarities.

The Icicle Works helped to define the 'indie band' concept. They also found themselves sitting within a very active Liverpool scene that was populated by a variety of outfits as large as Echo And The Bunnymen or as cult-ish as the

Flying Swans. Icicle Works produced a big sound, a symphonic, uplifting, always fascinating suite of songs.

Sound wise, Beggars Banquet should be congratulated, they've done a fine job, exceeding the quality of the Cherry Red issues, released a few years ago.

Four other box sets, also containing five albums in clamshell boxes, have also been released. They are Love And Rockets! ('Seventh Dream Of Teenage Heaven', "'Express'", 'Earth. Sun.Moon', 'Love And Rockets' and 'Assorted!'); Buffalo Tom ('Birdbrain', 'Let Me Come Over', '(Big Red Letter Day)', 'Sleepy Eyed' and 'Smitten'); Gary Numan ('Living Ornaments '81 Parts 'One' and 'Two'; 'Dance', 'I, Assassin' and 'Warriors') and The Fall ('The Frenz Experiment', 'I Am Kurious Oranj', 'Hit The North', 'Singles 1987-1989' and 'Seminal Live' plus Natasha Atlas ('Disapora', 'Halim', 'Gedia', 'Ayeshteni' and 'Something Dangerous').



SAMANTHA CRAIN

Kid Face
Full Time Hobby

Singer-songwriter Samantha Crain was given the title of this album as a personal nickname because of her eternally youthful appearance. Her voice belies this moniker, of course, which introduces vulnerability and power in equal measure. A lady of Choctaw, native American Indian descent, her songs are structured in a surprisingly mature manner. Surprising because, with a world full to the brim with singer-songwriters – most of which I find incredibly annoying, affected and cloyingly, irritatingly, self-absorbed – Crain just gets on with it, but her turn of phrase eases her message.

She bends her words and manipulates her phrasing in a similar way to Ricki Lee Jones. There is a relaxed, laid back, easy-going nature to her delivery, even when she is broaching important topics, while her conversational presentation never grates. For this album, John Vanderslice is

responsible for the production which helps to give it a rather Neil Young sense of portent and gravitas.

The songs themselves are compact constructions telling a story to serve up a message. 'Never Going Back' talks about a break up from an unhappy relationship and the relief that has brought. Songs like 'Paint', 'Somewhere All The Time' and 'Kid Face' enforce a core melodicism that gives the album a sense of swing while 'For The Miner' adds depth and a brooding sensibility that is arguably the best track on the whole album.

Other slices of Americana on offer this month include The Deep Dark Woods' 'Jubilee', their second album on Sugar Hill.

Also look out for 'High Cotton: A Tribute To Alabama', in which a variety of groups perform hits and lesser-known album cuts. Artists include Wade Bowen and Jason Boland.

Famous to many as Mrs Merle Haggard, Leona Williams, by 1958, at the age of just sixteen, had already secured her own radio show on Jefferson City's KWOS called 'Leona Sings'. She was soon spotted by Loretta Lynn. Next minute, Williams was touring with Lynn as a bassist and backup vocalist.

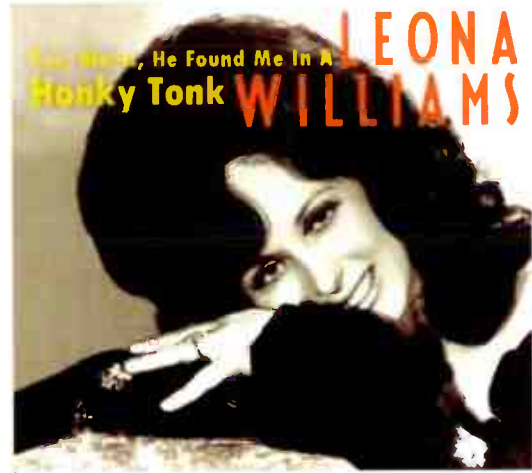
It wasn't until 1968 that Williams found her solo career with the Hickory label, then MCA. In 1975, she joined Merle Haggard's band and became the featured vocalist, replacing Haggard's estranged wife, Bonnie Owens.

Williams married Haggard but the match wasn't a success. What was a success, however, was the pairing as a songwriting team creating hits such as 'Bull and the Beaver' and 'We're Strangers Again'.

On this four CD set, eighty-two tracks provide all of her studio recordings, including several previously unreleased songs, for Hickory, and a complete unreleased

LP produced in 1986 by Tompall Glaser. A great emotional singer, you know that she has lived through the lyrics of her songs.

Other Bear Family releases, this month, include Speedy West & Jimmy Bryant's 'Bustin' Thru - Flippin The Lid' featuring excellent guitar work, plenty of hillbilly music and some top notch steel guitar duets; Bob King's 'Rockin' the Jukebox' featuring all of King's rockabilly masters for RCA Canada, his first collection since 1963; country singer, Marie Singleton's 'Pledging My Love', a story of a versatile singer who worked with the likes of George Jones and Clyde McPhatter. Finally, 'Over There!: Sounds And Images Of Black Europe' is a three-disc collection featuring the work of Pete Hampton, Laura Bowman The Savoy Quartet, Reverend J.J. Ransome-Kuti and Josephine Baker. This collection serves as a taster to the just released, forty-four CD box set, 'Black Europe'.



LEONA WILLIAMS

Yes, Ma'm, He Found Me In A Honky Tonk Bear Family

AUDIOPHILE CD

Price was a multi-faceted performer and that is reflected on this CD. He originally, belted out R&B classics, such as 'Lawdy Miss Clawdy' (with the help of Fats Domino), during the fifties but that wasn't enough.

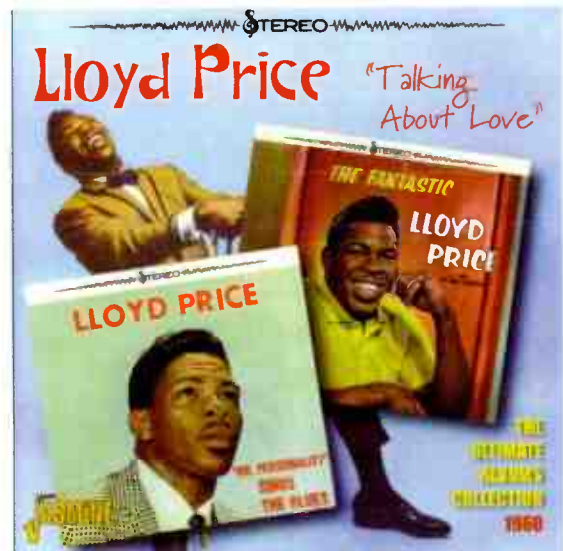
He, in fact, mirrored the title of his own hit 'Restless Heart'. First, he had to tackle an entire war when he was plopped into the middle of Korea but he managed to make it back home safely and straight into a new business venture, the creation of his own label, KRC.

'Just Because' was subsequently released on ABC-Paramount but Price wanted more: to be a major pop star, - which he achieved with a rock'n'roll reworking of the blues track 'Stagger Lee' as well as the pop-infused 'Personality'.

He then progressed to the songs covered on these two albums from 1960: 'Mr Personality Sings

the Blues' and 'The Fantastic Lloyd Price' plus a few snippets from 1959's 'The Exciting Lloyd Price' which, although downtempo in their arrangements, still featured Price's own bubbling energy underneath. These are dangerous ballads in indeed.

Other releases from Jasmine, this month include The Miracles 'You Can Depend On Them: 1959-1962' including the albums: 'Hi We're The Miracles' (1961), 'Cookin' With The Miracles' (1962), 'I'll Try Something New' (1962) plus singles over the period. The Marcells 'Blue Moons, Heartaches & Melancholy Babes' including their first album (1961), singles and rarities. Johnny Tillotson's 'Poetry In Motion' includes sixteen hits, his first LP plus rarities. Also look out for Paul Anka's 'You, The Night And The Music' featuring 'Anka At the Copa' (1960), 'Diana' (1962), 'Let's Sit This One Out' (1962) and 'Young Alive and In Love' (1962).



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* Bordeaux finish shown



Cambridge Audio's latest standmount has a surprising trick up its sleeve – and Jon Myles finds it's one that makes it rather special.

Aero Dynamic

Take a quick look at Cambridge Audio's new Aero 2 loudspeakers and you might not get too excited at first. To all intents and purposes they're yet another conventionally-styled British standmount loudspeaker retailing at an entry-level £350 price point. Don't be fooled by appearances, though.

Take a closer and things become distinctly more interesting. Traditional in looks they may be but the Aero 2 has a seriously intriguing feature that makes it stand out from the crowd – the use of a Balanced Mode Radiator (BMR) where you'd usually expect the tweeter to be.

And what might a BMR be exactly? Well, in brief, it is a flat panel driver that has wider bandwidth and dispersion characteristics than a conventional dome tweeter or midrange.

It means, in the case of the Aero 2, that panel is handling all the signals from 250Hz to 20kHz – whereas in most conventional box standmount loudspeakers there would be a tweeter covering 3kHz to 20kHz.

That frees the lower drive unit to handle everything below 250Hz – so no longer a mid/bass driver as in most rivals, but more simply a bass unit.

It also means the crossover frequency can be set much lower than with a conventional dome tweeter – so moving it much further away from the all-important midband.

To be fair, the theory behind BMR technology isn't new – in fact its development can be traced back to the 1990s – but it has only recently really started making any significant in-roads into the field of hi-fi.

It's used in Rega's range-topping

RS-10 – reviewed in Hi-Fi World's September 2013 issue – and throughout Naim's Ovator series. But the Rega will set you back £7,998 while the Naim range starts at £3,650 for the smallest model.

Yet here, Cambridge is bringing the same technology into a loudspeaker costing just £350.

So while the Cambridge Aero 2 may look quite conservative it is in fact radically different from most other standmount loudspeakers out there at the moment.

That 46mm BMR sits atop a 165mm paper cone bass unit contained in a 203/370/311mm (W/H/D) cabinet – with a large-ish front-firing reflex port used to augment low-frequency response.

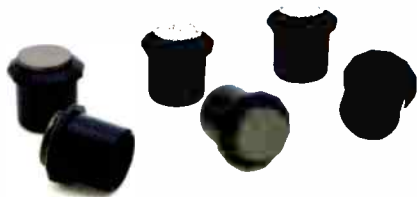
There's a single pair of decent speaker terminals on the rear of the cabinet, so bi-wiring is not an option and the grilles magnetically

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VERDICT

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AGAINST

- only available in black

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SOUND QUALITY

As soon as you fire up the Aero 2s it's obvious they are very different to most other standmount loudspeakers.

The midband is effortlessly easy and organic – the music simply flowing through the loudspeakers with no sense of strain.

Take something atmospheric like It's Immaterial's 'Driving Away From Home' and the guitar, bass, vocals and occasional harmonica simply float free of the loudspeakers. It's not the most intricate piece of music ever recorded, but the Aero 2s bring such an even, balanced and airy feeling to the performance that it sounds fresh and new.

Ditto with Eleanor McEvoy's 'Out There' collection. Midband and treble are exceptionally smooth, There's an articulation and seamless quality to the music that you don't expect on a loudspeaker at this price.

The advantage of the BMR unit's wide dynamic range becomes more evident the longer you settle back and let it weave its magic.

Switch to playing the same tracks on a more conventional pair of loudspeakers and you can hear the difference it makes – there's simply

more coherence from the Aero 2s. The wider sound dispersion pattern also means precise positioning is not as vital as with conventional designs.

Sound is diffused around the room to a much greater degree meaning the traditional hi-fi 'sweet-spot' is nowhere near as pronounced.

In my room and set-up most loudspeakers require a slight toe-in to snap vocals into focus.

Not so with the Aeros. Firing directly down the room everything was rendered with accurate placement and solidity – even on difficult recordings such as John Coltrane's 'Ascension' where things can get horribly congested if speakers are not set-up correctly.

If anything there's a slight rise in treble when they are toed-in – but it is so marginal as to be almost imperceptible in most cases.

BASS PERFORMANCE

The Aero 2s also have a prodigious bass kick – as you'd expect when the 6inch woofer is dedicated solely to low-end duties.

Leftfield's 'Rhythm and Stealth' was reproduced with no end of punch. However, it's here where things don't gel quite so well.

Bass is tuneful and – thankfully – free of the one-note thump some

similarly priced designs can produce. But there seems to be a noticeable lower bass hump which is in direct contrast to the seamless, smooth and undeniably sophisticated performance of the BMR unit. It means music with distinct low-end power can at times display a slight overhang.

On Daft Punk's 'Random Access Memories', for example the mids and highs were pristine, but the lower registers sounded a tad disconnected from what was going on above.

To be fair, though, this is being extremely critical of what is, after all, a £350 standmount loudspeaker. At their best they are highly infectious, as well as being extremely free of coarseness or undue grain.

CONCLUSION

The Aero 2 is a bold piece of engineering by Cambridge Audio. Its BMR unit provides an expansive soundstage that is unrivalled at the price. The only caveat is the bass performance. Not that it is poor for a £350 speaker – but it isn't quite as impressive as the standards set by the BMR.

Having said that, this is still one highly-impressive loudspeaker.



MEASURED PERFORMANCE

The BMR drive unit of the Aero 2 works from 250Hz all the way up to 20kHz and our analysis clearly shows it provides impressively flat response across this range. The small peak above 10kHz in our on-axis measurement flattens when listening off-axis to give perfect flatness and supreme tonal accuracy when the speaker is pointed straight down the room.

Below 250Hz there is a lift in output from the bass unit that will add a small amount of body to the sound, and some bass peaking at 100Hz will add 'speed' bass.

Below 80Hz the port takes over and its acoustic output (red trace) is flat down to a low 30Hz. The flatness here shows it damps the bass unit well and the impedance curve backs this up, showing a broad dip centred at 45Hz, with the usual residual peaks either side. Bass should sound tight and tuneful. The Aero 2 also goes low, so deep bass should be apparent too.

The loudspeaker's 200ms decay spectrum shows little coloration from the BMR, as expected from its flat

frequency response that suggests an absence of cone resonances, but there is a clear change-over between it and the bass unit, and the later does exhibit obvious overhang, suggesting coloration at low frequencies. There is also a hot zone around 100Hz so, in all, the bass unit looks like it will exhibit fullness and colour, perhaps boxiness, likely through the front port as well as the bass cone.

Sensitivity was a respectable 87dB from one nominal Watt of input (2.8V), about typical for a good modern stand mount loudspeaker of the Aero 2's size. Amplifiers of 40 Watts and upward will be suitable. The speaker is for the most part an 'easy' resistive load, having a high value of 8 Ohm under measurement, meaning it draws little current from amplifiers.

Measurement suggests the Aero 2 will sound very smooth and coloration free across midband and treble. Bass output is strong and will be obvious, but there is likely to be some audible coloration here. Overall however, the Aero 2 looks like it will provide a fine overall sound, appreciably better in many ways

than rivals. The absence of crossover at 3kHz and associated lack of a crossover dip will give it better phase characteristics than conventional loudspeakers, a smoother off-axis response and more upper midrange detail. Measurement shows an advanced performance with little compromise. **NK**

FREQUENCY RESPONSE

Green - driver output
Red - port output



IMPEDANCE



CAMBRIDGE AUDIO AERO 2

£350



OUTSTANDING - amongst the best

VERDICT

Traditional looks but the latest technology in a speaker that is superbly smooth and musical for the price.

FOR

- BMR technology
- big, wide soundstage
- price

AGAINST

- slight boxiness at low frequencies

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VERDICT

HI-FI WORLD



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SOUND AND VISION



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SOUND AND VISION



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HI-FI WORLD



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"Talent will out — no matter what route it chooses to follow"



Paul Rigby

Do you remember the ITV talent show *Popstars*? I was prompted to recall the series, which was broadcast around 2001, by Myleene Klass's toothy grin, plastered all over a recent Littlewoods commercial. She was a member of the winning manufactured band *Hear'Say* alongside the likes of Kym Marsh, who now treads the Coronation Street cobbles. My memory wasn't so much of the ex-band member's current successes or even the *Popstars* show itself but a later *Brits Awards* show. *Hear'Say* had done rather well for themselves to that point. Too well for some struggling musicians who had garnered a career the hard way.

I remember *Hear'Say* bouncing up, on stage, to claim their instant *Brits Award* and receiving a frosty reception from the largely professional crowd. *Hear'Say* had found a short-cut to stardom. Where were their scars? The years of deprivation? The fight against rejection? Simon Cowell has since taken up the TV talent-spotting flame and received a constant stream of derision from 'true music fans' that reject the franchise. Suede frontman Brett Anderson (who makes an appearance in this issue's *Classic Cuts*), Madness singer Suggs and Bernard Sumner of *New Order* have all been quoted as believing that the show stifles opportunities for new artists while Elton John declared *The X Factor*, "...boring, arse-paralysingly brain crippling".

I wonder if the occupants of Johnson City, Tennessee, USA thought along similar lines as they read the newly plastered poster in 1928. 'Can You Sing or Play Old-Time Music?' it asked while briskly continuing with 'Musicians of Unusual Ability... Small Dance Combinations... Singers... Novelty Players, Etc. Are Invited'.

Prospective talent was then given a time and a place on Johnson City's East Main Street before the bold lettering rammed the potential home, 'This is an actual try-out for the purpose of making Columbia Records'.

Why Johnson City? Because the same experiment had worked amazingly well, twenty-five miles away, at Bristol, the year before when *Victor Records* ended up not only discovering the legendary *Carter Family* but also the incredible *Jimmie Rodgers*. In addition, Johnson City was a major railroad hub. Like the draw of *The X Factor*, people shipped in from far and wide when they heard the news of the sessions. The city was gaining popularity. It was unofficially being tagged as 'Little Chicago' — even Al Capone loved to use it as a retreat, as did a host of local bootleggers in those Prohibition times.

Two batches of sessions were eventually recorded in Johnson City — in 1928 and 1929 — and, while no major stars were found, there were plenty of significant recordings such as those found on Harry Smith's more contemporary *'Anthology Of American Folk Music'*: 'Clarence Ashley's *'The Coo-Coo Bird'* and *The Bentley Boys' 'Down On Penny's Farm'*. The latter — a much-covered song and one that directly inspired Bob Dylan's *'Hard Times In New York Town'* from 1962 and 1965's *'Maggie's Farm'*.

Possibly why the Johnson City Sessions didn't do better in terms of sales and impact was due to the onset of the Great Depression. In fact, the final day of the Sessions fell on October 24 1929, known as *Black Thursday*, a day when eleven per cent of the entire US stock market disappeared in a single day.

Because of these global events, that would ultimately help spark world war, the often understated and rather idiosyncratic nature of these sessions

have been lost, until now.

Performers that took part in the sessions included Ancil McVay (guitar) and Roland N. Johnson (vocal and fiddle) with daughter Eula Johnson on banjo-mandolin. Singing *'Ain't Going To Lay My Armour Down'*. McVay eventually sold his gas station to a certain Harland D. "Colonel" Sanders who turned it into Sanders Court, added a motel and restaurant and began to offer fried chicken featuring a secret recipe, apparently part created by Eula Johnson.

Then there was the wonderfully named *Moatsville String Ticklers*, an eight-piece band, who, "...were just country boys — they didn't know how much talent they had". So poor that they had to carry their instruments around in pillow cases, the *Ticklers*, could smell the success. According to band member Brooks Ritter, "We almost made it".

Yet the band are regularly discussed on internet forums and they were even name-checked in the *New Yorker* magazine of late.

Those that want to know more about this important period in music history should check out *Bear Family's 'The Johnson City Sessions: Can You Sing Or Play Old Time Music?'* (www.bear-family.de) box set, featuring four CDs of gems and a magnificent hard-back tome that crams a wealth of musical treasure within its 136 pages.

I admit that *The X Factor* and all the other TV talent shows set my teeth on edge. Yet I realise there has always been a place for them. I can't remember the same furore occurring when *Opportunity Knocks* or *New Faces* were going strong.

Maybe our issue is more with Simon Cowell's techniques — a case of personality rather than the innocence of budding talent. But, as the Johnson Sessions proved, talent will out no matter what route it chooses to follow. ●

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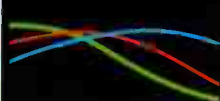
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"I really cannot be bothered to get up every few minutes to change a record"



Tony Bolton

I regularly commit what some may regard as the heinous sin of playing certain of my records on autochange turntables. Usually it will be 78s that get this treatment, although some of my singles will get stacked up on occasion as well. What both have in common is the short playing times and the fact is that I really cannot be bothered to get up every few minutes to change a record, especially if I am eating while listening.

So, records that were made with this sort of usage being the norm, get stacked up and I sit back and enjoy the tunes with just the brief interruption of a click and whirr as the mechanism does its work.

About a month ago I received a letter from reader Malcolm Wilson – who has a collection of 78s and 45s that he enjoys playing but wants the convenience of autochange and was asking advice about which record player would be most suitable. About a week later a friend of mine who loves her music and appreciates good sound, but is not a "hi-fi" person, asked me if it was possible to have a record player that gave good LP sound but would also allow her to stack her old '70s and '80s singles.

Both parties complicate matters somewhat because they have stereo singles and getting these to sound good on an autochanger is a bit more difficult than playing the mono equivalent.

With the exception of the Thorens 224 autochanger (which can be seen in action here: http://www.youtube.com/watch?v=w_ouqCsZUx0) all autochangers lower the arm onto the gradually increasing height of the stack of records. This alteration in the angle of the arm alters the angle of the needle in the groove (Stylus Rake Angle) and the alignment of the stylus in relation to the groove. With the spherical needles that are generally used for standard groove

and mono microgroove reproduction, and the constant width and depth of the groove, this is not such a sonically obvious problem as it is with stereo discs. Also, the less than "full bandwidth" capabilities of most of the equipment that these decks are usually attached to covers a multitude of sins.

With stereo records, the groove walls move independently of each other, and the depth of the groove varies with this. Combine this with the phasing problems that can occur when a stylus is not correctly aligned in a stereo groove, and the openness and detail of most separate component systems, and it starts to become sonically obvious why the convenience of autochange has generally been consigned to history.

But not being one to let the laws of geometry deter me from trying to find a satisfactory answer to both requests for advice, I set to work on trying to find the best compromise.

Since Malcolm wanted to be able to play both mono and stereo singles and 78s (which are mono of course) I came to the conclusion that a deck with detachable headshells would be the simplest answer. He had been using Ortofon's OMD25M cartridge, a mono version of the OM series, with both LP and 78 needles on a dedicated mono system, so this could be transferred to a suitable deck if required.

Garrard was the make that instantly sprang to mind, since few others had detachable headshells. The need to play at modern microgroove tracking weights for the stereo singles, but still retain at least three speeds, refined the search to Garrard's Laboratory Series from the mid 1960s onwards.

Machines such as the SL65 fit the specification quite nicely, although I would advise replinthing it and replacing the signal lead with modern cabling. It will still suffer from the geometry problems, but

careful alignment of the cartridge, with the alignment gauge resting on half a loading of records, should at least minimise the range of audible geometrical error as the record stack descends.

My friend had a slightly different problem, wanting to combine good stereo LP sound with autochanging stereo singles. To be honest, this one I found to be more of a problem, but Garrard once again produced a potential answer with the Lab 80 deck from 1966. This was mostly sold as a transcription grade, single play, two-speed deck with automatic lift off at the end of a side. An optional long spindle could be fitted that used prongs sticking out below the records to support the stack. Size selection is done by presetting a control lever to the appropriate size.

By chance one appeared on ebay, within a reasonable driving distance of my home last week. Having won it, I drove over to collect and was pleased to find that it looks as though it has just come out of the showroom, with even the soft acrylic dust cover in very good condition. The previous owner had replaced the signal lead with some Van Damme examples (a brand normally associated with studios and live sound) and there was a Nagaoka MPIO cartridge fitted, which had had less than ten hours of use. The platter bearing had also been replaced with a modern ultra low-friction device.

Having got home and played it through my Leema Acoustics/Chario system I was pleased to find no apparent signs of rumble (a potential problem with idler drives and resonant plinths) and a surprisingly acceptable sound from LP, using two platter mats to correct the SRA problem. It needs a bit more tweaking, but I think the sound can be improved a little more yet. I am now on a mission to find the autochange spindle, so watch this space. ●

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"I sat there and listened in delight. Others Hoovered in delight!"



Noel Keywood

I long to live in a stately home – even a castle will do – where the walls are solid, the neighbours are distant, I shop by helicopter and my lounge is the same size as the landing pad.

This I know is a fantasy, because I am too lazy or sceptical, or both, to fill in a Lottery entry form. But in this fantasy I can get perfect sound quality from a perfect room and do not have to sit on my settee worrying about room modes and how they might be messing up the bass.

The simple truth is I lost confidence in my lounge many years ago. A decent size at 17ft long and 14ft wide, with 9ft 6in ceilings – a fairly normal Victorian terrace size room – it is sweet sounding and acoustically impeccable in many ways, but not up to scratch in one major way – it doesn't do deep bass. At least, not well.

I never had serious doubts about it throughout years of use and improvement by the use of various acoustic treatments. Putting in a foam-filled three-seater settee, two-seater settee, arm chair and foot stool, bought as a set, took boom out of the room in a startlingly effective manner. I thought I had near perfect bass as a result, although a few minutes with pen, paper and calculator suggested to me a lower limit of 32Hz existed, imposed by the room's longest dimension.

No worries, I thought. It may not develop full sound pressure below this frequency, but the roll down would be slow and I could likely expect to be a tolerable -3dB or so down at 20Hz, which should be OK as there's little below 20Hz on most CDs.

Floor standing loudspeakers up to the usual height of 1m worked well in practice, seeming to confirm my views. It was only when three of

us man-handled a pair of giant Tannoy Yorkminsters up two flights of stairs to my listening room that I realised it was time to think again!

Now, the dear old Yorkies had sounded absolutely amazing in our big office, 28ft square. They were so awesome I used to sneak in for after-6pm listening sessions when all other workers in the building had gone home. I offered ear-plugs to the bemused cleaners but they thought the 'system' was amazing and didn't want them, asking me instead to leave the big double-door open so they could party whilst they Hoovered!

I can't tell you what big Tannoys sound like when flying in the right environment; I sat there and listened in delight. Others Hoovered in delight!

They are well engineered "good big-uns" with 12in bass cones, driven by a giant motor, in an equally giant cabinet. Big boxes tuned low produce amazing bass and, our measurements show, less than 1% distortion, against 5% or so for loudspeakers with 8in cones working hard. The Yorkminsters hit me in the chest, in effortless fashion. I walked over to the big cones whilst experiencing this and they were hardly moving. Awesome!

So I had to get the Yorkminsters into my home – and what a disappointment that was. But it was also an education. The really deep bass had gone – not unexpected. What was a surprise was how much the room dominated the loudspeaker. Gone was the tight punch I felt in the office; instead I heard a softer and less well-defined sound; it wasn't boomy, the room was too well damped for that, but it was bass-coloured and had lost the clean, unencumbered dynamics I had heard in our office.

The net result was that the massive Yorkies had been neutered; I could hear their excellent mid-band

and insightful treble, and I could sense their ease of delivery, but the room's resonances had despoiled bass quality. It was a horrible disappointment.

So how do you get "fast, tight and punchy bass" in a room like this? There was a time in the late 1970s and early 1980s when loudspeakers like the Linn Kan and Epos ES14 and Heybrook HB2 managed it. All being small standmounters, quite unlike the giant Yorkminsters that promised so much and seemingly could not deliver. How did they then manage to pull this off? What is it they could do the giant Yorkminster could not?

Small loudspeakers don't go low and their bass output rolls down – not so good. But if you put them against a wall at the end of the room they drive the room's main mode effectively. This will make the room boom if you put as much power into it as the Yorkies, but these small standmounters did not.

What's more, as a loudspeaker delivery system they were not just well damped but over-damped – meaning they didn't waffle and overhang. They were 'fast' in themselves, starting and stopping cleanly. The end result was impressive bass. The only drawback was that this didn't work at low volumes; volume had to be turned up to get the shebang working then, suddenly, these small loudspeakers were delivering real bass punch. Magic!

It was a brilliant system in some ways, driving a medium size room cleverly. There was no deep bass and in a big room they would sound deficient. Also, over-damped systems only come alive at high volume and these days playing music at shattering volume requires negotiation, I've found (groan).

All of which is to explain why I need a stately home! ●

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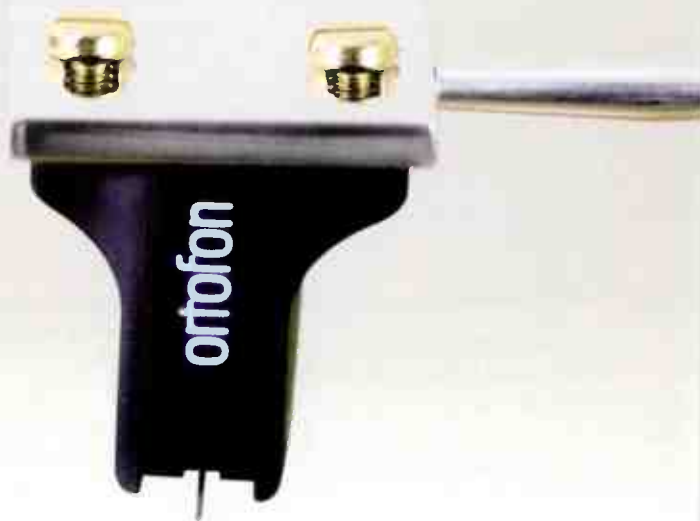
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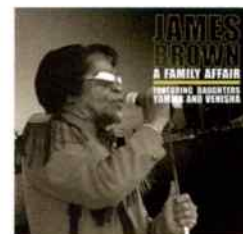
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A new turntable from Pro-Ject gets a workout from Tony Bolton

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Tony Bolton likes the sound of Exposure's latest phono stage

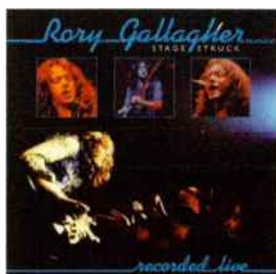
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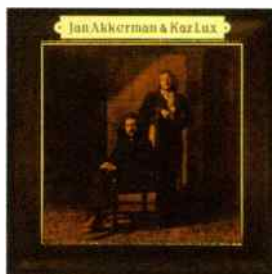
LIVE AND KICKING

Let Them Eat Vinyl is on a roll this month. This time with three live, limited edition, double albums including Patti Smith's 'Easter Rising: The Place, Eugene, Oregon May 9th, 1978' including 'Gloria' and 'My Generation'; The Steve Miller Band's 'Shake Your Tree: The Classic 1973 Radio Broadcast' via KSAN-FM from the Record Plant, Sausalito, California, USA, July 1 1973.

Finally, look out for James Brown's 'A Family Affair Featuring Daughters Yamma And Venisha' featuring 'God Is Good' and 'Say It Again'.



Fresh Evidence - Rory Gallagher



ROCK MOV

A whole heap of rock, courtesy of Music On Vinyl includes three albums from Rory Gallagher from his 1980S period.

'Stage Struck' (1980) was Gallagher's third officially released live album but he sounds tired after a long tour. 'Fresh Evidence' (1988), his last recording, is a mixed bag but does succeed in exhibiting his mastery of different musical styles while 'Defender' (1988) actually gets better as the LP progresses.

Then there's Shuggie Otis (the only man who rejected an approach to join the Rolling Stones. "I was so excited about my own music coming out that nothing really appealed to me about wanting to be in anybody's group", he said.). At the time, he was creating the frankly brilliant and idiosyncratic, 'Inspiration Information' (1974). Otis played all the instruments in a jazzy, latin, R&B suite of songs. We want more Shuggie!

Also look out for Jan Akkerman & Kaz Lux's 'Eli', a superb rock outing from the ex-Focus man.

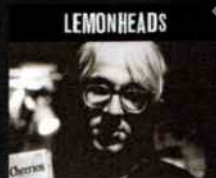
LEMONHEADS

LEMONHEADS

LEMONHEADS

LEMONHEADS

Combining rock, pop and punk, main songwriters, co-vocalists and co-guitarists, Evan Dando and Ben Deily produced simple, catchy songs but also rather subversive lyrical content. Record label Fire (www.firerecords.com) has re-released the band's first three LPs: 'Hate Your Friends' (1987) has bags of energy but is unfocused; 'Lick' (1988) is totally charming despite lacking direction while 'Creator' (1988) retains a sense of noise but offers more fully-formed pop.





MORE MOV

A deluge of Music On Vinyl releases continues with: Miles Davis' 'Doo-Bop', a contentious acid jazz outing; The Isley Brothers' superb '3 + 3' showcased a new line-up, more rock/pop to the R&B and classics such as 'Summer Breeze'; The Meters' 'Cabbage Alley' revealed a jamming, funky, slick fourth album; Ted Nugent's 'Double Live Gonzo!' exhibited the wildman in outrageous action, something his studio outings failed to do; Willie Nelson's 'To All The Girls...' features a range of duets with the likes of Dolly Parton, Wynonna Judd and Shelby Lynne and leading Chicago soul man, Major Lance's 'Um, Um, Um, Um, Um, Um: The Best Of...' exhibited Lance's forte as a singles man.

Finally, look out for the coloured vinyl, numbered limited editions of The Bryan Ferry Orchestra's 'A Selection Of Yellow Cocktail Music' from the recent movie, 'Gatsby'; Gloria Estefan's 'The Standards' and Blind Boys Of Alabama's 'I'll Find A Way'.

DEAD KENNEDYS

Hard core punk combined with overt politics, under the control of Jello Biafra, some established political groups saw the Dead Kennedys as positively dangerous. UK-based reissue label, Let Them Eat Vinyl! (www.letthemeatvinyl.com) has delighted punks of all ages with a magnificent reissue program that might not include the band's debut, 'Fresh Fruit For Rotting Vegetables' (1980) but includes just about everything else including: 'In God We Trust' (1981), a frantic, if hardly subtle, eight-song EP; 'Plastic Surgery Disasters' (1982), a brilliant send-up of institutions and individuals who were acting less than sensibly during the early 1980s, accompanied by excellent music; the brilliant sleeve art for 'Franken Christ' (1985), packed with literate and angry lyrics targeting everyone from MTV to rednecks; 'Bedtime For Democracy' (1986) was their final studio release but, egads, it was another frenzied LP resplendent with angry, cynical sleeve art. Add to that the brilliant compilation, 'Give Me Convenience Or Give Me Death' (1987) that includes many rarities and 'Live At The Deaf Club' (2004) which includes a searing atmosphere and you've got yourself an instant treasure trove of punk.



...AND FINALLY

Chet Baker fans will be interested to hear about 'Sings & Plays' (*Not Now Music*; www.discovery-records.com), a 2LP gatefold edition that features the excellent albums 'Chet Baker Sings' (1956) and 'Chet Baker Sings And Plays' (1964).

Next is Jim Croce's 'I Got A Name' (*Demon*; www.demonrecords.co.uk) from 1973. His third album in two years, Croce was reaching his peak as an artist when he tragically died in a plane crash.

New from Kent (www.acerecords.co.uk) is 'Dave Godin's Deep Soul Treasures' featuring a high-quality compilation including Eddy Giles' 'Losin' Boy' and Dori Grayson's 'Try Love'.

The Chills, active since 1980, has released a new, triple album. 'Somewhere Beautiful' (*Fire*; www.firerecords.com) features live tracks, recorded at a private party on New Year's Eve 2011, in Central Otago, New Zealand. Also included are two exclusive prints from artist Shane Cotton.



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Tony Bolton spins through his record collection as he Xplores the capabilities of Pro-Ject's latest version of their Xpression turntable

Over 20 years ago, Heinz Lichtenegger, founder of Pro-Ject Audio, introduced the Pro-Ject I turntable, the first of what has now become a range of best-selling decks. The I-Xpression Carbon is its sixth incarnation and boasts a new 8.6-inch, carbon fibre tonearm with an over-size bearing housing and a resonance-damping counterweight design.

This is mounted on an MDF plinth that comes in a high-gloss finish in either black, midnight blue or the rather attractive bordeaux of this example. Underneath are height-adjustable feet that help to decouple the deck from the surface that it is resting on.

Beside the front left foot, under the plinth, is the power switch for

the new DC power supply. This powers a circuit board that contains a quartz generator that feeds a signal to the AC synchronous motor. Essentially this offers the sonic upgrade of the Speed Box, but retains manual control over speed selection. This is accomplished by lifting off the platter and using the supplied hook to move the belt between the appropriate steps on the pulley. (78 rpm is also available by buying and fitting a different pulley).

The motor is supported by what are described as 'isolation blobs', manufactured for the purpose by Danish cartridge maker Ortofon. They have also made a special version of the 2M cartridge for this deck, which features silver coils to improve signal purity. Known as the 2M Silver, it is now available separately in the

UK for £150.

As per usual Pro-Ject practice, gold plated RCA sockets are mounted to the plinth, beneath the arm mounting, allowing either the supplied interconnect to be used or another of choice. I used my customary Atlas Electra interconnect for the purpose.

Two platter mats are provided, of felt and cork, to allow the sound to be tailored to preference. I tried both and preferred the slightly more grounded and weighty sound that came from using the cork one. I also felt that there was a slight improvement in the sense of tightness around the beginning and the end of notes and especially of powerful drum sounds, with the cork mat. I think it gripped the gloss platter surface better. If I was

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going to use the felt mat I would be tempted to anchor it to the platter with a few bits of double-sided sticky tape to prevent slippage.

This deck is intended as a "plug in and play" model, so the user only has to attach the counterweight and anti-skate weight to the back of the arm, fit the drive belt and place the multi-layered main platter over the hub. This latter runs on a chrome-plated, stainless steel axle which rests on a Teflon-bottomed, bronze bearing housing. The outer platter consists of a sandwich construction of steel with layers of 'advanced thermo plastic elastomers' surrounding it.

I started off listening to the laid back, Latin-influenced, lounge-cool of 'Hotel Costes 6'. Mixed by Stephane Pompougnac, this LP has excellent production and is a good ambassador for the capabilities of vinyl. The I-Xpression rose to the occasion and played it in a zestful way, making the most of the complexities of the rhythms in a very engaging presentation. Vocals were well projected without being overwhelming in their presence, and seemed to integrate well with the spread of sound around them. Some of the more up tempo tracks have quite a substantial bass beat and I was pleased to note that this seemed quite well controlled.

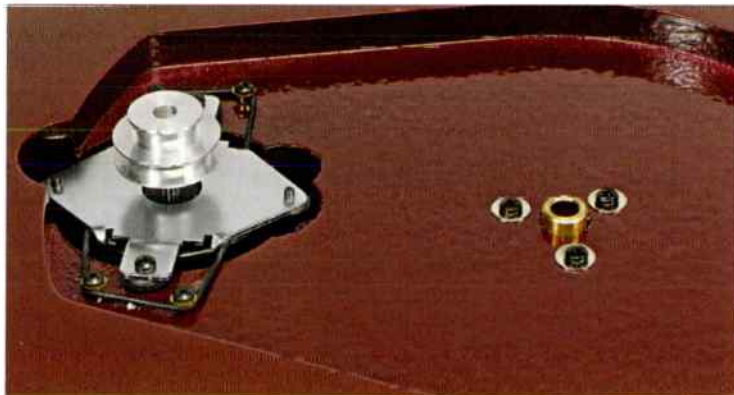
Given the Latin flavour of a lot of these tracks, the percussion has greater importance here than with some other types of music. Delicate sounds, such as shakers, were well displayed. They had definition, and avoided the slightly ratty sound that these can sometimes have when played on more affordable machinery. Instead, I was left with the sensation of having listened to the sound of seeds moving within a confined

The counterweight has resonance damping built into its design. At the bottom of the arm pillar can be seen one of the hex head bolts that must be undone to adjust the height of the arm.

resonant space, which is as it should be.

I stayed in a fairly gentle musical mood as I moved onto the Kingston Trio LP. Their version of Rod McKuen's folk classic 'Love's Been Good To Me' displayed the three performers spread across the soundstage, with the guitars to left and right, topped by the harmonising vocals, with John Stewart's lead placed dead centre. The placement of each one was very solid, with none of the slight vagueness in the imaging that can occur with some decks at this price point.

The guitar sounds were distinct, the different resonances of each being well defined. Again, at this price point, it can sometimes be difficult to distinguish small details such as the differing tonality of two examples of the same instrument, but playing this



The new AC motor mounted on Ortofon's specially manufactured 'isolation blobs'. The bottom of the bronze bearing shaft is coated in Teflon.

record through this deck I had no such problems.

I think one of the things that helped this was the quite bright and lively sound of the Pro-ject. It does have a certain sonic character which I found worked well, striking a pretty good balance between smoothness and definition. Neither were over done, the Trio's smooth harmonised vocals didn't descend into a glutinous mass, yet the definition between the sounds of instruments and vocals wasn't so overstated that it lost cohesion.

I tested the cohesiveness of the sound to the limits the next day by playing Messiaen's 'Turangalila Symphony'. Written between 1946 and 1948 at the urging of Serge Koussevitsky for the Boston Symphony Orchestra, the ten movements are modernist in their

abilities when faced with some horrendously complex waveforms, and managed to not only track well, but produce sounds that were musically intelligible. This is a piece of music where any classical conventions of harmony and rhythm are pushed to the limits and I have heard far more expensive cartridges reduce this piece of music to an incoherent mess even on rather more rarified decks. On the other hand, this deck would not be my first choice for regularly playing this type of music.

I explored more conventional classical sounds as well, and found that the deck seemed to sound in better control of the situation when playing the likes of Mozart or Tchaikovsky.

After this I headed to the jazz section of my collection and put on



The 8.6in long, one piece, carbon fibre tonearm is a new design, and is mounted in an oversize bearing housing to help eliminate resonance.

nature, without reaching to the more experimental levels of Schoenberg, for instance. It is a demanding piece, both to perform, listen to, and especially for a record player, to reproduce. It is certainly on the outer edge of my musical tolerances.

I am pleased to say that it also proved just within the I-Xpression's tolerances as well. I think the cartridge showed excellent tracking



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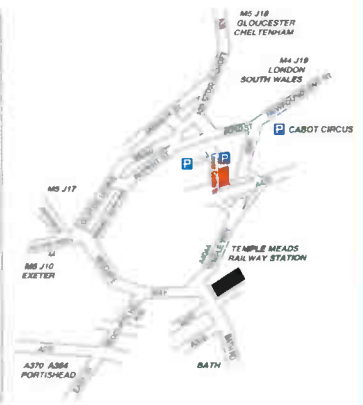
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WHAT HI-FI?
SOUND AND VISION

Duke Ellington's 1954 LP 'Ellington Uptown.' The last track on side one is a multi movement version of the classic 'Take The A Train', this time with vocals provided by Betty Roche.

Although the beat still swings, the orchestration has moved on from the swing era, and has flavours of the be-bop influences that were around in jazz at the time. The music suited the quite bright and vivacious sound of this turntable, and my feet were soon tapping along quite contentedly to the snappy beat. About halfway through, just after Betty's scat singing, the beat breaks and the music moves into slow 'nightclub jazz' mode with the lead taken by the saxophones, before getting going again.

This UK first pressing is in very good shape, and the spread of sound in front of me was beautifully clear, full of energy and with a sense of space in both the presentation of the music and the grouping of the musicians in the mono-sourced image in front of me. There were a few pops and crackles but,

looking turntable that feels solid to handle, with positive feeling actions to the controls. The prefitted cartridge is more than capable, and the silver wiring may, I think, be partially responsible for the tendency to a brighter sound that this unit displays. Since this deck is likely to be plugged into the phonostage of what is probably a similarly-priced amplifier, a little get up and go to the sound is probably not a bad thing at all.

Overall, I enjoyed the sound of this deck. It isn't perfect, but at the price it offers very good value music making and will give future owners a great deal of musical pleasure.

This is the new 2M cartridge specially made for this deck by Ortofon. Internal wiring is made of silver. It is now available separately for £150.

MUSIC USED

Messiaen. 'Turangalila Symphony'. Andre Previn conducting the London Symphony Orchestra with Michel Beroff (piano) and Jeanne Loriod (Ondes Martenot). EMI Records Ltd. SLS 5117. 1978.

Duke Ellington and His Orchestra. 'Ellington Uptown.' Philips Records. BBL 7003. 1954.

The Kingston Trio. 'Nick - Bob - John.' Decca Records (USA). DL 74613. 1964.

Various Artists. 'Hotel Costes 6'. Wagram Records. 3087056. 2003.

SYSTEM USED

Luxman E200 and Pro-Ject Tube Box phonostages.

Townshend Allegri passive pre-amp
2 x Quad 303 power amps.
Kelly KT3 loudspeakers.



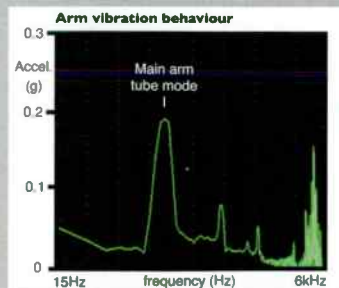
even with the phonostage in stereo mode, the intrusions were so fleeting that they were barely noticeable.

I have just mentioned the energy that this deck seems to impart into music, and this is one of its foremost characteristics. It has a slightly bouncy, get-up-and-go sound when presented with anything with a rhythmic beat. Whether this is down to the arm resonances measured by Noel, I don't know, but it does make for an entertaining and enjoyable listen. More considered sound seemed to be treated with respect and a certain amount of deference, and I certainly didn't feel that the sound was overly bright or glossy in anyway, rather, I would say that there was a pretty good lighting technician keeping the spotlights carefully aimed to pick out key players while maintaining an even spread of slightly lower level light across the rest of the assembled performers.

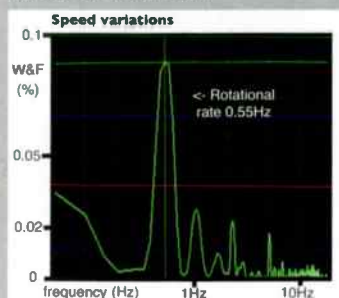
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MEASURED PERFORMANCE

ARM VIBRATION



WOW & FLUTTER



The turntable was accurate in speed, rotating just 0.1% fast, a negligible error that will not audibly affect pitch. Basic speed stability was very good as belt drive goes, unweighted wow measuring a low 0.15%, excellent for an inexpensive turntable. This resulted in an overall Wow and Flutter reading of 0.08% weighted, a low value, so the Project should sound stable and free from wateriness of pitch or such like.

The carbon fibre arm is stiff, having a first bending mode at a high 275Hz, compared to around 220Hz for metal arms. All the same, it still resonates quite strongly and this may affect imaging or dynamics a little, such arm effects often being subtle in their sonic influence. The headshell resonates little at higher frequencies, so treble should be clean.

The Project Expression turntable and arm both measure well, having great weaknesses and some obvious strengths. **NK**

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OUTSTANDING - amongst the best

VERDICT

Nicely finished and well thought out mid-price turntable from established Viennese turntable maker.

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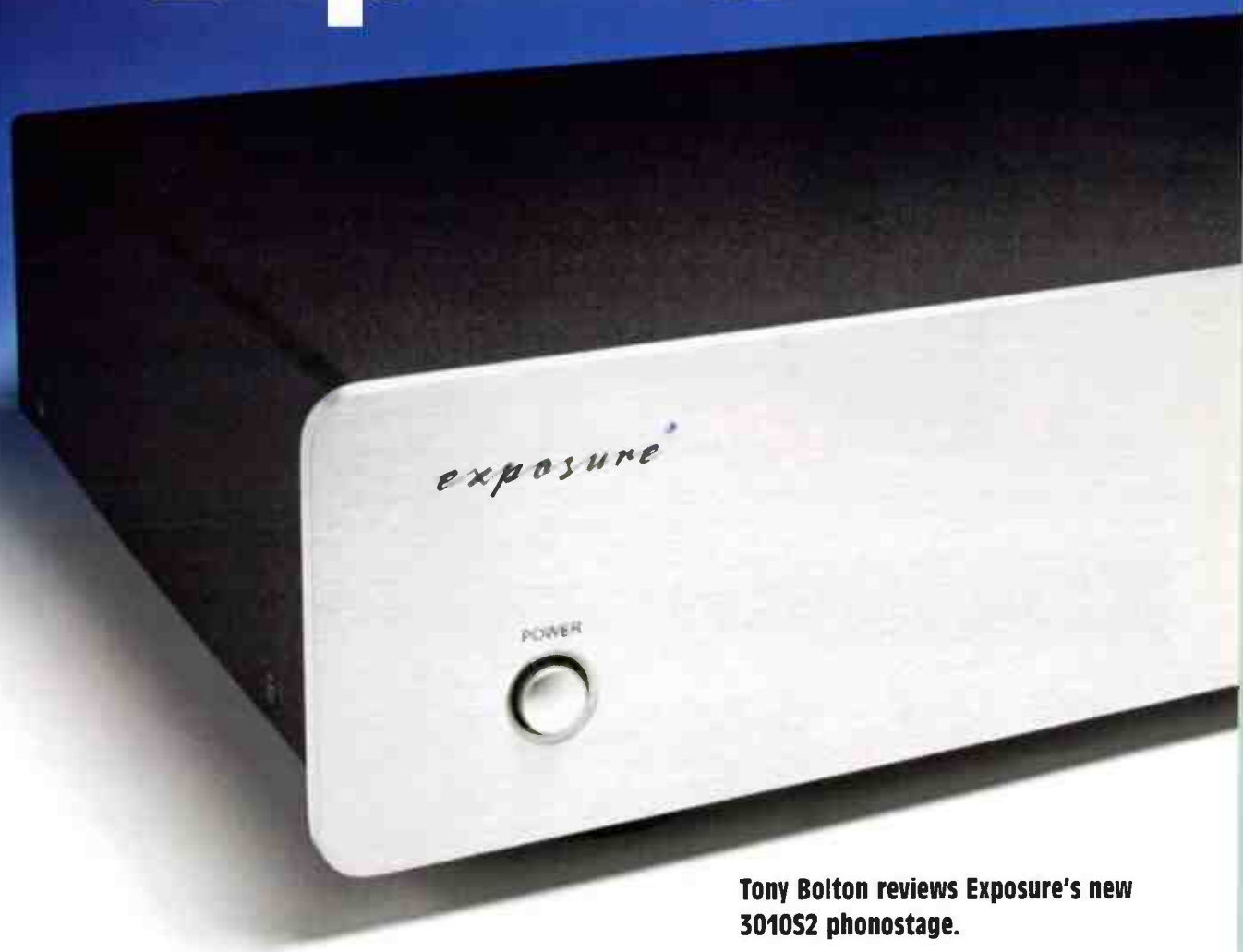
- bright, upfront sound
- good rhythm
- well-defined soundstage

AGAINST

- nothing at the price

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Perfectly Exposed



Tony Bolton reviews Exposure's new 3010S2 phono stage.

2014 will mark the 40th anniversary of the founding of Exposure Electronics Ltd. Based in Lancing, near Brighton, the company remains dedicated to two channel audio and has always accommodated vinyl lovers in its product range.

The recently introduced 3010S2 phono stage is part of the 3010S2 range of products and is supplied with either a Moving Coil phono card, or one for Moving Magnet cartridges. Extra cards are available

at £220 each.

These can be changed by the user by simply removing the outer case, removing the securing screws and swapping over, connections being made through gold plated pcb mounted sockets.

The MC board contains jumpers which can be configured to offer two levels of gain and seven impedance settings. The MM card also has two gain settings but a fixed impedance of the usual 47kOhms. An additional setting allows an additional 220pF to be loaded in

parallel with the cartridge.

All of this is housed in an alloy casework that contains a large custom-made transformer feeding into two banks of four capacitors. There is dual regulation for each power supply rail, combined with IC regulators on the main board and hybrid regulators for the phono board.

The instructions warn that running in can take 48 hours so I didn't start any serious listening until most of this time had elapsed, during which period the sound

"With strummed and picked guitars and three voices, I found sounds that had a greater edge of naturalness to them .."

seemed to expand and richen up somewhat, especially at the bottom end. One thing that did not change over this time was the slightly low gain levels. I found that I was turning up the volume control by a small but noticeable amount to achieve my normal listening levels. Since the Benz Micro Wood SL has a reasonably healthy output I think owners of lower output cartridges, such as the Goldring Legacy, may find they suffer from a background hiss accompanying the music.

This wasn't a problem with the Benz, so I got settled into listening to the Benny Goodman Orchestra and combos playing live around the big dance halls of America in the late 1930s. These recordings were transcribed onto 15-inch acetate discs for use in radio broadcasts and released to the public in 1964 to celebrate the 25th anniversary of the Goodman band. Although the sound is a bit reserved it is otherwise of

good quality and really shows off the band getting a hall full of people up and groovin'.

Although there wasn't a mono switch fitted, the negligible surface noise on this near mint record was placed a long way back into the mix, and I found myself focussing on the quite solid and fast bass sounds that were driving the music along in a very pleasant way. The way the sound was presented sounded relaxed, flowing and rather good fun.

Later on I was still playing upbeat dance music but of a more modern type with Bentley Rhythm Ace's second LP 'The Big Bear' living up to its name through this phono stage, with the bass again providing propulsion to music that consisted of vocals, samples, some live instruments and a healthy dosage of synthesised noises. The imaging, while not the widest or deepest that I have heard, was still of generous



size and quite well focussed.

Having established that this phono stage works well with beat-driven sounds, I turned to the folk section of my collection and put on an American, stereo, first pressing of 'Peter, Paul and Mary in Concert'. In the haunting love song 'There Is A Ship' the two male voices, pinpointed in front of each speaker, were at a

The phono card is located on the right of the chassis, being held in place by securing screws. The power supply is on the left with the gainstage in the middle section.

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- WDPSU3 High performance choke power supply
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RADFORD STA25 series 3 valve power amplifier, all silver soldered. It's been cherished for the last 15 years. I am reluctantly downsizing hence £850, Silver High Breed Epitome 8 interconnects with phono's £40, Fuber USB DAC/ADC converter £50, Fubar Supplier improved power supply £50 woodbine @hotmail.co.uk Tel 02476 679165

WANTED: LUXKIT Avance Z504 'The Power' power amplifier, working or not. Contact alvinkearsley@tiscali.co.uk

HMV MODEL 11119 valve radio circa 1950 in a wooden cabinet. In perfect working order, needs an aerial. Dimensions 19.5 x 14.5 x 10in (wxhxd). £60 ono. Collection from Meopham, Kent. For more info. Call 07941 387692 or Email fernahnah@gmail.com

ICON AUDIO Stereo 60.2 KT88 tube amplifier plus PSI MM phono preamp £1350. VGC, 4 yrs old, 150hrs use. Buyer collects. 01438-353840

MUSICAL FIDELITY A3.2CR Power amp £550: Highly reviewed. This is the newer all silver model! Attractive appearance and good value when new at £1000. Owned by me from new, still pristine, unmarked (kept covered by a dust sheet) as new, with original box, remote and instructions. Protected in an audio rack in my smoke and pet free home. Happy to demonstrate. Mike (Cheshire) 07500 804700 michael.yates7@ntlworld.com

QUAD ELECTROSTATIC ESL63 speakers (brown) in good condition but one speaker has slight clicking sound. Will consider all offers. Collect from S. London. Call Rick 07931 526 106

2 RUSS ANDREWS
Signature Powerkords
1m length, Wattgate
350i IEC plugs, mint
condition rrp £440
- £290 each, £570 for
both. Cheaper if collected
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AT-0C9ML/111 M/C
Cartridge. New condition
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(new is £500.00) Boxed.
AT-0C9ML/111 M/C
Cartridge Fair condition
£100.00. Boxed. Tannoy
revolution RV3 floor
stand speakers in Cherry
excellent condition.
£175.00 Boxed. Sony
STR-K740P 5.1 Surround
system F.O.C. with
Speakers if collected or
£20.00.(no remote)
Rega Fono amp Moving
coil only. £70.00 Boxed.
All reasonable offers
will be considered.
Contact details email:
nigelsach42@tiscali.co.uk
Mobile 07917221033

FOR SALE - Denon/
Columbia PMA 850
Integrated Stereo
Amplifier 85 watts per
channel into 8 Ohms
one red speaker
connector missing from
rear, very very good
condition £182.00
fiskallen@aol.com

EAR (PARAVICHINI) 509
25th Anniversary mono
block valve power amps
Mint boxed, spare valves.
Can demonstrate Buyer
collects £ 4500 ono.
(Cost now £10,000) Tel
01751 431665 (North
Yorkshire)

WANTED: MONITOR
Audio (Tocord) low
loss Litz speaker cable,
- due to it's age and
construction, must be in
good sound condition.
Contact alvinkearsley
@tiscali.co.uk

WANTED: SONY ST-
SDB900 (QS) tuner, little
used, boxed. Tel: Peter
07941 842 605

MICHELL
ENGINEERING VTA
adjuster for Rega 3
point fixing system.
Excellent condition. £25.
Phone 07804 121730
(Nottingham).

WANTED: TOP quality
Hi Fi seperates and
complete systems, Naim,
Linn, Cyrus, Meridian,
Arcam etc, fast, friendly
response and willing to
travel/pay cash Please call
me on 0781 5892458

PS AUDIO GCA-MC500
5 channel amp 5 x 500
watts per channel/ 8
ohms Class D amp. Mint
condition £2000 ono.
Bel Canto pre I balanced
control preamp - mint
condition £500.00 ono
Tel 01782 256087 or
07791 048621

IT IS with regret that
I put up for sale my
beautiful Morch DP6
yellow spot 24 caret gold
tonearm boxed £750.00
ono. Tel: 07853076980.

NAKAMICHI CA 7E
Control Amp. Good
condition for age
works fine, these were
built to last, sorry no
remote,manuel or
box,these cost new
£2300.00 new asking
£500.00 ono phone 0191
4171669.

MUSICAL FIDELITY
A308CR Pre-amplifier
£695: Very highly
reviewed and rare!
Attractive appearance
and was excellent
value when new at
£1500. Owned by me
from new, still pristine,
unmarked (kept covered
by a dust sheet) as
new, with original box,
remote and instructions.
Protected in an audio
rack in my smoke and
pet free home. Happy
to demonstrate. Mike
(Cheshire) 07500 804700
michael.yates7
@ntlworld.com

WANTED FAULTY
or non working Quad
44 preamps, later grey
models. Contact Mike
01758 613790 with price.

ROTEL RMB 1075, 5
channel power amp.
Battleship build quality
with machined aluminium
fluted front fascia. 120
watts per channel.
Owned from new with
box and manual. £640
ono. Tel: 07817 365 393
(Leicester)

ICON AUDIO Stereo
25MkII amplifier. Few
months old, not yet run
in. Pristine condition.
Invoice, manual, box. Still
under guarantee. £700.
Tel: 01487 814 015

NAIM FLATCAP for
sale. Olive front model.
Excellent condition.
Original packaging. £100.
Tel: 07538 774 946
(Northants)

HFC NUMBER 58
Nakamichi BX2 cassette,
£80. Marantz CD63SE
CD, £60. Project Debut
2 turntable phono
speed boxes, £90. Bang
& Olufsen 5500 system,
£500. Sansui AX701 tuner,
£60. Tel: 01708 457 691

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pair of Harbeth P3ESR
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Fi Choice, Hi-Fi News.
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Buyer collects. Tel: Andy
01484 427 426.

WANTED: GARRARD
GT55P turntable. Must be
complete and preferably
mint. Tel: 01344 485 418

**GUIDELINES FOR
BUYING AND SELLING
SECOND-HAND
EQUIPMENT**

FOR THE BUYER

1. Not everyone is honest - Buyer Beware!
2. Don't send cash!
3. Accept no verbal guarantees.
4. Have you heard the item or something similar? If not, why do you want it?
5. Don't pretend to have knowledge - it's your fingers that will get burnt!
6. Is it working? If not, why not? Can it be repaired and if so is it worth it?
7. Has it been modified and, if so, have notes been kept?
8. Was it any good in the first place?
9. Don't send cash!
10. If you are in the slightest doubt, arrange an audition (see point 5) If it's too far, wait for another time.
11. Either buy it or don't: vendors are excusably impatient with 'consultation' exercises.
12. Don't send cash!

FOR THE SELLER

1. Not everyone is honest - Seller Beware!
2. Make no verbal guarantees.
3. Even 'nearly new' is still second-hand. If the manufacturer's guarantee is no longer in force, your price should reflect this.
4. There is very little intrinsic value in second-hand hi-fi; it's only worth what someone will pay for it.
5. The best guide to pricing is last month's Classifieds: that a 'classic' was worth £xxx a year or two ago is no guide. Values fall as well as rise.
6. Amateur second-hand dealing is not a big money game: you win some, you lose some.
7. Be prompt with despatch. If in doubt about buyer's bona-fides, either wash out the deal or send C.O.D.
8. There will always be time-wasters; be tolerant within reason!



NEXT MONTH MARCH 2014 ISSUE

T+A SOLITAIRE CWT 500 speaker

We heard this loudspeaker on a recent trip to T+A in Germany – and it sounded superb. It uses an electrostatic treble unit, in conjunction with three midrange units, all vertically arranged as a line source.

Line source loudspeakers commonly project sound in PA systems. But a line source works well in the home too and has strengths over the popular point source we are used to, T+A told us. So we were intrigued.

Find out more about T+A's novel approach in our March 2014 issue.

ALSO, WE HOPE TO BRING YOU –

MY AUDIO DESIGN 1920 SIGNATURE STANDMOUNT LOUDSPEAKERS
MING DA CAVATINA MC3008 VALVE MONOBLOCKS
LUMIN MUSIC STREAMER
CAMBRIDGE AUDIO MINI XI DIGITAL MUSIC SYSTEM
FURUTECH ADL X1 HEADPHONE AMPLIFIER AND DAC
ASTELL&KERN AK100 MKII HIGH-RESOLUTION PLAYER
LONGDOG AUDIO VD11 TRANSFORMER DAC

This is a selection of what we hope to bring you, not a complete list. Unfortunately, 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.

**PICK UP THE MARCH 2014 ISSUE OF HI-FI WORLD ON SALE JANUARY 31st 2014
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MARCH 2014 - 8TH JANUARY

APRIL 2014 - 5TH FEBRUARY

SUEDE

SUEDE
1993



"Suede quickly became media darlings contained in a bottled frenzy"

There was shoegazing indie guitar washes, dance/pop combinations and there was Madchester...then Suede appeared and everything changed again. 'Suede' was the album that flicked the Britpop reset switch. Based upon an intense guitar-infusion backing, lead singer Brett Anderson stirred the soup of ambiguity with a sensual, almost carnal style to his lyric delivery while the songs were supported and driven by a multitude of hooks and a certain melodic determination. One that demanded success.

Listening to this album, squint your eyes and your ears a touch and you could easily be listening to Ziggy-era David Bowie. There's the same soaring vocals and attendant glam rock flourishes in there that immediately gives the music a free-flowing, slightly abstract and decadent air.

Such stylings are heard from the off on 'Animal Nitrate' and 'So Young' which – as you might guess – deals with the knife-edge of being young. There's the desperation and all the pitfalls but then actually turning them into something hopeful and beautiful that looks forward and that isn't negative.

"It's a rejection of the traditional English character" declared Anderson. "A desire to push all the claustrophobia and tat and bits and pieces away and stride into the future, which isn't the most original thought in the world but maybe one of the most important".

There are also elements of the more experimental Ian McCulloch in there during the tracks 'She's Not Dead' and 'Pantomime Horse' while the more floating elements of The Smiths can be recognised within the songs, 'Sleeping Pills' and 'Breakdown'.

'Suede', the album, was written by Bernard Butler and Brett Anderson – but it is the latter's tormented delivery on this album that provides the group with its signature style: the underclass scrambling towards a bling-reflected light.

This is anguish by design, a sort of IKEA-based theatrical construction that matches the lyrics well and provides the group with an almost melodramatic presentation, combining elements of the past and present.

It also featured that sleeve art which depicted a couple kissing – an ambiguous picture, which could be a man kissing a man,

a man kissing a woman or a woman kissing a woman..

"I chose it because of the ambiguity of it but mostly because of the beauty of it" said Anderson.

Quite apart from the album itself, the LP was also part of a mythos that surrounded the band, who were stuck in a musical hurricane. It's easy to forget how frantically famous the band was during the early 1990s where, within the music industry, Suede quickly became media darlings contained in a bottled frenzy..

"I think we were guinea-pigs for a whole new interface of media and pop music" said Anderson. "I'm sure a lot of the public thought we were really manipulative, pulling the strings and sleeping with journalists, none of which is true. From our point of view we were just a band and we thought we'd written some really good songs and people were getting excited about it. There were great expectations simply because we delivered a lot of the things people wanted".

Guitarist Bernard Butler, who left the band during the final sessions for Suede's second album 'Dog Man Star', commented that, "Every band hated you because you were getting all this attention".

"Frankly I hated us as well because the focus wasn't on the music. It was on all this stuff that I didn't understand. I just found it embarrassing to be honest".

Nevertheless, this album was significant. Intriguingly, although it ushered in Britpop it didn't fit into Oasis' laddish crew or pose with the suburban Blur-ite mockneys. It's postmodern elements were too busy merging punk with glam rock, adding to its own heady brew.

Fans of the album can now grab it in a gloriously remastered condition within a superb, limited edition, numbered vinyl box set called, oddly enough, 'Suede: Vinyl Box Set', featuring the band's six studio albums across eleven pieces of 180gm vinyl plus 'Sci-Fi Lullabies' (a B-sides compilation).

This is also the first time that 'A New Morning' and 'Sci-Fi Lullabies' have been produced on vinyl and includes a book with interviews recorded in 2013 with the band plus associated photographs.

PR

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The USHER Dancer Diamond Series features the world's first amorphous DLC (diamond-like carbon) diaphragm tweeter. This is a tweeter which is second to none in the current market. To find out more, visit www.usheraudio.com or your nearest USHER dealer...



"2012 Editor's Choice" Awards --- AUDIO ART

Mini-X Diamond

2-way system: 1.25" Diamond DMD dome tweeter, 7" midrange

Sensitivity: 87 dB @ 1 watt / 1m

Nominal impedance: 8 ohms

Frequency response (-3 dB): 41 Hz - 40 kHz

Power handling: 100 watts

Crossover frequencies: 2.3 kHz

Weight: 15.5 kgs/34.2 lbs. per piece

Dimensions (w x d x h): 26 cm x 37 cm x 43.5 cm;



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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we’re not
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