





UDIOLAB Q-DAC & M-PWR c & amplifier



MESTEP RA POWER SUPPLY th Technics SL-1200 MK2 RA version



FiiO X3 DIGITAL MUSIC PLAYER VTL TP-2.5 SERIES II PHONOSTAGE **TELLURIUM Q CLAYMORE AMPLIFIER**

MASS FIDELITY RELAY BLUETOOTH RECEIVER



8 PAGES OF LETTERS - THE BEST WINS A PAIR OF KEF Q100 LOUDSPEAKERS! (UK ONLY)

Epic Reference speaker cable www.chord.co.uk CHORD COMPANY CABLE World Radio History Designed & hand built in England since 1985

welcome

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verdicts

OUTSTANDING **EXCELLENT** GOOD

POOR

VALUE

amongst the best extremely capable worth auditioning MEDIOCRE unremarkable flawed

keenly priced

ELECTRONIC MAGAZINE

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It's the time of the year when the days grow short, frosts set in and Christmas approaches. Which means it's also time for us to sit down and look at all the products we've reviewed over the last 12 months to nominate the conspicuous greats, those that stand out as exceptional. And as always, there were plenty of them.

As Editor I make sure I listen to most of what passes through our portals and out to contributors, and discuss with

them what we hear. And Quad's Elite QMP mono

power amplifiers received universal praise. What I loved about them was their 'easy' presentation, combined with a muscularity that seemed to suit all the loudspeakers we connected. All the same, everyone in the office and out of it swooned when they heard the Audusa Ariand Pro845. This is a real gem, if also wonderfully esoteric

Steady refinement based upon good engineering improves loudspeakers and both our nominations enjoy this advantage: Quadral of Germany and Martin Logan of the USA have come up with fine loudspeakers in the Platinum M50 floorstander and Motion 15 standmount models.

Digital gets increasingly complex and Teac's extraordinary UD-501 DAC, able to play DSD files with its unique, free software player, was one of the year's "wow" moments in audio. And Naim's NAC-172XS was a supremely smooth and impressive sounding network preamplifier, providing real quality from digital.

The most controversial product was the Astell&Kern AK120 reference portable digital audio player. As a portable 'MP3 player' one (U.S.) reviewer thought its price outrageous. Seen as a reference high resolution digital audio player whose sound quality eclipses CD, it is a bargain however.

And finally innovation in turntables is seen in Funk Firm's well thought out Little Super Deck with its novel drive system - fascinating. And to go with it Leema Acoustics Elements Ultra phono stage is a top choice we feel, to get the best from LP.

As if all this were not enough, we have plenty more under review in this first issue of 2014. I hope you enjoy it all - and Christmas too!

Noel Keywood, editor.

testing (see www.hi-fiworld.co.uk for full explanations of all our tests)

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





Distributed by Seymour Distribution Ltd 86 Newman Street London, W1T 3EX Tel: +44 (0) 20 7396 8000 Printed by Artisan Press Limited Tel: +44 (0) 1869 363 333 Our Agents in Malaysia Millennium Hi-Fi & AV Simon Chang Showroom & office, 500-1-3 First Floor Wisma Indah (Shen Court), Jalan Tun Razak 50400 Kuala Lumpur, Malaysia Tel: 603 9283 8171 Fax: 603 9281 3762 e-mail: info@millennium-audio.com

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contents









LOUDSPEAKERS
USHER DANCER MINI-X DIAMOND 48 Jon Myles listens to Usher's diamond tweeter standmounts

QUAD PLATINUM DMP PLAYER AND AMPLIFIER 10 Quad's new top of-the-range separates impress Jon Myles

FiiO X3 DIGITAL AUDIO PLAYER 61 Noel Keywood finds much to like in FiiO's budget portable

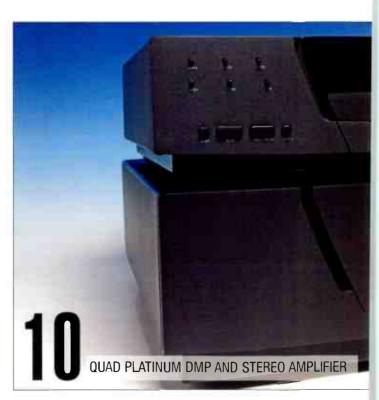
> **AUDIOLAB Q-DAC AND** M-PWR AMPLIFIER 66

Jon Myles samples Audiolab's DAC/amplifier package

MASS FIDELITY RELAY BLUETOOTH

RECEIVER 82
Wireless streaming via Bluetooth sounds good to Jon Myles

AMPLIFICATION
TELLURIUM Q CLAYMORE 41
Tony Bolton takes Tellurium Q's latest amplifier for a spin



JANUARY 2014

VOLUME 23: NO. 11

FEATURES

15 HI-FI WORLD AWARDS

Eleven pages of the top products from the past 12 months

37 BRAIN TEASER

Test your knowledge in our annual Christmas quiz.

55 CHRISTMAS WISHES

The Hi-Fi World team tell Santa what they want for Christmas

107 CHRISTMAS CROSSWORD

Get clued in with our annual festive brain-teaser

OLDE WORLDE

102 DAWN OF DIGITAL

Martin Pipe on the Sony player that kick-started the digital revolution

VINYL

84 NEWS

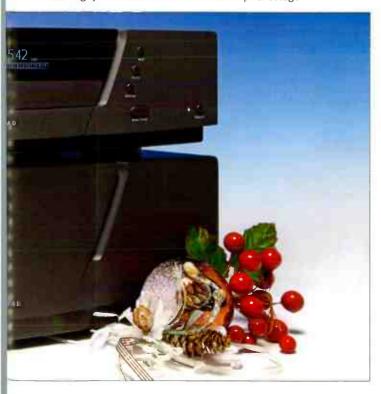
All the latest and greatest vinyl releases for you, from the pen of Paul Rigby

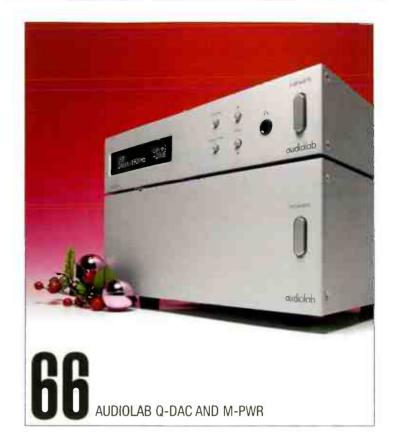
86 TIMESTEP RA POWER SUPPLY WITH TECHNICS SL-1200 MK2 TURNTABLE RA VERSION

Tony Bolton discovers a superb power supply upgrade for the Technics ${\sf SL1200~Mk2}$ turntable

93 VTL TP-2.5 MKII PHONOSTAGE

Paul Rigby listens in to VTL's new valve phonostage





SOUNDBITES

109 ATLAS EOS POWER BLOCK/HI-END RACKS

REGULARS

6 NEWS

All the latest from the Hi-Fi world...

27 MAIL

Eight pages of your views, wonderful as always...

53 COMPETITION

Your chance to win a pair of Acoustic Energy 301 loudspeakers worth $\pounds 425$

38 SUBSCRIPTIONS

Ensure your copy every month and save money too!

45 WORLD STANDARDS

Updated guide to the latest and greatest hi-fi hardware on sale

64 AUDIOPHILE CD

Paul Rigby rounds up the latest audiophile CD releases

76 WORLD CLASSICS

Brilliant designs that have stood the test of time...

71,73,75 OPINION

The team get to grips with matters music, hi-fi and life!

96 DIAL-A-DEALER

A comprehensive guide to UK hi-fi retailers

110 CLASSIFIEDS

Two pages of second-hand bargains

112 NEXT MONTH

What we hope to bring you in the next sizzling issue...

113 ADVERTISERS' INDEX

114 CLASSIC CUTS

Paul Rigby on Fred Neil

email:news@hi-fiworld.co.uk Market Salah Salah

ANTHEM AVR

Canadian outfit, Anthem, has unveiled the MRX 710, MRX 510 and MRX 310 A/V receivers.

Included in all is the ARC IM room correction system. The software and microphone kit are included as part of the MRX offering. ARC IM connects via Ethernet, enjoys a higher level of digital signal processing and offers users the option to print 'before and after' room measurement graphs.

The MRX 710 and 510 feature seven channels of power, the MRX 310 is a five-channel unit and all models feature Anthem's proprietary 'Advanced Load Monitoring', designed to keep a constant eye on output.

Seven rear inputs and one front-panel input are featured on the MRX 710 and MRX 510, and seven rear inputs are to be found on the MRX 310. Dual HDMI outputs, 4K Upscaling and Pass-Through, plus a HDMI Audio Return Channel are joined by software updates via the USB port and IP and RS-232 control drivers for full integration with automation.

Remote control apps for iOS (Apple) and Android are also available. You can also bi-amp the front left/right speakers with the MRX 710 and MRX 510.

Power outputs include: MRX 710 120W (2 channels driven), 90W (5 channels driven), MRX 510 100W (2 channels driven), 75W (5 channels driven) and MRX 310 80W (2 channels driven), 60W (5 channels driven).

Prices: MRX 710 £2,199; MRX 510 £1,699 & MRX 310 £1,199.

Click on www.anthemay.com for more information.





CHORD ELECTRONICS OUTE EX

Forming part of the Chordette range, the new Qute EX adds a new chipset and circuit board that enables decoding at up to 384kHz PCM and DSD 128 over USB (against the QuteHD's 192kHz PCM and DSD 64). Existing QuteHD DACs can be upgraded with the new chipset and board at the factory for just £200 (plus shipping), the price differential between the two.

The Qute EX builds on the strengths of original QuteHD, a compact D/A convertor that eschews off-the-shelf DAC chipsets in favour of a bespoke FPGA (programmable) circuit. The EX is its stable mate, with the 'EX' suffix denoting its DXD (Digital eXtreme Definition) intentions. In addition to 384kHz PCM files, the QuteEX can also process DSD 128 data using the latest DSD-over-PCM standard (DoP). Whether using Mac or Windows OS, Chord Electronics' own proprietary driver software is provided, removing the restrictions of current operating system audio playback. Price is £1,195

Click on www.chordelectronics.co.uk or call 01622 721444 for more information.

MCINTOSH APP

The latest version of McIntosh's free API Audio Player app has been released. Version 1.5 can be downloaded from the Apple Store, allowing iTunes to be run with the look and feel of a full sized McIntosh component.

The API app offers users the ability to listen to and playback music from iPhone, iPad and iPod Touch devices. Featuring the 'McIntosh Blue' Watt meters, the API app gives users access to their audio library through an interface inspired by the iconic power meters.

The latest version of the app now includes AirPlay technology, enabling users to wirelessly stream their music to an AirPlay-compatible speaker system, such as the McIntosh McAire. Also included is a mini product catalogue, a history of McIntosh plus a dealer locator (US only).





Features include: the app now remembers a song selection and player settings between uses to resume playback, added hi-res graphics for Retina screen support have been included and the app now follows a device's auto-lock setting and turns the screen off to help save battery power.

Call 01202 911886 or click on www.jordanacoustics.co.uk and www.mcintoshlabs.com for more information



CHORD ETHERNET

The Chord Company has launched a trio of Ethernet cables: C-stream; Indigo Tuned ARAY and Sarum Tuned ARAY.

C-stream provides OFC conductors and low-density polyethylene insulation. Each set of C-stream's twin conductors are twisted, with each pair featuring an overwrapped foil shield; the four pairs are then additionally overwrapped with a further foil shield. C-stream features 24ct. gold-plated signal contacts with an overmolded plug surround. It is directional and is marked with a black dot on the plug at the source end.

The Indigo Tuned ARAY does not rely on twisted-pair conductor geometry and has been designed and built to carry data to an audio streamer. It employs a subminiature coaxial high-speed cable for all critical signal paths. The signal conductors are silver-plated copper, the insulation is PTFE and the shielding comprises two layers of high-density braid (effective to high frequencies), protected with a PTFE outer jacket. Indigo Tuned ARAY's connections are soldered rather than crimped and a RJ45 connector has been chosen to allow the secure attachment of the conductors without the need to compress them.

The flagship Sarum Tuned ARAY cable is built to the same specification as other Sarum cables: the copper conductors are micro-polished prior to being plated with silver and the insulation is gas-foamed PTFE. It is shielded with a dual-layer high-density silver-plated braid and heavy-gauge foil. The shielding is then protected with a PTFE outer jacket. As with Indigo Tuned ARAY, all connections are soldered rather than crimped.

Prices are: C Stream, 1.5m - £45; Indigo Tuned ARAY, Im - £850; Sarum Tuned ARAY, Im - £1,600. Additional lengths are available plus custom lengths to order.

Call 01980 625700 or click on www.chord.co.uk for more information.

VERTERE TURNTABLE

The RG-I turntable plus Reference tonearm includes a five level isolation system including twelve acetal suspension bobbins and tuned silicone suspension rings, ten decoupled suspension domes and an adjustable and surface selectable foot support. The motor is a forty-eight pole precision synchronous model driving a cast acrylic sub-plinth linear damping disc. This is run via a phosphor bronze housing containing a Tungsten Carbide main bearing with a Tungsten Carbide ball, supporting a bonded cast acrylic platter and 'record interface' with a belt running groove. The power supply is switchable from 33 to 45rpm and comes with a detachable mains lead.



Price for the RG-1 is £21,050 plus £23,950 for the Reference tonearm. A RG-1 Standard model is priced at £14,050 with a RG-1 tonearm at £3,500. The SG-1 Standard turntable is priced at £11,250 with a SG-1 tonearm at £1,500.

Click on www.vertereacquistics.com or call 0203 176 4888 for more

Click on www.vertereacoustics.com or call 0203 176 4888 for more information.



ADL X1 HEADPHONE AMP

Alpha Design Labs (ADL) XI is a small, portable headphone amplifier and digital to analogue convertor (DAC). It supports digital input from Apple iOS devices up to 16bit/48kHz as well as 24bit/192kHz high-resolution files from PC via USB. In addition, a 4-pin 3.5mm line-level input allows for use with analogue source devices.

The 4-pin 3.5mm output will drive any headphones in the 12-600 Ohm range and supports 3.5mm remote and mic earphones. A 3.5mm TOSLINK optical digital output delivers USB source signal up to 24/192.

The XI uses a gold plated circuit board and connectors. The internal rechargeable battery can be charged from a computer connected by USB or from an external power supply. The XI does not draw power from a connected iOS device and so will not reduce playback time. A full charge will give approximately 7.5 hours listening. Price is £395.

Call 01276 501 392 or click on www.soundfowndations.co.uk for more information.

KEITH MONKS DISCOVERY ONE

Available now in a trimmer, less clunky chassis is the discOveryOne Record Cleaner. Offering a very quiet electric motor (37dB, C weighted, Im), it features a medical grade diaphragm suction pump, a wash pump from a Mini Cooper, an auto-off function, a semi-automatic dry cycle and auto shutdown if the waste container is full. The Classic is £1,295 with the sturdily built Pro at £1,595. Call 01983 857079 or click on www.keithmonks-rcm.co.uk for more information.

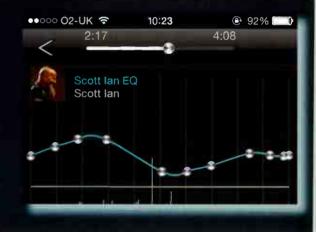


ONKYÓ ĀPP

The HF Player free audio player app features album artwork display and playback controls. A phase-linear FIR equalizer offers 16,384 discrete bands of equalization. The user shapes their desired frequency curve with a finger on the touchscreen to manipulate bass, mid-bass, mid-range and treble response. Presets may be created to suit a particular musical genre, artist, album or pair of headphones and can be saved, swapped and loaded.

Users seeking high-resolution audio performance can make an in-app HF Player Pack purchase (£6.99) to enable FLAC, DSD, WAV and AIFF playback of up to 192kHz with 24bit sampling (these files are loaded via a drag-and-drop operation on an iTunes-equipped PC prior to synchronization). This in-app purchase also enables selectable upsampling from 44.1 kHz to a possible 192kHz, and an HD phase-linear equalizer with 20,000 bands of adjustment in 64bit mode.

Phone 08712 001996 or click on www.onkyo.co.uk for more information.



CUSTOM CABLE HEADPHONE DAC

The Resonessence Herus personal headphone USB DAC spans just 63 x 32 x 19mm, is crafted from a solid block of aluminium and has two connections: a USB type 'B' socket at one end and a 6.35mm stereo headphone jack at the other end. The signal to noise level at the headphone output is over 100dB, a result of the Resonessence designed power line processing circuits. These deliver more voltage range to the DAC chip than the standard USB provided 5V.

Herus is designed to work with Mac, PC or Linux machines. The USB 2.0 Audio protocol enables asynchronous compatibility with the ESS 9010-2M DAC chipset (natively on MAC and using the Thesycon USB 2.0 Audio driver for Windows), which runs Resonessence's own custom code and Asynchronous algorithms in the Cypress USB interface chip.

The PCM audio of up to 24bits and 352.8kbps in addition to DXD and DSD64/128 is further enhanced by using the Herus' in-built 32bit volume control processing. On connection to the computer, Herus will register itself as being able to control the volume internally, with the playback software sending control commands to the ESS 9010-2M DAC chip. Price is £299.

Contact www.custom-cable.co.uk or call 020 8942 9124 for more information

SONOS PLAY:1

PLAY: I is a smart speaker offering a custom-designed mid-woofer and tweeter. Designed to be part of the Sonos streaming system, it can be accessed using a single app (iOS, Android, PC/Mac). You can also pair two PLAY: I units for stereo sound or use two PLAY: Is as rear speakers with PLAYBAR and a SONOS SUB to create 5.1 home theatre sound for TV. Price is £169.

Contact www.sonos.com or call 0808 234 6596 for more information





NEAT ACOUSTICS MOTIVE SX

The next generation of Motive speakers, the SX series, is out.

The first and most obvious change from original to SX is to the tweeter. A newly designed, aluminium dome that is black anodised for added stiffness has replaced the original titanium dome.

The crossover has been revised using Mundorf components. Simple three-element crossovers are mainly employed. The SXs will be single wired as standard. Bi-amp terminals are available as a chargeable option on order.

The internal bracing and damping have been upgraded and the LF tuning optimised for each model, while the HF units now operate in their own enclosures to minimise driver crosstalk.

The Motive SX series comprises three models: the SX1, a two and a half way floorstander; the SX2, a two-way floorstander and the SX3, a two-way stand mount. The bass reflex port on the two floorstanders is fitted to the bottom panel of the cabinet and is vented through an outlet in the MDF plinth. The plinth offers a stable platform for the speaker whilst providing a slight backward tilt to maintain the Ideal angle for optimum performance. The Motive SX will be available in four finishes: American Walnut, Black Oak, Natural Oak and Satin White.

Prices are: Motive SX1, £1885 per pair; Motive SX2, £1395 per pair; Motive SX, £1085 per pair and the Motive SXC, £705.

Call 01833 630022 or click on www.neat.co.uk for more information.

SONIXX BLUETOOTH HEADPHONE

Sonixx has released a new pair of over-the-ear, Bluetooth headphones, the X-Touch, with cushioned, pivoting ear cups and 40mm neodymium drivers. Instead of multiple buttons, the X-Touch incorporates touch gesture controls on one side. A swipe of your finger upwards increases the volume, a swipe downwards lowers it. A forward-swipe skips to the next track and a backward-swipe plays the previous one. Alongside the swipe 'touch' controls, a single, multi-function button does the rest – press it to power up or down, pair with a new device or pause your music during playback. The same button lights up red or blue to indicate power and pairing status.

A microphone is incorporated for hands-free calls. When paired with a smartphone, if a call comes in music is paused automatically. Battery life spans nine hours. Price is £80.

Click on www.sonixx.co,uk for more information.



TRAX

Looking like something that has emerged from a pod of Thunderbird 2, i-box has launched Trax, the new portable Bluetooth speaker complete with NFC pairing.

Trax is fully portable, weighing in at just 317g and offers up to ten hours playback from its rechargeable Lithium battery.

The rubberised caterpillar track surround ensures rugged reliability while an aluminium touchsensitive control panel allows users to adjust volume level, pause and skip tracks without touching the source device and a hands-free speakerphone facility adds further flexibility when paired with a smartphone. sckage includes a proprietary USB cable for battery recharging, as well as an audio cable to allow connection of

The package includes a proprietary USB cable for battery recharging, as well as an audio cable to allow connection of non-Bluetooth enabled music devices.

Trax measures 60x160x55mm, weighs 317g and is priced at £70. Contact www.iboxstyle.com for more information.



Quad goes Platinum

Iconic hi-fi brand Quad has spent seven years developing its new top-of-the range Platinum series — and Jon Myles says it's been well worth the wait. egular Hi-Fi World readers will know we are big fans of Quad's Elite series of electronics. So much so, in fact, that the company's supremely musical Elite QMP monoblocks have won the Amplifier of the Year Award in this month's issue.

But hard on the heels of that success Quad has looked



The Platinum Digital Media player (top) has a wide array of digital inputs on its back panel, including professional AES/EBU balanced S/PDIF digital. Together with a CD player and USB, it caters for most digital audio sources. It outputs analogue to the Platinum Stereo power amp (below) through normal phono cables, or fully balanced XLR cables.

to raise the game again – with the launch of a range-topping Platinum series of separates.

At present that means a one-box digital media player with a choice of mono or stereo power amplifiers — with all the units priced at 5p short of £2,500 each.

There's also a Platinum preamp in development to enable the connection of analogue components – with release slated for early 2014.

Housed in purposeful but defiantly unflashy slate-grey casings, the Platinum DMP (digital media player) and Platinum Stereo power amp on test here offer impressive specifications on paper.

The DMP is a CD player/DAC/ pre-amp - aimed firmly at being the centre for all your digital music playback needs. It features twin Cirrus Logic 24bit/192kHz Delta-Sigma D/A converters – one for each channel – run in dual differential mode, and a high-precision master clock to minimise jitter.

At the back are six digital inputs – three optical S/PDIF, two RCA and one asynchronous USB – and four digital outputs, as well as balanced XLR and singled-ended RCAs for connection to a power amplifier.

The CD transport is impressively

constructed. It's made from a diecast aluminium and ABS compound, with a disc tray supported by steel rods running through sintered bronze bearings. Quad says this reduces noise and vibration through critical damping of the mechanical components – allowing the laser to read the disc with better accuracy. It also means the sled slides in and out with a pleasing solidity, a world removed from the wobbly plastic

Inside the Platinum DMP digital media player lies a linear power supply, and Quad's customised CD player mechanism, with smooth acting disc tray.



trays of cheaper machines.

The front panel features a large display window above the CD sled with input connection indication lights and control keys arranged either side.

The matching Platinum Stereo power amplifier is rated by Quad at 150 Watts per channel into 8 Ohms but our measured performance shows it easily beats this at 190 Watts and a whopping 324 Watts into 4 Ohms – fully justifying Quad's claim that it has the ability to drive any loudspeaker.

Inside, the output stage is built around a large number of output transistors with each one driven from its own driver transistor to maximise linearity. Quad says this enables virtually flat output impedance to be presented to the loudspeaker across the frequency band – leading to a more natural dynamic performance throughout the audio spectrum.

Each amplification stage is fed by its own power supply while the use of a servo to remove unwanted DC voltage means there are no potentially sonic deleterious capacitors in the signal path.

Other features include new PCB layouts to screen signal paths and custom-made transformers.

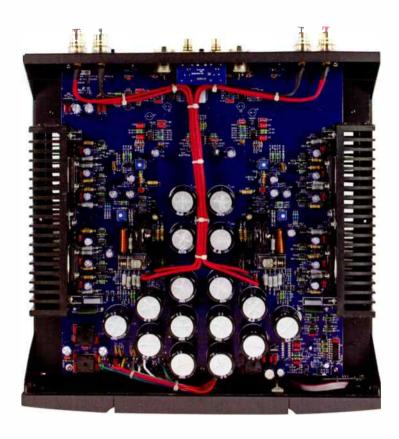
At the back are both RCA analogue and balanced XLR inputs as well as twin pairs of WBT speaker binding posts to facilitate bi-wiring. Finally, a 3.5mm lead (supplied) allows the DMP and power amp to be tied together so the on/standby feature for both units can be operated by the remote control.

And that remote control deserves a special mention. It's large, heavy and extremely well laid out with its own integrated stand. This is one remote you'll find extremely difficult to lose behind the back of a sofa!

Taken as a package the Quad Platinums may lack the sheer bling factor of something like, say, a Chord amplifier and CD – but their understated look oozes quality and they look purposeful in the hi-fi rack.

SOUND QUALITY

It takes just a few moments after hitting the play button for the realisation to dawn that these new Quad components are really something rather special. We're all creatures of habit to some extent and recently much of my listening has been through streaming and computer USB with rather less via



Inside the Platinum Stereo power amplifier lies a modern Class A/B power amplifier utilising vertical heat sinks at either side of the cabinet. Banks of smoothing capacitors suppress noise.

the venerable CD.

But connecting the DMP to its matching stereo amplifier via a pair of Chord Anthem XLRs and slotting in Led Zeppelin's remastered 'Mothership' collection was a revelation.

Drum cracks were firm and solid with detail better than I've heard from any other CD player

registers are crisp and clean.

And the detail the DMP manages to extract from CD is exceptional. Listen to Joy Division's 'She's Lost Control' and you can clearly hear that Ian Curtis's vocals are subtly multi-tracked – whereas on lesser players the effect comes over as simply an echo.

The trademark smooth, assured,

"the company's engineers have subtly extended the bandwidth of its Elite series of components to produce a more all-encompassing musical presentation"

and separation between instruments exemplary. What's more, there's a propulsive drive above and beyond anything I've heard from a Quad amplifier/CD combination before.

Led Zeppelin's 'Black Dog' positively hammered out of a pair of Spendor's diminutive A3 floorstanders with a big, wide and deep soundstage. Bass is deep but well-controlled with no sense of thump, while the upper

confident Quad sound is all present and correct but there seems slightly more bite to the top end and a touch more rhythmic drive to proceedings. It's as though the company's engineers have subtly extended the bandwidth of its Elite series of components to produce a much more all-encompassing musical presentation.

It means the Quad combination

simply revels in big orchestral and choral pieces. The Turtle Creek Chorale's rendition of John Rutter's 'Requiem' is nothing less than visceral, yet still anchored in a deep acoustic space that retains the ambience of the venue. What's more the Platinum Stereo's power reserves means there's no hardening of the sound as you push the volume control on the remote. Indeed, your loudspeakers will probably give up the ghost well before the Quad is even breaking a sweat.

But it's not all about power. There's also a delicacy and fleetfootedness about both the DMP and Platinum Stereo that works well with gentler selections.

Kate Bush's '50 Words For Snow' (24/96) is suitably ethereal and haunting via a MacBook Pro into the DMP's USB input - vocals floating free and clear of the speakers with the piano anchored centrally in the soundstage.

The combination of poise and power shows itself to full effect on Edgar Varèse's percussion-heavy 'Ameriques' where thunderously dynamic passages intermingle with delicate interludes. The Quads fly through it completely unfazed - able to switch between dark and light passages without missing a beat.

Briefly separating the two units served to highlight each one's innate quality. Feeding the DMP into a NuForce IA-18 (slightly dearer than the Platinum Stereo at £2,899) revealed all the Quad unit's openness, clarity and detail retrieval, if shorn of the rich, smooth element its matching power amplifier brings to the proceedings, because the IA-18 is very lucid, but dry.

Similarly, pairing the Platinum Stereo with a Naim CD player brought a touch more pace to upbeat material but at the expense of the DMP's ability to seemingly dig out that last bit of information from CD and high-resolution files.

Putting the DMP back together with the Stereo power amplifier, all the elements fell into place again. Elements which meant I quickly found myself stretching out listening sessions into the early hours of the morning, finding new and unexpected details on even the most familiar recordings, or even simply getting carried away by the flow of the music.

If there's any criticism to be made it's purely the fact that at

present there's no analogue input and no way of adding one apart from using a separate analogue pre-

> The DMP is a master at detail retrieval and could easily shame price. Add in its welter of digital inputs and it's the ideal hub for anyone mixing CD and computerbased music replay. Its partnering Platinum

The Platinum remote control is big and chunky - and very difficult to lose!

amplifier to feed the Stereo - but hopefully that will be remedied in the near future. Apart from that, there's nothing to criticise here.

CONCLUSION

Quad says the new Platinum series has been some seven years in development - and once you listen you can understand why. The company's smooth, rich and assured house sound is still very much in

colouration. some CD players costing twice the

evidence, but with an added bite

and punch that makes music truly

exciting, without adding undue

Stereo amplifier offers prodigious grunt and enough voltage swing to drive even electrostatic loudspeakers,

while never sounding anything less than silky smooth and polished. Also,

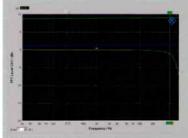
it's at home pumping out beat-driven heavy rock tracks as it is handling orchestral crescendos or delicate, shimmering musical pieces.

Admittedly, the combined cost of £5,000 is not exactly pocket money - but considering what these offer for the price, I'd say they are value for money. Put simply, they come very highly recommended.

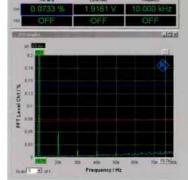
MEASURED PERFORMANCE

The Stereo power amplifier delivers a massive 190 Watts into 8 Ohms and 324 Watts into 4 Ohms, and with relatively little distortion, just 0.03% at 10kHz. The Stereo will go very, very loud without strain and has sufficient voltage swing

FREQUENCY RESPONSE



DISTORTION



- around 37V - to drive even insensitive electrostatic loudspeakers. A 1.4V input signal is needed for full output, through either the unbalanced line inputs or the balanced XLR inputs.

The DMP digital preamplifier (there are no analogue inputs) works up to 192kHz sample rate through all inputs and with a 24bit signal produced just 0.036% distortion at -60dB, a very low value, so the internal DAC is very linear. As a result EIAJ Dynamic Range measured a high 116dB. Maximum output was 2.8V but the Platinum power amplifier needs just 1.4V and the DMP delivered this at 69 (of 100) on its volume control, so there is 'gain' to spare. High frequencies rolled off slowly above 25kHz with 192kHz sample rate digital and the filter will likely give a well damped, ringing free sound.

The Platinums measured well in all areas and will likely give a typically smooth Quad sound. NK

Power	190watts
Frequency response	1Hz-68kHz
Separation	99dB
Dynamic Range	116dB
Distortion	0.03%
	2FS = 1.4V out

QUAD PLATINUM DMP DIGITAL **MUSIC PLAYER** £2,495

QUAD PLATINUM STEREO POWER **AMPLIFIER** £2495









VERDICT

The best solid-state components Quad have ever produced. Combine power, poise and control with superb musicality.

FOR

- detail retrieval
- range of inputs
- pre-amp functionality
- tuneful, deep bass

AGAINST

- no analogue inputs

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"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

"A certain magic when it comes to absolute sound quality"

Jimmy Hughes, Hi Fi Choice 2012



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

Paul Rigby, HiFi World 2012

Cable group test winner 2012

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"something that I've never heard from any cable at this price point."

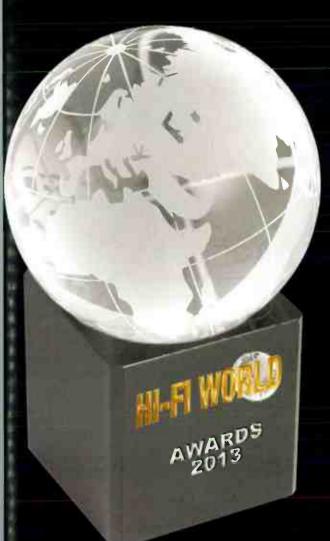
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THEFT WORLD AWARDS 2013



elcome to Hi-Fi World's 2013 Awards.
Every year our dedicated review team tests hundreds of products - but some stand out more than others.
So here is our pick of the best components we've heard over the past 12 months - whether it be for sheer sound quality, innovation or fabulous value for money.

AWARDS 2013	WINNER
BEST AMPLIFIER	Pg 16
BEST VALVE AMPLIFIER	Pg 17
BEST LOUDSPEAKER	Pg 18
BEST BOOKSHELF SPEAKER	Pg 19
BEST DAC	Pg 20
BEST NETWORK PLAYER	Pg 21
BEST TURNTABLE	Pg 22
BEST PHONOSTAGE	Pg 23
BEST HEADPHONES	Py 24
BEST DIGITAL SOURCE	Pg 25



BEST AMPLIFIER

Quad Elite QMP monoblocks

Reviewed: July 2013 £1,195 each www.quad-hifi.co.uk

eaturing the latest implementation of Quad's patent current dumping technology, the Elite QMPs provide a winning combination of power and control.

Producing 260 Watts into 8 Ohms (324 Watts into 4 Ohms) they have an almost unique strength in being able to handle modern electrostatics' capacitive load while producing a great sound into the bargain. Yet at no time do you get the feeling that the Quads are battering you into submission. Instead they have a big-bodied, easy-going sound that is smooth up top but maintains a firm grip on the rhythm and timing of the music.

They are as adept at driving along an up-tempo, bass-heavy rock track as they are at unravelling the light and shade in more nuanced recordings – and those meaty reserves of power means there's no shortage of grunt on hand for big orchestral crescendos.

At just under £2,400 a pair the QMPs have the ability to show a clean pair of heels to designs costing significantly more.



BEST VALVE AMPLIFIER

Audusa Ariand Pro845

Reviewed: June 2013 £1499

www.audusa.co.uk

ingle-ended amplifiers have a magic sound quality of their own - and the Ariand is a superb example of the breed.

Built in China by Yarland, the

Ariand uses a single 845 triode power output valve in each channel with a 12AX7 double triode pre-amp and 5Z2P double diode rectifier in the power supply.

Power output is limited – at 7 Watts into 8 Ohms for 1% distortion – so sensitive speakers are essential. But get that right and the Ariand is a genuine piece of audio magic.

The Pro845 is silky smooth, gentle at low levels, full bodied on crescendos and has a tonality that makes vocals and instruments seem relaxed yet forceful too.

"It sounded so immediately gorgeous, easy-going yet forcefully dynamic at the same time as well as tonally natural and revealing of the timbral nature of instruments" we said.

Factor in the classy wooden front panel and blue LCD bias voltage meter and it can match or better many an amplifier costing twice as much or more.



BEST LOUDSPEAKER

Quadral Platinum M50

Reviewed: August 2013 £3,150

www.quadralgb-ie.co.uk

itting at the top of German manufacturer Quadral's Platinum range, the M50 is a full three-way, five-driver floorstander. Quadral designed the M50 to be exceptionally clean and accurate.

And that's exactly how they sound

- reproducing music with a confident,
unforced ease and plenty of dynamic thrust.

"The textures and delicate sonic touches of Radiohead's 'Kid A' were finely etched and easy to follow" we said, while "the beginning of Bach's 'Passaglia in C Minor' spirals down with real power until its final organ note hits you with the required sub-sonic punch".

Quadral's ring dome tweeter extends lower than more conventional designs ensuring seamless integration with the midrange drivers, while the twin bass cones produce good, clean bass.

As we concluded: "Some speakers impress with clean treble, low-end power, mid-range detail or out-of-the-box imaging. Only a special few manage to put it all together in one elegant, eminently enjoyable package. But that's exactly what the Platinum M50 does".



BEST BOOKSHELF LOUDSPEAKER

Martin Logan Motion 15

Reviewed: September 2013

£800

www.absolutesounds.com

nere's no shortage of choice in compact bookshelf loudspeakers in the UK market – but the Martin Logan Motion 15s are undeniably special. They're a brave attempt to bring some of the characteristics of the company's big hybrid electrostatics down to a lower price point.

The star of the show is the Folded Motion tweeter – a Heil-type folded ribbon design. It is clean, fast and deliciously airy, giving vocals and acoustic instruments a wonderful sense of freedom and lack of colouration.

The 5.25-inch aluminium-coned woofer integrates seamlessly and although there's little low bass it is remarkably refined and articulate on dense material with a firm sense of rhythm and timing.

As we said at the time: "If you have ever hankered after a full-size Martin Logan hybrid electrostatic but had neither the space — or the funds — then this 'speaker could be just the ticket." The Martin Logan Motion 15s really are that good.



BEST DAC TEAC UD-501

Reviewed: September 2013

£699

www.teac.co.uk

ac's outstanding UD-501 pushes the limits of what's currently possible in the playback of high-resolution digital files.

Designed to work both with a conventional hi-fi system or from a computer fed via USB, the Teac is one of the most sophisticated DACs currently available with a wealth of upsampling and digital processing options on offer.

It can also do things most other DACs cannot – such as playing Direct Stream Digital (DSD) files from a computer at both standard (2.8MHz) and double (5.6MHz) rate. Standard file formats up to 32-bit/384kHz are also supported and the DAC upsamples all data to 192kHz to reduce jitter.

Sonically, the Teac is also superb

- managing to smooth over the imperfections
of bad digital with its various filter
arrangements.

arrangements.
"The sparkling cleanliness, glitter of treble and rock-like stability of imaging were gorgeous" we said.

The Teac is at the cutting edge of digital replay – but it is also a DAC that sounds decidedly non-digital as its sound is so big. fulsome and clear.



BEST NETWORK PLAYER

Naim NAC-172 XS

Reviewed: February 2013

www.naimaudio.com

aim has no end of network players in its portfolio – but the NAC-172XS is unique in being a pure pre-amp and streamer all in one.

Capable of handling file sizes up it/192kHz, the Nac-172 also packs an

to 32-bit/192kHz, the Nac-172 also packs an internet radio facility into its slim chassis and is fully controllable from Naim's excellent n-stream app for Apple devices, giving access to album artwork as well as artist features, biographies, images, discography, and reviews from the expansive Rovi database.

Playing Rimsky-Korsakov's 'Dance Of The Tumblers' Rafael Todes said: "The Naim has a tautness in the bass and speed of timing which makes the track rock impressively".

On a Ray Gelato CD through the NAC-N 172 "the percussion section seemed to have died and gone to hi-fi heaven: the high hat was as crisp as I've ever heard it, the drum kit positively sizzled, and the track had a driving energy which brought it alive".

In short, the Naim NAC-172 is an ideal way to add top-quality network streaming to an existing hi-fi set-up, making it a deserving award winner.



BEST TURNTABLE

Funk Firm Little Super Deck

Reviewed: May 2013

£1164

www.thefunkfirm.co.uk

table is more traditionally styled than the company's modernist creations, having a slightly retro look. But while its appearance might be slightly reminiscent of the 1970s its sound and specifications are decidedly 21st century.

Measurements revealed a belt drive turntable of unusual speed stability with a rock steady tone and little wow and flutter. Funk's new F5 arm (£600 if bought separately) is also well damped and vibrationally inert — which all adds up to a sonically impressive package.

The Little Super Deck has an unerring musical honesty about it. Playing a variety of tracks ranging from classical to 140bpm trance classics, the Funk never failed to impress.

Bass is firm and well-defined, while upper registers are clearly etched and the tonality of instruments is never less than believable.

The Funk Firm has produced a superbly engineered and accurate turntable, with true and faithful reproduction. It really involves the listener in the music we found.



BEST PHONOSTAGE

Leema Acoustics Elements Ultra

Reviewed: November 2013

£1195

www.leema-acoustics.com

he Elements series is Leema's entry-level range of equipment

— but the Ultra still boasts an impressive range of facilities for the price.

Inside the compact steel casework the Leema features separate gain stages for MM and MC cartridges

— each fed by its own regulated power

Flip the unit over and the underside contains a series of dip switches to set gain, capacitance and resistance to enable exact cartridge matching, as well as a bass filter.

Once set-up the Ultra's sound is a winning combination of an open midband that offers spacious and detailed imaging, fast, deep and accurately-timed bass along with a smooth top-end.

"Rhythmic music was played with a great deal of energy and sparkle", we said.

Factor in the ability to work with almost any MC currently available and Leema's traditional bomb-proof build and the Ultra is not just an impressive package but sets a standard at its price point.



BEST HEADPHONES

Philips Fidelio XI

Reviewed: October 2013

£270

www.philips.com

hilips Fidelio XIs are aimed firmly at the upper end of the headphone market. Weighing in at 430gms, they are not designed to be fighting it out with in-ear portables on the morning commuter run.

Instead they are an open-back design incorporating 50mm diaphragms with powerful neodymium drivers.

And crucially – unlike so many other headphones – they are truly accurate.

Drums sound hard and solid while Joe Walsh's guitar licks on 'Last Good Time In Town' were clean and sparklingly clear.

"The X1s have glorious treble that comes across as totally natural and smooth, similar to that from electrostatics" we said.

With Marta Gomez singing Lucia (24/96) "the slick smoothness of high-resolution digital came across beautifully. Even the sense of space being picked up by Marta's mic was discernible".

The washable velour ear pads can get a little warm over extended listening sessions but otherwise the XIs are a lovely set of 'phones in a league way above most others. Hear them before anything else.



BEST DIGITAL SOURCE

Astell&Kern AK120

Reviewed: July 2013

£1140

www.soundfidelity.co.uk

t might look like a portable music player - but the Astell&Kern is so much more. Instead think of it as a high-quality digital source for both headphone listening and as the front-end of a top-quality home hi-fi.

Capable of playing files right up to 24bit/192kHz, the AK120 has 32GB of memory on board – that can be expanded to a whopping 96GBs through the use of MicroSD cards, meaning a whole library of hi-res material can be stored on it.

Feed the AK 120 into a hi-fi amplifier via its headphone output – which uses line drivers rather than the usual 'phone amps of other portables – and there's a massive I 15dB dynamic range on offer – 15dB more than available on CD.

Rafael Todes said "this player really shows what good hi-res can sound like. Crystalline sound, clean and clear with good dynamic punch".

We have no doubts about it – the Astell&Kern AK I 20 really is a game-changer.



New Stereo 60 III KT150 our finest "modern" integrated amplifier with the new KT150 valves



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Visit our website at www.hi-fiworid.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.

LETTER OF THE MONTH PRIZE



KEF Q100 LOUDSPEAKERS

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 ROBERT LEEDS, Letter of the Month winner in our December 2013 issue.

Letter of the Month

REGENERATION

Buried in the outback of Noel's reply to Adam Mann's letter (November issue) 'A buzz in Oz' was a real nugget that I might not have taken much notice of – until recently. Adam's problem was getting good-quality AC power living in rural New South Wales. In the light of my recent experience, I suspect that's a problem in old south London – indeed probably through much of the UK – too.

Noel's final suggestion was for Adam to try a mains regenerator as one would make Adam "as happy as a Koala in a Eucalyptus". I hope he takes Noel's advice because my hi-fi dealer suggested the same to me — and it's been a revelation. So much so, in fact, that I have to ask if you use mains regenerators when testing kit — because if you don't you probably aren't hearing it at its best.

This all started back in 2011, when my wife and I moved from an old stone cottage into a large modern house (the living room is about 8 metres by 7 metres and was one of the reasons I wanted to move in — room for the hi-fit to really sing, or so I thought!).

As has been said many times before in this august publication, moving your hi-fi can be one of the most traumatic things we audiophiles have to do — and this was certainly the case for me. I'd gone from a smaller, heavily-furnished room with a high ceiling, to



A Pure Power mains regenerator is "like going from black-andwhite to colour! Every aspect of sound reproduction is better" says Julian Reeves.

a larger, more sparsely-furnished room with lively acoustics. The hi-fi sounded terrible. I tried acoustic treatment of the walls, I upgraded cables and experimented with speaker positions but nothing would cure an extreme harshness in the upper midrange, and an almost total lack of bass.

Next suspect was the amplifier, perhaps a valve amp to replace my solid-state affair would help? A visit to my local hi-fi dealer (Audio Emotion) and an hour later, I was on my way back home — not with an amplifier, but with advice to move my seating position back by 500mm or so. It was also suggested that a mains regenerator could be helpful.

Back home, I moved the settee back as ordered and bingo, more bass, less aggression in the upper mid. What a lovely cheap upgrade! Based on the quality of this advice, I took the plunge and ordered a Pure Power regenerator.

Hooked up, the display can be set

to show the incoming voltage in real time. Mine shows between 245 and 251 Volts - all within the statutory limits but probably not making life easy for the components in my system.

Now I've got over the initial enthusiasm we all have when upgrading our systems, I feel able to articulate the difference the Pure Power makes in my system. I think it's best described as like going from black-and-white to colour! Every — and I do mean every — aspect of sound reproduction is better. Not just a little, but a lot better. Sound staging — width, depth and height is better. Tonal balance is better. Transients are better. Speech intelligibility is better.

OK, at over £2,000 this is a significant upgrade, but it improves the whole audio (and visual) chain connected to it, and hopefully will do so for any future upgrades. However, I have to say for the first time in quite a few years, I'm not immediately feeling the need to seek further improvement.

Which brings me back to my initial question. Do you use regenerators when testing kit or not, because it seems to me that if you don't, it's a bit like testing a pair of speakers hooked up with bell wire.

Julian Reeves, Serial upgrader! Kinross, Perthshire.

Thanks for letting us know about your experiences Julian. We've tested all sorts of mains cleaning devices over the years, including mains regenerators, and all of us find they make a difference. How much difference seems to depend upon the quality of the incoming mains supply however. I've been told by various transformer manufacturers, including Morite who used to wind World Audio Design output transformers, that rural supplies can have poor regulation (i.e. change their voltage a lot) and be noisy because long cables commonly supply heavy agricultural machinery. Perhaps it is not surprising then that the reviewers who are most impressed by mains regenerators and filters live in rural areas.

I live close to a 400kV substation in North West London and this supply seems pretty good, because mains conditioning doesn't offer me "night and day" differences, so I rarely review such items. I should perhaps mention however, that I use a huge transformer to provide a balanced mains supply in my lounge, which enormously reduces earth currents and improves the sound by this mechanism. But I do not review products using it, because it is not a representative

supply situation.

Similarly, although our reviewers commonly use mains filtering I am not sure complete regeneration is representative either, because amplifier power supplies are usually – but not always – designed to clean up the incoming mains and cope with its vagaries. Using a regenerator would favour those amplifiers with poor power supplies, bringing them up to the standards of an amplifier with a high performance power supply – hardly a fair thing to do.

Bear in mind here that Switch Mode Power Supplies (SMPS), as used by Chord Electronics and Linn for example, provide complete isolation from the incoming mains, whereas simple, traditional transformer/rectifier power supplies provide less isolation, although they are quieter in themselves. It's a complicated business!

Such labyrinthine issues apart, your experience with mains regeneration will be very interesting to readers I believe. Oh – and I like the bit about moving the settee back. Neat trick! **NK**

RESTORATION

Since my last letter to Hi-Fl World, dated perhaps two years ago, two events dictated the need of some advice from you. First of all, the Garrard 401 that belonged to my father has been restored to its former glory with a huge help from my friends who also helped restoring my pair of Kef Reference 107.2 (internal rewiring using decent cables, the update of the crossovers and refurbishing the woofers foam surrounds).

One of these friends builds his own idler wheel and direct drive turntables.



A Switch Mode Power Supply like this one is light and compact. By replacing the big mains transformer within traditional linear supplies they save on weight, cost and space. They are also immune to changes of incoming mains voltage. Their use in hi-fi is contentious, however

The other one distributes his own brand of hand-built valve preamps, amps and phono stages but also has a thirty year old project of a pair of hybrid horn-loaded five-way speakers for which he designed and built 10 specific prototype valve monoblock power amps (JG audio systems, whose site is easily Googled on the internet). So, both of them knew exactly what to do and the end results are absolutely stunning.

The second event that motivates this letter results from having had to dismantle my father's library where, in three big trunks, my siblings and I found 982 LPs ranging from Decca to Philips, Deutsche Grammophon, Polydor, and several other labels, most of them dead for many years and, at least to me, completely unknown.

Most of these records are mono ones and just a few stereo RCA, EMI and Parlophone allow being played with a modern MC stereo cartridge, though with high levels of subjective discomfort resulting from accentuated surface noise. All these records correspond to different music types ranging from iazz and classical orchestral and piano works to the likes of Sinatra. Ella Fitzgerald, but also choral and symphonic works by Elgar and Britten. This collection ends with 10 Living Stereo pressings of Rachmaninoff, Brahms, Schubert and Elgar's Enigma Variations which are in fact a delight to listen to.

The problem I would like to deal with is the equalisation one. Both my highly-specialised friends tell me that I need a dedicated phono preamp with a mono switch that has to allow me to



An SME M2 9 (9 inch) tonearm with damped stainless steel arm tube and detachable magnesium headshell would be a good replacement for the SME 2009 SII SME used by Mario Tulio. It allows easy cartridge changing.

choose between several different equalisations, that I need a modern pick-up arm with interchangeable wands (maybe a VPI 10.5) and also, at least, a couple of good modern and different mono cartridges.

My actual phono preamp is a fantastic ASR Basis Exclusive which I purchased 2 years ago after auditioning the Icon Audio PS3 and the ASR in my system for over a month. In general terms I preferred the Icon Audio but as I use very low output cartridges the ASR gave better results with high gain settings. Unfortunately the ASR doesn't have a mono switch and neither has the VTL 5.5 preamp. Also, the ASR doesn't provide settings for different equalization curves. So, I'm stuck with a piece of equipment I love but that does not fully satisfy my current newly record-dictated needs.

At least I've got a good idler wheel turntable with an upgraded 2009 SII SME tonearm (fixed head shell, can you believe that?).

The relevant remaining items in my system consist of two different amps, which I use to bi-amp the speakers. For the woofers I'm currently using a Rotel Michi solid state amp and for the mid and high frequencies a BATVK60.

Now, after providing you with this background information, here are my main questions:

I. Is there any device that I may install in the signal path that would sort out the equalisation and mono switch problems? If not, what phono preamp would you suggest that would fit my around £2000.00 budget?

2. The VPI JMW 10.5 tonearm and spare wand are far more expensive than what I intend to spend. I would prefer a good arm with detachable head shell instead that would cost around £1000. Any suggestions?

3. About the cartridges, do you think that I would need more than one? And if I have to buy two cartridges should they be of the same brand in order to avoid readjusting the arm settings every time I decide to use the second cartridge for a specific record? I would like to keep my cartridge purchase below £1500, if I am to buy 2 of them or below £1000 in case a single one will do. What do you have in mind? Taking in consideration the kind of records I intend to play would it be better to use MM or MC cartridges?

Best regards and thanks in advance for your kind advice regarding these matters.

Mario Kopke Tulio Portugal



An affordable phono stage with various equalisations is the iPhono from www.ifi-audio.com, distributed in Portugal by www.esoterico.pt, says our expert Tony Bolton.

Hi Mario. It sounds as though you have acquired a very interesting record collection from your father. I would agree with you that the Living Stereo pressings can sound wonderful. Your comments about the intrusion of surface noise, for both mono and stereo LPs, is quite a common one and can usually be cured quite easily by putting the records through a vacuum cleaning machine. I have used various examples of these and can recommend the Moth RCM Mk.2, from £499.00, (www. britishaudiostore.co.uk) the Clearaudio Smart Matrix (£930.00) or the Clearaudio Double Matrix (£2295.00, www.clearaudio.de). This latter model cleans both sides of the record at once. I have also found the Loricraft range, priced from £1459.82, to be excellent. (www. loricraftinternetshop.co.uk)

Unless a record is damaged, I have found that most surface noise is caused by minute dust particles from the paper sleeves, so to avoid this re-occuring after cleaning, I would suggest using poly-liners, which can be slipped inside the original inner

sleeves. The best price that I can find on these is from www.britishaudio.

I would agree with your friends that a mono cartridge will give better results than using the mono switch on a phonostage or pre-amp. At the price point you are looking at I would recommend the Benz Micro Wood SL. These are available in both stereo and mono versions and cost £995.00. The website is under construction but Benz Micro can be contacted at contact@benz-micro. com. Lyra also make mono versions of their Kleos and Titan models. (www.lyraaudio.com). They can be contacted in Portugal at Ajasom Comercio Industria de Som LDA, Tel: +351 21474 8709.

Variable equalisation phonostages are available at various price points. An affordable one is the iPhono from www.ifi-audio.com, distributed in Portugal by www.esoterico.pt. Prices should be around the equivalent of £350.00.

I have used Graham Slee products for a number of years and can recommend the Jazz Club (£674.00) or the Revelation (from



The Moth RCM II cleaning machine, a simple way to keep those LPs quiet.

£689.00, depending on power supply). These are both Moving Magnet units and require the Elevator EXP (£574.00) to allow it to be used with Moving Coil cartridges. After adding in a suitable pair of interconnects, this should just fit into your £2000 budget. See www.gspaudio.co.uk, or the Portuguese distributor at Sound Eclipse LDA, +351 91865 1722. There are other designs on the market but they tend to be far more expensive.

Regarding arms, I note that you seem pleased with the performance of your SME 3009, so I would suggest that you might consider changing it for a detachable headshell version, which would allow you to easily swap cartridges as required. A more modern answer would be the SME M2-9R at £1100.00, which also has detachable headshells (www.sme. Itd.uk or www.imacustica.pt). I have used a Hadcock 242 Cryo unipivot (£1074.02) arm for years, and have several arm wands pre-loaded with



Benz Micro Wood SL cartridge is available in stereo and mono versions.

cartridges so that I can lift off and unplug the arm and drop another one in place. See the range at www. hadcock.co.uk.

I have also heard Jelco arms, which have detachable headshells, sounding very good when fitted with a mono cartridge. Prices start from about £375.00. Their website is www. jelco-ichikawa.co.jp.

I cannot see why you would need two mono cartridges and would suggest auditioning the Benz and the Lyra and choosing the one that gives you the most pleasing results in your system. You do not mention the stereo cartridge that you use, but I assume, from the quality of your partnering equipment, that it is a Moving Coil. I would suggest staying with that design of cartridge, and I think you will find that a



Led Zeppelin's first LP is available in Quiex SV-P vinyl, for reduced surface noise.

modern mono MC cartridge will give excellent results, with cleaned records, when played through your ASR Basis Exclusive phonostage.TB

LP v CD

Do new vinyl releases sound better than the old? I would agree with most that vinyl has the sonic edge over CD but personally I have a problem with vinyl pressings of today.

Recent experience of new vinyl has been somewhat patchy. To me it seems that either not enough care is taken over the manufacture/pressing, or the skills of yesteryear have long been forgotten. Why? Nearly every new vinyl

I burchase has a problem with crackles. sparkles and even in one case a deep gouge that sent the stylus spinning across the surface of the LP.

I have been in the market for a new turntable for some months now, but I am filled with trepidation whether to go ahead or wait to see if vinyl manufacturers get their act together. I am loath to spend hundreds or thousands on a new deck if vinyl is not going to be delivered to my door in pristine condition. It may be great to have a fabulous new deck, but what good is it if the media is not up to scratch? (pun intended)

The debate regarding new pressings



Where is it written that direct drive has to cost an arm and a leg?

Nowhere. Which is why the new Kenwood KD-2070, with the superior direct drive performance,

sells for the reasonable price of \$140°. The KD-2070's specs are impressive. Wow and flutter is less than 0.04% (WRMS). Rumble is better than -65 dB (DIN weighted).

As for its features, we designed a new S-shaped low-friction tone arm to give you superb tonal quality, and built in a strobo scope with a variable speed adjust.

As for its styling, you provide the adjectives The high-performance Kenwood KD-2070. The direct drive turntable that won't cost you an arm and a leg.



Kenwood KD 2070 Direct Drive turntable with S shaped tonearm. What cartridge should I use with it, asks Remi Balestie? being sonically better than old does not stack up either. Recently I visited a record store in Birmingham (The Diskery) and grabbed a handful of second-hand albums ranging from the '70s to the '90s that took my fancy. They were all duly cleaned and every single LP was found to be in excellent condition. No snaps, crackles or pops! So, why is it that new vinyl cannot match even second-hand?

And this is not just my experience; I have spoken to others making the same comments. Indeed, I recently spoke to a friend (who manages a hi-fi store) and he told me of his horror when listening to a brand new vinyl album and during a quiet section pops and crackles completely broke his concentration. Imagine that, you're right in the middle of enjoying a new piece of music when your concentration is shattered by extraneous noise that should not be there.

Scouring the internet for vinyl I visited a website that actually stated not all pressings will be perfect, some surface noise may be present. What! All I can say is those who listen to today's pressings must have filters built into their ears!

For me the future is CD or even downloads, I simply cannot see today's vinyl reaching the standards we enjoyed back in the halcyon days. Of course, there is still the option of the second-hand record store and this is where you will find me when I have a few free hours.

Clive Bannocks

It is difficult to ensure vinyl is perfectly silent, but having said that, I have many expensive new box sets as well as newly-pressed LPs, using Quiex SV-P and find them quiet and of great quality. Ticks and pops are transitory phenomena and – yes – I do filter them out; they do not worry me. Underlying sound quality from LP, which is not transitory, is what matters I find.

CD is quiet, but it has its own set of sonic problems that you have to suffer from beginning to end. See the argument about the compression used on Metallica's 'Death Magnetic' album, which apparently has caused it to be remastered. Go to http://www.musicradar.com/news/guitars/lars-ulrich-takes-on-the-death-magnetic-complainers-175581, or run a Google search. A large number of Rock albums are heavily compressed. And I won't mention digital distortion and quantisation noise. Good CDs are very impressive, but



Panasonic RQ-DP7 DCC cassette player, bought in Hull by David Smith. It was also a Digital Compact Cassette portable, like the Philips DCC 170, he says.

there is as much variability in CD as there is in LP I feel. **NK**

OLD AND NEW

I have bought on eBay a wonderful Kenwood KD 2070 Direct Drive turntable and I wonder which MM cartridge can I use with its S shaped arm? Maybe a vintage Shure or Audio Technica?

Thanks for your advice

Remi Balestie France

You don't have to use an old-design cartridge in a heavy arm of the sort used in the KD 2070. A Shure M97XE will give a traditionally warm sound and is suitable, or you can buy a Goldring 1006 or preferably a 1012GX with its excellent Fritz Geiger stylus. This is my personal recommendation, because it has a great sound – dynamic and tonally accurate, well differentiated treble and a tracking force of 1.7gms that suits the massy arm of the Kenwood.

I am assuming your arm moves freely on its bearings. To check this, balance it out so it floats by setting tracking force to zero grams. Put a stylus guard over the stylus to prevent damage or remove the stylus completely. Then ensure the arm moves sideways freely, and vertically too. If time has caused the bearings to get sticky you either have to clean and lubricate them, or use a higher tracking force DJ cartridge, from Shure or Ortofon, for example.

NK

DCC TAPED

Martin Pipe says the Philips DCC 170 was the only portable DCC recorder sold in the U.K. However I have a Panasonic RQ-DP7 purchased in Hull years ago with two battery packs and recharger still in working order, complete with tapes. Perhaps that might interest him!

Could I also enter a plea for a feature on a computer designed purely for music and perhaps based on a solidstate drive with ability to stream via NAS.

Kind regards

David Smith

My simple advice here is to get a Mac Mini fitted with a Solid Sate Drive – a standard option. Windows requires drivers to be installed for



A Mac Mini can be fitted with a Solid State Drive (SSD) and is a popular music server, due to small size, silence and an operating system that is compatible with high-resolution digital.

high-resolution audio whilst Mac OS-X Lion works up to 384kHz I find and everything interfaces with Mac nowadays (unlike the past!). The Mini is small and quiet and you can use it as a music server: I use EyeConnect UPnP server software and it works well with a wide range of products. Twonky is another UPnP server often recommended. **NK**

ESL-63 AND DAC DILEMMA

Maybe I should be addressing this letter to a psychiatrist rather than Hi-Fi World! After way too many distractions I have realised I would like a "warm, rich" CD-based system — something like the sound I recall my LP12 had back in the 80s.

I accept I am (unduly) influenced by the first system I recall hearing (and seeing!) a Transcriptor turntable, Quad amplification and a single Quad ESL-57. I also (slightly) begrudgingly recognise my Quad ESL-63s have caused domestic disharmony for many years! You may also recognise another heavy influence hence my first ever letter to any magazine is to Hi-Fi World.

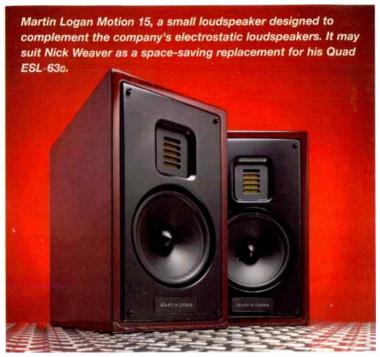
My current system is a Cyrus CD SE transport, (with PSX-R power supply) Musical Fidelity M1 DAC, Quad QC24 preamp, Quad Il-eighty power amps and ESL-63s (serviced by One Thing Audio).

Some speakers that can be placed against or near a rear wall would help the domestic situation and I guess the DAC is the weakest point. The aim is to create a smoother, fuller, analogue sound. Your thoughts on how interconnects and cables can help achieve this aim will also be greatly appreciated!

Many thanks,

Nick Weaver, Winchester

Electrostatics like your ESL-63s do take up space, and this is significant drawback for a lot of people - as it was for me when I owned a pair. My 18ft long lounge just wasn't big enough to accommodate them, but at present I'm getting excellent results from the affordable Martin Logan Electromotions in the same room. They'll give you much of that lovely electrostatic purity of sound, in a relatively compact package that's visually unobtrusive. I use acoustic absorption panels against the wall behind them, to absorb rear sound. Bass from the small bass bins is relatively light so near-wall use helps reinforce this. You should get a tidy sum for your One-Thing tuned Quad ESL-63s and this will help toward



their £3500 price tag.

The Electromotions are not, however, "warm". In fact, they're tad midrange forward. The larger Martin Logan hybrids are fuller in their sound, but they're also more intrusive – and that's what you are trying to get away from it appears.

These days there are few "warm" loudspeakers around. The only truly warm, small box loudspeaker I recall hearing recently is Wharfedale's new Denton 80th Anniversary Edition costing £500, but I somehow don't think you'll be downgrading in this fashion, as lovely as they are.

Otherwise, Martin Logan make the excellent Motion 15 reviewed in our September 2013 issue and this ticks all the right boxes, being small, designed for near-wall mounting and with electrostatic levels of clarity from its special air-motion tweeter – but it is not "warm". Far from it in fact. You could always hang a handkerchief over the tweeter, but it won't look nice and my invoke more disharmony!

I have an interesting observation to make though. If you buy an Audiolab M-DAC or Q-DAC and set the digital filters to Optimal Time Response, then with CD you will get a warm sound, because these 'slow' filters roll down treble above 8kHz. This will only work with CD (i.e. 44.1kHz sample rate), and/or 48kHz sample rate digital; you won't get a warm sound with higher sample rates (e.g. 96kHz). But as you are using a Cyrus CD transport this isn't an issue and fulfils your need for a new, high-quality DAC as well as desire for

a warm sound.

And as if all that wasn't good enough, the 'slow' filters I am talking about eliminate time-domain ringing of transients, including pre-ringing, to give a smoother and more stable, analogue-flavour sound. In fact, listening to them again on the Q-DAC we review this month, after hearing them on the M-DAC (reviewed by Jon Myles in our October 2013 issue) I am reminded that these filters really do take the glare and sting out of digital, making CD sound very nice. Their affect is less obvious with high rate digital, but it is there all the same. NK

GOING AKTIV

I first read about the Quadral Orkan Aktiv speakers in German magazine Stereoplay. Although I do not like the German approach of giving marks and ranking everything very much, I thought it worthwhile to listen to the Orkan, because I was looking for an active loudspeaker. Luckily there is a dealer not far from where I live and I was duly impressed. I spent about 90 minutes listening to different kinds of music and the Orkan mastered them all. It is well-known what a ribbon can do and the mid-range unit it got from the Titan is no slouch either, but what impressed me most was the effortlessness with which the Orkan handled the music. Only when I listened to a piece of organ music I thought it lost the bass a little bit. Your review seems to confirm that.

I listened to it hooked up to an Audiolab CDQ 8200. The dealer told me that he thought the Orkan was selling itself a little short using this source,



but I like the all-in-one part about the CDQ 8200. He told me that it was worthwhile to invest more into the source.

Now my problem is that in theory I only need a DAC with a volume control as a source, but alas I most often listen to music at low volume and most DACs digital volume control mars their otherwise fine sound. So I either need a DAC which does not have that ailment or I combine a cheaper DAC with a fine preamp.

Funnily, I was thinking about a Music First Classic v2 and did already contact Music First asking them whether their preamp was able to drive active speakers via a 7.5 m long XLR connection (if you rent you cannot just drill holes anywhere in order to keep the wiring connection short). Mr. Billington said that this would not be a problem.

So the conundrum is: do I buy a cheap but good DAC (like for instance the M-DAC from Audiolab) and combine it with the Music First or do I buy a very good DAC with good volume

control which does not affect the sound at low volume (T + A DAC8 seems a candidate) or do I buy a very good DAC and the Music First?

Option one would set me back roughly 3900 Euros, option two about 1900 Euros and option three then logically 5000 Euros. And it all started when I was auditioning Dyaudio's Xeo 5 (no need for 7.5m of wiring) and found them lacking in bass in my room, at least at a volume I find agreeable. Those are at 2900 Euros and would only need a source: no DAC no preamp.

Thanks for your insightful review of the Orkan and your discussion on active speakers in general. May I ask you what your preferred solution would be if you were in my place? Best regards

Uwe Mair

Hi Uwe. That's an interesting experience. Active loudspeakers are "about bass" because this is where the idea of active working has most impact. The Orkans kept bass output in check, but all the same they had 'obvious' bass that will keep low level listening lively. The Audiolab M-DAC suits your needs and is a very high-quality design. The resolution of the volume control was a design issue and is explained by Peter Comeau of IAG (Audiolab) as follows -

Yes, M-DAC does have a high resolution volume control which doesn't reduce quality in the way normal digital controls do. It maintains the full resolution down to low listening levels with an 83dB adjustment range in 1dB steps.

Peter Comeau, Head of Acoustic Engineering, IAG.

VARIABLE RELUCTANCE CARTRIDGES

Further to Tony Bolton's piece on the above, asking for readers' experiences, much of my record llstenlng commenced with variable reluctance pickups, also I think known as moving iron cartridges, albeit a different type, namely the Decca XMS. This was designed by Decca's chief engineer Arthur Haddy after WWII to play their ffrr 78s with an LP version being produced when Decca introduced the LP to Europe in 1950.

In the XMS the stylus/armature consisted of a metal T piece with a sapphire stylus mounted in the bottom end (no diamonds then). The outer arms had rubber blocks moulded on them which held the stylus/armature in the pick-up head and provided some compliance. The vertical of the T passed through a coil of fine wire with two permanent magnets placed at either side of the coil diametrically opposed. The pick-up head had 3 pins which plugged into the tonearm. The LP version was red and tracked at 7 to 8g.The 78 version was brown and was also weighted to give an even higher tracking weight. They were not kind to records!

In our top-of-the-range KB radiogram from 1951 (Kolster Brandes part of STC/ITT) the outputs of the two pick-ups were taken to different pins which connected to different amplifier input filters thereby automatically giving the different equalisation necessary for LPs or 78s (although at that time there were of course several versions of each used by the different record companies). I've no idea what the output level was but the radiogram's excellent audio stage consisted of a 6SL7GT preamp, 6SL7GT floating paraphase phase splitter driving two 6V6GTs in push pull which gave about 10 watts to the 10 inch Goodman's loudspeaker "with slot

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.

QUAD
the closest approach to the original sound



Audiolab M-DAC has a high-resolution volume control with an 83dB adjustment range in 1dB steps. It would suit Uwe Mair, who plays music at low levels and does not want to lose resolution - a problem with digital volume controls.

high note diffuser" (whatever that was).

It sounded very good. I did start a restoration with capacitor and resistor replacement some years ago but due to lack of time it was never completed, perhaps one of these days

Hi-Fi World some years ago did an article on the days of TV Test Card music when at the ITA transmitters the duty engineer played the records (unlike the BBC who used studio generated signals). I once visited an ITA transmitter (405 line black & white) and whilst I don't recall the turntables I did note they were fitted with XMS pickups so they must have been considered a broadcast quality item.

I was interested too in Tony's article on the Rachmaninoff 78s earlier in the year. I grew up with these as well and I always thought they were pretty intractable with very rough surfaces (plenty of powdered slate added to the shellac). I don't have the LP transfer Tony mentioned but do have two others and much to my surprise I find the electronic stereo version the better of the two but it does need some bass boost. Unlike Tony, however, I have to say I find Mark Obert-Thorn's Naxos transfer the best version of this recording that I have heard.

Regards

Nick Coleman

Hi Nick. Thank you for that information - your first-hand experience is most interesting. I know that in the early days of microgroove, tracking weights up to 15g were regarded as acceptable, which is probably one of the reasons why it can be difficult to find good condition copies of pressings from that era.

Having said that, the General Electric RPX tracked at 8g (acceptable for 78s but still far too high for microgroove usage in my opinion) and the Elac, Goldring and Tannoy models track at around 5 to 6g. There is quite a lot of correspondence on various forums discussing this and making the point that the correct mono microgroove 0.0010" stylus puts considerably less pressure on the groove walls of a record than the later stereo compatible 0.0007" stylus, due to the



"So far everyone has chosen the 78 versions over the CD" says Tony Bolton about Rachmaninov recordings.

former's greater contact area. So I will be sourcing a 0.0010" stylus for any of these cartridges that I come across.

I have been playing 78s for years, on various machines that track at up to 10g, and to be honest, have found no deterioration in the condition of the record even after heavy usage. 78s were designed with the expectation that they would be played on extremely low compliance acoustic or electrical pickups with tracking weights often in excess of 150g, so anything that plays them at microgroove tracking weights with a sapphire or diamond stylus in a reasonably compliant head shouldn't do any harm to them.

I was under the impression that

General Electric had pioneered the Variable Reluctance principle, but your comments about the XMS could indicate that the GE units may have been inspired by Arthur Haddy's work. If anyone has further information on this I would be most interested to hear from them.

As for the Rachmaninov 78s, they were handicapped by being pressed by HMV whose record surfaces were notably noisier than their competitors (I was told a great many years ago by someone who used to be in the industry at the time that HMV were referred to as "His Master's Noise' by industry wags for this reason) but Australian and Indian pressings are considerably quieter due to a different shellac formulation, the latter being available in this country courtesy of returning members of the Raj.

Using the correct 0.0035" stylus for 1925 to 1939-era records reduces noise quite considerably compared to the 0.0028 (or smaller) profile commonly used in aftermarket replacement styli. I tested this theory when playing the Timestep turntable reviewed in this issue, and found that the 78s had a far more open and full bodied sound compared to the Naxos CD version. I also find the random and moderately muted crackle of the originals far less intrusive that the tape-like hiss that seemed to replace it on the CD. I have demonstrated this to several hi-fi industry visitors and so far everyone has chosen the 78 versions over the CD, but these things are always a matter of personal preference.

Hopefully you will find the time to get the KB up and running. The Expert Stylus and Cartridge Company (+44 (0)1372 276604, www.78tours.com/Expert_Stylus_ Company.htm) offer a re-tipping service so should be able to fit a suitably-sized stylus to your XMS cartridges. I assume, since it is a 1951 model, that the radiogram is fitted with a Garrard RC80 turntable. Tracking force can be altered by accessing the underneath of the deck where there is a screw at the base of the arm mounting for this purpose. However, too low a tracking force can cause the needle to slop around in the groove rather than sitting snugly against the groove walls, lowering sound quality and increasing record wear. I would consult with an expert and experiment a little to see where the best compromise lies.TB

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- 1. NAME OF THE HOTEL WHERE THE **BRISTOL SOUND AND VISION SHOW** IS HELD?
- a) Ritz
- b) Marriott
- c) Savoy
- 2. EMI ARE?
- a) Electrical Musical Industries
- b) European Musical Industries
- c) Electronic Musical Industries
- 3. WHAT IS BEW SHORT FOR?
- a) Brighton and Worthing
- b) Brown and Wilson
- c) Bowers and Wilkins
- 4. THE VALVE TITLE KT MEANS?
- a) Kinkless Tetrode
- b) Kinkless Triode
- c) Kinky Triode
- 5. EDISON'S FIRST WORDS REPRODUCED BY A CYLINDER **PHONOGRAPH WERE?**
- a) Baa, baa black sheep
- b) Mary had a little lamb
- c) pat-a-cake, pat-a-cake, baker's man
- 6. IN WHICH YEAR DID SONY INTRODUCE THE ELCASSETTE?
- b) 1969
- c) 1982
- 7. WHAT IS THE NOMINAL UK MAINS **VOLTAGE?**
- a) 220V
- b) 240V
- c) 230V
- 8. WHAT WAS THE POWER SOURCE FOR AN UNUSUAL KIWI TURNTABLE **FEATURED IN THE FEBRUARY 2013 ISSUE?**
- a) Solar power
- b) Water power
- c) Steam power

- 9. IN WHICH YEAR WAS THE FIRST **COMMERCIALLY AVAILABLE** COMPACT DISC INTRODUCED?
- a) 1981
- b) 1982
- c) 1983
- 10. THE LINN KAIRN PRE-AMP WAS **USUALLY PARTNERED WITH?**
- a) The Klubb
- b) The Klonk
- c) The Klout
- 11. WHAT WAS THE BEST SELLING LP OF THE 1960S IN THE UK?
- a) A Hard Days Night
- b) G. I. Blues
- c) The Sound Of Music Film Soundtrack
- 12. WHAT DOES DAC STAND FOR?
- a) Digital Analogue Convertor
- b) Digital Audio Convertor
- c) Digital Amplification Convertor
- 13. AT WHAT SPEED WERE PRE-EMI MERGER COLUMBIA RECORDS USU-**ALLY RECORDED AT?**
- a) 76 RPM
- b) 78 RPM
- c) 80 RPM
- 14. THE CHORD COMPANY MAKE?
- a) Cables
- b) Electronics
- c) Musical instruments
- 15. MPEG MEANS?
- a) Music and Pictures Electronic Gathering
- b) Moving Picture Experts Groups
- c) Maddeningly Poor Electronic Gizmos
- 16. IN WHICH YEAR WAS HI-FI WORLD FIRST PUBLISHED?
- a) 1991
- b) 1986
- c) 1997

- 17. SPOTIFY IS A?
- a) Music download site
- b) A celebrity gossip site
- c) An acne cream
- 18. DVD STANDS FOR?
- a) Digital Versatile Disc
- b) Digital Video Disc
- c) Digital Variety Disc
- 19. A 12AX7 VALVE IS ALSO KNOWN
- a) ECC 82
- b) ECC 83
- c) ECC 85
- 20. TELLURIUM Q MAKE THE ... **AMPLIFIER?**
- a) Neutron
- b) Atom
- c) Higgs Boson
- 21. IAG STANDS FOR?
- a) International Amplifier Group
- b) International Audio Group
- c) Integrated Audio Group
- 22. WHICH RECORD COMPANY INTRODUCED THE LP TO THE UK **MARKET IN 1950?**
- a) Columbia
- b) His Master's Voice
- c) Decca
- 23. WHICH LP IS REPUTED TO TELL A STORY IF RUN IN SYNCHRONISATION WITH THE COLOUR SECTION OF THE FILM THE WIZARD OF OZ?
- a) The Planets
- b) Never Mind The Bollocks
- c) The Dark Side of The Moon
- 24. WHAT WAS CD-4?
- a) A four track CD
- b) A quadrophonic recording system for LP
- c) A digital surround-sound system
- 25. WHAT DOES QUAD STAND FOR?
- a) Quality Unit Amplifier Domestic b) Quality Unit Audio Domestic
- c) Quite Unusual Amplifier Designers

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2

You need

breathe deeply while i call those nice men in white coats..

16

[b] 19.[b] 20.[b] 21.[b] 8.[c] 9.[b] 10.[c] 11.[c] 12.[13.[c] 14.[a] 15.[b] 16.[a] 17.[a] 1.[b] 2.[a] 3.[c] 4.[a] 5.[b] 6.[a] 18.[a] *although Toshiba use 24.[b] definition 23. 7.[c]



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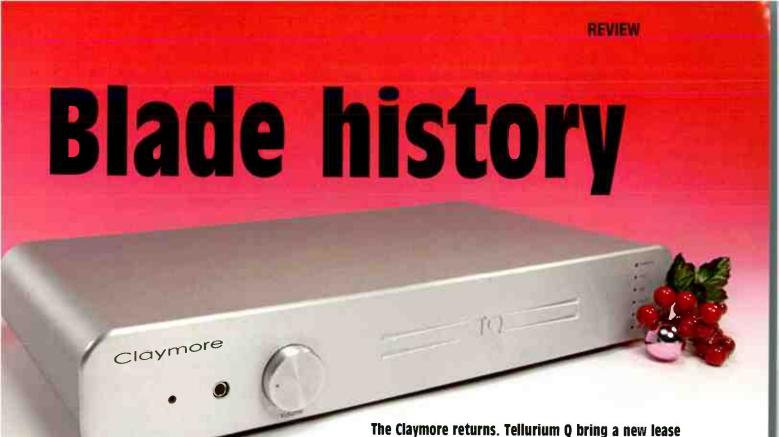
"The Tempo is a top flight interconnect that provides a wealth of upper mid detail..."

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listens in.

ver the last few years,
Somerset based
Tellurium Q have earned
a reputation for making
solid and well performing
amplifiers. The Claymore,
under review here is their first integrated unit and comes complete with
a Moving Coil and Moving Magnet
phonostage as well as a USB and
MP3 inputs, thus satisfying the needs
of formats both old and new.

This link with the past stems from the early 1980s when Colin Wonfor designed the very successful Incatech Claymore amplifier. After a varied career, which has included working for NASA, Colin is now a partner in Tellurium Q and has updated the Claymore design to the requirements of the 21st Century.

Apart from the inputs already mentioned, the amp offers CD and Auxiliary line level inputs, a Tape Out and Pre-Out connections, all via custom made gold plated phono sockets. The substantial speaker binding posts are also made specially for the Company. All of these, along with the digital inputs, are at the back of a gracefully curved, quite slim, all alloy case.

The front is quite plain, apart from the remote control sensor, headphone socket (which glows a gentle red when the system is ready to be used) the volume control and a vertical row of LEDs to indicate

the chosen source. These can only be selected via the buttons on the slender, but surprisingly weighty remote control. Apart from a moderately narrow field of operation, this unit sat very comfortably in my hand and proved gently responsive, allowing fine tuning of volume settings.

The simplicity of the outside belies the complexity of the internal design. The amplifier boast no less than seven separate power supplies, feeding amongst other things, the phonostage, tape loop and preout, and the motor for the volume control. The sensor has its own PSU and transformer and there is a 12V PSU for the relays.

The power amp PSU has 40,000 micro-Farads of capacitance and

a 250VA transformer feeding it. Digital conversion is performed by a PMI 2906 DAC chip with a custom designed filter and, to cut the risk of interference with other sources, is only powered up when a plug is inserted into the socket of one of the digital inputs. Star earthing is employed throughout the design.

of life to a once popular amplifier. Tony Bolton

After switching on, the amp automatically detents to the muted state, and must be unmuted via the remote control. Once this is done all of the other controls become responsive.

After letting the unit run in on a diet of television, Radio 3 and burn in CDs (which is quite a long process with this amp) I settled down to listen to some laid back reggae beats from UB40's first LP, and



All of the components in the power amp section are connected with leads rather than using surface mount components. This is done "for improved sound quality."





'An extremely polished, well rounded and musically satisfying loudspeaker; fine value too!'
Hi-Fi Choice, July 2012

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GP Acoustics (UK) Limited Eccleston Road Tovil Maidstone Kent ME15 Tel: +44 (0)1622 672261 Fax: +44 (0)1622 750653 the instrumental title track, 'Signing Off'. I was pleased by the precision of the bass beat, and the lack of bloom from some quite powerful low notes. Rather like a lightweight boxer, the bass sound was lean and fast, but capable of a hefty punch when required.

Later that evening I was exploring the previously unreleased material on the 'History Of The Future' CD which I had just purchased at the recent Orb 25th Anniversary Tour. The Ambient House sounds, overlaid with a heavy dub inspired bass, of 'Majestic - Heavy Mix' displayed this amp's ability to suddenly dispense large amounts of power while still maintaining midrange and treble decorum, even when playing at the relatively high volumes that I was using at the time.

Over the next few days I explored all sorts of musical avenues from the classic Dennis Brain recording of the Mozart Horn Concertos to Lionel Hampton playing some very good swing on a 1950s LP transfer of some of his late '30's recordings. Both of these discs are mono, the latter being in good but played condition, and the former being near mint. The phonostage handled them quite well, although a mono switch would have helped cancel a few stray crackles on the Mozart and a couple of near crunches from a scuff on the Hampton cover of Kid Ory's jazz classic 'Muskrat Ramble'.

The tonality of the brass was well described, with a slightly raw but smooth sound that sounded like someone blowing a trumpet, but avoiding the raspberyesque harshness that some phonostages can

introduce to this sound.

A foray into my MacBook Pro's hard drive, via the USB input, presented me with a very capable sound that, if this was my amplifier, would be likely to inspire me to use computer based audio more frequently than I do.

The remote control is essential for accessing all functions. Only volume can be altered without it, using the amp's volume control. So the remote must not be lost!



The speaker terminals are unusual in being mounted in horizontal pairs instead of the current voque for vertically pairing them. The switch on the far right chooses between MM and MC cartridge inputs, with the earthing post above it.

CONCLUSION

I am impressed with this amplifier and I feel that it can be regarded both as a successful reworking of a respected classic design and as an excellent unit in its own right. It retains a slight British understatement in the way it portrays sounds, a pleasant alternative to some of the glossier sounding solid-state models that are on the market. But this understatement does not imply a lack of drive, detail or dynamic ability. Rather the

opposite, the unvarnished sound allows these aspects to be appreciated all the more. allowing the amp to work its way into a listener's sonic affections.

If you are after a well specified integrated amplifier, that can connect most currently available sources, which looks and sounds good and seems to be very well put together, then look no further. I think you'll be quite impressed. I know I was.

SYSTEM USED

Clearaudio Master Solution turntable/ Magnify arm/ Benz Micro Wood SL cartridge Leema Acoustics Agena phonostage and Antilla CD player Chario Ursa Major loudspeakers

MEASURED PERFORMANCE

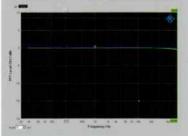
Power measured 72 Watts into 8 Ohms and 81 Watts into 4 Ohms, so the Claymore has plenty enough power to give very high volume with current loudspeakers. With a relatively high damping factor of 44 bass quality should be well controlled.

Frequency response measured a wide 5Hz-120kHz, suggesting a fair amount of feedback applied to get such a 'closed loop' response. The high damping factor also suggests reasonably high feedback. There was some high

FREQUENCY RESPONSE

DISTORTION

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frequency crossover distortion, all the same, measuring 0.3%. The harmonics can be seen in our analysis of a 10kHz signal at 1 Watt output. The harmonic structure was fairly stable with level so any subjective impact is likely to be

Input sensitivity was low at 480mV, fine for CD but less suitable for low gain external phono stages. However, because the Claymore has its own Moving Magnet and Moving Coil phono stages, this is not so relevant. Some power supply pulses were obvious in the amplifier's noise floor and the Claymore could well have been better here; this is often an internal supply earthing issue.

There was plenty of gain in the MM and MC phono stages, especially at low frequencies, suggesting strong bass. Tellurium Q told us they will reduce bass in final production versions. Otherwise, equalisation was accurate and the phono stages worked well. NK

rower	/Zvvatts
CD/tuner/aux.	
Frequency response	5Hz-120kHz
Separation	89dB
Noise	-90dB
Distortion	0.18%
Sensitivity	480mV
Disc (MM/MC)	
Frequency response	20Hz-20kHz
Separation	65dB
Noise	-63dB/-77dB
Distortion	0.2%
Sensitivity	3.8/0.2mV
Overload	135/7mV

TELLURIUM **Q CLAYMORE** INTEGRATED AMPLIFIER. £3,750.00







VERDICT

Descendant of a 1980s classic amplifier that has been very successfully brought up to date.

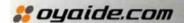
FDR

- clear, precise, well timed sound
- excellent connectivity
- smooth, unflustered power delivery

AGAINST

- no mono switch

Tellurium Q +44 (0)1458 251997 www.telluriumq.com



MWA-RC Magnetic Wave Absorbers



"Dynamics in the music seem to be more refined with the Magnetic Wave Absorbers fitted and the music flows more smoothly. This is an excellent value accessory for your hi-fi system"

HI-FI Choice, October 2013



These simple yet effective products from Oyaide in Japan have been designed to add further improvements to the equipment and cabling in your system.

MWA-RC caps are manufactured from high quality polypropylene which act reduce the vibrations found on unused RCA contacts on your system.

The inclusion of a 1mm thick piece Oyaide's very own Magnetic Wave Absorption material also acts as a barrier from the noise generated from the unused RCA contacts on your equipment.

Additionally the caps act as a barrier to dust build up in your equipment, which combined with the above can taint the quality of the music you have come to love and enjoy!

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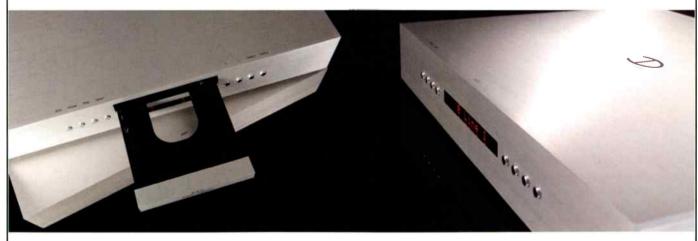
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NORLD STANDARDS

Your guide to the best products we've heard that are currently on sale in the UK...

TURNTABLES

FUNK FIRM LITTLE SUPERDECK 2013 Funk's entry-level turntable offers excellent value. Sueprb speed stability and an appealing sonic per-

formance make it a true bargain.



PRO-JECT 2 XPERIENCE BASIC+

ing nature; a fine package.

Seriously confident, assured and capable vinyl spinner. More than capable of getting the best out of your record collection.

ROKSAN RADIUS 5.2 2011 Although getting expensive, the latest Radius is a highly grown up package with a flowing yet engag-

ACOUSTIC SIGNATURE STORM 2011 £3,612 An excellent high end design with a smooth, solid, open and lyrical sound and razor sharp styling and build.

FLETCHER AUDIO OMEGA .5 2010 3.699 Charming high end turntable that's a fitting testament to the late Tom Fletcher.

PALMER 3 2010 £3.750 Eccentric hand built high end turntable with a pleasingly smooth, sweet and lucid sound.

F A T. FORTE S EVO 12 2010 £4,750 Excellent premium price turntable with power, precision and passion aplenty, but relaxed and easy going by nature too. Geat value package with the Pro-iect Evo 12" arm option.

DR FEICKERT WOODPECKER 2010 £3,445 Elegant deck with great low frequency solidity, coherent soundstaging and a precise midband.

AVID DIVA II SP 2010 £2.599 New twin belt drive and power supply make this a more commanding performer although there's a substantial price hike. Speed, dynamics and detail are hard to beat anywhere near the price.

LINN LP12SE 2010 £3,600 Surely hi-fi's most iconic turntable, the legendary Sondek goes from strength to strength. New Keel subchassis and Radikal DC motor add precision and grip to one of the world's most musical disc spinners. Expensive, though.

INSPIRE ECLIPSE SEV2 12 2010 £2,349 Finely engineered, smooth and detailed sounding deck offering valuable twelve inch tonearm compatibility.

NOTTINGHAM ANALOGUE HYPERSPACE 2010

Deliciously spacious, lyrical and beguiling sounding tumtable, but lacks ultimate grip.

2010 £225 Pleasing sound, fine build and ease of set-up and use make this a great first 'real' hi-fi tumtable.

BRINKMANN BARDO 2010 £5,845

Unique high end direct drive turntable with amazing grip and focus, albeit not the most romantic of natures.

TONEARMS

ORIGIN LIVE ENCOUNTER MK3C

2012 Origin Live combines carbon fibre and ebony to marvellous effect in its new 12-inch arm. Creamy and rich in presentation, the Encounter delved deep into the mix for a satisfying listen.



REGA RB202 2012 Replacement for the venerable and much-loved RB251. Three-point mount design serves up a taut and detailed sound.

HADCOCK GH-242 EXPORT 2010 £793 Consummately musical, lyrical sounding tonearm, but needs the right turntable. Excellent value.

FUNK FIRM EXR II 2010 Clever reworking of the ubiquitous Rega platform, the FXR II gives a wonderfully musical, almost unipivot like performance.

2010 £1,750 Twelve inch magnesium alloy armtube plus SME V bearings makes an impressive transcription tool with an insightful yet composed sound. Superlative build completes the age.

ORIGIN LIVE SILVER 3C. 2010 \$500 Excellent mid-price tonearm with a clean and open yet lyrical sound.

AUDIO TECHNICA AT-F3/III 2010 £189 Great value entry level moving coil with detail and grip you just can't get from similarly priced moving magnets.

TONEARMS

BENZ MICRO WODD SL 2010 6945 Highly finessed Swiss moving coil that plays music with riflebolt precision.



ORTOFON CADENZA BLUE 2009 £1.000 Musical, out of the box sound, allied to real finesse, makes this a great do-it-all high end moving coil.

ORTOFON CADENZA BRONZE 2010 £1.350 Smooth and engaging high end MC with a slightly warmer and more relaxed presentation than its superb bigger brother.

ORTOFON CADENZA BLACK 2010 Ultra incisive, transparent and dimensional moving coil with grip and punch aplenty.

PREAMPLIFIERS

MING DA MD7-SE

2012 £1,520 A valve preamplifier with an open, effortless sound

and a big soundstage. It has plenty of gain so will accept any source and drive any power amp. A



ICON AUDIO LA-4 Uses early 6SN7 triodes for liquid sound. Has plenty of gain and a remote control into the bargain

MF AUDIO CLASSIC SILVER 2010 One of the best preamplifiers we've heard any price, this transformer-coupled marvel does very little wrong. It's powerful, clean and open yet delicate. Its sound is unmatched at or near the price.

INTEGRATED AMPLIFIERS

ICON AUDIO STEREO MKIIIM 2013 £1.500 Excellent starter tube integrated with plenty of detail and an expansive soundstage. Revised 2013 model features easy bias meter for even easier set-up.



ARIAND PRO845SE 2013 £1499 Pure single-ended valve magic. Low-powered but immediately gorgeous, easy-going yet forcefully dynamic at the same time. At twice the price it would still warrant the entrance fee.

NAIM NAIT 5SI Naim's fabled entry-level integrated amplifier is updated to si status. Retains Naim's superb musicality with a extended bandwith and smoothness.

ICON AUDIO LA-4 MKIII 2012 Vintage 6SN7 valves provide liquid sound with plenty of gain. Comes with remote control for added convenience.

CAMBRIDGE AUDIO A851 A 2012 Feature-packed amplifier that turns in a mightily accomplished performance offering power allied to superb levels of finesse and detail.

BURMESTER 032 2012 £11,500 Undeniably expensive - but if you treasure a large yet subtle presentation with plenty of air and space around the performers then the Burmester will provide. Also built to last a lifetime.

CYRUS 84

2011 £1,250

Trademark shoebox-sized Cyrus integrated now offering 70Watts per channel. Majors on insight and clarity without sacrificing an ounce of musicality.

QUAD II CLASSIC 2010 £4,500
Beautiful retro styled integrated amplifier with a subtle, supple sound - aithough needs matching to speakers that are easy loads.

SIM AUDIO MOON 6001 2010 £5,750
Sturdy build, useful facilities and a wonderfully relaxed, seamless and even-handed sound will win this many friends.

MUSICAL FIDELITY AMS35I 2010 £5,999
One of the best high end integrateds we've come across, this combines hear-through transparency with musical get-up-and-go.

DARTZEEL CTH-8550 2010 £16,500
Charismatic and quirky hig- end solid-state integrated amplifier with superb sound and a charming visage.

DPA CA-1 2010 £2,650 Excellent solid-state preamp with a meticulously detailed and propulsive sound, but a deep velvety tonality.

MF AUDIO CLASSIC CII SILVER 2010 £4,500
One of the best preamplifiers we've heard at any price, this transformer coupled marvel does very little wrong; its powerful, clean, open yet delicate sound is unmatched at or near the price.

POWER AMPLIFIERS

ICON AUDIO MB845 MKIIM 2013 £5,999
Offering 120Watts from big 845 valves the Icon
Audio offers power right down to low frequencies
providing massive dynamics and bass swing yet
always remaining easy on the ear.

QUAD ELITE QMP MONOBLOCKS

2013 £1,195 (EACH)

The proverbial iron fist in a velvet glove. Plenty of power but delivered with an assured and confident nature. Smooth on top and easy on the ear but can rock out when needed.



TELLURIUM Q IRIDIUM 2012 £4,800

Single-ended Class A solid-state with a beautifully smooth, transparent and three-dimensional sound. All the refinement of a good valve designer but with a tighter and firmer lower end.



AUDIO RESEARCH VS115 2012 £5,000

Oodles of power with enermous punch. Rafael Todes found the Audio Reserach provided "shock and awe"while retaining incredible smoothnmess and texture.

XTZ AP-100 2010 £520

Decently smooth yet usefully muscular, this power amp punches way beyond its price point in sonic and value terms.

ICON AUDIO MB845 MKII 2010 £5,500
With 120W from big 845 valves right down to low frequencies, this power amplifier has massive dynamics and bass swing, yet is easy on the ear.

MUSICAL FIDELITY AMS50 2010 £7,000 Mighty, assured high end full Class A integrated proffering icy clarity allied to real musicality. Lacks the lucidity of the best tube amps but redeems with power and punch.

LOUDSPEAKER FLOORSTANDER

QUADRAL PLATINUM M50 2013 £3,150
A superbly engineered loudspeaker combing lowend authority with midband detail and a clean spacious treble. Very few to touch it at the price.



QUAD ESL-2812 2013 £6,500

The latest incarnation of Quad's classic design is better than ever. Brilliantly open and natural with a cohesive quality that puts conventional box loud-speakers in the shade.

TANNOY PRECISION 6.4 2013 £2,399
Clear, forward sound with great projection. Need little power to go loud and have superb fit and finish into the bargain.

SPENDOR SP100 R2 2013 £6,495
Retro looks but a sound that's hard to match.
Spendor's 12" bass unit provides massive of lowend grunt with a room-filling sound. Just make sure your room is big enough!

AURUM WOTAN VIII 2012 £2400
A surpremely well-balanced loudspeaker. Clean and detailed with great treble and a real sense of presence. A big, bold sound from a relatively compact cabinet.

EPOS ELAN 35 2012 £1,200
Enthralling loudspeaker with prodigious bass
power, detail and depth. A 93dB sensitivity means it
works well with lower-powered valve amplifiers.

USHER DANCER MINI-TWO 2012 £3,500
Fitted with Usher's own diamond-coated tweeter,
the these loudspeakers glisten with detail while
the massive cabinet delivers deep, powerful and
controlled bass. Offer great sound from a price-tag
half that of some rivals.



MARTIN LOGAN ETHOS

Matches Martin Logan's XStat electrostatic to a powerful subwoofer to provide extended, powerful bass with dramatic sonic purity. Demands careful partnering to give of its best.

B&W 800D 2011 £18.000

B&Ws statement floorstanders are a veritable study in hi-tech design. They deliver depth and definition with breathtaking speed and authority. Expensive – but endlessly impressive.

ECLIPSE TD712Z/2 2011 2011 £5,100
Flawed genius, and wilfully so. These loudspeakers don't do everything well, but what they can do is profound and enthralling; rhythms, dynamics and soundstading.

GERMAN PHYSIKS LIMITED 11 2011 £7,800

Don't be fooled by the austere looks; this is a superbly enjoyable omnidirectional speaker with a wonderfully fast, expansive sound.

MAD MY CLAPTON GRAND MM 2010 £3,599
Distinctive coaxial standmounters with wonderful soundstaging, bright lucid midband and true musical insight.

SPENDOR ST 2010 £5,995
This classy sounding, superbly presented big

This classy sounding, superbly presented big floorstander will appeal to those seeking high end sonics with subtle looks.

VIVID V1.5 2010 £6,000
Breathtaking transparency, superlative coherence and dizzying speed make these one of the best standmounters ever made - providing you like their 'studio sound'.

REVOLVER CYGNIS GOLD 2010 £15,000
Vast in scale with effortless dynamics and an easy, barrel chested bass, these big bangers are great for lowish power tube amps. Large room needed!

TANNOY DEFINITION DC10T 2010 £5,000 Wonderfully wide and open, super fast and amazingly engaging to listen to.

ISOTEK AQUARIUS 2010 £795
Highly accomplished premium priced mains conditioner that delivers the sonic goods, unlike so many others.

LOUDSPEAKERS STANDMOUNT

MARTIN LOGAN MOTION 15 2013 £800
Folded Motion tweeter gives a taste of Martin
Logan's electrostatic sound in a standmount. Very
different from the standard mini-monitor and all the
better for it.



ACOUSTIC ENERGY 301 2013 £425
Clean, crisp delivery with a good level of detail.
Bass performance belies their size.

WHARFEDALE DENTON 2012 £500

A beguiling mixture of retro looks with modern, high rechnology drive units. The Denton has an easy-going, big-hearted sound with just a touch of warmth that should appeal to many listeners.

MY AUDIO DESIGN MY 1920 2011 £1,350
Mini-monitors with an exceptionally smooth, spacious and refined sound that beguile and excite in equal measure.

Q ACOUSTICS 20201 2010 £165

Great little bargain-priced standmounts with a friendly, fun yet surprisingly refined sound. Hard to better for a pair of starter loudspeakers.

ACOUSTIC ENERGY NEO 1 V2 2010 £225 Civilised sounding speaker with fast and tuneful bass.

XTZ 99.25 2010 £640

Disarmingly open and refined at the price, these standmounters bring unexpected civility, refinement and insight to the price point. Exceptional value for money.

MY AUDIO DESIGN MYCLAPTON SE

2010 £3,299

Powerful, dynamic, musical yet refined, this unconventional point-source design yields dramatic sonic benefits.

ELAC BS243 2010 £1,000
More transparent and spacious than they've a right

More transparent and spacious than they've a righ to be at this price, these refined mid-price standmounters represent top value.

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.

HEADPHONE AMPLIFIERS

EPIPHANY EHP-02 2012 £99

PP3 battery-powered portable gives great sound quality at an almost giveaway price. Happy with the output from an iPod or CD player, the little epiphany is a true bargain.



FIDELITY AUDIO HPA 100 2011 £350 Great little headphone amplifier with a lively yet

CREEK OBH11 2010 £150

Designed specifically for low to medium impedance (300hm – 3000hm) headphones the little Creek has a marvellously well-judged sound. Slightly lean in the bass but none the worse for it.

GRAHAM SLEE NOVO 2009 £255

Eminently-capable, dynamic headphone amplifier with a great sense of timing. Crisp, clear treble and warm midrange gives an involving sound.

SYSTEMS

refined and open sound.

PEACHTREE AUDIO IDECCO 2012 £1,000
Excellent sounding iPod dock, impressive DAC and fine amplifier section make this an excellent one box style system.

CD PLAYERS

REGA APOLLO-R 2013 £55

Rega comes up with a cracking CD player again. Tremedous detail and an easy, unforced sound at all times. Few bells and whistles but made up for by its superb sonic ability.

CHORD RED REFERENCE 2012 £15,000

A unique and massive engineering exercise that could well be the best CD player available. Chord's Pulse Array DAC technology produces a musical experience like few others. This iis a true reference player.



ELECTROCOMPANIET EMP-1/S 2011 £4,650

Epic in scale, lavish in tone and exuberant in its musicality - this is a memorable SACD spinner. Quirky in operation and modest in finish, though.

ROKSAN KANDY K2 2010 £900

A charmingly musical performer at the price - this is a surprisingly sophisticated CD player for the money.

MARANTZ SA-K1 PEARL 2010 £2,500

Finely-honed, affordable high-end silver disc spinner; this has a musical lucidity that's unexpected at this price.

TUNERS

CAMBRIDGE AUDIO AZUR 651T 2010 £299
Value-packed Am/FM/DAB and DAB+ ready tuner.

Value-packed Am/FM/DAB and DAB+ ready tuner Precise and detailed with excellent resolution of spoken word.

CREEK DESTINY 2 2010 £675

Creek's tuner expertise shines through in the Destiny 2. This AM/FM receiver is wonderfully three-dimensional and smooth.

MAGNUM DYNALAB MD-90T 2010 £1,900 Exceptionally able, but commensurately priced, audiophile tuner that cannot fail to charm.

DACS

TEAC UD-501 2013 £699

Feature-packed DAC with benefit of DSD playback. Superb sound means little to touch it at the price.



QUTE HD

2013 £990

Superb build quality and exceptional sound from this comapct unit. Boasts the ability to handle DSD direct via USB and has an exceptional soundstage. One of the best DACs you can buy.

AUDIOLAB M-DAC 2013 £600

Excellent sound, a comprehensive feature count and impressive flexibility make the Audiolab a stand-out product at its price. A range of filter options is the icing on the cake.

NAD M51 2012 £1500

A sweet-sounding treble coupled with complexity and tonal depth makes for a roiunded and smooth performer. HDMI functionality adds to the NAD's all-round value.

NAIM DAC 2010

Superb high-end digital convertor with a probing, punchy and fornesically-detailed sound.

NETWORK PLAYERS NAIM NAC-N172 XS 2013

NAIM NAC-N172 XS 2013 £1650

A pre-amp/DAC/streamer package provides a taught, rock-solid presentation with a tonally rich midband and a superior sense of rhythm.

CHORD DSX100 2013 £7500

Chord's proprietary DAC circuit shines in their topof-the-range streamer. Hear-through clarity with a sound rich in detail, dynamics and soundstage. SANSUI WLD+2012

2012 £350

Offering great value for money with with a variety of input options the Sansui was a deserved Hi-Fi World Award-winner in 2012. Few can match its ability at the price.

DIGITAL SOURCES

ASTELL&KERN AK120 2013 £1,140

It's small - but packs a punch. Plays digital files up to 24/192, packs 32gb of memory (expandable up to 96gb via MicroSD cards) and has massive dynamic range with negligible jitter. Good enough to replace a CD in most systems.

NAIM HDX 2009 £4,405

Interesting one-box network-enabled hard-disk music system that gives superb sonics together with impressive ease of use

BAYAN SOUNDBOOK 2013 £149.9

Superb design and great sound make for one of the best portable Bluetooth speaker/radios on the market. Not the cheapest – but worth every penny.

CABLES

MAINS CABLES R US NO.27 2013 £95

Offers a sprightly pace with a precise nature. Fast performance enhance frequencies and beautifully etched detail.

BLACK RHODIUM LIBRA 2013 £100

Opens up the sound stage and offers a significant upgrade to a basic power lead.

TELLURIUM Q BLUE POWER 2012 £399

This power cable is not cheap but is worth every penny. Top quality, high resolution and fine value

BLACK RHODIUM TWIST 2012 £71/3M

Twisted to fight off radio frequency, the Black Rhodium speaker cable is easy on the ear with a fine sense of clarity and focus. A remarkable performer at the price.



TELLURIUM O BLACK 2010 280/3M

A deep, dark, velvety performer that's nevertheless highly musical, it represents excellent value as mid-price cables oo.

HEADPHONES

PHILIPS FIDELIO X1

2013 £270

Aimed firmly at the upper end of the market, these are super-accurate 'phones that can shame many a loudspeaker. Hear them before anything else.

YAMAHA HPH-MT220 2013 £150

Purposed for indoor monitoring yet light and comfortable enough to be used on the move. Excellent sound quality marred only by a slight warmth to yocals

ONKYO ES-HF300 2013 £180

Detailed and fast sound with good bass and fienly-etched treble. Have great presence without colouration.

SENNHEISER HD700 2012 £59

Tremedously fast with a strong, focussed, lower-frequency range and a firm bass punch.

JAYS V-JAYS 2010 £49

Wonderful little budget over-ear portable 'phones with a clean, smooth sound to beat the best of the rest at the price.

£1,995



Diamond mini

aiwanese company Usher manufactures a comprehensive range of loudspeakers at its purpose-built facility in the Far East — one that has been attracting a growing number of enthusiastic customers here in the UK.

We were impressed with the Usher Dancer Mini-Two reviewed in the November 2012 issue of Hi-Fi

World – a £3,500 floorstander good enough to trouble 'speakers costing twice as much.

But that's a big, imposing floorstander not necessarily suited to everyone's listening space. Which is where the new Usher Dancer Mini-X Diamond DMD standmount comes in.

Usher Audio is one of a select few speaker manufacturers that

builds all the drivers it uses itself and the DMD in the name refers to its proprietary tweeter – an acronym for diamond-metal-diamond.

Usher explains: "The DMD dome is effectively a diamond dome with a reduced mass and a well-controlled, appealing sound signature, resembling very closely a perfect piston in its behaviour. This is made possible by its laminated diamond-metal-

diamond structure, which consists of a proprietary metal alloy base layer coated with an amorphous diamondlike carbon layer".

This 1.25in DMD tweeter unit is mated with a 7in bass/mid-range driver with a front-facing slot port underneath to augment low frequency response.

As to the 'Mini' in the name? Well, it has to be said it's a relative term as the Dancers are not exactly diminutive, standing 435mm tall and stretching back 370mm with a front baffle width of 260mm. That 50mm thick front baffle curves back slightly around the tweeter to help time-align the drivers and the edges are chamfered to lessen diffraction effects.

The cabinet itself is a beautifully veneered layered-wood construction that Usher says is held together with a special glue that creates multiple constrained layers to reduce cabinet resonances.

The side walls curve backwards from the front baffle to a narrow spine containing four sturdy gold-plated speaker terminals to facilitate bi-wiring or bi-amping. Inside the cabinet the crossover is split across two completely separate printed circuit boards — one for the high-pass filter feeding the tweeter and one for the low pass feeding the bass unit. They are fixed to opposite walls of the cabinet with an elastomeric substance to avoid resonances.

There's no overall grille as such for the fascia — just a round cloth pad that fits over the mid-range driver; the DMD tweeter is protected by its own fixed wire-mesh.

True to Usher's renowned attention to detail, the company also produces dedicated 'Waveguide' stands for the Mini-X that look superb. They're a cast metal design with a sweeping front section that curves gracefully round the central pillars while the top plate has two holes which allow the Mini-Xs to be bolted to it via threaded inserts on the base of the 'speaker cabinet. In situ they look undeniably imposing and purposeful while the curved centerpiece is said to help smooth and improve the Mini-Xs lowfrequency response.

One word of warning, though — once mated together the speaker and stand are heavy — and I mean heavy because each 'speaker weighs 15.5 kg. So it's worth assembling them as close as possible to their intended site before making those final crucial

positional adjustments.

Speaking of which, the frontfiring port means the Dancers are relatively unfussy about close-towall placement – but they do sound better with a bit of room to breathe. I found they worked well some 16in into the room and well clear of side walls, and with a slight toe-in – but, as ever, individual experimentation is recommended.

Not surprisingly, all this engineering and craftsmanship comes at a price, the Usher Mini-Xs retailing at £2,450 and the stands £650 – although they are available as a package for £3,000.

SOUND QUALITY

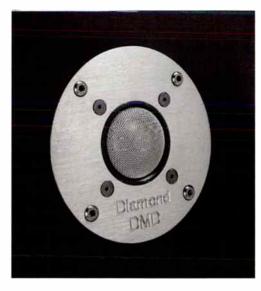
If you equate diamond tweeters with a ringing, bright treble then the Mini-Xs might come as a bit of a surprise. Instead, Usher's DMD design gives a smoother response than some others. High frequencles are very much present and correct but devoid of that sometimes-piercing 'tizzy' sound diamond or metal-domed tweeters can exhibit. What that equates to is a very refined yet detailed portrayal of music.

Listen to something with plenty of atmosphere – such as Cowboy Junkles' 'The Trinity Sessions' or David Hykes and the Harmonic Choir's 'Hearing Solar Winds' – and you can hear the sounds reverberating in the acoustic space they were recorded in.

In the David Hykes piece in particular the DMD tweeter captured the high-pitched overtones produced by the choir with astonishing detail without ever sounding shrill or edgy.

Overall, there's a slightly forward





nature to the Ushers which means images are pushed into the room, hanging deliciously between the speakers.

Jan Garbarek's ECM recording 'In Praise Of Dreams' positively soared from the Ushers – the soprano saxophone sounding clean and finely-etched with the subtle synthesizer embellishments rumbling clearly beneath.

Even pushed to neighborbothering levels here the Ushers stayed controlled and poised throughout.

And it has to be said the Mini-Xs do respond to a good dose of power. Usher quotes an 87dB sensitivity level and they thrived on the end of Quad's impressive new 150 Watts per channel Platinum Stereo amplifier (see review this issue).

The combination brought an impressive depth to YoYo Ma's 'Songs Of Joy And Peace' with the cello having a rich tonality. Yet again the delicate decay of notes fading away was admirably well captured.

Switching to a less powerful 50 Watt per channel Arcam amplifier and, while the Ushers never sounded anything less than musical, the dynamics previously on offer became somewhat softened.

BASS PERFORMANCE

Despite being relatively large for a standmount, basic physics dictates that the Mini-X is never going to have prodigious amounts of lowend heft. And, after all, Usher has its larger floorstanding models for those looking for room-shaking subsonics.

But to its credit the bass the Mini-X does provide is both powerful and realistic — sounding tight, solid and tuneful. Usher seem to have avoided the temptation to







"This level of performance, convenience and style makes for an award winning product."

Jeff Dorgay, Tone Audio Magazine, January 2013



"Oozes quality in both construction and sound"

Paul Rigby, Hi Fi World, March 2013



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engineer in any artificial upper bass hump which means you get a lowend that is very consistent.

It means if the bass is there you'll definitely hear it, but at a realistic level that retains its place in the overall musical spectrum.

I'd say the sturdy construction of the Mini-Xs is playing a big part here as there is no sense of the cabinets adding any colouration to the music.

Take Leftfield's 'Rhythm And Stealth' for example. This slice of 1990s dance music electronica positively thumps along - and, unfortunately, thump is exactly what it does through some loudspeakers. Not with the Mini-Xs. They take the extended lows in their stride with no energy-sapping overhang, so the album pounds along energetically.

Yes, subsonics are missing but the Ushers are so musically satisfying you really don't notice.

Similarly on Rahsaan Roland Kirk's 'Bright Moments' CD you can hear the power of drummer Robert Sly's sledgehammer beats while Henry Pearson's supple bass bristles with energy – providing the perfect foil for Kirk's improvisations at the top of his saxophone's register where yet again that DMD tweeter comes into its own.

Nothing seemed out of place through the Ushers - every element of the music occupying its correct place within the sonic palette.

If there's one criticism to be made it's that on first listening the Mini-Xs will not sound as exciting as some rival speakers - especially those with more sharply-etched diamond or ribbon tweeters.

That's a consequence of their overall smooth balance and something that actually rewards longterm listening better. The chances are you'll still be enjoying them when their more immediate-sounding brethren have started to grate on the ears.

CONCLUSION

Usher Audio has forged a deserved reputation for superbly-engineered, beautifully-made loudspeakers and the Dancer Mini-X does nothing to alter that.

Fed by a good quality amplifier they are terrific performers with a sonic signature that doesn't favour one part of the frequency spectrum above another - which makes for an extremely honest, open and natural performance.

Usher's DMD diamond tweeter

is among the best examples of the breed you could hear, with excellent high-frequency treble response that manages to avoid veering into harshness

Instead, it is smooth and refined with a beguiling character which shines on wellrecorded material.

The relatively large and heavy cabinet means bass response is also well-controlled with little colouration.

Most importantly. they present sounds in an infectious and involving manner, whatever musical genre takes your fancy.

Add in the fact that they are finished to a standard befitting loudspeakers costing easily twice as much and it's clear the Usher



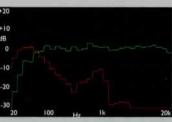
Dancer Mini-Xs are a very impressive package indeed.

You'll search long and hard to find anything else to match it at the price.

MEASURED PERFORMANCE

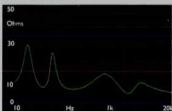
Sensitivity at one metre measured 86dB for one nominal watt (2.8V) of input - a fair result, compromised slightly by the 'speaker's high overall impedance. This measured 10 Ohms with pink noise, partly because Usher have used a high DCR 7 Ohm bass unit, where 4 Ohms is a common value these days. Our impedance curve clearly has a very high value at low frequencies, meaning the Diamond Mini-X draws little current from an amplifier. It needs a high power amplifier with good voltage swing to go loud, around 60 Watts being a

FREQUENCY RESPONSE



Green - driver output Red - port output

IMPEDANCE



minimum for good volume and over 100 Watts to play very loud.

Frequency response was flat, as is usual with Usher loudspeakers. The interesting feature here is the flatness of the Diamond tweeter's response. Diamond tweeters tend to be peaky, but Usher's unique diamond vapour deposition process on a substrate avoids this problem, our analysis shows. The result is smooth, accurate treble.

There is no upper mid-range crossover suckout so detailing will be strong. There is no bass lift either, to add warmth or body to the sound. Absence of peaks and undulations in frequency response suggest low coloration and this was borne out by our 200mS decay analysis

The slot port works around 40Hz, damping the bass unit over a fairly wide frequency band, our red port output trace shows. Bass extends down to a low 30Hz and quality will likely be on the dry and controlled side, but near wall placement will lift low frequency output in use.

The Usher Dancer Mini-X Diamond is accurately engineered, delivering a smooth even response right across the audio band. It runs low and should have firm bass. The Diamond DMD tweeter looks impressive. Sensitivity is on the low side however so it needs power.

USHER DANCER MINI-X DIAMOND £2.450 (STANDS £650)







OUTSTANDING - amongst the best

VERDICT

A highly-accomplished standmount loudspeaker from Usher with outstanding sound and great build quality.

FOR

- smooth, refined diamond tweeter
- tuneful bass
- great detail
- excellent build quality

AGAINST

- unexciting at first listen
- large and heavy

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A PAIR OF ACOUSTIC ENERGY'S SUPERB 301 LOUDSPEAKERS

nin a pair of Acoustic Entroy Luparb 301 standingunt loudspeakers - which garnered a live globe review in our

For a chance to win this great prize, simply read the review extract below and then answer the four easy questions on the right Send your entries on a pustcard to Hi-Fi World at the address below.

The 301 is a two-way ported design measuring 300×185×250mm (H/W/ D) and retailing at £425.

Instead of the usual rear-firing round port the Acoustic Energys use a front-mounted slot to augment bass response.

Above this is an 11cm hard-

annoticed aluminium mid bass cone mated to a relatively large 28mm soft-dome tweater The golles for migratically to the front baths to maintain the overall clean lines.

In use the 301s are clean and crisp with a good level of detail that makes all forms of music instantly Enjoyable

Try New Order's 'Bizarre Love Triangle' and it's conveyed with all the requisite attack as well as a decent dose of low-end heft. In fact, the bass digs much deeper than you'd expect - with a spin through Leftfield's 'Rhythm And Stealth' sounding positively thunderous.

Set-up correctly they are a delight - displaying a pleasing authority while remaining lithe and nimble at all times.

Stereo images are also well-

placed, the Acoustic Enling 3 throwing out in exprising soundstage which has both width and depth. The tweater and lumin um cone mid bass triver are well-matched, with little sense of any suck-out in the presence region. That quality adds to the sense of exceptional detail levels".

For a chance to win just answer the four questions on the right. Send your entries on a postcard only, by 12th January to:

January 2014 Competition, Hi-Fi World magazine, Studio 204, Buspace Studio, Conlan Street, London WIO 5AP.

QUESTIONS

- [I] What is the bass driver made from?
- [a] Glass [b] Aluminium
- [c] Treacle [d] Paper
- [2] Where is its port sited?
- [a] On the front [b] On the back
- [c] On the base
- [d] Somewhere secret
- [3] How are the grilles attached?
- [a] By magic
- [b] With Sellotape
- [c] With glue [d] Magnetically
- [4] What size is the

- [a] 28mm [b] 3 feet [c] 15mm [d] 20mm

Hi-Fi World magazine Studio 204, Buspace Studio, Conlan Street London WIO 5AP



RULES AND CONDITIONS OF

- ONLY ONE ENTRY PER HOUSEHOLD
- MULTIPLE ENTRIES WILL BE AUTOMATICALLY DISQUALIFIED
- PURCHASE OF THE MAGAZINE IS NOT A PRE-CONDITION OF ENTRY
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- THE EDITOR'S DECISION IS FINAL
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entries will be accepted on a postcard only

OCTOBER 2013 WINNER: TIMESTEP T-01MC PHONOSTAGE Stephen Crane of Northumbria

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Sishsful Chunking

Four ideal music-lovers' Christmas presents - and one bit of wishful thinking!

NAME: Jon Myles

STATUS: reviewer and digital fiend

THE CLASH SOUND SYSTEM £129.95 www.amazon.co.uk

Here's a treat. The Clash's five seminal studio albums re-mastered by Mick Jones and Paul Simonon and presented in their original eight-disc format along with a further three discs of demos, non-album singles, rarities and B-sides and a DVD of previously unseen footage by Don Letts and Julien Temple. And it all comes beautifully-presented in a Simonon-designed boombox package. What's not to like! Beats Strictly Come Dancing hands down for Christmas Day listening. In my house at least.



NAIM DAC-V1 £1250 www.naimaudio.com

With a rapidly-growing collection of audio files residing on my laptop, finding the best way of accessing those ones and zeros is increasingly important – and there are few better than the compact Naim DAC-VI.

Featuring an asynchronous USB connection, high-quality DAC, superb headphone section as well as the ability to act as a pre-amp, it boasts Naim's traditional strengths of pace, rhythm and timing allied to a smooth mid-band and a welcome dollop of subtlety and finesse. Just perfect for headphone listening while working away at the computer or ploughing through your e-mails.



BAYAN SOUNDBOOK £149.99 www.bayanaudio.com

Portable Bluetooth speakers seem to have really come of age this year. Done right they're great for slipping in a pocket and taking out to the garden or park for listening to music or radio in the great outdoors. And the Bayan Soundbook certainly does things right.

Housed in a clever fold-over case that doubles as a stand, it pairs easily with any Bluetooth device and produces a nice, clear articulate sound. The solid aluminium body mean there's none of the rattle and hum you get from some cheaper models and the internal aerial pulls in a strong FM signal to boot. It also switches into conference-call mode if someone inconveniently rings while you're listening, allowing hands-free conversation via the built-in microphone.





B&W C5 EARPHONES £149.99 www.bowers-wilkins.co.uk

B&W know a thing or two about making quality loudspeakers — so it's good to see them bringing their expertise to bear on the in-ear headphone market. Anyone who uses an i-device or portable music player on a regular basis knows that the sound can be improved appreciably with a quality pair of earphones. And the B&Ws are amongst the best at their price.

A proprietary micro-porous filter incorporated into the weighted body means they are essentially an open-back design – which translates into a spacious, open sound with impressive scale. The bass is also suitably punchy with a depth and detail absent from cheaper rivals. Any music lover would be delighted to find these in their Christmas stocking.

ITUNES HIGH-RESOLUTION DOWNLOADS 99P

Yes - 24bit/96kHz and above high-resolution downloads from the world's biggest music store. Brilliant, hey?

Well, it would be if it actually existed. Unfortunately, despite numerous rumours Apple has steadfastly refused to embrace true hi-res downloads on its site.

But if anything is guaranteed to get more people listening to better quality music files then this would be it – which can only be good for the hi-fi industry as a whole. It's my Christmas wish.



Sish full Chinking

Reviewer and recordist Martin Pipe tells us what he wants from Santa.

NAME: Martin Pipe

STATUS: reviewer and collector

TASCAM DR-60D DIGITAL AUDIO RECORDER £300 www.tascam.eu/en

I enjoy making 'field' recordings, and for such applications this affordable Tascam device nearly fits the bill. The menu-driven DR-60D can record up to four channels simultaneously (ideal for quad/surround-sound) and offers PCM (uncompressed) recording, 16 or 24bit resolution and sampling rates of up to 96kHz. It runs off cheap (rechargeable) AA cells or the integrated USB port (also used for PC data transfer) and stores audio on commonly-available SDHC cards. Phantom power is offered for capacitor microphones, while balanced XLR/TRS inputs are provided for two of the channels – the other two (rear surround?) are alas only served by unbalanced 3.5mm mini-jacks. It can even be tripod-mounted!



RODE NT55 MICROPHONES (MATCHED PAIR) £500 www.rodemic.com

A field recorder is only as good as the microphones you partner it with. And so I'd like Santa to drop this pair of Rode NT55s down the chimney. Versatile and capable of excellent sound quality, they benefit from interchangeable capsules – omnidirectional and unidirectional (with a 'cardioid' polar pattern). Other features of these well-built Australian mics include phantom powering, switchable attenuation and a three-step high-pass filter. I'd specify cardioid capsules, and use these mics in a classic 'crossed-pair' configuration – which can deliver some of the most natural stereo you're likely to hear. For outdoor use, though, decent windshields are essential, and one mustn't forget the XLR cables needed to connect the NT55s to the Tascam either.

ONKYO ES-HF300 HEADPHONES £200 www.uk.onkyo.com/en

Being able to play back your own recordings, or monitor what you're about to capture, is always a good idea – you can't rely on metering alone! I was impressed with these 'phones, the first from a company that's better known for hi-fi equipment and home cinema. Thanks in part to titanium drivers and bass-chambers, they benefit from a revealing and detailed presentation coupled with superb imaging and a wide frequency response. The 3.5mm jack is compatible with the DR-60D – adaptors or alternative 'plug-in' cables with 6.3mm jacks can be used - and the 'closed design' suits outdoor monitoring of field recordings as well as listening to music on the Tube without annoying fellow passengers. Thanks to sensible use of padding, they're comfortable to wear for long periods despite their half-kilo weight.





CREEK EVOLUTION 50A INTEGRATED AMPLIFIER £750 www.creekaudio.com

This beautifully-finished solid-state amplifier combines many practical features with a musical sound. Full marks to the XLR inputs (ideal for my pro gear, and rare at this price point!), switchable tone controls and wonderful user interface built around an OLED display. The Evolution 50A also benefits from internally-fitting FM tuner/DAC and phono stage upgrades, and since these are superior

to many 'offboard' items you can build up a clutter-free system around it. Best of all, though, is the audio — which is revealing, dynamic and fast. Imaging is superb, while the low-end is tight and articulate. What better for playing music — be it your own recordings, or a favourite album?

SME 309 TONEARM £1300 www.sme.ltd.uk

My Kenwood KD-600 quartz-locked direct-drive turntable is a lovely way to spin vinyl - but replacing its current SME Series 3 tonearm with the more recent SME 309 would make a big difference. The magnesium-built SME 309 is suited to moving-coil cartridges of lowish compliance, and so I may upgrade the cartridge too (and, whilst at it, attend to my phono stage). Still, that's something to trouble Santa with next year...



88 ish full Chunking

NAME: Rafael Todes STATUS: musician

A music lover's ideal present list - from a man who loves music



PHILIPS ORIGINAL JACKETS COLLECTION 55CDS £66.47 www.play.com

This is a veritable treasure trove of some of the greatest recordings from recent days on the Philips label. At £75, it represents a modest outlay for what is such a comprehensive CD collection, with a dazzling array of the world's finest classical artists, superbly recorded. Gergiev conducting the "Rite of Spring", Bruckner 3, Mahler -Das Lied Von der Erde etc. Included is a fascinating history of the label. Ranges from the classic to the esoteric, highly recommended!



This is an 'improved' version of the AK I 00, and now with the recent new software update, the player can exploit DSD. The other new feature with this update enables the unit to act as a USB DAC, enabling highly portable high-end computer audio from a laptop. The AK I 20 gives many top-level CD players a good run for their money and fits neatly into a pocket.





APOGEE DIGITAL MICROPHONE "MIC" £151.58 www.thomann.de/gb/apogee_mic.htm

This high-quality microphone plugs into an iPhone, iPad or laptop and provides the mic preamp and A to D conversion in-house, yielding superb recordings in an extremely convenient way. Great for interviews or home recording, i.e. it can be used for multi-tracking on GarageBand. It is sadly mono only, but in the fullness of time, I'm sure a stereo version will become available. A serious studio-quality mic!

SEISMIC VIBRATION ISOLATION PLATFORM £550 www.townshendaudio.com

Isolates ground-born vibration from 3Hz up, with isolation increasing with frequency in all three planes. I use one with my Inspire Monarch turntable and it results in a dramatic increase in clarity and overall performance. It will hugely improve any component where the isolation is not immaculate. Comes in different sizes and springs that are load-appropriate.





WIREWORLD SUPERNOVA 7, OPTICAL AUDIO CABLE 0.5M £166.20 www.futureshop.co.uk

I have a personal preference of glass over plastic in optical digital cables. This is one of the best glass cables I have heard. The sonic differences among digital audio cables are caused by jitter, which occurs as digital processors mistime or even intermittently lose

track of the digital bitstream. Jitter degrades sound quality by adding in indeterminancy of timing, noise and distortion that blurs images and makes for a vague sound.

This is a reference-quality optical digital cable, using 338 Borosilicate glass fiber optic conductors. The new termination technique provides improved clarity and dynamics with 3.5mm mini optical connector for Macintosh computers or the AK100/120.



NAME: Paul Rigby

STATUS: vinyl head

STAX 009 HEADPHONES £3,700 www.symmetry-systems.co.uk

The best pair of headphones currently resident on the planet? The best pair of headphones ever (with apologies to the Sennheiser HE90 Orpheus)? Using these headphones, I can do nothing else but give it my ultimate accolade: playing music on the Stax 009 headphones sounds like you are not wearing headphones at all. In fact, the 009 headphones completely disappear. Transparency is everything here. Surely, you ask, it's not possible to hear everything – I mean everything – without being too clinical or analytical, is it? Oh yes, my friend, oh yes. And they call it the 009.





HEADAMP BLUE HAWAII SPECIAL EDITION HEADPHONE AMPLIFIER \$1,635 www.headamp.com

I currently own a pair of Stax 007 headphones (who knew, eh?) along with a Stax 007, valve-based, headphone amp. I suspect that the amp doesn't have enough voltage swing, though. There needs to be more oomph. I sometimes crave more bass control and a little less veiling. This headphone amp is my

solution but I'd have to buy it from the USA. Someone bring it to the UK! Featuring two RCA connections plus XLR it includes a separate power supply, solid state early gain stages plus a valve output stage.

EMMELINE II B-52 \$5,350 www.raysamuelsaudio.com

...and another thing! I also own a pair of Sennheiser HD800s. They may be superb in terms of neutrality, offering a magnificently wide soundstage plus amazing imaging but the design is extremely dependent on the amp. In fact, I have heard people moaning that their HD800s aren't all that they're cracked up to be, purely because (I later realise) they are running the phones on a duffer of a headphone amp. The B-52 is the perfect pairing for the HD800s. A fully balanced amp cramming in dual mono power supplies and a suite of eight ECC82 (I2AU7) valves.





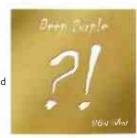
BOB DYLAN COMPLETE ALBUM COLLECTION VOL. ONE £175 www.myplaydirect.com/bobdylan

From analogue to digital. You may have heard about the enormous CD box set, featuring Dylan's entire official discography and, for the first time, two Side Tracks discs (i.e. non-album singles, tracks from Biograph and other compilations, songs from films and more). The CD set contains thirty-five studio titles, six live albums, 'Side Tracks' and a hardcover book featuring extensive new album-by-album liner

notes. But! If you want the lot on FLAC/MP3 then grab this variant that inserts the lot onto a USB stick, contained within this neat replica harmonica. Nice.

DEEP PURPLE — NOW WHAT?! (GOLD DELUXE EDITION) PRICE: £30 www.deeppurple.com

A rare new release from this group but, in these multi-format times, you really want to get the luxurious version of this newly released live album don't you? Yes, there's a CD version which includes a DVD plus interview segment, and there's a double vinyl edition but I would be looking at the limited edition box set featuring that same CD/DVD, the CD singles of 'Above and Beyond', 'Vincent Price' and 'All The Time In World', the 'Live Tapes' CD plus a T-shirt, poster and sticker. I'm a sucker for all the extras.



Sishful Chunking

Tony's top tips for a terrific Christmas

NAME: Tony Bolton

STATUS: valve head and vinylista

THE MISSING LINK DUST BUSTER. £21.00 (£19.00 IF ORDERED BEFORE CHRISTMAS) www.the-missing-link.net

Even if you have put your records through a cleaning machine, eventually the stylus will get a coating of detritus on it. The Missing Link Dust Buster is an unusual way of keeping the dirt at bay.

It consists of a small pot that has a thick substance in it. It is simple to use. You unscrew the lid and very gently lower the stylus into the pot, pausing for a moment before lifting it. As it is removed any residue from the tip stays in the pot, hopefully leaving your stylus sparklingly clean. A simple and very effective product.



BLUE HORIZON SPIKE SHOES. £24.95 FOR 4 www.bluehorizonideas.com

I first reviewed these in June 2011 and fitted them underneath my loudspeakers and my equipment rack finding improvements in the tonality and depth of instruments, and an improvement in the perception of the timing of the sound. Since then I have tried them under the spikes that support my Clearaudio Master Solution turntable, again with very positive benefits.

They are made from an aluminium casing containing a reinforced plate and a composite mixture or cork and rubber and will take a mass of up to 100kg per shoe. Fitting is simple and takes moments, the sonic results are excellent and worth every penny spent.





HMV MODEL 800 RADIOGRAMOPHONE. FROM £1000 ON EBAY. www.ebay.co.uk

This model was introduced in 1934, produced until approximately 1937 and represented the peak of audio capability at the time. The amplification is via two PX25 triodes producing 6 Watts, with an eight-record Garrard autochange turntable and long, medium and bandspread short waveband radio. A switchable filter system is provided, similar to the ones fitted to Quad amplifiers some twenty years later. The sound outputs through twin loudspeakers. There is also a mains driven clock that can be preset to switch on the radio. Cost new was 110 Guineas.

The sound is beautifully smooth as only triodes can provide and has a depth and tonal texture that a lot of modern equipment could do with emulating. The HMV Model 800 was big, weighed a ton and will only play 78s, but I would somehow find houseroom for one. One of the best radiograms ever built.



ACOUSTICAL SYSTEMS SMARTRACTOR £450.00 www.selectaudio.co.uk

I first came across this German-designed and built alignment gauge at the Munich HIgh End Show this year and reviewed it in the September 2013 edition of Hi-Fi World. Since then I have used it on several turntables and my liking for the ease of use and, particularly, the sonic benefits of using the UNI-DIN alignment have continued unabated.

It is simple but very effective to use and an example of good precision engineering. It is expensive, but is the only alignment gauge that you

will ever need to buy. Once you have tried it you won't want to use anything else ever again.

MILTY ZEROSTAT 3 £48 www.britishaudiostore.com

This is a product that seems to have been around forever but is still very effective and useful. It contains a Piezo Crystal Device that is activated by gently pulling the trigger. This generates a positive charge when the trigger is squeezed and a negative one as it is released thus cancelling the static charge on records, CDs or any surface at which it is pointed. A disc's sound quality is improved, with the perception being of a cleaner, clearer sound. It is also useful for helping to keep audio components a little freer from the dust that they seem to attract.



A Classic Made New...

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

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Fiio-delity

Will Chinese manufacturer FiiO have a runaway success with their new, budget X3 digital audio player? Noel Keywood thinks so.

ittle hi-res players like the FiiO X3 I am reviewing here aren't so common as yet but they're an intriguing proposition for any hi-fi enthusiast. Aimed at headphone users and the portable market, they also have a Line output to drive a hi-fi. You can think of them as a high-quality 'CD player' then, a portable one.

The iBasso DX50 portable audio player I reviewed last month (p34, December 2012 issue) seemed like a real bargain, costing just \$239 direct from the factory in China.

The FiiO X3 is also from China but costs around £150 from on-line retailers like Amazon. So if buying

direct from China makes you fearful, and Amazon is a name you know and trust, the X3 may interest you.

£150 is a new, low price point for a portable potentially able to deliver sound quality better than any CD player, as well as far better sound than portables like the iPod.

I suspected there would be hidden drawbacks because this player is one-quarter the price of the market leading Astell&Kern AK 100 from Korea — and of course well below the cost of hi-fi CD players

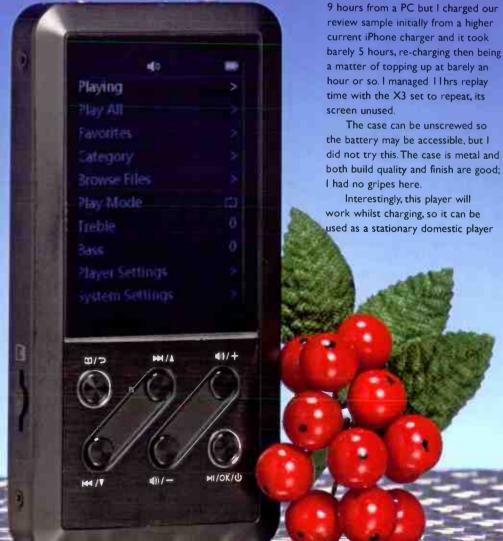
But what I found surprised me. The X3 isn't as slick as the £1100 Astell&Kern AK | 20 | use as a highresolution audio player, but it is impressive at one-tenth the price.

As portables go the X3 is small, measuring 110mm high, 55mm wide and 18mm deep. That makes it the size of a small mobile phone - old sort with no screen! - and easily pocketable. Weighing 125gms on our scales, it isn't especially heavy either and won't be punching a hole in your

Unlike the Basso DX50, but like the AK 100, 120 and Colorfly C4 Pro I have reviewed, the X3 has a non-replaceable internal battery charged through its USB socket. It is a 3000mAH, 3.7V lithium polymer

Charge time is quoted as around 9 hours from a PC but I charged our review sample initially from a higher current iPhone charger and it took barely 5 hours, re-charging then being a matter of topping up at barely an hour or so. I managed 11hrs replay time with the X3 set to repeat, its screen unused.

World Radio History vorld co. 44 ____ JANUARY 2014



with external power supply. Charge time is inevitably lengthened, but it does mean the player isn't limited in playing time by its state of battery charge, although FiiO warn that doing this may give the X3 "slight fever". Turn down volume to reduce this fever, they advise! Mine didn't need to be hospitalised, I'm glad to say.

The X3 will play high-resolution digital audio right up to 24/192 spec. in basic WAV format, meaning uncompressed; it doesn't baulk at the data rate (9Mbps). Music is stored

on 8GB of internal Flash memory



microSD card up to 64GB capacity. With hi-res music files reaching 200MB or more, the internal memory will hold just 40 tracks - not so much, but probably enough for a daily commute. That makes an additional 32GB (£25) or 64GB (£50) card obligatory - reckon on adding one to the X3's cost. Obviously, if you have a lot of compressed MP3, AAC etc, or even FLAC CD rips, the internal memory will hold a lot more tracks and possibly be enough.

In addition to WAV, the player handles FLAC up to 24/192 - the two formats I use. APE, ALAC, WMA, MP3, OGG and even grotty old MP2 are played. FiiO don't mention AIFF, Apple's equivalent to WAV, a totally uncompressed PCM format, so I loaded AIFF and it did not play, being flagged as an 'unsupported file format'. The solution to this is to convert to WAV or FLAC using the free XLD programme for Mac, or dBpoweramp for PC.

An important and distinguishing feature of any high-resolution player is that its analogue output amplifiers don't stifle sound quality. Measurement showed that at 3V through the headphone socket (high gain) the X3 has 50% more output

> than most CD players, and ten times more output than

portables. It has far better dynamic range than either as a result, so FiiO don't scrimp in this area and measurement showed the X3 offers 10dB more dynamic range than CD. Not bad for a player costing just £150.

I was interested to see FiiO identify the DAC chip as a Wolfson WM8740, the same as that "put into use for the top level CD player Saturn which is manufactured by the hi-fi brand Rega". They go on to point out that iRiver use this chip in their Astell&Kern players, as do Sony in their PHA-1. I'm impressed that such a good part should be used in the

X3 and measurement confirmed excellent results from it, through the allimportant analogue output amplifiers. The output amplifier is an Analogue Devices AD8397 able to swing large output at high frequencies.

There is a Line output through a 3.5mm jack that delivers a fixed 1.7V maximum, unaffected by volume control or gain setting, designed to feed a hi-fi amplifier.

The X3 can also be set to act as a USB DAC and worked perfectly with a MacBook Pro in this fashion.

In addition to these two analogue outputs the X3 has a digital output. I'm finding that as good as highquality portables may be in terms of DAC and output amplifier, sound quality through an external hi-fi DAC is often appreciably better. I got quite a shock at how much better music from the iBasso DX50 sounded through headphones plugged into an Audiolab Q-DAC, digitally connected, than the player's own headphone amp. - and that was the case with the X3 too. Not surprising perhaps when you consider the Q-DAC offers another 11dB dynamic range, or 121dB in all, when playing 24bit files. This massive range is why you get those dark silences from good 24bit recordings, as well as a lovely, silkysmooth sound free of coarseness.

The X3 outputs S/PDIF digital from a 3.5mm jack and it worked properly from the outset, unlike the

DX50, except that 192kHz sample rate files were down-sampled to 96kHz (firmware 2.05). Curtailed audio bandwidth was clearly visible on our analyser and both Q-DAC and our Rohde & Schwarz UPV audio analyser flagged up 96kHz sample rate. In case you are wondering, bit depth was not reduced, and since this is more influential upon sound quality than sample rate, the X3's digital output still works well enough and has a useful role to play for hi-fi buffs who want the best from high resolution files.

Of all the players I have used to date, the X3 was the fiddliest

C3 II 📟

Allegri String Quartet

and least intuitive. It

fires up quickly - in just a few seconds - but the home screen has a rather turgid list of options in dull blue text; turning brightness to maximum improves legibility. This is not a touch screen as on the Astell&Kerns, so the X3 is driven by pressing buttons. Basically, there are forward and back buttons. forward acting to Start and Pause play when a file is reached. There

are Up and Down (the menu list) buttons too. Files can be searched by Category (Album, Genre, Artist), as a list, or as a computer folder/file tree.

Since so much output is available via headphones, gain can be set High or Low, and maximum output volume and default output volume levels set also, to prevent excessive headphone volume. Album artwork is supported.

The X3 is inelegant: its display panel is workmanlike, its controls prosaic in layout and touch and the screen a little coarse, but it is usable and I'm not going to be critical considering its low price.

There are treble and bass controls, but no equaliser as found on many other players. Volume (0-60) is controlled by Up and Down buttons. Gapless playback is an option, and Repeat Once, Repeat All and Shuffle. Various screen dim and auto power off times can be set, to preserve battery life - or otherwise.

The player can be re-set using



a paper clip through a small hole in the case and, whilst this isn't very convenient, our sample never crashed once, unlike all other players I've tested to date. I was impressed by this; the X3 was a sweet player to use in real life, if short on style.

Our sample came with Firmware version 1.23 and was updated to 2.05 without difficulty; both were stable. You have to download the firmware to a microSD card, since the player updates from card only. A small card of IGB will do, FAT32 formatted and best loaded direct from computer through a USB adaptor that costs pennies. The card is then put into the player, two buttons pressed simultaneously and bingo — it's done.

SOUND QUALITY

Our X3 came with no fewer than twenty six hi-res music demo tracks from Chesky, showing just how good high-resolution downloads - in this case from HDtracks - can sound. There were some great little demos here, including David Chesky in a Cathedral walking up to the mic to demo binaural recording technology - eery! Even worse was a binaural haircut where scissors and razor travel over the listener's head on replay. Amusing demo tracks like this were common in the early days of stereo - I have LPs of them. It was great to hear more, in latest digital. However, I loaded and played my own series of music files that sit on a 16GB SanDisk SD card for listening tests, since they are tracks I know and also have on my Astell&Kern AK 120 for comparative purposes. I used Philips Fidelio XI headphones, Jay V-Jays when on the move, and the player also fed my WAD300B valve amplifier driving Martin Logan Electromotion hybrid electrostatic loudspeakers.

Straight away I simply enjoyed the X3. Being used to an AK I 20 it obviously lacked the tidiness and orderliness, and the bass line behind Diana Krall singing Narrow Daylight (24/96) was softer and warmer, less defined in the time domain. This sort of thing apart, the X3 sounded big and lusty through 'phones – there were the same forceful dynamic contrasts I have come to expect, or at least hope for, from such players, due to their specialised DACs and headphone amps.

The Eagles 'Somebody' (16/44.1) roared along, Glen Frey sounding full bodied, the Hammond organ swirling fruitily in the background. The bass line on 'Busy Being Fabulous' was solid

and kick drum had punch: this track rocked. Again the X3 wasn't as tidy or couth as the AK 120, but then you would not expect it to be at the price.

It was with hi-res classical rather than Eagles type Rock that the X3 was 'nice' rather supremely lucid or tightly controlled. The Minnesota Orchestra playing Rimsky Korsakov's Dance of the Tumblers from The Snow Maiden (24/96) came over as full bodied and powerful, but suffused with a small amount of bloom that added a pleasant sense of warmth to proceedings. If anything the X3 is best described as big hearted and almost 'warm' in the sense that it has an easy demeanour. It lacks the sharp definition or sense of deep intertransient silence of more expensive players, it also lacks their forensic resolution and grip; it is less couth all round and not as dramatic. But it manages to be fun and it conveys the intrinsic quality of high resolution digital audio files well.

CONCLUSION

The X3 may not be so pretty display-wise but – button pressing apart – was one of the easiest players I have used to date. The menu system is visually unattractive and the buttons not so lovely either, but they are usable and the X3 never once crashed, with its old or new firmware. It fired up quickly and got on with playing music, always sounding easy and entertaining. Because FiiO have used a good DAC and headphone amplifier it delivers high-resolution music with gusto.

It will play compressed MP3s, iTunes files and such like, CD rips and modern 24/96 or 192 material too.

At the price it's a great portable, and a good high-quality domestic digital player. It isn't up with the Astell&Kerns, but it isn't their price range either.

It is great entertainment though – and a fine budget starting point in high-resolution digital.

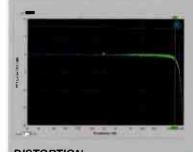
MEASURED PERFORMANCE

Frequency response of the FiiO X3 via its analogue headphone and line output extends to 70kHz with 192kHz sample rate digital, our analysis shows, so the DAC and output amplifier exploit the benefits of 192kHz sample rate.

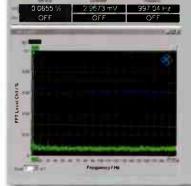
The digital output down-sampled 192kHz to 96kHz, limiting analogue bandwidth to 48kHz – no disaster, but a surprise. This wasn't cured by firmware update to 2.05.

With gain set to High, the headphone output gave a massive

FREQUENCY RESPONSE



DISTORTION



2.9V at full volume (60), higher than CD players (2V) and too much for most headphones. With gain at Low it gave 1.4V.

Distortion at 0dB was low at 0.002%, rising to 0.06% at -60dB with 24bit. These are low values for a portable at full gain, meaning the headphone output delivers high quality audio. One small drawback was that as volume was wound down noise in the following output amplifier adversely affected the player's dynamic range. At full volume the EIAJ Dynamic Range value with 24bit was a healthy 111dB, but this value decreased as volume was turned down.

The Line output is unaffected by the volume control, having a fixed output of 1.7V and similar performance to the headphone output. This is suitable for driving a hi-fi amplifier.

The X3 measures well enough to complement high resolution digital audio through its headphone or Line outputs. It has no major weaknesses, downsampling to 96kHz being a minor limitation. NK

Frequency	response	(-1dB)
192k		5Hz -70kHz

Distortion (24bit)

0dB	0.002
-60dB	0.06
Separation (1kHz)	95dB
Noise (IEC A)	-110dB
Dynamic range (EIAJ)	111dB
Output	2.9V

FIIO X3 DIGITAL AUDIO PLAYER £150



EXCELLENT - extremely capable

VALUE - keenly priced

VERDICT

An affordable high resolution digital player that can drive a hi-fi or headphones. Excellent quality and value.

FOR

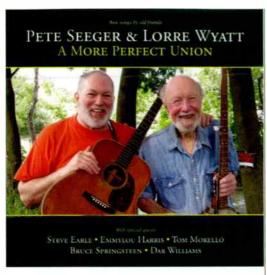
- sound quality
- line output for hi-fi
- small and light

AGAINST

- basic display panel
- no touch display
- downsamples 192k

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(%)



PETE SEEGER & LORRE WYATT

A More Perfect Union Let Them Eat Vinyl

ike Bob Dylan, his folk compatriot, Pete Seeger's voice could hardly be called tuneful or melodic. With the onset of age, this sometimes does him no favours. The reason for Pete Seeger, however, is not the voice, it never was the voice. The reason for Pete Seeger is the message. Seeger's mind is as sharp as a razor as you can hear on this newly-issued collection that features sixteen songs spread over two slabs of vinyl, fifteen of which are newly penned by Seeger.

On this project is his neighbour Lorre Wyatt, a singersongwriter in his own right. This album is partly about survival against the odds. For Wyatt, his struggle was against illness (his stroke prevented him singing and guitar playing for fifteen years). Seeger battles age: he was 93 when making this 2012 album. The upshot is uplifting. Maybe that is why this album features

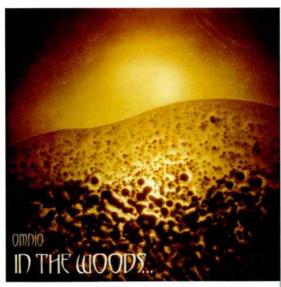
widely diverse songs, these guys are enjoying life and pursuing their craft: the front sleeve grins are a bit of a giveaway.

Packed with humour and the wisdom that arrives from a long, eventful life, this album is also packed with star names that just want to cuddle up to the great men, even if it's just for a spot of harmony singing.

Hence Bruce Springsteen appears on 'Gods Counting On Me...' while Wyatt's 'Somos El Barco/We Are The Boat' features the quality warbling of Emmylou Harris.

A quite brilliant album, well mastered, Seeger's improving with practice, it seems.

Also look out for two, double vinyl packs. 'The Songs Of Pete Seeger' featuring new recordings from the likes of Bruce Springsteen, Roger McGuinn and Eliza Carthy plus 'Pete Remembers Woody' - a series of spoken reminiscences with the odd song from Seeger.



IN THE WOODS

Omnio Back On Black

is album was released in 1997 and followed 1995's 'Heart Of The Ages' (which has also just been reissued by Back On Black). The latter oozed black metal but this double album, presented here within a luxurious, thick gauge, gatefold sleeve, changed the creative path. The musical direction was refocused towards prog metal with added gothic overtones and more effective song-writing that helped tie the project together. The result, for this carefully considered creation, is an enviable reputation of being one of the very best metal LPs to emerge from the European scene.

The vocal histrionics of past LPs were left by the wayside. The 'style' was no longer the band's prime focus. 'Substance' became the priority. Prog fans will not be surprised to hear that there are only five tracks on the album but each is carefully considered, featuring a wide range of emotional

references plus nods to mystic tales and pagan stories. Think of Marillion lured into the dark side and you will see where this album is coming from. There are shape-shifting poetical pieces on offer that form an impressive whole, merging with the inevitable and unavoidable violence of metal.

You will also find plenty of talent on show here such as past and future members of Emperor, Anathema, and Katatonia.

Omnio is a true metal classic. A sonic voyage and a musical experience that should be pounced upon by anyone who has an interest in prog-metal. The gothic elements and ambient keyboard overtures only help to raise the standards even higher.

Also look out for a third In The Woods re-release from the same label. 'Strange in Stereo' was the sequel to 'Omnio'. Released in 1999, it continued the band's foray into darker heavy rock.

ne Echo & the
Bunnymen frontman
with the haunting
vocal range has had an
intriguing solo career: leaving the
Bunnymen in 1988 and continuing
his solo projects despite working
again with the band from 1997.

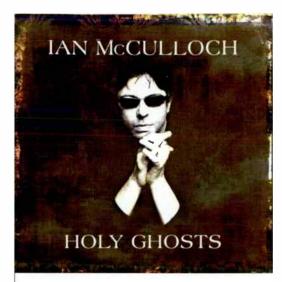
At times, McCulloch has lead a private existence, out of the public gaze, bringing up his children and handling the grief of his dead father but, when he has returned to his work, it has always secured fascinating results.

This new vinyl release, a three LP package, deserves careful consideration because you will see some respected music journals out there describing it as a concatenation of two albums: 'Pro Patria Mori' and 'Live At Liverpool Anglican Cathedral'. It isn't, but we'll get to that. The two sides of 'Pro Patria Mori' plug into McCulloch at his very best. The lush rock orchestration of 'Watch Me Land' is contrasted with the rather sweet

hero worship of 'Me And David Bowie'. The title track, meanwhile, contrasts the soaring McCulloch voice with an ethereal female harmony.

The accompanying, fifteen track, double album is not, as has been reported in some quarters, 'Live At Liverpool Anglican Cathedral'. It is, In fact, 'Orchestral Reworks From the Union Chapel', recorded in 2012. The confusion stems from the fact that both 'Pro...' and 'Cathedral' were created this year. It was wrongly assumed that both albums had been packaged as a single value pack.

For the record, the 'Union' collection has a better track listing but the 'Cathedral' collection offers more vigour and energy. That said, 'Union' provides a relaxed performance from the man and, without the band to support, his vocal delivery is clear and open. The reworkings of 'Bring On the Dancing Horses' along with 'Rescue', 'Nothing Lasts Forever' and 'Killing Moon' are particularly effective.



IAN MCCULLOCH

Holy Ghosts Demon

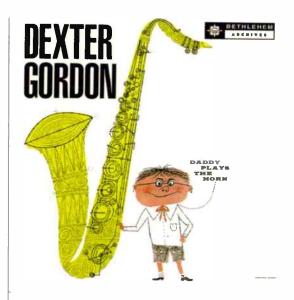
AUDIOPHILE VINYL

riginally released in 1955 on Bethlehem, this is a remarkable record. Mainly because no-one expected Gordon to be there. Some might have thought him dead by then because he was in the mire, wallowing in a major drug addiction and hadn't been seen in years. That he got himself together to make this album showed a strength, however. One that was supported, on this LP, by the pianist, Kenny Drew, Leroy Vinnegar on bass and Larry Marable on drums.

In fact, it is Kenny Drew that acts like a glue for the whole LP. He is the principle fixture on this piece. Even on the revisited Charlie Parker piece, 'Confirmation', despite some beautifully relaxed playing from Gordon's tenor sax, Drew does sterling work, manoeuvring the rhythm section. The pair of ballads on 'Daddy Plays The Horn' are nothing short of amazing

and stand as simple, emotive expressions. 'Darn That Dream' sees Gordon with a warm approach to the music while Drew provides a perfect accompaniment as an easy-going compadre. Meanwhile, on 'Number Four', written by Gordon, it finds a groove from the off and the ensemble lets loose with equally solid licks beneath his cool tone. In fact, it was during the ballad sections of the album, despite Gordon's fight with drugs, that he was still capable of reaching creative heights. The track 'Autumn In New York' is a perfect example of that, Gordon covering this in a wholly meaningful manner.

The final track, 'You Can Depend On Me' ends the LP and sends you off home with a bang. Each band member gets a final opportunity to perform and be noticed and, boy, do they take advantage of it! Gordon, meanwhile won his drug battle in 1960, for the benefit of jazz as a whole.



DEXTER GORDON

Daddy Plays The Horn Pure Pleasure



Join the Q

Audiolab's new Q-DAC promises great performance at a wallet-friendly price. Jon Myles is suitably impressed.

he Audiolab brand has gathered a deserved reputation for the quality of its digital products over the past few years. Its M-DAC is one of the sweetest-sounding and most versatile digital-to-analogue converters around at the price.

But at £600 it's clearly not within range of all buyers. So enter the Q-DAC – that Audiolab claims gets remarkably close to its bigger brother's sonic performance at two-thirds the price.

And for those looking to build a decent system around the Q-DAC, Audiolab also has its M-PWR – a cosmetically matching 40 Watts per

channel power amplifier.

Unsurprisingly, Audiolab has had to shave some features from the M-DAC's specification get the Q-DAC down to its £400 asking price. Gone from the M-DAC is the rotary volume control (replaced by a pair of buttons) while the power supply arrangement has been simplified.

The range of inputs has also been reduced – with the new DAC having just single optical and coaxial connections rather than a pair of each

The balanced XLR outputs of the M-DAC have gone as well, its little brother having just a single pair of RCA analogue connections alongside

digital S/PDIF coaxial and optical outputs for those who need them.

There's also no remote control option which may, or may not, be important to some armchair users.

The Q-DAC is still usefully specified. Internally it's built around a well-regarded ESS Sabre32 DAC chip while the USB input is asynchronous so data flow is handled by the unit's master clock rather than your computer. Both the USB and coaxial inputs can accept a full 24bit/192kHz stream while the optical is as usual restricted to 24bit/96kHz material. And, crucially, Audiolab's proprietary range of digital filters are also present and correct.

Seven user-selectable filter options allow the listener to tailor the Q-DAC's presentation to their personal taste and – unlike some other DACs out there – have a clear and pronounced effect on the sound.

Other features include a frontmounted headphone socket and a slim display window on the fascia. Fit and finish, if not luxurious, are certainly up to Audiolab's usual high standards.

SET-UP AND USE

Pairing the Q-DAC with a MacBook Pro (OS 10.6.4 and above recommended) was – as per usual – straightforward and hassle-free. For Windows users the supplied drivers have to be installed first but the instruction book contains a detailed step-by-step guide.

Once up and running the Q-DAC is simplicity itself to operate with the front screen displaying a wealth of information from nominal or exact incoming signal rate to track and time information from a CD.

SOUND QUALITY

Stripped-down it may be in terms of features, but the Q-DAC gives little away sonically to the more expensive M-DAC. Frequency extremes are well extended, the bass firm and assured without the slightest hint of overhang while treble is sweet and open.

There's also an exceptional amount of detail retrieval in evidence. Keith Jarrett's 'The Koln Concert' in 24/96 gave ample evidence of the Q-DAC's impressive qualities. Jarrett's dynamic performance was presented in a tremendously spacious fashion – the piano sounding natural and undistorted. I could hear all of his sharp intakes of breath, grunts and yelps as his fingers fly over the keyboard.

Switching between the various filter options here revealed subtle shifts in the sound. Audiolab itself recommends using one of the three Optimal Transient settings — which it says give the most natural and pure sonic performance if not the best technical specification.

This is indeed the case. All three have a mellifluous quality which lets the music flow organically with an ever so slightly warm balance. It's a sound that suits something like Nick Cave's 'Murder Ballads' extremely well – adding an all-important touch of menace to the singer's growling vocals and blood-drenched tales.



The remaining four filters - (Sharp Rolloff, Slow Rolloff, Minimum Phase and Optimal Spectrum) - all have their own distinct sound. Optimal Spectrum, for example, is significantly sharper and more transparent giving a more CD-like reproduction.

Experimentation is definitely recommended here - and many will find different settings will suit particular genres of music or, indeed, the recording quality of individual tracks. Whichever you choose, what will become quickly evident is the Q-DAC's ability to take on and unravel complex pieces of music without sounding analytical or leaden-footed. Listen to Ornette Coleman's experimental 'Free Jazz' outing - two jazz quartets playing simultaneously through the left and right speakers - and it becomes surprisingly easy to track the individual players, the

Audiolab providing a high level of instrumental separation while never losing its grip on the subtle interplay going on between the individual musicians.

O-DAC AND M-PWR

The Q-DAC's variable output level control means it can also act as a pre-amp fed directly in to Audiolab's M-PWR. This is a 40 Watt per channel power amplifier with both RCA analogue and XLR balanced inputs — the latter for those wanting to pair it with something like the M-DAC.

Despite its relatively modest output rating, in use the M-PWR is a punchy performer. It has a clean, clear and crisp sound with a weighty and authoritative bass. Daft Punk's 'Random Access Memories' through the Q-DAC/M-PWR combination romped along in an infectious



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*subject to status **subject to conditions manner, the Audiolab duo making light of the changes in tempo and various multi-tracked effects.

Taken on its own, it's clear the M-PWR has a slightly dry presentation - but that actually works well with the relative warmth of the Q-DAC's Optimal Transient settings, the one unit neatly balancing the other's sound.

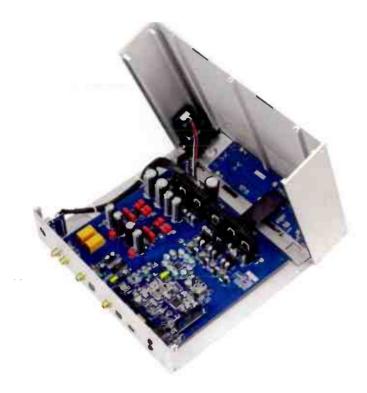
If there's one criticism it's that the M-PWR doesn't charge along with quite the verve of, say, a Naim amplifier. But, then again, it doesn't cost nearly as much and anyone pairing it with the more-thancapable Q-DAC would have the basis of a very good system at less than £1,000.

CONCLUSION

Audiolab's O-DAC is a very impressive piece of equipment. It takes all that's good about the company's renowned M-DAC, omits a few features but shaves a good chunk off the price.

It boasts a superb level of detail retrieval with excellent dynamics and an agile delivery - but stays precise and controlled at all times.

The various filter options also give the user the ability to tailor the sound to their individual taste which proves remarkably useful the more



you experiment.

Partner it with the M-PWR and you have the basis of a very good system indeed - one that sounds much more powerful and well-honed than its paper specifications might suggest.

In absolute terms the Q-DAC is the star of the show here

- and capable of being paired with amplifiers costing twice the price or more of the M-PWR.

But factor in their matching cosmetics and obvious synergy and it's easy to see why many people would look to pair them together. If that's you, the chances are you won't be disappointed.

AUDIOLAB Q-DAC £400









OUTSTANDING - amongst the hest

VALUE - keenly priced

VERDICT

All the sonic assurance of Audiolab's lauded M-DAC but with a saving of some £200 makes the Q-DAC a veritable bargain. One of the best DACs around at the price.

FOR

- detailed sound
- clean, clear presentation
- range of filter options
- pre-amp capability

AGAINST

- no remote
- little else at the price

MEASURED PERFORMANCE

Like the M-DAC tested in our Oct 13 issue, the Q-DAC has seven filters, three for optimal time domain response and the rest widest frequency response, with minor variations of behaviour within each filter set.

Optimal time domain filters avoid ringing, including pre ringing, and sound best, having an easier, more natural sound than traditional filters like Optimal Spectrum that give extended bandwidth, as used in CD players.

In the Q-DAC Optimal Spectrum possessed the widest bandwidth of 43kHz with 192kHz sample rate digital, and a slow roll down in output all the way up to the 96kHz upper theoretical limit.

The optimal time domain filters reduce bandwidth but this did not affect the audio band up to 20kHz with high resolution digital, using sample rates of 88.2kHz and above It is with CD that the optimal time domain filters affect audible response, rolling off audio above 8kHz. This gives an obviously warm sound, but also a more organic feel than is common from CD, as the admired Chord DAC64

Output at +4dB (maximum) on the

output level control measured a high 3.25V, and 2V at 0dB. The maximum setting raised the signal well above the output noise floor, giving the best measured EIAJ Dynamic Range value, an impressive 121dB with 24bit digital.

The TOSLINK optical digital input worked up to 176 4kHz sample rate, but would not accept 192kHz. The electrical input worked to 192kHz without difficulty though, as did USB.

Distortion levels were low, especially with 24bit, where the Q-DAC managed a -60dB value of just 0.02%. Just compare this with CD at 0.23% and you get some idea why high resolution digital is so much better than CD - ten times better in this area

The Q-DAC measured well in all respects, possessing a wide range of useful filters. It is little worse in performance than the more expensive M-DAC, so it looks to be good value. NK

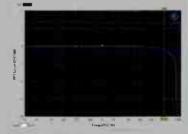
Frequency response (-1dB) 192k sample rate 2Hz-43kHz

Distortion (%) 0dB

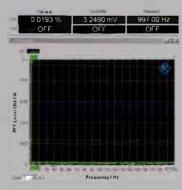
16/24 bit 0.002/0.002

0.23/0.02 -60dB Separation (1kHz) 115dB Noise (IEC A) -120dR Dynamic range (EIAJ) 121dB Outnut 3.2V

FREQUENCY RESPONSE



DISTORTION



AUDIOLAB M-PWR £500

OUTSTANDING - amongst

the best VERDICT

Assured power amplifier that sounds bigger than its specifications suggest. Good synergy with the Q-DAC.

FOR:

- big, powerful sound
- clean presentation
- matches Q-DAC

AGAINST:

- slightly dry sound - others have more rhythmic drive

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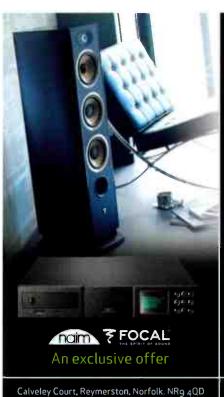
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BASICALLY





"Nashville was the store...if you had something to sell you had to go there"



Paul Rigby

hat's that Chinese curse, again? "May you live in interesting times". Well, there's nothing as interesting as failure and change. It illuminates. It teaches you about people, how they act and react, their strengths and weaknesses and how people and organisations adapt to

Success is boring to the outsider. It demands little from any individual except minor efforts to push the wheel to keep it moving in the right direction. Change, however, creates stories and legends. The original Chinese curse referred more to wars, famine and pestilence but the 1960s provided a whole new meaning to the notion of 'interesting times'.

Despite the fact that music fans bang on about the period - probably too much for some people - the '60s haven't received the cultural recognition that they deserve. That decade saw a major renaissance on a par, in my opinion, with the great Renaissance of the 14th-17th centuries. But because of mass media, cheap and available travel and the speed of communication, the evolution of this particular renaissance was compressed into little more than a decade. The '60s saw incredible upheavals in art, music, architecture, politics, social mores, technology and more.

What I find just as interesting are the changes that are not quantified, qualified or explained. We tend to hear about the headlines: The Beatles and The Stones; counterculture, feminism, spaceships and satire plus the mini skirt and the Mini car. What we miss are the less glamorous avenues of this tumultuous time.

Country music is one such subject that experienced serious ructions at this time, reflecting changes in society and the changing

expectations of the people involved, but the topic is neglected because of its complexity. I will have a stab at it, however.

Where to start? The structure and politics of country was changing during the '60s. The centre of power began to focus on Nashville.

"Nashville was the store" commented singer Willy Nelson. "If you had something to sell you had to go there".

This concentration wasn't a great move and it became the nub of country music's deflation. Think about it. One tiny area of the USA, a massive landmass, dominates an entire genre of music? You can see what's going to happen. The singers use the same studios, the same producers, the same session singers and songwriters...is it any wonder that the records all sounded the same? More than that, the genre went commercial, too commercial for some, entering the pop arena.

The labels themselves also suffered from a lack of imagination. At Columbia, label president Clive Davis appointed Bob Johnston as the new A&R chief in 1967 resulting in some of the worst country records ever made. Davis later wrote that Johnston, "...kept giving interviews saying how he was going to shake things up in Nashville". Instead, said Davis, "...very little was happening".

Anger started to rise from the fans and artists, who felt restricted. Singer Johnny Bush said of Johnston's successful predecessor Don Law, "do you know why A&R men like Don Law were so great? They kept their musicians to work it out. And let the artist be the artist".

Action was taken. An early move was the commercial introduction of country rock, a revolutionary change, at the time. Rockabilly could be called country rock at a pinch but, when we

discuss the genre, we normally refer to the conflation of country with the established rock genre of the time, as promoted by Gram Parsons via his International Submarine Band, the Flying Burrito Brothers and The Byrds. This 'longhair' country took a while to be accepted by both fans of country and rock but it was to become a central focus of the music industry with the onset of The Eagles, Doobie Brothers, Neil Young, Linda Ronstadt and more.

Country music also began to properly exploit the media for the first time. The '60s was the decade when all of the major country awards were set-up that elevated publicity and marketing for the genre.

Arguably more effective was country music on television.
Previously derided as 'hillbilly' music (something, it was perceived by Middle America, that would only be of interest to straw chewers and hicks) country music was attaining the sort of respectability that it had hungered after for many years as both Glenn Campbell and Johnny Cash hit the American screens late in the decade.

Angry 'core' artists also began to fight back with the introduction of the 'outlaw' singer such as Ray Price, Willy Nelson, Waylon Jennings, Kris Kristofferson, John Prine and the resurgent Johnny Cash. You could argue that these men saved country music from itself.

If you want to examine the history of country during this period then take a look at Bear Family's (www.bear-family.com) on-going, multivolume, 'Dim Lights, Thick Smoke And Hillbilly Music' series. Featuring around 30 tracks per CD, this latest batch of five volumes focuses on 1966-1970. Presented in hard covers and including 70-page plus minibooks, they are essential sources for the music historian.



VINYL REVIVAL

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"Musical instruments and our reponse to them extends into the ultrasonic spectrum"



Tony Bolton

ue to space considerations in the magazine it is impossible for me to list every component in the System Used boxes in the reviews, be they equipment supports or types of cable that connect up my hi-fi systems. Most are products that have impressed me during the reviewing process and I have acquired them because of what I consider to be their positive effects upon the sound of my hi-fis.

There are two components on my upstairs system that I haven't reviewed (because they have previously been covered by this magazine) that have become permanent fixtures over the last couple of years though, these being a pair of Townshend Maximum Super Tweeters. Their frequency response extends from 6kHz to 90kHz.

I was initially somewhat sceptical about these. After all, we have been told over the years by respected scientific opinion that the limits of human hearing are approximately 20-20,000Hz when our hearing is in good condition. Although I have done my best to protect my ears in noisy environments (I always take a pair of ear plugs to music events, just in case it is deafeningly loud) I am in my late 40s and there is a natural deterioration in human hearing as we get older. Therefore I was both pleased and intrigued to discover that running my system with the Supertweeters in place made a noticeable difference to the sound.

Obviously, given the frequency response of these components, I expected any alteration to the sound to be focussed on the midrange and the treble, but was pleasantly surprised to find that this change included an opening up of the bass sound as well, adding layers of texture to its tonal qualities. What

also surprised me was the fact that high-frequency sound, such as record surface noise, instead of being enhanced, was actually reduced in perceived presence and became less intrusive.

I was even more taken aback to discover that this effect was consistent whether I was playing full bandwidth modern recordings or 78s. The latter are supposed to have a limited frequency response (generally regarded as 3-5kHz for the best acoustic recordings, rising to 12kHz for electrically recorded discs up to the late '40s, and around 15kHz for later ones, particularly Decca FFRR records) topped with a mass of crackle and hiss. When played with the Supertweeters in use, the clarity and range of the music seemed to be increased and non-musical sonic disturbances appeared quite drastically reduced. So, over the last couple of years I have spent spare moments trawling the internet for answers to this seeming conundrum.

Some theories I have discounted since they are not backed by any form of scientific research – including one suggesting the hairs which begin to sprout from our ears later in life are nature's way of picking up high frequencies to compensate for hearing loss.

Max Townshend (manufacturer of the Supertweeters) pointed me in the direction of some research carried out in the 1990s by James Boyk of the California Institute of Technology called "There's Life Above 20 kilohertz!". (www.cco.caltech. edu/~boyk/spectra/spectra.htm). In this paper he explores the ultrasonic frequency response of various instruments, including the trumpet, french horn, violin, oboe, piano, crash cymbal, snare drum, claves and human voice as well as a jangled set of keys.

All of the above demonstrated various levels of power above 20kHz.

This varied from the french horn showing harmonics up to 55kHz, with 0.1% of its power being above 20kHz, through to the non-harmonic sounds of jangled keys (recording at least 10dB above the background noise up to 60kHz, with 68% power over 20kHz) and the crash cymbal (+10dB up to 102kHz, with 40% power over 20kHz). Human speech sibilants displayed greater than 10dB over the nose floor up to 40kHz, with 1.7% of power over 20kHz.

Having established these sounds existed in the supersonic spectrum, James Boyk then referenced some research by Tsutomi Oohashi, Emi Nishina, Norie Kawai, Yoshitaka Fuwamoto and Hiroshi Imai entitled "High-Frequency Sound Above the Audible Range Affects Brain Electric Activity and Sound Perception" (Audio Engineering Society preprint No. 3207 - 91st Convention, New York City - Abstract page 2.). This established that although we may not perceive our response to ultrasonics as 'hearing' them, we are aware of them and do respond to this form of stimulus..

This was followed by a reference to a paper published in "Science" where Lenhardt et al. report that "bone-conducted ultrasonic hearing has been found capable of supporting frequency discrimination in normal, older hearing-impaired and profoundly deaf human subjects." They also point out that the saccule has neural cross-connections with the cochlea.

So having established that both musical instruments and our response to their stimuli extend into the ultrasonic spectrum, I am now hunting around for further information on how we actually detect these short wavelengths.

I shall keep you advised of anything of interest that I may discover.

We do not sell these products. It is for your information only.

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

£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 6860 Innovative engineering gives a nimble, pacey 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.

£8,995 **MCINTOSH MT10** 2008 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 ontional £150 outboard power supply.

ACOUSTIC SOLID ONE 2007 €4,050 Huge tumtable, both in terms of sheer mass and sonic dynamics. Fit up to three arms and enjoy, just and clean sound. Rare in Europe, but big in Japan. 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 Design icon with superlative build. Sound is beautifully smooth, effortless and exceptionally expansive.

2005 **MARANTZ TT-15S1** £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 tumtables - on a budget. Top quality build and elegant design mean it's still the class of the mid-price field.



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

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 2800 CD version of the Technics SL-1200 tumtable. Massively built to withstand the rigours of 'pr' use and laden with facilities - a great eighties icon.

ROKSAN XERXES 1984 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.

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

MICHELL GYRODEC 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 Beautiful seventies high end belt drive with sweet



REGA PLANAR 3 1978 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 5800 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!

1978 The best 'all-in-one' tumtable 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

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 bought 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.



£400 **TECHNICS SP10** 1973 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 689 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

ARISTON RD11S 1972 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.

into the 21st century, albeit at a price

GOLDRING LENCO GL75 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

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 counterweight modification.

HELIUS OMEGA 2008

Stylish and solid lump of arm with fabulous build quality, that tums in a dynamic and weighty performance.

£1,595

AUDIO ORIGAMI PU7 2007

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



GRAHAM PHANTOM 2006 £3,160

Sonically stunning arm with magnificent bass dexterity and soudstaging. 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 alu-

minium 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 insiahtful.

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

1979

£113

SME SERIES III

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 F 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

Japanese design to Linn specs made for a muscular, 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 In another life, this sold for three times the price, 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 C N/A

This Tom Evans-designed black box started the trend for high performance offboard phono stages. Charismatic, musical and punchy - if lacking in



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 Supernait at half the price, this is powerful, articulate and smooth beyond class expectations.

MUSICAL FIOELITY 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.

2008

Brilliant value budget passive, with remote control, mute and input switching, plus an easy, a neutral

CAMBRIOGE 840A V2

Version 2 addresses version 1's weaknesses to turn in a mightily accomplished performance, offering power, finesse and detail.

SUGDEN IA4

2007 £3,650

Goodly 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 1010 2007 The clarity and openness of valves plus firm grip and fine detail make this a preamplifier masterclass.

AUDIOLAB 8000S 2006 £400

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 smoothnes. Lean, punchy and musical.



AUDIOLAB 8000A 1985

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 1980sminimalism 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

Madcap eighties minimalism, but a strong and tight performer all the same.

1983 ROTEL RA-820BX £139

Lively and clean budget integrated that arguably started the move to minimalism.

NAD 3020

1979 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

Lots of sensible facilities, a goodly 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.



SUGDEN 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.

SUGDEN A21

1969 £ N/A

Class A transistor integrated with an eminently likeable smoothness and musicality. Limited inputs via DIN sockets.

ROGERS CADET 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 FAN

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

POWER AMPLIFIERS

ELECTROCOMPANIET 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.

OUAD II-80

2005 26,000 PER PAIR

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



QUAD 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 MODEL 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 expenence.

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.

RADFORD 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.

QUAD 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-50D AMPLIFIERS

1973

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,

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

£22

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.

QUAD II 1952

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, TL/12 PLUS

1949

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

£150

Tonally grey but fine phono input and great facilities make it an excellent general purpose tool.

CROFT MICRO 1986

Budget valve pre-amp with exceptionally transparent performance.

CONRAD 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

Beautifully designed and built high end tube preamplifier with deliciously sweet and smooth sound. Not the last word in incision or grip.

A brave attemptto bring remote controlled userfriendliness 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.

OUAD 33 1968 £43

Better than the 22, but Quad's first tranny pre isn't outstanding. Responds well to tweaking/ rebuilding

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-fi!

QUAD 22 1958 £25

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

LOUDSPEAKERS

WHARFEDALE DIAMOND 10.3 2010 £290

Great small standmounters for audiophiles on a budget; dry punchy sound with impressive soundstaging at the price.

YAMAHA SOAVO 1.1 2009

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...

2009

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

Brilliant entry level electrostatics, giving a taste of loudspeaker esoterica for the price of most moving coil boxes. Tremendous clarity, eveness and delicacy, although not the world's most powerful sound.

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.

QUAO 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 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

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



MISSION X-SPACE £499 1999

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 hom 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 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

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

MISSION 770 1980 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 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!

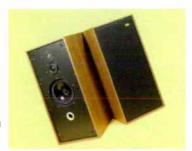


JR 149 1977 £120

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,

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 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

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

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 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 EACH

Warm sounding infinite baffle that, with a reasonably powerful amplifier can sound quite satisfying.

£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 UNITIQUTE £995 2010 Great little half width one-box system with truly

impressive sound allied to a wealth of source

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 it 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.

MERIOIAN FRO 2007 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'

fucid sound.

2007

£22,000 SANSUI TU-9900 1976 6300 A flagship Japanese tuner . It boasts superlative RF performance and an extremely smooth and

1999 Probably the best sounding CD recorder made; built like a brick with a true audiophile sound and HDCD compatibility.

£1100

MARANTZ DR-17

The combination of SA-7S1 disc player, SC-7S2 preamp and MA-9S2 monoblocks delivers jawdropping 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 2600 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 Sumptuous sound and top-notch build quality make for a tempting AM/FM package. Warm and richly detailed on good-quality music broadcasts.

£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

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.

197B MARANTZ ST-B £353 Marantz's finest radio moment. Warm, organic sound plus an oscilloscope for checking the signal strength and multipath.

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

SONY ST-5950 £222 1977 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 Superb mid-price British audiophile design, complete with understated black fascia. Smooth and sweet with fine dimensionality.



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

REVOX 8760 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 Series I an interesting ornament but limited to 88-100MHz only. II and III are arguably the bestsounding 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 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 2900 The best sounding MD deck ever, thanks to awesome build and heroic ATRAC-DSP Type R coding.

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



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

SONY TCD-B 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 CDZ3 1983 A riot of gold brushed aluminium and LEDs, this distinctive machine squeezed every last ounce from its 14x4 DAC -super musical



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

SONY CDP-R1/DAS-R1 1987 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 Inspired Stan Curtis redesign of Philips CD104, complete with switchable digital filter. Lean but tight and musical performer.



MERIDIAN MCD 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 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 paperbook-sized remote control.

YAMAHA CD-X1 1983 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 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

1989

Aiwa's Nak beater didn't, but it wasn't half bad nonetheless. Massive spec even included a 16x4

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 Early classic with ski-slope styling. Middling sonics by modern standards, but cool nonetheless!

SONY TC-377 1972 FN/A A competitor to the Akai 4000D 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 28.000 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 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.

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

QED DIGIT 1991 690

Budget bitstream performer with tweaks aplenty. Positron PSU upgrade makes it smooth, but now past it,

CABLES

MISSING LINK CRYO REFERENCE 2008

High end' interconnects, with deliciously smooth, open and subtle sound without a hint of edge.

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

VDH ULTIMATE THE FIRST 2004 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 £99/M 2003 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.

When a classic goes 'pooof' 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) Ouad 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 **CLASSIQUE SOUNDS** repairs. High quality special cartridges. Tel: 020 8688 6565 Email: thecartridgeman@talktalk.net

QUAD ELECTROACOUSTICS (Cambs)

www.thecartridgeman.com

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

(Paul Greenfield, Leicester) ESL-57s restored, rebuilt, fully renovated or improved. Leak, Quad valves amps

Tel: 0845 123 5137/ Mob: 0116 2835821

Email: classique_sounds@yahoo.co.uk www.flashbacksales.co.uk/classique

WEMBLEY LOUDSPEAKER

(Paul MacCallam, London) Comprehensive loudspeaker servicing. Tel: 020 8 743 4567 Email: paul@wembleyloudspeaker.co.uk www.wembleyloudspeaker.com

CLASSIC NAKAMICHI

(Paul Wilkins, Worthing. West Sussex). Restore, Repair & Service Nakamichi Cassette Decks. Tel: 01903 695695 Email: paul@bowersandwilkins.co.uk

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 Ils. Email: one.thing@ntlworld.com 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 Email: w.hodgson@btclick.com

REVOX

(Brian Reeves, Cheshire) Revox tape recorder spares, service and repair. Accessories also available. Tel: 0161 499 2349 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. Tel: 01473 252794 www.sowter.co.uk

LOCKWOOD AUDIO

(London) Tannoy loudspeaker parts, restoration and repair. Also Epos and TDL loudspeakers. 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. Tel: 01372 456921 Mobile: 07730 134973

Clear relay

It's small, cute and very convenient. Jon Myles is taken with the Mass Fidelity Relay Bluetooth receiver

ass Fidelity's Relay receiver is designed to do one thing – and one thing only.
That is to take a Bluetooth signal from your smartphone or laptop and relay it to a hi-fi.

Which, in the days of one box-can-do-everything units, may seem either restrictive or rather liberating. In the case of the Mass Fidelity it is the latter. Because it does what it does very well, maintaining the quality of a Bluetooth signal rather better than the one box-can-do-everything devices, when connecting mobile phone or computer to brocer his least your little more

for quality, £180 in this case, a price both QED and Cambridge Audio can improve upon.

If you haven't heard of Mass Fidelity before it's not a surprise. They are a Canadian start-up company — but their founders have a good track record in digital audio. Founder Ben Webster says: "We were determined to find a way of having it all — convenience and fidelity. It is from this inspiration that the Relay was born."

So what they've come up with is a palm-sized, aluminium-chassised unit (36mm high, 100mm wide and 115mm d. -p) which looks and tooks the radius of the chassillar than the very place.

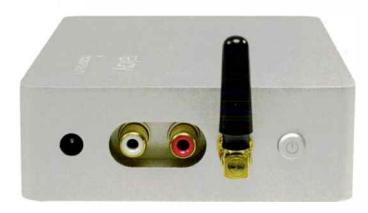
The front fascia is devoid of controls; there's just a small LED sitting on top of the unit. Around the back are the mains input, socket for the Bluetooth antenna (supplied) and one pair of analogue outputs for connection to an amplifier.

Inside the circuit is built around a single 24bit Burr-Brown chip. Power comes from a wall wart although Mass Fidelity says additional filtering circuits have been employed to keep the electrical supply clean and noise free.

PAIRING

The Mass Fidelity is simplicity itself to use Screw in the antenna plur it in and then turn on It immediately





goes into mating mode from which you only have to select the unit from your laptop/computer/phone.

It means anything you can stream through your device can be accessed via the Mass Fidelity Relay - be it Pandora, Spotify, internet radio stations, podcasts etc.

Pairing was easy and when done the Relay refreshingly never lost the connection while using a variety of iPhones, Android mobiles and both Mac and Windows laptops.

SOUND QUALITY

The Mass Fidelity came as a pleasant surprise.

While it will never beat a well-honed CD-dedicated or highresolution capable hi-fi system playing to the best of its abilities, its convenience, ease of use and overall competence more than made up for that.

Tonally, it is no slouch - and there's a pleasing amount of punch to its overall sound.

Paired with a MacBook Pro (with Apt-X) it made a decent fist of Daft Punk's 'Random Access Memories'. The synthesised bass was deep and the propulsive feel of the album rendered realistically throughout. The same went for Acoustic Ladyland's 'Last Chance Disco' - a decent amount of drive combined with nice, if not eye-popping, dynamics.

Trying exactly the same tracks via an iPhone revealed a dramatic difference. For some reason MacBooks support the Bluetooth Apt-X standard while iPhones do not. And it makes a difference.

Apt-X does give a better defined, more realistic soundstage. It also has the ability to extract extra detail from the source file.

Try a file from an Android mobile via Bluetooth with Apt-X and the same through an iPhone and you will soon

hear the difference.

But that gives an indication of just how good the Mass Fidelity is. It has enough definition to discriminate between sources but never makes anything sound bad. Part of that is due to the fact that its frequency extremes are limited; there is no deep bass nor extended treble on offer. Neither will you get the hear-through quality of more expensive units.

But that is not what the Mass Fidelity is about. Instead, what it does is allow anyone to arrive home, click a button on their mobile phone and hear music through their hi-fi at a better quality then we'd ever thought possible just a few years ago. Which, frankly, has to be a very good thing.

CONCLUSION

The Mass Fidelity Relay is a very impressive product. It combines convenience with impressive sound quality at the price.

If you want to get the most out of it then any source equipped with Bluetooth Apt-X is the best and will show a real difference.

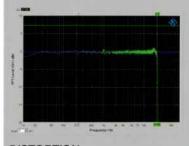
But even if that is not available then the Mass Fidelity has enough going for it to be a worthwhile buy.

"combines convenience with impressive sound quality at the price"

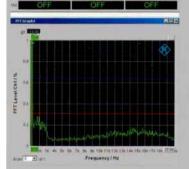
MEASURED PERFORMANCE

Bluetooth receivers compress audio to reduce data rate and the processing used raises noise and distortion. As a result even with 24bit resolution at 48kHz sample rate from an Astell&Kern AK120 portable player, the EIAJ Dynamic Range

FREQUENCY RESPONSE



DISTORTION



value was a mediocre 96.6dB, where around 102dB is expected from CD.

In absolute terms, however, this is still a fair result, and fairly good for a Bluetooth receiver. At -60dB there was no obvious distortion, the value measured being largely due to noise. Such noise will not be audible, so much as flatten imaging and reduce a sense of silence between transients.

With 48kHz sample rate, frequency response ran flat to 21.2kHz our white noise analysis shows - as good as CD.

Output was a healthy 1.9V, close to that of a CD player, so the Relay will work well with any amplifier.

The Relay measured well enough all round, giving a stable and distortion free performance, if one a bit limited in dynamic range, but this is a limitation of Bluetooth rather than the device. NK

Frequency response (-1dB)

5Hz-21.2kHz Distortion 0.01% OdB - 60dB 0.8% Separation (1kHz) 86dB Noise (IEC A) -95dB

Dynamic range (EIAJ)

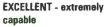
Output

MASS FIDELITY RELAY BLUETOOTH RECEIVER £180









VERDICT

A good way to bring Bluetooth to your hi-fi.

- small and neat
- trouble free pairing
- sound quality

AGAINST

- analogue output only
- dynamic range
- expensive

Advanced MP3 Players +44 (0)843 289 6880 www.advancedmp3players.co.uk

96.6dB

1.9V

vinyl section

contents

JANUARY 2014

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TIMESTEP RA POWER SUPPLY WITH TECHNICS SL-1200 MK2 TURNTABLE RA VERSION 86

Tony Bolton discovers a superb power supply upgrade for the Technics SL1200 Mk2 turntable

VTL TP-2.5 MKII PHONO STAGE 91
A new valve phono stage from U.S. based VTL reviewed by Paul Rigby



news



DORIS DUKE

Released on the Kent label, 'A Legend In Her Own Time' (acerecords.co.uk; 1975) is Duke's collaboration with Jerry 'Swamp Dogg' Williams Jr. Beset with personal problems, the record disappeared under a blanket of acrimony. Now rediscovered, this deep soul treasure features Dukes rich and passionate vocals. A powerful LP.











MOV VARIETY

New this month from Music On Vinyl is Bob Dylan's 'Desire' (1976), a real hodge podge of styles that might not gel but possess bags of charm.

Next, 'The Great Otis Redding Sings Soul Ballads' (1965), offering a superb blending of magnificently emotive vocals and Booker T & the MG's groovy backing.

The Stone Temple Pilots 'Core' (1992), pressed on transparent vinyl and individually numbered, does have its stale Pearl Jam moments but plenty of inspired, stylish highs too.

Graham Central Station's self-titled 1973 release was bass guitarist Larry Graham's, first post Sly and the Family Stone work. Offering plenty of grooves, it cries out for hooks but funk lovers will lap it up.

Finally, Faith No More's succinct and concentrated 'Album Of The Year' (1997) was an appropriate way to end the band's tenure as a going concern as it features a wealth of outstanding tracks.



ROCK ON

A trio of early records from Molly Hatchet from SPV (www.spv.de) includes albums: 'Molly Hatchet' (1978) taking southern rock direction from Mountain and the Allmans; 'Flirtin' With Disaster' (1979) a hard driving career highlight and 'Take No Prisoners' (1981) which may lack intensity but still provides many highpoints.

Also look out for Grim Reaper's 'Fear No Evil' (1985), the band's superb second album of British heavy metal, basic riffs with few refinements plus Edenbridge's new LP, 'The Bonding', a Nightwish-lite LP of symphonic goth metal. Not their strongest outing.



JAZZ TRIO

Three LPs from 1962 and the WaxTime label (www.discovery-records.com) includes John Coltrane's 'Ballads'. Too simplistic? Never. It remains a hugely enjoyable, warm LP that always shimmers.

Also look out for The Thelonious Monk

Quartet's
'Monk's Dream'.
All four players

shared an almost telepathic connection, resulting in a brilliant collection. No-matter how unpredictable Monk is on this LP, the guys are always in sync. Finally, Cannonball Adderley's 'And the Bossa Rio Sextet with Sergio Mendes' which suffered from a lack of rehearsal time and lacked pizazz.





DEMON'S FOGHAT

Demon (www.demonrecords. com) has launched a range of new vinyl reissues starting with Foghat's 'Fool For The City' (1975), the band's best album featuring a range of well crafted, flowing, rock tunes and including the radio favourite, 'Slow Ride'.

...AND FINALLY

Melt Yourself Down's self-titled LP (Leaf; www.theleaflabel.com), a selection of funked up vibes that stem from Central America, mutated with a jazz meets techno-dance core.

New from The Pet Shop Boys, 'Electric' (X2) swims in vintage synths, giving Daft Punk a run for their money. This high-energy electrodisco fun is a return to form.

Presenting a cast of thousands – well thirty-four, Go: Organic Orchestra's latest, 'Sonic Mandala' (Meta; eee.metarecords.com), combines world music, jazz and complex arrangements. Hypnotic at times.

As a follow-up to last year's Ultraísta album, 'Ultraísta Remixes' (Temporary Residence; temporaryresidence.com) sees Nigel Goodrich and Joey Waronker's work tweaked by the likes of Matthew Herbert, Prefuse 73 and Four Tet. Strong, rhythmic and, at times, quite compelling.

Exit Calm's 'The Future Isn't What It Used To Be' (Club AC30; www.clubac30.com) reflects Britpop laden, rhythmic beats, brooding vocals and soaring guitar chords. A work in progress but it'll be interesting to see where they go from here.

Stephen Kellogg's new album, 'Blunderstone Rookery' (www.stephenkellogg.com) has spawned a limited 10" EP, 'Thanksgiving' featuring largely understated songs. Introspection for American cultural navel-gazers.

Great name. Papernut Cambridge's 'Cambridge Nutflake' (Gare Du Nord; www.garedunordrecords.com) has a laid back, distortive, floaty vibe over slightly gritty arrangements. Only slightly, mind you...don't want to overdo it. An uplifting, sensory orgy.

New from Static Caravan (www.staticcaravan.org) The R.G. Morrison's 'Diamond Valley', alt.country LP is a considered, thoughtful release full of contemplation and reflection. A grown-up album.

François Bayle studied under Stockhausen and Messiaen. His avant-

garde opus, 'L'Expérience Acoustique' (Editions Mego; editionsmego.com), a three LP collection from 1970-1971, is a master musique concrète exhibition.

Under Editions Mego's Spectrum Spools imprint is Unicorn Hard-On's new LP, 'Weird Universe', an electronica fest that offers a mix of dry, claustrophobic tracks combined with retrostyled, Kraftwerk-like constructions.

New from NYMF (whose history stems from the group, Graviators) is 'From The Dark' (Headspin; www.headspinrecords.nl), a doom-laden, Black Sabbath-like, heavy rock album limited to just 200 copies. Great vocals, well produced and for doom rock, offers admirable diversity.

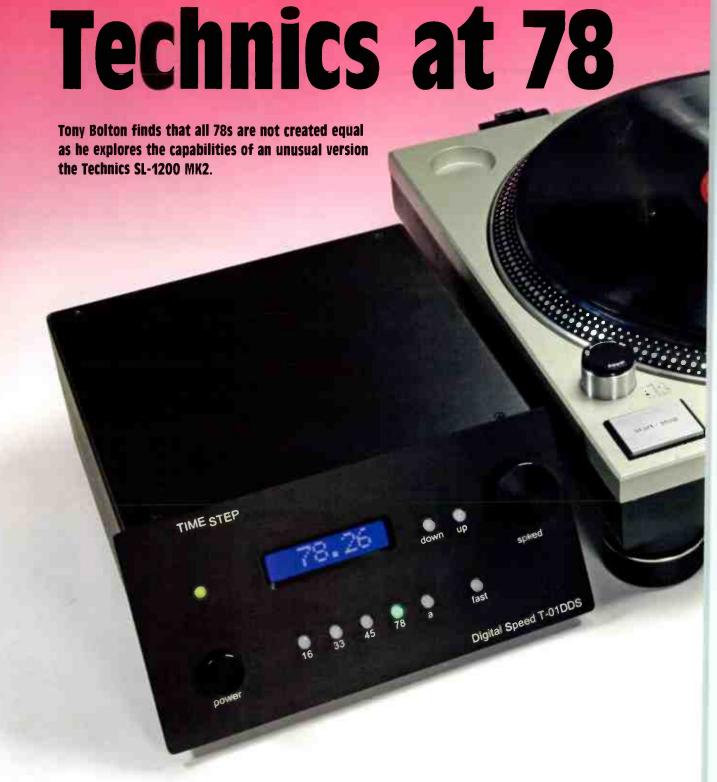
Baby Guru's 'Pieces' (Inner Ear; www.inner-ear.gr) uses a stripped psychedelic base to build

minimalist pop/rock that is almost Tortoise-lite in style.

From the same record label, the dense rock rhythms of The Callas' 'Am I Vertical' provides an almost languid approach to each song, nomatter what the tempo. Knowing and intense.

The new album from Jonny Cola & The A-Grades, 'Spitfire' (Scratchy Records; www.theagrades.net) is an album full of, well, old fashioned rock and roll. It's not innovative but it won't disappoint, either. I would like to see them reaching a little higher, next time, however.





s we settle into the 21st century we are used to having a fairly universal standard for most things in our lives from mains voltage through to the speed of revolution of a record. 33 1/3rpm has been a standard since it was first introduced in America in 1948. However, when dealing with 78rpm discs, this consistency only applies from the early 1940s when 78rpm was agreed as a standard. In

fact the vast majority of records had been recorded at this speed since the late 1920s, however there had still been a few examples that played at an unusual speed. Prior to the late '20s, the situation was a lot more complex (see Box Out).

With this in mind Timestep have introduced a version of the Technics SL-1200 MK2 turntable (and the black SL-1210 variant), fitted with an outboard speed controller that covers all speeds from 14rpm

to 170rpm. The RA (Restore and Archive) deck consists of a standard Technics SL-1200 or 1210 that has the arm replaced with the new SME M2-9RT that is supplied to Timestep without a headshell or arm lead. Timestep then fit their own mounting plate, arm lead and headshells, prefitted with the cartridge of your choice from a range of Stanton MMs or an Audio Technica Mono SP MC. The latter has a spherical 2.5mil tip, while the Stanton can be fitted with a



"had the effect of tightening the beat and the relationship between the performers so that they sounded like a group of professional musicians, rather than talented amateurs."

selection of tips depending upon the age (and therefore the groove size) of the records to be played.

The onboard slider for the pitch control, fitted as standard to the turntable, becomes redundant as soon as the Timestep T-01DDS Speed Controller is plugged in. (DDS stands for Direct Digital Synthesiser.) This freestanding device has a selection of buttons across the front for the four well known speeds, alongside a rotary control and two push buttons (marked 'down' and 'up') to adjust the speed to non-standard settings. This can be done in either 0.01 rpm increments or in steps of Irpm by pressing the 'fast' button on the facia. The speed chosen is Indicated in a screen on the facia.

Apart from the arm and the speed controller this deck was also fitted with an Oyaide Tungsten/Butyl

Precision mat BR-12 at £90.00, and a new precision Timestep bearing at £249.00.

Each deck is custom made to the purchaser's requirements with quite a range of different options that are too many to list here. For those who wish to play 78s without going to this level of expense, Timestep offer a 78rpm modification to Technics decks for £399.00 including fitting.

This example was set up in place of the Clearaudio on my downstairs system feeding into the Leema Acoustics Agena phonostage. The multiple headshell facility on this made swapping cartridges and matching them electronically a matter of moments, so I was able to work my way through the variety of cartridges and stylus profiles that Timestep supplied with the turntable.

Stylus profiles are of vital

importance when reproducing 78s, acoustic ones requiring a 0.0040" tip, 1925 to 1939 editions use a 0.0035" one and 40s and 50s discs need a 0.0028" tip. Playing an acoustic disc with a 1950s profiled tip will result in the needle running on the bottom of the groove and the noise level being unnecessarily intrusive.

A 1911 issue of 'The Valkyrie' demonstrated this very ably. The signal to noise ratio of acoustic discs is always relatively poor but using any other than the 4.0 x 1.0 elliptical stylus on one of the Stanton cartridges put the noise well in front of the music, making it nearly unlistenable to. Whereas the correct profile reversed this to the extent that the noise was present but did not interfere with the music.

Correcting the speed to 79rpm, as advised by the 1911 Gramophone

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Co. Ltd. catalogue, had the effect of tightening the beat and the relationship between the performers so that they sounded like a group of professional musicians, rather than talented amateurs.

This became even more obvious when playing a 1927 Columbia recording of the Halle Orchestra performing 'A Trumpet Voluntary'. Played at 78rpm, the trumpet sounded as though it was being played very carefully, by someone who was sight-reading the music unrehearsed. Replayed at the correct speed of 80rpm, the presentation of the music altered to sound like a group of well rehearsed and experienced musicians. The organ accompaniment on this record (recorded in the sadly long gone Free Trade Hall in Manchester) was murky and indistinct at 78. At 80 it still sounded somewhat obscured, but had far better definition

Achieving the correct speed on discs that do not have this marked, is, to some extent, a case of trial and error. However, there is a point where things sound 'right'. The music or voices have a natural sounding flow to them and the words become



This is a typical pre September 1927 Columbia record, revolving at 80rpm. After this date Columbia discs were recorded at 78rpm.

more intelligible, rather than sounding slightly gabbled or slurred. Harry Welchman's vocals in the 1927 London cast recording of selections from 'The Desert Song' sounded prosaic at 78rpm, but gained urgency and excitement when played at the correct 80rpm.

Even small changes in speed can tighten a performance. In the UK, 78 is actually 77.92rpm courtesy of our 50 Hertz mains frequency. In America,



the 60 Hertz mains frequency results in a 78.26rpm rotational speed. Prior to the introduction of tape into the studios, which allowed for remastering in different countries, the only way of pressing an American disc in the UK was to ship a stamper across the Atlantic. This means that British releases of American artists such as HMV's 1940 release

This is where a turntable such as the Timestep RA will appeal to purists as well as those who are serious for either personal or professional reasons, about achieving the correct velocity and pitch.

This turntable will also deal with oddities such as the Prestige releases of 'Miles Davis and the Modern Jazz Giants' at 16 2/3rpm. This speed was

PITCH

It is possible to find the correct speed of a record by using the pitch of the instruments. However, there are traps that are easy to fall into. The note A is nowadays regarded as being 440Hz but over the years different countries have used different pitches to tune to. In England live broadcasts were often tuned to A = 438.5Hz, while in Germany the average was A = 441.2Hz.

Prior to 1939, British Concert Pitch (or New Philharmonic Pitch) was A = 435Hz at 60 degrees Fahrenheit. An international agreement in that year rounded this up to A = 440 at 68 degrees F. In recent years both the Berlin Philharmonic and the Philadelphia Orchestras use A = 444Hz.

British military bands and some others were known to tune to "Old Philharmonic Pitch" or "Sharp Pitch" before 1929 where A could be between 452.5 and 454Hz. Also, acoustic recording studios were usually kept very hot (90 degrees F being not uncommon) to keep the wax masters soft enough to cut properly. This temperature would make a 440Hz pitch rise to over 450Hz.

So comparing a modern recording with the old one to ascertain the correct pitch may result in quite a considerable error.

of Muggsy Spanier's 'I Wish I Could Shimmy Like My Sister Kate' should be played at 78.26rpm. The difference in sound quality, although small is still subtly noticeable, with greater snap to the beat, and a sensation of more precision in the performance.

This does not just apply to standard groove records. I have seen reports that Miles Davis's 'Kind Of Blue', and various Pink Floyd releases are not recorded at 33 I/3rpm, but can be either a semitone high or low at this speed depending upon the disc in question.

originally developed by Chrysler for the Highway Hi-Fi in-car system but the machinery was poorly implemented and failed to sell. This speed was eventually used for talking books for the blind until cassette tapes replaced it. I was surprised at the level of fidelity that this slow

achieved, although

revolving disc

The new SME M2-9RT arm fits very neatly onto Timestep's own mounting plate. The headshell is detachable, making swapping between different cartridges and stylus profiles very easy.



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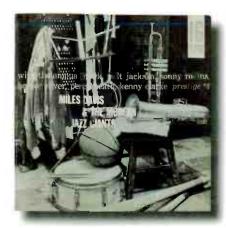


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FROM MAINS TO MUSIC

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Miles Davis at 16 2/3rpm. This was part of a limited series of releases at this speed on the Prestige label. This one dates from 1957.

SPEED

From the early days of recorded audio each record company had its own views regarding recording speed and there was sometimes little consistency between discs issued by the same manufacturer.

Prior to 1912, The Gramophone Co. Ltd (also known colloquially as HMV) had used a variety of speeds but rarely marked them on the discs. After that date it stuck pretty much consistently to 78 but later reissues may be incorrectly marked as playing at this speed.

Columbia recorded at 80rnm until 1st September 1927 when 78 was adopted as their standard speed. It should be noted that later reissues of 80rpm recordings were often incorrectly labelled as 78rpm so the matrix numbers offer the best guide as to speed, WA6100 (10 inch) and WAX3036 (12 inch) were the first discs to be issued at 78rnm.

Grammovox, and it's post First World War derivative, Imperial used 77rpm.

Vocation, and their offshoots, Broadcast, Aco and Coliseum all used 80rpm, as did Actuelle. British, Grafton and Homochord

Edison-Bell, and their successors Velvet Face and Winner tend to be around 84rpm but can varv.

American Victor discs, certainly in the acoustic era were often recorded at 76rpm but intended to be reproduced at 78rpm so that they would sound "more brilliant" As far as I can ascertain this practice did not continue into the electrical recording era.

All of the above records are laterally cut. The main users of vertical or 'Hill and Dale' cutting were Pathe of France and Edison in America with the Diamond Disc. The former can vary between 90 to 100rpm (pre 1916, usually with embossed labels). Later recordings (with paper labels) run at 80rpm. Diamond Discs also run at 80rpm.

not as good as the 33 1/3rpm versions, it was still of very acceptable sound quality.

I am very impressed with this machine. Having been spinning records at all three speeds for most of my life and on a very wide range of equipment, I can honestly say that this record player has given me the best '78' sound that I have ever heard and has further enhanced my appreciation of the capabilities of the format. It also gives excellent microgroove replay, although the configuration is not optimised for this purpose.

It is aimed at the professional archivist, and several are already in use in national libraries and archives around the world. However, unlike some professional turntables, this one fits physically and aesthetically into the domestic environment and I can thoroughly recommend anyone who takes their standard groove replay seriously to consider investing in one. I have used it at all speeds with excellent results and if you only have funds or space for one deck and want to get the best out of your '78' records and very good reproduction from your microgroove ones, then the Timestep RA is the best turntable that I have yet used for the purpose.



Before 1912, Gramophone Co. Ltd. (HMV) records were recorded at a variety of speeds. They were not displayed on the label but listed in the Company's record catalogues. The 1911 catalogue (available as a PDF here: http://sounds.bl.uk/related-content/TEXTS/029I-HMVGX1911XXX-0000A0.pdf) lists this record on page 9 and advises that the speed is 79rpm. A quick read through shows the wide variety of speeds that The Gramophone Co. Ltd. used at the time.

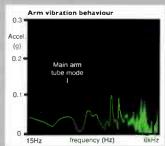
SYSTEM USED

Leema Acoustics Agena phonostage and Tucana II amplifier. Chario Ursa Major loudspeakers.

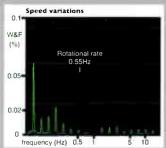
MEASURED PERFORMANCE

Speed accuracy of the SL-1200 MK2 RA turntable was excellent, a negligibly small +0.1% fast - this is within test disc error. Speed variations were very low at 0.08% wow, the main rotational component at 0.55Hz (33rpm) remaining perfectly stable in level on our spectrum

ARM VIBRATION



WOW & FLUTTER



analyser, where it usually fluctuates wildly with belt drives.

Close inspection of our speed variation analysis shows only frequency modulation sidebands at multiples of 0.55Hz and no wow or flutter components, so it is difficult to say there's any measurable speed variation, except that from test disc eccentricity, even though the disc was centred, a superb result.

The original SME M2 arm tube rang quite strongly but SME now damp this tube internally and our vibrational analysis clearly shows there are no major vibrational peaks, only a series of low level perturbations. The one piece solid headshell shows little sign of resonant modes

The modified turntable is remarkably speed-stable and the best we have ever measured in this respect, looking cleaner than standard Technics SL-1200 MK2 Direct Drives. The SME arm reaches a high standard too, both items measuring extremely well. NK

Speed +0.1% W&F (total, weighted) 0.06% Wow 0.08% Flutter 0.04%

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Back To Basics

he VTL TP-2.5 Series II valve phono stage is quite a departure from its predecessor, being a trickle down project, a simplification of the more expensive VTL TP-6.5 (£8,350), but costing substantially less at £2,250.

The rear of the TP-2.5 II chassis, spanning 482 x 355 x 95mm and weighing in at 11kg, features standard phonostage connections with a removable power lead and bespoke sockets.

"They are mounted straight to the chassis" said Luke Manley, VTL owner and Manager of Engineering for the outfit. "The PCB hangs off those. Stresses are removed because you are not pushing on the board or waiting for the jacks to fall off from heavy cable overuse".

On the front of the chassis is a three-way switch featuring: mute, operating and 'rumble' cut. Luke explained,"we wanted to use a hard toggle switch to avoid using microprocessors to circumvent noise getting into the phono signal".

The 'rumble' option is aimed at those playing warped records, cutting the bass response.

"Some people don't like to see

their woofers move. They think it causes distortion in their power amp and maybe turntables of that price-point don't have a substantial clamping system" said Luke.

Opening the chassis means tackling numerous screws. "That's mainly chassis bracing. There's a heavy toroidal transformer in there that could warp, so we braced it. We must have had a deal on screws that day" joked Luke.

Loading is changed via jumpers on the circuit board spanning: 100 Ohms, 250 Ohms, 470 Ohms, 1k

Ohms, 4k7 Ohms and 47k Ohms for MC, with 47k Ohms and 100k Ohms for MM. Specific loading can be achieved through a VTL dealer.

"If you have a cartridge rated at 473.56 Ohms, say, we can fit a resistor for that figure", said Luke.

The guts of the phono amp runs ECC82 and ECC83 valves but the signal has to initially move through a JFET, "They are more like valves in terms of how they operate" said Luke, "they are normally 'On' devices. They conduct as soon as you turn them on, so you don't have to bias them. JFETs are an amplifier and you need high current to resolve the tiny cartridge distances in an MC cartridge. JFETs are also great for noise levels. All valve phonostages can produce noise, producing more than transistors. Using a JFET in the first stage, combined with our ECC82 (which



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has a good linear operating range) gives us a phonostage of around 20dB amplification".

SOUND QUALITY

Sound testing began with Nina
Simone's title track from the 1971
album 'Here Comes The Sun',
which suffers from a measure of
compression and excess vocal reverb
so getting the best from it is a task
for any phonostage. This choice
was somewhat guided by the VTL.
I couldn't dip into my mono disc
collection because the TP-2.5 II has
no mono/stereo switch.

Despite being slightly hissy at higher volumes, the VTL allowed the song to progresses, despite the noise, without undue rush or stress.

The complex start to the song was easily tracked: the subtle bass guitar and piano sequence, the bell reverb that flowed into Simone's low-key finger clicks and then into drums is a sequence that can easily be muddled — the VTL exhibited no such problem. In fact, its easy-going nature enhanced the characterful percussion while the intricate piano solo and secondary percussion exemplified the more than admirable tonal balance, imagery and instrumental separation.

The track was presented as a cohesive whole, no one frequency or instrument dominated. Most noticeable was the treble that was both delicate and informative, providing a refined playback that I found delightful. This jazz/soul interpretation had a particularly laidback ambience via the VTL.

Moving to the hard/prog rock of Byzantium's 1972, self-titled album (featuring future Blockhead Chas Jankel) and 'Flashing Silver Hope', the first impression was a great sense of focus that was demonstrated by the lead vocal whose delivery was quite articulate and free from unruly frequencies.

Similarly, the electric guitar provided estimable precision but there was a slight lack of involvement, despite the VTL's admirable sense of clarity, which was due to a relative lack of weight and drive compared

to the exuberance of my Icon PS3 reference.

Turning to the Wilson-Benesch turntable and Yehudi Menuhin's 'Mendelssohn & Bruch, Violin Concertos', the VTL was on firmer ground. Initially tackling the orchestral introduction, the backing strings, via the VTL, established an early, flowing sweep that sustained itself throughout the track, no matter what the prevailing mood.

Crescendos, meanwhile, added real urgency while the clean, clear upper mids offered a smooth presentation.

During Menuhin's solos, the sense of bow striking the violin's strings was well conveyed, there was a superb sense of imagery, giving the ear a clear picture of the event. The more emotional sections of

these recordings pulled at my heart, becoming poignant.

CONCLUSION

Despite the basic chassis construction, rather basic loading/gain adjusters and noise issues, there is a lot to admire in the VTL TP-2.5 Series II. It shows both finesse and elegance when tackling more sedate, considered tracks or works that

require an incisive examination of the detail within.

It's well-defined image creation and detail retrieval is excellent while its general presentation is both confident and rhythmically compelling.

SYSTEM USED

Origin Sovereign/Enterprise 12"/Benz Glider Wilson Benesch Full Circle/A.C.T. 0.5/Ply Icon Audio PS3 phonostage Avid Pellare phonostage Aesthetix Calypso pre-amp Icon Audio MB 845 Mk.II monoblocks Quad ESL-57 speakers with One Thing mods Hi-End Racks shelving Atlas cabling

MEASURED PERFORMANCE

Gain was low for MM at x128 (42dB), but this is a common enough figure. With amplifiers of low gain (400mV input sensitivity) volume will have to be turned up.

Gain was selectable internally for MC, measuring a low x886 (59dB) and a more useful x1680 (64dB). MC gain usually ranges from 1000 to 3000 (60dB-70dB) so the VTL TP-2.5II is at the low end of the gain scale and suited to relatively high output MC cartridges.

Equivalent input noise on MC measured 0.3µV, 9dB higher than expected, and this also militates for a high output Ortofon MC, or similar. Slight background hiss may be apparent even with high output MC cartridges.

Equalisation was accurate, our analysis shows, so the VTL will sound tonally balanced — neither bright nor dull. Switching in the Rumble (low frequency) filter rolls off bass below 40Hz, introducing -8dB of attenuation at 5Hz where LP warp signals are strongest, enough to substantially reduce cone flap in reflex loudspeakers. Why they call it "rumble" I don't know because such high-pass filters are to suppress subsonic LP warp signals (and modern turntables don't rumble in any case).

The VTL TP-2.5II avoids using input transformers and is noisier as a result.

Otherwise, it measures well in all oreas and should give good sound quality. NK

MM/MC

 Frequency response
 20Hz-20kHz

 Separation
 82/67dB

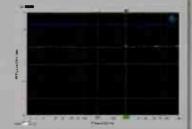
 Noise (e.i.n.)
 0.7μV/0.3μV

 Distortion
 0.08%

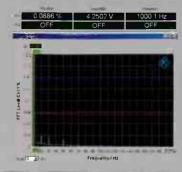
 Gain
 x128 / x886 / x1680

 Overload
 22V out

FREQUENCY RESPONSE



DISTORTION



VTL TP-2.5 SERIES II £2.700



EXCELLENT - extremely capable

VERDICT

With an emphasis on sonios, this simply styled phonostage offers detailed, open and perceptive sound quality.

FOR

- open, smooth mids
- delicate treble
- imagery

AGAINST

- prosaic styling
- no mono/stereo switch
- noise

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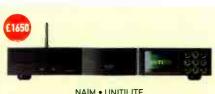
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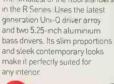
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Kicking off the digital revolution

Martin Pipe revisits Sony's CDP-101 - the first commercially-available CD player — thirty years on.



hree decades ago, CD was launched amidst much fan-fare in the UK to become an iconic Eighties technology. Admittedly, prestige LPs had been digitally-mastered for nearly a decade previously, but in 1983 the man in the street with several hundred pounds to spare could enjoy digital playback in the home for the first time.

The mainstream hi-fi industry responded by labelling practically every new amp and speaker as being 'digital-ready'. Then there were all of the advertising claims, including

Philips since-scorned 'perfect sound forever' slogan.

And who can forget the infamous 1981 Tomorrow's World demonstration during which future Ballykissangel creator Kieran Prendiville smeared strawberry jam over a Bee Gees CD testpressing? Despite its notorious status, this demo is not available as a YouTube clip - or even on the BBC Tomorrow's World archive pages.

Competing digital formats faded into obscurity. Few, for example, remember the Soundstream Audiofile. Developed by the same American

audio company that built early studio recording and editing systems, the Audiofile system relied on a card to store audio. Although it pointed to the future in some way - SD cards and USB sticks are commonplace nowadays - the Audiofile card, which measured five inches by three, had the digital audio stored in a highresolution photographic format. In a nod to CD, the card's bit pattern was read by laser. Up to 45 minutes (the capacity of a typical vinyl LP) of PCM audio could be accommodated, with 16bit resolution and a sampling rate of 50kHz. Soundstream reckoned that the card's 600MB capacity also made it ideal for archival purposes (the computerised equivalent of a microfilm, if you will).

Then there was JVC's stylus-read AHD (Audio High Density) discs; the same basic format was touted for video playback (VHD).VHD was to compete with RCA's conceptually-similar Selectavision videodisc (which failed, nearly bringing the mighty American corporation to its knees) and the sophisticated laser-read Philips Laservision system.

Various Japanese systems that used Philips-standard metal-formulation compact cassettes (or, in one Matsushita/Technics example, a microcassette).

On top of these were PCM adaptors for VCRs, like the Sony PCM-701ES we examined in a previous article. Although the latter

were intended for home-use digital recording, at least one small label released 'albums' on videocassettes - which disappeared almost as quickly as pre-recorded DAT tapes did a few years later.

Laservision hardly fulfilled Philips' dreams of worldwide domination even after the late-1980s addition of CD-quality PCM audio - although Pioneer did take the LP-sized format under its arm and, after rebranding it Laserdisc, successfully-promoted it as a home-cinema staple until DVD's release. There were far too many marketing delays on the part of Philips, and following its eventual 1982 UK launch most consumers bought a VCR instead. Sure, the picture quality wasn't as good (and you didn't get the near hi-fi stereo sound) but you could at least make your own recordings.

But all wasn't lost. Laservision gave the Dutch company a lot of useful experience with lasers, servos, optical disc-mastering and replication that was to come in useful. For in the late 1970s, it joined forces with Sony to develop a playback-only digital audio disc – the 5in, wonder that would become CD.

Although Philips started its own initiative in 1974, Sony had demonstrated a digital audio disc prototype as far back as 1976, and in the meantime it had gained a considerable amount of experience with digital audio processing. Tellingly, both companies had record-company ties – Polydor was owned by Philips, while Sony had formed a Japanese joint-venture company with CBS (it subsequently acquired CBS Records in 1987). This gave them access to libraries of music to release on CD.

Meanwhile, the fruits of this collaboration gradually took shape publicly. Across the late 1970s and early 1980s, pictures of prototype players and discs were issued to the press to keep interest buoyant - as time went by, they looked more sophisticated and closer to 'real' products. Sony and Philips gave CD demonstrations to hi-fi and technology journalists, although what looked like a commerciallyviable player in at least one demo was sneakily-connected via an umbilical link to a large collection of electronics concealed under the

Eventually, though, the problems were cracked. The Compact Disc and underlying 'Red Book' standard made their eagerly-anticipated Japanese



The source of the well-known myth that CD's 'perfect sound lasts forever'. Here's Sony ad for the CDP-101 player, as it appeared in British hi-fi magazines during the spring of 1983. That era's exciting high-tech is alas today's museum-piece...

debut on October 1st 1982, although hi-fi buyers in Europe and the US had to wait until 1st March 1983 for CD's arrival.

SONY'S FIRST CD PLAYER

Sony's CDP-101, as featured here, was the first player commercially available in Japan – and is thus an audio milestone. On the same day that it launched (with a 168,000-yen price tag), a Japanese consumer could also pick up a copy of Billy Joel's 52nd Street. Reinforcing the point made earlier, Joel recorded for Columbia – which was a CBS label.

There weren't a huge number of discs to choose from initially; even by the time CD came to the UK, only 200 or so titles (covering a wide range of genres) were available. On that date, UK consumers had a choice of several players: in addition to the CDP-101 there was Hitachi's DA1000, Philips' CD100, Marantz's CD73 and Toshiba's XR-Z90. All had solid-state lasers – a far cry from the cumbersome helium-neon tubes that early Philips Laservision players relied on.

Examine the CDP-101 today, and you'll see how it influenced industry design methods. Indeed, it doesn't look that old-fashioned even now. While most of the early players had a hinged lid mounted on the front or top to conceal the disc compartment, the CDP-101 had a motorised loading drawer – unusually, the button for retracting or releasing it is

on the drawer itself.

Admittedly, the European Marantz CD73 also had a drawer-loading system, but the Sony was the only player of the group to provide as standard infra-red remote control – at that time, usually confined highend TVs and VCRs.

There was numerical tracknumber and time indication, shown



Very much a deluxe item. This full-function infrared handset could operate all of the CDP-101's key functions from the comfort of your armchair. We take such convenience for granted today, but the CDP-101 was the only first-gen CD player to offer remote control as standard.

by front-panel fluorescent displays.

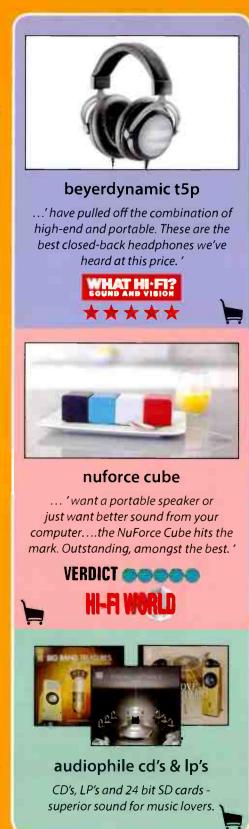
Sony may have put a lot of thought into the CDP-101, but it doesn't take full advantage of CD's random-access nature. You cannot, in other words, pre-set a selection of tracks to play in the desired order.

The CDP-101 used a 'true' 16bit digital-to-analogue converter,

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compared to the 14bit converters and 4x oversampling of Philips and Marantz machines. I deliberately say 'converter' in the singular sense, because the Sony 'time-shared' one of these chips (a CX20017, as used in PCM processors like the aforementioned PCM-701ES) between the left and right channels. 16bit DACs were expensive to realise at the time, and this arrangement saved money at the expense of a 11-microsecond 'lag' between the channels – this was negligible, and had no impact on stereo imaging.

Each channel of converted audio then passed through a simple analogue low-pass filter, automatically-switched de-emphasis network (for the few CDs, typically Japanese releases, that employed pre-emphasis to enhance the signal-to-noise ratio) and output stage. The result was fed to your amp via a pair of gold-plated phono sockets — no digital outputs here! Line levels were fixed, although you did get a headphone socket with volume control.

It's the build quality and attention to detail that really impress. Everything is built to last here, as the 7.6kg weight suggests; the disc tray is metal rather than plastic, and moves with a silky smoothness. On the underside of the player is a switch engaging or disengaging the 'bleeper' that audibly confirms when a handset command is being received.

Other switches compensate for vibrations (why – this isn't an in-car player?) and engage an 'auto-pause' mode. A few examples had a 'sync out' jack to ease the process of recording tracks with a compatible Sony cassette deck, although all were equipped with a mysterious 'accessory' connector for 'optional equipment' that never appeared. Someone was rumoured to have developed a digital audio output module that plugged into this socket, but it didn't see the light of day.

What's incredible is that my example, an Audiojumble 'find', still works today. Not bad for a consumer-electronics product that is three decades old – it's a testimony to Sony's superb engineering and manufacturing skills. Despite its expense (£500 at launch, or approximately £2,000 today), a fair number were sold and they're surprisingly-common second-hand buys in 2013.

These players suffer some common ailments, the descriptions of which tend to mirror the comments applied to 'not working' examples on



Exceptionally well-built, the CDP-101 should still be capable of giving results if it's looked after. Not bad for a complex product that's now thirty years old. In terms of sound quality, though, it has been eclipsed by modern hardware

eBay.

First of all, the grease used in the mechanics tends to go hard - the result is a tray that won't open. This gunk needs to be cleaned off and the mechanics regreased. I can tell you that it's not a particularly involved job, as I had to do it on my CDP-101.

Another problem is a pair of dual power op-amps that look after the various motors and focus/ tracking coils. Mounted on the 'servo amp board' that's visible with the top cover removed, these large components tend to fail. They are indicated on the board as IC204 and IC304 (the former is most likely to be affected, although IC304 will probably snuff it if you keep trying to open a 'stuck' drawer!).

Recognising a possible flaw here, Sony changed the chips during production – mine had the newer devices fitted during the course of a previous repair – but even these replacements are alas no longer available. Fortunately, you can 'bodge' it with alternatives like the LM1875 audio amp (see http://www.tronola.com/Saving_the_Sony_CDP-101_CD_Player.pdf) or L272 dual power op-amp. Fortunately, the player's sledmounted laser and motors are more reliable.

Is all that effort worth it? From a historical perspective, yes. There are those who like to keep old clocks, TVs, horn gramophones, tools and tubed wireless sets going even though their modern equivalents are capable of superior performance.

The same is true of our CDP-101. Compared to a modern player, this first-generation Sony sounds hard, gritty and – ultimately - fatiguing. I found that passing its audio through a Z-Man Audio Signal Enhancer (basically, a two-channel triode buffer) 'smoothed over' the player's rough edges and restored warmth to the sound.

Similarly, recording CDs onto analogue reel-to-reel tape made them more listenable. I'm talking about recent CDs here (note in passing that the CDP-101 can handle CD-Rs, but not CD-RWs); most early CDs were terrible and must have further compounded the deficiencies of the era's players.

But let's put it all into perspective. The CDP-101 sounds very different to the good vinyl playback system that nearly all hifi enthusiasts would have owned or aspired to at the time, and it was this character that endeared the budding format to some early adopters while alienating others. The naysayers claimed that CD's upfront and comparatively-analytical nature yielded an unemotional detachment from the music, despite the system's obvious practical advantages that won it support among nearly everyone else. No pops, no scratches, no locked-grooves, a complete freedom from wow and flutter, a wide potential dynamic range and frequency response, quick track access and no need to physically-flip the record over at the end of a side.

And CDs were reliable, provided you looked after them – unless yours were among the few titles that succumbed to 'laser rot'.

Sony's CDP-101 kicked off the digital revolution – and its ramifications are still with us.

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HI-END RACKS 20/20 STUDIO REFERENCE \$3,850.65 (THREE-SHELF SYSTEM WITH 20CM RACKS)

Hi-End Racks produce a new range of system supports that promise sonic improvements. The company is heavy on the acronym front — Multi-

Layer Resonance Neutralisation Technology (MLRNT), Structural Resonance Isolation Technology (SRIT) being just two of them – but their products have a quality feel about them and are well produced.

The 20/20 Studio Reference is a three-shelf rack employing rigid frame support with the aforesaid MLRNT and SRIT technologies providing the damping to produce an inert platform for your electronics.

The rack is available in Maple or Rosewood with aluminium or black additions — and the suggested configuration can be varied along with the price.

The company is based in Mexico City but shipping to Europe is easily arranged. My review sample arrived in perfect condition and set-up was easy.

In use, it made an immediate difference. Playing The Who's dynamic 'Pinball Wizard' on my Densen B-475 CD player and using an Avid Isorak as a support reference, the Hi-End Rack had an incredibly clean aura to it.

Pete Townshend's distinctive.

energetic guitar work was easily delineated, while John Entwistle's bass guitar provided an assured foundation to the sound.

Switching to vinyl via a Wilson Benesch Full Circle and Anita O'Day's 'S'Wonderful' sounded positively buoyant and carefree. There was no sense of O'Day being chained to her backing instruments as the vocals rang out clean and clear.

Here, piano successfully displayed good separation, avoiding any bloom from the accompanying double bass. The latter provided a nicely defined plucked string action within the 3D soundstage, adding complexity and revealing a live ambience within the studio recording.

The Hi-End shelving system is a richly rewarding addition to any hi-fi reproduction chain.

It helps to free stodgy and restricted frequencies, refining the upper midrange and treble while adding control and definition to bass.

[Contact 0052 55 5135 4636 www.biendracks.com]

SOUNDBITES

ATLAS EOS MODULAR 4-WAY £395

The Atlas EOS power distribution unit features star wiring on each outlet. Shielded against RFI/EMI, the weighty steel chassis includes a plugin mains cable. with three of the four connectors symmetrically filtered.

Spinning Porcupine Tree's 'Lightbulb Sun' on my Densen B-475 CD player, I initially isolated the block itself by plugging a typical household cable into the Atlas chassis and the Densen into an unfiltered plug

With this arrangement the EOS displayed calming vocals upon a magnificently wide soundstage, a prominent piano sequence and bass guitar that showed admirable clarity and gravitas. Yet transients were dull, woolly and lacking in sharpness and midrange/treble was lacklustre.

Swopping the household mains cable for the supplied Atlas cable and the Densen, into a filtered socket, produced a solid, measured performance. Upper mids and treble exhibited great control.

Though the extended midrange and treble frequencies were restrained. Bass did remain characterful, if lacking presence, while the immediacy of the drum strike was subdued.

Moving the Densen from a filtered to unfiltered socket produced open and airy vocals, impressively complex guitar strumming, informative upper mid frequency response and a 3D-like soundstage, rich in detail. Bass drum slam was also tough and expressive.

The same results occurred via my Origin Live Sovereign turntable and Ella Fitzgerald's 'Sweet And Slow'.

Filtered music produced a rather claustrophobic atmosphere, passive bass and artificially intimate vocals while the unfiltered variant saw Ella's voice as smooth and sensuous with a touch of reverb while the backing orchestra provided complexity and engagement.



The EOS Modular is not for general use but remains a valuable tool to solve a problem: for example when unruly mains systems, full of spikes and wayward frequencies, hamper sonic enjoyment.

If you are braving such a source then this Atlas system demands a home demo because it will instill stability and bring order and coherence on your music.

[Contact: 0800 731 1140 www.stirscables.com]

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TERMS AND CONDITIONS: Only one advert per reader. No Trade adverts. This section is strictly for readers selling secondhand hi-fi equipment only. Maximum length per advert is 30 words, Adverts over 30 words will not be accepted. Telephone numbers and E-mail addresses are treated as one word. Model numbers are treated as one word i.e. Quad 303 = two words. Email your advert to; classifieds@hi-fiworld.co.uk or fill in the form on page 113 and post it to Hi-Fi World Free Readers Ads, Studio 204, Buspace Studio, Conlan Street, Notting Hill, London W10 5AP. Sorry, we cannot accept adverts over the telephone. The Publisher reserves the right to judge submissions.

REGA CURSA pre-amp, Rega Maia power amp. Boxed. £500. Tel: 01283 732 020

DENON D-M39 DAB Micro System, as new, boxed, £160. Dali Zensor I speakers, boxed, unused, £160. Tel: 01943 467 859 (West Yorkshire)

WANTED: SONY TA-FB940RQS amplifier, boxed, little used. Tel: Peter 07941 842 605

WANTED: SONY ST-SDB900 (QS) tuner, little used, boxed. Tel: Peter 07941 842 605

YAMAHA A-S500 amplifier, Marantz CD-6003 CD player, Marantz PM-6002 amplifier, £140 each. Mordaunt Short Aviano-2 speakers £175. Original boxes, works well as system, items little used. Tel: 020 7386 9177 evenings (London)

WANTED: SME Series IV tonearm with fluid damper. Mint. Perfect working order. Also wanted: Late VDH Grasshopper-III SLA cartridge. One requiring repair considered. Cash waiting. Tel: 01505 346 791 (Renfrewshire)

MERIDIAN M80 CD/ DVD, AM/FM DAB radio, remote control, white leather, boxed, £600. Tel: 01733 352 712 (Peterborough) ESOTERIC X05 CD/ SACD player. As new condition, boxed, 3 years old. Silver finish, superlative sound, high end player, new £4500. Buy for £1895. Tel: David 07729 600 847 (West Sussex)

MUSICAL FIDELITY 3.2 C.R. pre amplifier with box and manual £250. Plus Quad 405, upgraded £200. £400 for both. Downsizing. Would part exchange for good integrated with remote control. Tel: 01277 219 639 (Essex)

GAMUT L3 standmount speakers. Birdseye maple with Partington Dreadnought stands. £1975. Merlin Scorpion SP cables, bi-wire, 3.25metres, £125. PS Audio GCPH phonostage £350. Chord Chameleon Silver Plus interconnect, XLR, Imetre, £95. Tel: 01474 326 220 (Kent)

CREEK 5350 amp, 3 years old, boxed as new, 100 watts, cost new £1750, £400 ono. Tel: 01943 609 150

NORDOST SPEAKER cable, 3metre pair, new £550, ask £100. Also brand new Nordost White Lightning RCA interconnect, 2.5metre pair, new £198, ask £100. Ixos digital coax, Imetre cable, new £40, ask £20. Tel: 01457 871 622

DBX 224 tape encoder/decoder £50. Teac CRH227i system, iPod input, £80. B&O 2000 cassette deck, £50. Pioneer A502R amplifier, PDS503 CD, F303 tuner, CTS420 cassette, £200 lot. Tel: 01708 457 691

HI-FI ENTHUSIAST is looking to buy both vintage and modern audio equipment. Unfinished projects welcome. Will travel, cash waiting. 0117 946 7188 slkw@btinternet.com

A LOVELY sounding pair of Harbeth P3ESR speakers together with a pair of Custom Design FS104 Signature stands. All in mint condition with speakers finished in maple natural wood veneer . Boxes, packing and instruction manuals included for speakers. £1000. Buyer to collect. Phone 07910913525

CARDAS CROSS Im RCA interconnect £145, I set of 4
Stillpoints resonance support feet, including additional risers £145 and Vertex AQ Silver Jaya mains conditioner £265 Contact John on 01202 515474 or e-mail: johnlangley17 @talktalk.net

WANTED: SONY TA-FB940RQS amplifier, boxed, little used. Tel: Peter 07941 842 605 ATACAMA SPEAKER stands £40, Atacama hi fi rack, with 4 glass shelves £100, Both mint condition, supplied with spikes and matching shoes. ECA phono stage, separate power supply per channel £80 eadymike@gmail.com Mike, 07710256440 East Sussex

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

MUSICAL FIDELITY A308CR Pre amp £695, A3.2CR Power amp £395, A308CR CD Player £695, A3.2RDS Tuner £295.Will sell separately. All items are pristine, unmarked (kept covered by a dust sheet), fully working, lightly and carefully used, as new, with original boxes, remotes and instructions. Currently residing in an audio rack in my smoke and pet free home. Demonstration a pleasure. Mike (Cheshire) 07500 804700 michael.yates7 @ntlworld.com

MONITOR AUDIO PMC 702 standmount speakers. In light oak. Boxed and in very good condition. One owner from new. £195.00 Tel: 01306 880574 (Surrey)

RADFORD STA25 series 3 valve power amplifier. It has been cherished by myself for the last 15 years. I am reluctantly downsizing hence £900 Silver High Breed Epitome 8 interconnects with phono's £50 davidhirst244@o2.co.uk Tel 02476 679165 (Midlands)

POWER SUPPLY for Class A amplifiers, self contained, suits John Linsley Hood's or any low power class A amplifier, £279. Pair of used SEAS 10 inch drivers, £99. Tel:-0207 499 8729.

NAIM NAC 62 preamp with Chord interconnect cable £195. Boxed. Mobile Fidelity Soundlabs discs JVC Victor pressings ca. 1970's £25. each mint. Sheffield Labs Direct to Disc Ip's £19. each Mint. Tel 02392 453382. Hants.

VAN DEN Hul 900mm pair MC D102 MKIII Hybrid (£85.00).Van Den Hul Im pair MC D102 MKIII Hybrid (£90.00). Van Den Hul Two 800mm pair MC D300 MKIII Hybrid (£130.00).Van Den Hul 600mm pair The First (£135.00). Van Den Hul 1.4m pair The Wind MKII (£30.00).Van Den Hul 2.4m pair The Wind MKII (£45.00). Cell: 07853076980 E-Mail: freddiew4 @googlemail.com

JK DAC32 little used. Giant killer battery-powered Dac gives stunning sound, huge dynamics, great bass and detail, with special USB cable included. USM in/phono out only. £360 07793749178 London kingjuancho@yahoo.com

WANTED FAULTY or non working Quad 44 preamps, later grey models with RCA sockets. Contact Mike 01758 613790 with price. MARANTZ SA 15 SI Super Audio CD player, boxed as new, outstanding build and sound, £450. Luxman PD 131 direct drive turntable perfect cond, SME 3009 arm and Ortofon cart. £475. Email: pkmadden4 @hotmail.com

LOWTHER ACCOLADE, speakers, Walnut, 52 x 25 x 31.5 cm, offers (new £2,800); also Quad 303/33, £200; Pioneer TX500A Tuner £50; NAD 502 CD player £70; Dual C814 cassette tape deck £50; 07743143941 (Wales)

CAMBRIDGE AUDIO
Azur 840A Amplifier and
Cambridge Audio Azur
840C CD Player (black).
Very good condition
- light usage, few times a
year at holiday home only.
West Yorkshire. Offers
and more information:
call 07717577576 or
email lawzed@gmail.com

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£750 Marantz UD5005
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immaculate little used
£225 Tel: 01795 522224
North Kent

WANTED: GARRARD GT55P turntable. Must be complete and preferably mint. Tel: 01344 485 418

HI-FI MAGAZINES for sale. Over 200 copies ranging from Hi-Fi World, Hi-Fi Choice, Hi-Fi News. Bargain at £120 ono. Buyer collects. Tel: Andy 01484 427 426.

ELECTRONICS
HOBBYIST requires
for project faulty or
non working Quad 44
preamps, later grey
models with rca phono
sockets.Contact Mike
01758 613790 with price

WANTED: SME 309, black finish if possible. South West area. Must try before purchase. Also wanted, Fidelity Research FR54. Tel: 01392 460 373

HI-FI ENTHUSIAST is looking to buy both vintage and modern audio equipment. Unfinished projects welcome.
Will travel, cash waiting. 0117 946 7188 slkw@btinternet.com

WANTED: ROKSAN Caspian CD player. Telephone 01395 576644, or email: jmichaelbrittain @yahoo.com

PROJECT GENIE Mk3 Ortofon OM2 red + Perspex cover £150 tel 01777 711386 Email: stafford7gg @btinternet.com

VERY RARE Mobile Fidelity Sound Lab original master recordings. Rolling Stones, boxed set, Limited Edition 2515. Mint condition. Played once. Sensible offers please. Tel: 07983 045 136 (Twickenham area)

RUSS ANDREWS
Reference Power Cords.
All DCT. 2x 1.5metre. 1x
Imetre, 1x16A Imetre.
£70 each. Tel: 01639 894
247

NAIM CD5i, mint, low hours, sound great. £500. JPW Mini-Monitor (pair), black, £35. Project headphone amplifier (black) only used to test some headphones, £70. Can demonstrate. Tel: 07973 426 291 (Birmingham)

CLARITY 09 high mass turntable with Rega RB1000 arm. Made by Claro Audio. 3 years old. Mint condition, boxed. (£2100) £950. Good reviews. Tel: 07905 348 812 for demo.

GUIDELINES FOR BUYING AND SELLING SECOND-HAND EQUIPMENT

FOR THE BUYER

- Not everyone is honest
 Buyer Beware!
- 2. Don't send cash!
- 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 slighest doubt, arrange an audition (see point 5) if it's too far, wait for another time.
- Either buy it or don't: vendors are excusably impatient with 'consultation' exercises.
- 12. Don't send cash!

FOR THE SELLER

- Not everyone is honest -Seller Beware!
- Make no verbal guarantees.
- Even 'nearly new' is still second-hand. If the manufacturer's guarantee is no longer in force, your price should reflect this.
- There is very little intrinsic value in secondhand 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.
- Amateur second-hand dealing is not a big money game: you win some, you lose some.
- 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 FEBRUARY 2014 ISSUE

Martin Logan's ultimate hybrid electrostatic, the Summit X seen here, is a review not to be missed. Not only does it have their top X-Stat panel in it largest form, meaning it goes low and covers more of the audio band, but it also has a bass bin the behaves like a dipole, matching the open-backe X-Stat panel it supports. It's a rare solution to pervasive problem

Is this a perfect match, one made in heaver Don't miss our in-depth analysis, one that feature advanced acoustic measurement with our Clindustrial measurement system, plus long listenin tests, to find out just how well these complex an sophisticated hybrid electrostatic loudspeake perform in real lif

ALSO, WE HOPE TO BRING YOU

PRO-JECT STREAM BOX RS NETWORK STREAME
MERIDIAN PRIME HEADPHONE AMPLIFIE
NAIM V-DI
JE AUDIO VM60 FULLY BALANCED VALVE MONOBLOCI
KEF X300A LOUDSPEAKEI
CAMBRIDGE AERO 2 BMR LOUDSPEAKEI
ANTELOPE GOLD DI

This is a selection of what we hope to bring you not a complete list. Unfortunately, we regret the due to a wide range of issues, such as failuunder review, we cannot guarantee that products listed above will appe

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	2	
3	4	
5	6	
7	8	
9	10	
11	12	
13	14	
15	16	
17	18	
19	20	
21	22	
23	24	
25	26	
27	28	
29	30	

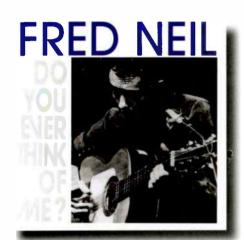
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FRED NEIL

FRED NEIL 1966



"A man who could have, should have, been more. Neil was one of the most arresting folk rock artists the world has ever seen".

h, Fred Neil. To some, a cult figure, a genius. To others, a frustration, a waste. A man who could have, should have, been more. Neil was one of the most arresting folk rock artists the world has ever seen. His signature voice with its beautifully rich bass range was the perfect stage for his songs that were powerfully intimate, thoughtful and

At his peak, Neil produced quite stunning songs including, from this self-titled LP, 'The Dolphins' and 'Everybody's Talkin', which Harry Nilsson took into the Top 10 and was the final song to be completed on the album, a rush job that was finished in the studio's bathroom.

In terms of his affect on music, his imprints might not blare at you like a neon light, but they are there: Stephen Stills drank from the Neil well; Jefferson Airplane covered his work on a regular basis; the whole production concept for the blues rock outfit Cream stemmed from Felix Pappalardi, Neil's old guitarist and John Sebastian played harmonica with Neil.

The list goes on. Neil, in fact, is wholly interwoven within the fabric of music history. Richie Havens, singer-songwriter who would famously open the Woodstock Festival and the film thereof, in 1969, was captivated by the unlikely duo of Neil and friend Dino Valente (associate of Quicksilver Messenger Service and writer of the hit song, 'Get Together') playing at the Café Wha? in Greenwich Village.

As he says: "The in-crowd would drop everything to be there, especially to see them close out the show with their folk rock version of Ray Charles's 'What'd I Say'. They were completely involved in the music of their youth and writing the music of our future".

Neil was never prolific but he was magnetic, entrancing audiences with his performances but also attracting talent to his side such as a young Bob Dylan.

"I used to play in a place called Café Wha? and it always used to open at noon and close at six in the morning", said Dylan. "It was just a non-stop flow of people, usually they were tourists who were looking for beatniks in the Village. There'd be maybe five groups that played there. Fred was from Florida I think,

from Coconut Grove, Florida and he used to make that scene, from Coconut Grove to Nashville to New York. He had a strong, powerful voice, almost a bass voice and a powerful sense of rhythm and he used to play mostly these types of songs that (country blues singer) Josh White might sing. I would play harmonica for him and then once in a while get to sing a song. You know, when he was taking a break or something".

Yet Neil was also mysterious and quite unfathomable to many of even his closet colleagues.

Friend and entrepreneur, Ric O'Barry, commented that, "Vincent Van Gogh reminded me of Fred, he was the same, extremely talented, very sensitive, and totally introverted, even in the early days. They both had a different way of communicating with people. Fred, he had a language all of his own, like James Joyce. I don't know if you have ever read Joyce, but he made up his own words, nobody really knows what the hell he's talking about in 'Ulysses'. It took me many years to understand Fred's language".

It was this sort of way of living that lead Neil to reject an invitation to appear in Woodstock.

He was first on the list to be invited but refused to appear because he disliked organiser Michael Lang. It was also this approach to life that lead to his large intake of drugs that helped to stall his career, building a reputation of unreliability.

Jac Holzman, founder of Elektra Records, the man who gave Fred his first recording contract, said, "...listening to Neil's 'Blues On The Ceiling' you could almost forgive him his irresponsibility as a human being".

Nevertheless, Neil does have a recording legacy, despite his last work being a live recording released in 1971. This self-titled album is a haunting masterpiece, dominated by Neil's world-weary, deep voice and his unhurried, drifting delivery. Ageless as a piece of creative art, it is as powerful a testament to Neil's genius now as the day it was recorded to tape. Check it out on RPM's CD, 'Do You Ever Think Of Me?' (www.cherryred.co.uk) that packs both the 'Fred Neil' album plus his follow-up, 'Sessions' onto one disc. **PR**

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Nominal impedance: 8 ahms

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Crossover frequencies: 2.3 kHz

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Dimensions (w x d x h): 26 cm x 37 cm x 43.5 cm;









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"I've got a feeling we're not

in Kansas

anymore..

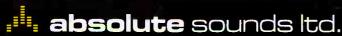
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