EAC PD-501 HR CD
EAC A1-501 DA
Digital player/integrated amplifier

HORD DSX1000
Network music player

PI SCOUT 1.1
Phono stage

TANNOW PRECISION
6.4  loudspeakers

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World Radio History
Some interesting - or ominous - press releases trickled in this month, amongst a torrent currently dominated by headphones. Sony sent us a modest e-mail about their new interest in pushing high-resolution audio downloads. This will worry all those who want nothing to do with downloads - just read our Letters this month. When the earth's magnetic field changes all download users will be damned!

Salvation from magnetic wobbliness may lie in another press release, from United Artists about a new range of ultra high-quality audio-only Blu-rays, in stereo and surround-sound. Unfortunately, whilst the sound formats are those common to Blu-ray, the actual resolution of the recordings on offer is not mentioned - curious. You can see for yourself at http://store.universal-music.co.uk/restofworld/artists/pure-audiolicipureaudio. Launch titles are from Amy Winehouse, The Rolling Stones, Nirvana, Marvin Gaye and many more, we are told. You have to order these discs on-line from United Artists. I have been playing 24/96 music videos on Blu-ray and titles from 2L that are music-only, for many years now and they're undoubtedly good. All the same, I have reservations about silver discs going round and round - even if they are impervious to magnetic field variations - having become used to 96GB of music in my pocket, stored on SD cards.

I rather liked Sony's new hi-res effort. Go to http://www.sony.co.uk/hub/high-resolution-audio to see for yourself. In this scenario there's yet another disc going around, this time in a hard drive. But Sony do at least mention DSD, 24/192 and things like that, which gives me some hope sound quality has been given consideration. I'm glad they've finally recognised the existence of hi-res and the value of better audio quality. To be frank though, I suspect it is high-quality headphone sales, tightly linked to portable stereo audio (meaning not AV) and the iTunes generation that is driving this.

Curious that stereo audio has now become the way ahead. That isn't something I would have dared predict ten years ago.

Noel Keywood, Editor

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

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

Loudspeakers are measured using a calibrated Bruel & Kjaer microphone feeding a Clio-based computer analyser, using pulsed and gated sinewaves, in a large room to eliminate the room's influence. Pickup arm vibration is measured with a Bruel & Kjaer accelerometer.

No other UK hi-fi magazine has in-house testing, and none has access to such advanced tests across all types of equipment. That's why you can depend on Hi-Fi World reviews.
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MCINTOSH AMP
The MA6700 is McIntosh's new solid-state 200 Watt integrated amplifier. It combines a 200 Watt pDAC and MM/MC phono stage with an optional AM/FM radio module effectively making the MA6700 McIntosh's first receiver since 1993. Also included, is McIntosh’s new internal High Drive headphone amplifier that offers increased gain and output power.

The preamp section features a total of eleven inputs. These include the three-strong digital input suite in the advanced McIntosh Digital Engine, which offers an assignable coaxial and optical input plus a dedicated asynchronous USB 2.0 input (operating at up to 32bit). The MA6700 also benefits from two dedicated phono sections (Moving Magnet and Moving Coil).

The Home Theatre Pass Through feature allows for integration into existing multichannel system and an optional AM/FM tuner module (£800) brings radio playback to the amp. The optional module offers twenty presets for each radio band, as well as a remote AM antenna. The amplifier also offers bypassable tone controls (bass and treble), RS232 control is also offered, along with rear-panel system data and power controls. Price is £7,295.

USB CABLES FROM BLACK RHODIUM
Black Rhodium has released the ACE and STAR USB cables. Both the ACE and STAR feature silver-plated copper 26awg conductors while all terminals are gold-plated for long-term reliability while the cables themselves are covered in a braid. The STAR also includes double anti-vibration damping components along with double RFI filters at each end.

Prices for the ACE are: 1m terminated, £90; 1.5m terminated, £96; 2m terminated, £118 & 3m terminated, £150.

Prices for the STAR cable is: 1m terminated, £192; 1.5m terminated, £204; 2m terminated, £216 & 3m terminated, £252.

Call 01332 342233 or click on www.blackrhodium.co.uk

ARCAM irDAC
Released to replace the popular rDAC, the irDAC is a stripped-down version of the Arcam SuperDAC in a modified rDAC chassis. Featuring a TI/Burr Brown PCM1796 DAC, eight separately regulated power supplies plus a heavy cast aluminium chassis, the irDAC can also be powered by the Arcam A19/AVR 450/750 for improved performance.

Supporting sample rates up to 24bit/192kHz (for the coaxials and USB under Class II regulation, Class I supports 24bit/96kHz, along with the S/PDIF connectors), additional design features include the isolation of the digital and analogue stages and low-noise power supplies. Inputs include asynchronous USB and a direct iPhone input that takes a direct digital signal from the device: two S/PDIF sockets, a set of coaxials, a digital plus analogue outputs complete the array. The rear of the unit also holds the 12V power socket and the rocker power switch. The front of the device features a source button and related indicators.

Featuring an infra-red remote control, the irDAC is priced at £400.

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

Devialet has launched three new components. The entry-level model, the Devialet 110, starts at less than half the price of the D-Premier, while the next model up, the Devialet 170, adds additional power output and facilities but still costs 40 per cent less than the company’s original product. The top-of-the-line Devialet 240, meanwhile, directly replaces the D-Premier in terms of comparable price and specification.

A further option, the Devialet 500, will be available from November – this combines two Devialet 240s in a dual-mono or bi-amp configuration, coupled together with proprietary software. Additional 240s (up to a maximum of eight) can be daisy chained.

The boxes combine a preamplifier, stereo power amplifier and DAC (Digital to-Analogue Converter) in a single, slimline case, combining Class A and Class D technology. There are differences between the three models in terms of power output (110W, 170W and 240W per channel respectively) and also a degree of functionality. For example, the 170 and 240 offer a more advanced phono stage, while Wi-Fi connectivity is an option on the 110 and 170 but standard on the 240. However, technologies such as Devialet’s ADH (Analogue Digital Hybrid) amplification are consistent throughout the range.

Prices are: Devialet 110, £4,490 (£5,490 with Devialet AIR); Devialet 170, £6,390 (£7,390 with Devialet AIR) and Devialet 240, £11,800 (Devialet AIR included as standard). Click on www.absolutesounds.com or phone 020 8971 3909 for more information.

VAD DAC

Valve Audio Devices (VAD) has launched its debut offering, the DAC-10 digital to analogue converter. Designed and handmade in the UK, at launch two versions are available: PCM-only (DAC-10 – £6499.95) or PCM and DSD (DAC-10 DSD – £6999.95). Both models are available in either piano lacquer gloss black or silver.

A dual mono design based around VAD’s own 24bit dual DAC circuitry, it is coupled to its bespoke designed triode valve analogue stage. Featuring RCA Coax, BNC, TOS link optical and AES/EBU (standard model only) inputs, the DAC-10’s DSD connectivity is included via a separate USB connection in the DAC-10 DSD, in place of the AES/EBU socket on the standard model.

The SPDIF digital processing includes a triode valve in its circuit and the built-in 32bit/192kHz asynchronous USB is connected via i2S transmission standard.

The triode valve analogue output stage operates in Class A and is point-to-point engineered. Featuring NOS (New Old Stock) valves, the stage consists of a pair of 6SN7 drivers, a pair of CV574 rectifiers and a pair of 6N6P double triode valves.

For further information, click on www.valveaudiodevices.co.uk or call 01327 876673.

MONITOR SILVERS

Utilising features taken from the Platinum and Gold series speakers, along with new driver developments, the latest Monitor Audio range includes two standmount models: Silver 1 and 2; three floor speakers, Silver 6, 8, 10; a dedicated centre, ‘FX’ surround and active subwoofer models.

While Silver 1, 2, 6, centre and FX retain the form factor of their predecessors, the Silver 8 becomes a full three way design and new to the Silver family, the Silver 10 tower, offers an up-scaled floor-standing format, featuring twin 203mm bass drivers. For the new mid/bass units, unlike conventional cones that incorporate a centre aperture for the voice-coil, the dimpled RST (Rigid Surface Technology) C-CAM cones, deployed by the Silver series, take the form of a continuous uninterrupted radiating dish.

For the new tweeter, a 25mm C-CAM tweeter design has been introduced, which vents internally around the outside of the magnet system into a large rear-loading chamber.

The range is available in a choice of real wood rosenut, walnut, natural oak and black oak veneers, together with high-gloss black and white finishes.

Prices are: Silver 1 (pair) £500, £550 (high gloss); Silver 2 (pair) £650, £715; Silver 6 (pair) £1,000, £1,100; Silver 8 (pair) £1,250, £1,375; Silver 10 (pair) £1,500, £1,650; Silver FX (pair) £500, £550; Silver Centre (each) £375, £413; Silver W-12 (each) £1,000, £1,100.

Call 01268 740580 or click on www.monitoraudio.co.uk for more information.
C-POWER

Looking suspiciously like standard cables, Chord’s new C-power is a low cost specialist design.

The terminations are high-pressure-crimped, with no screws to work loose, while the over-molding process holds the conductors firmly in place and reduces mechanically induced noise. The C-power is fitted with a high-quality military-grade over-molded mains plug plus an equally high-quality IEC plug. The cable, which is based upon 3x14 AWG high-purity multi-strand copper conductors, has a parallel conductor layout and a high-frequency-effective over-wrapped heavy gauge foil floating shield. It is insulated with PVC and also benefits from a high-density vibration-damping outer jacket.

The C-power is available in 1.5m lengths, is fitted with UK or European mains plugs, and is priced at £50.

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

BURSON CONDUCTOR

Burson’s new Conductor SL 9018 headamp/DAC features a fully discrete (IC free) output stage. Operating entirely in Class A and capable of driving most if not all headphones, it delivers up to 2W per channel into 8 Ohms. The SL 9018 features a twenty-one component symmetrical FET input stage and multiple discrete power supplies and a twin-gain Variable Output Stage (VOS) while D/A conversion is via ESS9018 Sabre 32bit, 200k DAC. It arrives in a 210x220x80mm folded 2mm aluminium casing, with a 24bit/192k Asynchronous USB, coax RCA and Toslink/SPDIF digital inputs and a single analogue RCA line-level input. Price is £1,199.

Call 01423 358846 or click on www.karma-ay.co.uk for more information.

CAAS UK

Two new products are available from this new British outfit: the Digital Audio Server with integrated pre-amp and the CAAS Elysian 100, Class A monoblocks. Much of the circuitry features microwave circuit techniques.

The DAS is a hand-built single chassis dual monaural digital audio server and streamer. The front panel volume knob provides a reference voltage to the internal analogue-to-digital converter (ADC) which, in turn, controls a bank of silver contact relays that switch different configurations of metal film resistors to produce attenuation levels between -50dB and 0dB in 128 discrete steps.

A Raspberry Pi micro-computer system handles the digital data and up-samples the content to 176.4kHz per second using a linear, impulse response up-sampling algorithm.

The DAS is fitted with two separate transformers; one for the analogue sections and one for the digital section. A CD transport or other devices can be connected to the DAS S/PDIF input. Additionally, a hard disk can be connected to the USB input and digital media data accessed from this hard disk. Alternatively digital audio can be streamed from either a NAS, PC, tablet or a Smart Phone over the LAN connection. All music files and data can be accessed through the on-screen interface once the DAS has been connected to a TV or monitor (through HDMI). If the TV has HDMI CEC then all the DAS functions can be accessed through the TV remote, alternatively the functionality can be accessed through a LAN interface, tablet or Smart phone. Price is £2,950.

The Elysian 100, push-pull, monoblocks offer 100W, zero feedback globally and locally using Class A amplification for the first 20W, slipping into Class A/B afterwards. Integrating a minimal component, two stage, voltage gain topology Couple Symmetric Drive, the Elysian 100 uses a symmetric DC coupled design from the input to the output with no capacitors placed in the signal path. Each channel includes two power supplies. CAAS Audio believes that regulated output stage power supplies can seriously impede the amplifiers performance due to slow response times and increasing impedance. Hence, the company has produced a high-speed, high current, discrete stabilised power supply. Price is £3,950 each.

Click on www.cassaudio.com or info@cassaudio.com for more information.
**GRYPHON KALLIOPE**

The new Kalliope DAC from Gryphon employs a modular layout for easy access to future upgrades. Firmware updates will be available via USB. Offering playback of PCM up to 32bit/384kHz and DSD up to 6.144MHz, the unit also removes dependence on USB bus power. That is, 5V fed to the USB receiver from the source computer via the USB cable’s power line then ‘bleeds’ noise and interference into the two data lines with significant audible impact. The 12.5 Farad SuperCap dedicated power supply of the Kalliope USB module acts as a virtual battery, delivering regulated power.

Other features include an ESS SABRE ES9018 32bit D/A converter for each channel and each ES9018 incorporates eight individual D/A converters in Dual Differential coupling. Included BNC and XLR inputs are compatible with PCM: 22.05, 24, 32, 44.1, 48, 64, 88.2, 96, 176.4 and 192kHz, up to 24bits. The unit also includes user-selectable PCM and DSD digital roll-off filters plus temperature-compensated, crystal oscillators. Price is €19,800.

Click on [www.gryphon-audio.com](http://www.gryphon-audio.com) for more information.

**AUDIO PRO ADDON T10**

The ADDON wireless speaker, the T10, is a compact single stereo speaker using the latest Bluetooth 4.0 standard and aptX technology for wireless music transmission. Finished in black or white matt lacquer standard finishes, the Audio Pro ADDON T10 is priced at £299. A Special Edition ADDON TIO finished in orange gloss lacquer with a leather handle is also available at £349.

Featuring DSP (Digital Signal Processing) and digital filters, the T10 provides 80W of power. Two, 2cm cloth-dome tweeters are set to the outer edges of the cabinet, each driven by their own 20W amplifier. The centrally-mounted 13cm mid/bass driver is powered by its own 40W amplifier.

Two wired inputs (a 3.5 mm and twin RCA plugs) are accessible from the back panel along with a USB socket to charge a smartphone. A subwoofer can also be added, such as the Audio Pro ADDON SUB. A remote control, milled from a solid billet of aluminium, is also supplied.

Click on [www.audioprodirect.co.uk](http://www.audioprodirect.co.uk) for more information.

**HRT STAGE**

The High Resolution Technologies STAGE is a computer audio system, featuring a pair of slim bookshelf speakers (featuring three mid/bass units and a domed tweeter per speaker) and a main amp unit cube that resembles an active subwoofer.

Made from moulded plastic, the STAGE offers both an asynchronous USB interface and an analogue input. Available in Black or White, price is £1,099.

Call 020 8948 4153 or click on [www.audiofreaks.co.uk](http://www.audiofreaks.co.uk) for more information.

**ETÓN G8 TRAVELLER II**

Featuring Long Wave, Medium Wave, VHF FM and Short Wave, the G8 includes a flip down world chart with World time zones setting, digital display, alarm clock and snooze control. The digital tuner offers options to choose auto, manual, fast or slow tuning and a 500-memory capacity across the wave bands. Price is £49.95.

Click on [www.nevadaradio.co.uk](http://www.nevadaradio.co.uk) or phone 023 92 313090.
Concentric issue

Tannoy hone their Dual-Concentric drive unit in the new Precision 6.4 loudspeakers, Noel Keywood finds.

Big Tannoy are muscular and exciting, but not fatiguing, nor 'obvious' — although neighbours may think otherwise. The Precision 6.4s reviewed here don't stray far from this winning formula. Priced at £2399 they may seem a tad expensive, but not so in reality. I found them more amenable and impressive than rivals up to £6000 or so. Their ability exceeds their price.

The Precision 6.4 is a big floorstander, but firmly a Tannoy in its technology.

At heart it uses a Tannoy 6in Dual-Concentric drive unit, where the treble unit fires out from the centre of the bass cone through a midrange horn — a unique unit that lies at the heart of most Tannoy.

A 25mm (1in) titanium dome tweeter sits at the base of the horn with a Tulip Waveguide — the effect of the horn being to extend bandwidth as well as raise efficiency and control dispersion. As a result the tweeter covers more of the
audio band, crossing over to the bass unit at 1.6kHz much more smoothly than a conventional tweeter.

This Dual Concentric arrangement occupies the top position of the four-drive unit array in what is a big cabinet. Below it sits a bass unit that works up to 170Hz, and below that are two ABRs, or Auxiliary Bass Radiators. The bass unit uses a treated paper pulp cone and rubber surround like the Dual-Concentric above it, and so do the ABRs. These are just undriven cones; they look like drive units but no power goes to them. ABRs act in much the same way as a port, serving to damp and control the bass unit as well as radiate low bass. They are also easier to tune and control than a port, by adjusting cone mass, and — in theory at least — give better bass.

What's also important in any floorstander is cabinet size. This affects bass depth and quality as well as sensitivity — crucial to determining how loud a loudspeaker will go from one Watt of power.

To that end the Precision 6.4s stand 1052cm high, are 310cm wide and 352cm deep. It makes them big — but perhaps not overpoweringly so in the current market where one metre tall is considered the accepted domestic upper limit in this loudspeaker category.

The 6.4s are solidly made, sitting on a plinth with screw feet that allow adjustment. Weighing 21.6kg they are heavy and solid feeling, but movable all the same.

The big cabinet and efficient Dual Concentric drive unit allows the Precision 6.4 to produce 90dB (loud) from one Watt so like all Tannoy's these need little power to go very loud and around 40 Watts will produce plenty enough volume for most people even in a big room. I used them for months with a wide variety of amplifiers, but mostly Quad QMP Elite monoblocks and an Icon Audio Stereo 60 MkIII valve amplifier and both worked nicely with the 6.4s. Our review samples came with a deep gloss walnut veneer finish and looked smart, if unintrusive.

The rear panel carries sturdy bi-wire terminals and Tannoy's earth tag that allows the drive unit chassis to be grounded, lowering noise levels where radio interference exists they claim.

**SOUND QUALITY**

The midrange horn of the Dual-Concentric is projective and Tannoy have slightly emphasised this quality in the 6.4 by ensuring midband output is strong, our measurements show.

As a result the 6.4s pushed vocals forward strongly, something I noticed immediately with Diana Krall singing Narrow Daylight (24/96). She was placed forward on the soundstage, well in front of the loudspeakers, a position that made her seem very close.

Intelligibility was excellent. I heard her every melancholy word, and the Tannoy's reminded me a little of B&Ws in this respect. However, whereas B&W will ensure treble is obvious, the big 6.4s are subtle and couth at the top end. Treble was smooth and unemphasised, making for a very easy listen. Dynamic inflections in Diana Krall's voice were conveyed strongly, making for lively and convincing performance that I found impressive.

The forwardness of the midband takes any emphasis away from bass and the lower midband, making for a balance with no sign of warmth or chestiness in it, and no boxiness or coloration either. As George Harrison picked the strings of an acoustic guitar in 'Woman Don't You Cry for Me' (24/96) his finger action was sparkingly clear, with sound from the guitar body conveyed cleanly and concisely with a welcome freedom from unwanted cabinet returns. This made the 6.4s sound clear, dry and wonderfully uncoloured.

The smooth acapella harmonies of the Persuasions singing 'Angel of Harlem' (24/96) were projected clearly outward, with every "woo woo" and "doo wop" hanging vividly in front of me. The Tannoy's pushed out the vocals to a remarkable degree, always sounding clean and concise.

They also image superbly, instruments and singers being all of a piece — a quality that strengthens their sense of physical presence on the soundstage.

I suspect this is down to Tannoy's midrange horn because all their Duals enjoy the same quality. It is something I have learned to appreciate about the brand over many years of reviewing them. So too the big bold and solidly-wrought soundstage which served to push the harp forward at me at the opening of 'Waltz of the Flowers' from Tchaikovsky's 'Nutcracker Suite'. horns played the main theme smoothly, sounding suitably metallic and fruity, then massed violins took up the theme with a lovely easy quality. Instruments were well separated and strongly expressed, so as the tune passed from one orchestral section to the next I felt they were all well separated and of their own nature. I should say here that the Quad QMP Elite monoblocks I used for much of the review period are smoothies with a mild top end...
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Kai Ekholm, Inner-magazines.com 2012

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Steve Dickenson, Hi Fi Plus 2010

"The Iridium mines details other amplifiers only dream about"
Noel Keywood, Editor, HiFi World 2012

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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."
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that I felt did the 6.4s justice. The Quads also have a powerful low-end punch that is right in the Tannoy domain.

The innate balance of the 6.4s was made obvious by Otis Redding singing 'Dock of the Bay' (24/192). The opening acoustic bass line was firmly stated but not bloated. Instead it fell into a nice relationship with the following vocal — which sounded cunningly clean and convincingly natural as only a good-quality analogue recording from 1964 can do. Otis was pushed out at me so I got every fine nuance of his delivery. The Muscle Shoal horns played their lovely accompaniment in the studio alongside Otis, the 6.4s capturing the scene beautifully.

Spinning Lady Gaga's 'Monster' on CD to check for subsonics from the synths made me aware that the 6.4s can be pushy in the upper midband, throwing out masses of information but taking no prisoners in the process. Lady Gaga jumped at me, her voice having a titanium hard edge at high volume.

Bass went low but the 6.4s are far more controlled than many others — including most Tannoy's — so there was not the big rumblings that I have heard from, for example, the same manufacturer's DC10s. There's no worry about foam bungs being needed to tame the 6.4s low-end.

For evidence I heard the 6.4s step down the frequency scale into the basement with 'Dance In The Dark', where low end power drifted through the room. Sitting on our settee listening to this, I mused that a Naim amplifier would suit these speakers just as well as the big Quads I was using.

CONCLUSION

Tannoy have re-worked their sound balance a tad with the 6.4s. More mid-band forward than other Tannoy's I have heard and with better damped bass, these floorstanders were nothing less than impressive in their upper mid forwardness does carry this penalty.

Bass was deep and tight, if not forward. I got stronger bass from a valve amp than the transistor Quads; they suit low damping factor valve amps I realised when using an Icon Audio Stereo 60 MkIII equipped with KT150s.

"they image superbly, instruments and singers being all of a piece — a quality that strengthens their sense of physical presence on the soundstage"

Matched with care the big Precision 6.4s are a gripping loudspeaker to hear. They offer a clear, concise and accurate sound. At the price, they are an attractive floorstander well worth hearing if you want a big sound.

THEIR PERFORMANCE

The Tannoy Precision 6.4s show a small amount of midrange emphasis or, seen another way, muted frequency extremes. They are smooth and even across the critical midband and have no crossover sickout to soften detailing. Treble rolls away smoothly, but not by enough to make the 6.4s sound warm, so much as easy and unchallenging. Lower bass frequencies have also been kept in check: this is a quite well damped loudspeaker that will not sound bass heavy or boomy, and it has plenty of low bass, reaching down to 20Hz.

MEASURED PERFORMANCE

Making the midrange prominent pushes vocals forward slightly and makes the sound seemingly more explicit. Our 200mS decay analysis shows an ordered and reasonably good midband and treble result, delayed energy levels being normal enough in level, with no particular overhangs, suggesting low coloration. Not unsurprisingly for a big cabinet producing substantial bass, at low frequencies the cabinet is 'hot' around 100Hz on our coloured decay map and a three-dimensional waterfall decay graph shows substantial cabinet overhang, suggesting bass might be a bit coloured or full sounding.

Sensitivity was very high at 90dB from one nominal Watt of input (2.8V) but with a D.C. resistance of just 2.9 Ohms the bass units draw current to achieve this. Our impedance curve clearly shows this is a low impedance loudspeaker at bass frequencies. But the 6.4s will go very loud from little power and need no more than a 40 Watt amplifier.

The Precision 6.4s will sound smooth, have good presence and possess deep bass. There's no bass emphasis or treble lift, so accuracy takes precedence over effect. Little power is needed to go very loud. NK

TANNOY

PRECISION 6.4

£2399

OUTSTANDING - amongst the best

VERDICT

Clear, forward sound with great projection. Need little power. With great finish and appearance, a loudspeaker worth hearing.

FOR

- clear, concise and accurate sound
- big and well finished
- exciting dynamics

AGAINST

- sounds hard with some CDs
- dry bass

Tannoy
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DECEMBER 2013
M. HI FI WORLD
The audio streaming market has reached an impressive level of maturity in a remarkably short space of time. Unlike the advent of CD all those years ago, when some companies held off launching their own silver disc spinners, most high-end manufacturers now boast a streamer for extracting audio from Network Attached Storage devices (hard drives) or computers. Latest to join the fray is Chord with its imposing-looking DSX1000 digital streamer.

At an asking price of £7,500 it's pitched firmly at the top end of the market — but build quality and the technology involved go a long way to justifying the outlay.

Built at Chord's Kent base, the DSX1000 shares the look of the company's other flagship products and at a quick glance could easily be mistaken for a power amplifier. All the panels are high-grade, brushed aluminium (silver or black finish) with Chord's trademark top panel cut-outs granting the owner — or their envious friends — a glimpse of the neatly laid-out internals.

In use, internally-mounted LEDs glow a cool blue, adding a sense of ambience to low-light listening sessions.

It's often said Chord's designs divide opinion — but to my eyes they're superb examples of modern industrial design.
Inside the DSX1000 utilises Chord's proprietary Robert Watts-designed DAC circuitry. Its Field Programmable Gate Array (FPGA) technology is the same as seen in the acclaimed QBD76 HDSD DAC and the mega-money Red Reference MkIII CD player - a Hi-Fi World Product Of The Year Award winner.

The FPGA handles all the digital data decoding, clocking and filtering while the DSX1000's streaming engine is directly coupled into the DAC technology to help minimise jitter issues.

With all that technology on board it's not surprising the DSX1000 boasts an impressive set of specifications.

Formats supported include MP3, WMA, WAV, AAC, ALAC, AIFF and FLAC up to 24-bit/192kHz resolution and there's also a software download to enable DSD support.

Connection to your home network is via a rear-mounted RJ45 Ethernet socket (Chord prefers wired for sound quality reasons) while the DSX1000 also features an internet radio tuner for access to thousands of on-line stations from around the world.

Aside from the RJ45 there is just one other input on the back – a BNC socket for S/PDIF digital audio connection. Alongside it sit two pairs of phono and balanced XLR sockets – one of each at fixed level for connection to a pre-amp or integrated, and the other with variable output which is adjusted by an analogue volume control within the DSX100 allowing direct connection to a power amplifier.

Control of the unit is via the supplied remote control or a four-way rocker dial that sits alongside the admirably-clear colour TFT screen on the fascia.

Chord says it will soon have a dedicated Songbird App available from iTunes to enable control from Apple i-devices with the possibility of an Android version to follow. In the meantime, though, the DSX1000 can also be controlled by many third-party iPad, iPod and Android UPnP devices.

I tried it with the free Audionet MusicManager software on an iPhone 5 and it did a competent, if unspectacular, job.

SET-UP AND OPERATION

As any good streamer should be, the Chord was a doddle to set-up and operate. Plugged into the home network via the supplied Ethernet cable, the DSX1000 immediately found my ReadyNAS Duo and was streaming music to NuForce's impressively clean IA-18 integrated amplifier within seconds.

Operation is definitely easier via the remote than the fascia rocker switch – which requires a long, firm push to react.

The 3.5-inch TFT front screen displays album artwork if available, or station logos when accessing internet radio, as well as allowing access to the various set-up options.

Radio stations can be stored into a favourites section to ease selection, while a variety of search options makes tracking down that elusive broadcast relatively simple.

Over a lengthy review period the DSX1000 remained rock solid throughout and switching between individual tracks or functions was quick and easy.

SOUND QUALITY

It doesn't take long to appreciate the quality of the DSX1000's DAC stage. What you get is an extremely open, clear and detailed sound that shines a fresh light onto even familiar tracks.

The 24/96 download of Kate Bush's '50 Words For Snow' was truly captivating.

It's a work that can sound a little cold and mechanical on some players – but the Chord blended the different elements together superbly to produce a truly haunting performance.

Image depth was deep and spacious, while the repeated piano figure and Kate Bush's ethereal vocals hung well clear of the loudspeakers. There's a clarity and spaciousness to the sound that helps to highlight the leading edge of notes and accentuate the detail in individual tracks.

Playing Arvo Part's 'Fratres' I could easily make out that, yes, there are the twelve cellists of the Berlin Philharmonic Orchestra playing – whereas lesser streamers can lump them into one homogenous mass.

Switching amplification to a Naim SuperNait - with a little more warmth and rhythmic drive than the NuForce - and the Chord continued to impress me.

Some DACs can miss out on scale and nuance within really deep bass but the DSX1000 isn't one of them. Massive Attack's 'Angel' rumbled threateningly from a pair of Sonus Faber Venere 2.5s without descending into just a dull thump.

That detailed presentation extends through the entire frequency spectrum. Rashied Ali's delicate saxophone also hung realistically in space, highlighting the ambience of the small studio setting. If anything,
The HRT family of products are, in most cases, USB powered asynchronous Digital to Analogue converters, which dramatically improve the sound quality from the host component into a music system and/or headphones. The extensive range is extremely easy to setup and use, offering varying levels of sound reproduction at key levels of price.

**HRT microStreamer**

The microStreamer is a revolution in the HRT product line. It brings together all the best features of their groundbreaking Music Streamer product with the addition of headphone capabilities, all in a miniature sized aluminium case that fits easily in your palm or pocket. The microStreamer is capable of a Sample Rate up to 96 kHz and Bit Depth up to 24 bit.

**HRT Music Streamer II**

The entry level Music Streamer II is an external DAC, which improves the computer’s sound quality by taking over the job of processing the digital music stream from the computer that is critical to producing great sound. The most popular model to date, it offers a Sample Rate of up to 96 kHz and Bit Depth up to 24 Bit.

**HRT Music Streamer II+**

A big step up from the Music Streamer II, the Music Streamer II+ takes the sound quality from computers to a higher level by using a higher quality Digital-to-Analogue converter and a much more sophisticated analogue output stage. The MSII+ supports up to 96 kHz Sample Rate and up to 24 Bit operation.

**HRT Music Streamer HD**

The ‘Flagship’ of the Music Streamer series, the Music Streamer HD will transform a computer into a better than CD quality source and allows connection to an audio system via balanced (XLR) or unbalanced (RCA) connectors. The HD allows up to 192 kHz Sample Rate and up to 24 Bit Depth.

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Variable level XLR and phono output connections allow the Chord to be used as a pre-amp - with the volume control operating in the analogue domain.

the DSX1000 probably has a slightly forward spatial presentation – which may well be a consequence of the masses of detail it manages to unearth. What that does do is make listening an involving and exciting experience.

Playing Cowboy Junkies’ ‘The Trinity Session’ the music wrapped around me, the full atmosphere of the Toronto church that served as the recording venue palpably real. Of course, that same detail and level of realism means the DSX1000 doesn’t flatter poor-quality files. Play a compressed MP3 and you’ll soon know about it. But anyone paying £7,500 for a streamer would be wasting their money doing that on a regular basis. Play something of decent quality on the other hand — from CD standard upwards — and the Chord will truly shine.

That goes for the S/PDIF input too. If anything, the sound is perhaps a little leaner with the Chord hooked up to a Mac Mini this way — with Ethernet seemingly having a touch more weight and warmth. But it’s a very close call and both are just as valid as each other.

Finally, the DSX1000’s ability to handle DSD files is also something of a welcome bonus. Admittedly, this is still a relatively niche market at the moment – but it is one that is growing and, when done correctly, can be extremely impressive.

A DSD download of the San Francisco Symphony’s ‘Mahler No. 2’, for example, revealed explosive dynamics and contrasts that a 24/96 file of the same performance couldn’t match. Overall there’s more organic and – dare, I say it – analogue feel to the music that brings a more lifelike sound to a big orchestra.

Whether DSD will catch on in any significant way is hard to say at the moment – but at least Chord gives you the option to try it if you want.

CONCLUSION
Chord’s flagship streamer is an undeniably impressive piece of equipment. The company’s proprietary DAC technology has won deserved praise in its other products and is put to good use again here. It can handle just about any file format you care to direct its way and does so with a superb musicality and sense of purpose.

Detail levels are as good as it gets at this price while frequencies from deep bass to soaring treble are handled with a clarity and punch that few can match.

Set-up and operation are also simple and well-designed, making the world of networked audio as straightforward as it was meant to be.

MEASURED PERFORMANCE

Frequency response via S/PDIF measured flat to a high 96kHz with 192kHz sample rate. This unusually extended analogue bandwidth is due to the high number of taps in the digital filter, designer Robb Watts told us.

Distortion was low at 0.0008% at full level (0dB) and 0.08% at -60dB with 24bit resolution digital, the figure rising to 0.24% with 16bit. These are good figures, if not the best, reflected in a mediocre EIAJ Dynamic Range value of 106.4db with 24bit, where 115db is typical. Our analysis shows noise was mainly responsible for degrading the results here.

Output through the volume control to Variable Output measured 0.95V full level (0dB) and 1.9V via balanced XLR. The Line Output produced a high 3V through the unbalanced phono outputs and no less than 6V via the XLR output.

The DSX1000 measured well in all areas, although EIAJ Dynamic Range could have been higher. Balancing this, bandwidth was exceptional, due to the unique WTA filter. NK

<table>
<thead>
<tr>
<th>Frequency response (-1dB)</th>
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<tr>
<td>CD 4Hz - 48kHz</td>
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<td>Output</td>
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CHORD DSX1000
£7,500
OUTSTANDING - amongst the best

VERDICT
The Chord DSX1000 has to rank among the best audio streamers available at the moment. Supremely easy to operate with a beguiling sound that boasts detail, dynamics and a wide soundstage.

FOR:
- musicality
- detail
- great bass
- DSD-capable

AGAINST:
- not cheap
- no dedicated control app (yet)

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17
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Letter of the month wins a pair of 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 GORDON HAMILTON, Letter of the Month winner in our November 2013 issue.

Letter of the Month

PORTABLE PLAYERS

I enjoyed your review of the Astell&Kern portable digital player AK120 and the riposte from two readers in the next magazine. You have to do a review with other contenders and iBasso DX100 has to be in there! It has a full size headphone socket, does that signify bigger output?

I borrowed an AK120 and was very impressed both through PX100 headphones and my Almaroo amp and Tannoy Prestige speakers.

Just two small things that concern me. I had to play most at 72 volume (max 75), through PX100s, I know the latest AK120 goes to 150 volume. Is it louder?

Second point. Will the cost of downloads come down? £12.00 is not that much to pay, but it is if you want lots of good downloads.

Please try and dem. the iBasso DX100, it does look cool, but does it sound cool?

Thanks for a great read,

Robert,
Leeds - up north!

Hi Robert. We have been trying to get HiFiMan and iBasso players for review, to bring us up to date on the high-resolution portable player front. No response from HiFiMan but perhaps they know that their HP-601 player is too big and heavy to compete with the more modern iRiver players. We reviewed the Astell&Kern player in our October 2013 issue and it was also too large to be a true portable.

We've had more luck with iBasso however, their new DX50 being reviewed in this issue. With a weight of 150gms, and dimensions of 64mm wide, 100mm high and just 17mm deep it is almost as small as an AK100/120. It has a high-level analogue line output too, so it can be used to drive a hi-fi system, much like a CD player. There is a digital output, and of course a headphone output.

Colorfly player in our October 2013 issue and it was also too large to be a true portable.

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Output from the AK120 remains 1.5V, Astell&Kern state.

Will the cost of downloads come down? Unlikely I would have thought. Speculating, iTunes may well offer single tracks at 24/96 in the future and this would be easier on the pocket perhaps.

I'm a complete convert to my AK120 player. It's replaced CD, even though it plays (ripped) CD, and it plays high-quality digital, as well as MP3, AAC from iTunes and CD rips.

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COLORFLY
My gripe is with Noel’s review of the Colorfly C4 Pro, unceremoniously downgraded to the ranks of ‘MP3 player’ on the front cover. How different would this have read if you had actually reviewed it when it first appeared some three years ago? As an offshore worker who likes his ‘sounds’ and who has constantly had to deal with limited baggage weights I have invested in numerous portable devices in the past.

I progressed from the Sony Walkman Pro (WM-DAC) to the Colorfly C4 Pro, purchasing one soon after it first made an appearance. What a revelation, the sound quality available from this device is quite amazing, even more so when used as a source in my home set-up, and I agree wholeheartedly with this aspect of Noel’s review.

Judgement, I feel, has been somewhat clouded by the much later release of the Astell&Kern machines, in particular the AK120. I can only disagree with much of Noel’s conclusion. I love the look (and those ‘faux graphics’ are in fact laser-etched artwork), pull it out and it becomes a talking point rather than another bland-looking box that appears to be some sort of mobile phone. I’ve yet to have anyone collapse laughing when they have seen it.

Limited it may now be in the file format section but it was perfectly adequate when it was first marketed (long before the availability of DSD downloads or even 24/192 FLAC files). I find WAV files perfectly adequate, especially when combined with a pair of AKG K451 headphones. Build quality is superb even if it’s appearance is not to one’s liking and I am sure I will get many more years use out of this amazing device.

Whilst I understand that things become more sophisticated over the years I feel that Noel’s review can only have damaged the marketability of a device that is still in production and, as such, should not ultimately have been published. Oh, and as for portability anything I can get in my hand baggage and will fit in my work-shirt’s pocket I’d deem portable.

Alan Strudwick

Thanks for your user experience Alan. I don’t think many readers will agree that we should not publish critical reviews because they harm a product. Our reviews are more frank than deprecating, highlighting both weaknesses and strengths so potential purchasers can make up their own minds, on the basis of expert advice. In particular, our ability to measure these high resolution players is showing good correlation between their EIAJ Dynamic Range value and sound quality — and there are big differences between them. These facts are worth revealing and they are not to produce them?

Since high-resolution downloads are not copyright protected and can be duplicated and re-distributed freely, irrespective of such players, this would seem not to make a lot of sense, but with copyright protected Blu-ray going nowhere and the future appearing to lie in unprotected downloads, there may well be tensions and politics behind the distribution and playback of such players. NK

RECORDING LP
I have bought a Terratec Xfire 8 from Germany via Amazon for £77 and I left...
Another way to record LP, the Terratec Xfire 8, Mike Tartaglia Kershaw tells us.

a mini-review on Amazon (as AudioNut), as below.

"I have just used this unit to record a vinyl LP using my Rega RP I and Rega Fono pre-amp into my PC via USB and Audacity (free online software) at 192 kHz sampling rate and 24 bit high-definition quality, exported as both WAV and FLAC. All the cables I needed were in the box and the result was amazing. The recording is as good as the LP even when played back on a Naim Superuniti and Quad electrostatic speakers. I did have to reboot the PC several times when installing the Terratec drivers and software but it was all up and running in half an hour. All the required cables come with the unit. I suggest downloading the manual and drivers from Terratec before starting the installation. Read the manual before you start – the driver software is clunky but OK once you learn to double click on icons to obtain a list of actions to set up the drivers for each input and output.

The unit is beautifully made and encased in aluminium – like a piece of jewellery – and the sound quality is superb for the price.

The unit has a two year guarantee. It took just four days to arrive from Germany via Amazon. It fits in the palm of your hand and is powered by the USB connection so you can carry it around with a laptop easily. It records from line or microphone so it could be a portable twin track recording studio with a microphone and laptop but I only used it for recording LPs. It comes with ASIO drivers for low latency recording. It outputs audio in stereo via gold-plated phono plugs, or surround sound via mini jack plugs, to connect a laptop or PC to a hi-fi or AV system. It has a headphone output, with volume control, and also comes with cables for digital audio connection. Highly recommended and superb value for money."

I hope you and Rafael Todes will review this audiophile bargain. Best wishes,

Mike Tartaglia Kershaw

PMC 'SPEAKERS

I wonder if you can help me improve the neutrality of my system, which presently consists of an AH! Njoe Tpeeb CD player (with all the upgrades), connected to a Conrad Johnson PV I 4 pre-amplifier feeding into an Audiolab 8000X7 power amplifier that Tri-amplifies a pair of Monitor Audio GR60 speakers. I am finding that as my tastes in music have become more diverse the system is sounding a little bright in the upper mid-range and the treble, most likely the product of the Monitor Audio GR60s' metal drivers. I am considering changing the speakers to either PMC OB1i or PMC PB1i but I don’t know which will produce similar levels of bass extension as the Monitor Audios and be sufficient to fill my living room. If the solution is to change some of the amplification I’m prepared to do that but unless it is completely unavoidable, I want to hang on to the CD player.

Best regards,

Jon, Sheffield

Hi Jon, You don’t say how large your room is but as you are using GR60s I’ll assume it is a largish space. In which case, as you suggest, you have two options. The Monitor Audios do have good, deep bass and are very clean and fast – but, yes, those metal drivers can make them sound a tad bright to some
Quad QMP mono power amplifiers are powerful but smooth, and would suit Monitor Audio GR60s.

a tad bright to some ears. PMC’s transmission line loading helps produce prodigious and tangible bass from a relatively small enclosure — but to match the GR60s I’d suggest you would be looking at the PB1s.

However, my personal opinion would be to look at the amplification. The Audiolab 8000X7 is (at its name suggests) a seven-channel power amplifier rather more directed to AV duties than pure music reproduction. Therefore I’d look at changing the amplification first. In which case you have a rather wide field to choose from — depending on your budget and taste in music.

My thoughts, with the Conrad Johnson pre-amp, would be to go towards a Naim NAP 250, which sounds superb with a valve preamp. Alternatively, Quad’s new QMP power amplifiers are very smooth and detailed and would definitely tame the GR60s top end.

Even though you won’t be able to tri-amp from either of these, I think you’ll find the better amplifier stage will make a very real difference to the sound.

SONY PCM-M10
I noticed that you reviewed the low cost Olympus digital recorders in a recent issue. Could I suggest that you also try to get hold of a Sony PCM-M10 as a comparison. I recently bought one to be able to make recordings from the radio (Troubleline of course) to listen to the following morning and to make 96kHz/24bit recordings of some of my vinyl.

I found the sound quality of the Sony to be excellent for the money (I couldn’t justify the expense of an Astell&Kern) and play it through a pair of Koss KSC-75s which are ridiculously good for the amount I paid for them (£14). The Sony has a proper line out which contributes to its excellent sound (in my opinion).

Ergonomically it isn’t the slickest thing to use but I have formatted a Sandisk 64Gb MicroSD card to FAT32 format (see this link: http://www.head-fis.org/t/456327/sony-pcm-m-10-as-portable-player/120) and now I leave this in at all times and just connect using the USB lead and drag folders into the memory. I think many of your readers might be interested in such a piece of kit so would encourage you to see if Sony will let you review one.

Kind regards,

Clive Walker

Thanks for the update Clive. There are so many different digital devices these days it is hard to keep up with them all. The Olympus units were a very interesting way of recording and good at it too, if a tad disappointing when reviewed critically. But this comes down to 24/96 expectations being unfulfilled; relative to their low, low price they worked wonderfully.

I’m sure Sony will let us have an M-10 to review, as they are very co-operative.

ONCE IN A LIFETIME
How many times can any of us truly say that we love, beyond any measure of normality, a band or a singer? I love loads of bands and types of music, but only three artists would make me attain a higher plane altogether and truly spin me around. I’m referring to a once in a generation occurrence — and that is if you are fortunate.

Well pop pickers, over the last year or so another (my third) band made it to the “feel faint, dizzy, excited” state of being, that is so rare. I’m almost 50 and by this score I may not even get to put another band on my list.

Please understand, we are talking about artists here that move beyond simply loving an individual or band or composer. It’s almost a god-like reverence. Well the band in question is Milk Music, and with the greatest respect I don’t expect everyone to jump up and say, “oh yes I know who they are” or of course “aren’t they great”.

The best place to see and hear them is YouTube. Spend 10 minutes watching them live, some recordings being better than others and see if you feel what I feel. You may not.

Milk Music - rated higher than the Beatles by Neil Porter.
You can now read our Letters online, from the last issue back to March 2010. That's a treasure trove of information and advice to our readers, as well as a fascinating catalogue of reader's systems and views. There's mountains of buying information, all just a click away on your computer or i-Pad. Have fun!

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

**World Mail**  June 2011 issue

To reply, please use the e-mail link at the top of the page, or the reply pane at the bottom of the page. Replies will go on-line and in the magazine if suitable.

Just go to [www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk) and click on Letters in the left hand menu list, under the FEATURES category. This will take you to the individual months of issue. To see the full list set the ‘Display’ drop-down list to ‘All’.
not, why not (too many nots). Write in and suggest an iconic god-like musical experience of your own.

I'm positive the boss here at Hi-Fi World would welcome our musical highs, as personal and as varied as they would of course be.

Oh — any news on The Beatles mono box set? Bye the way, The Beatles don't make my list of three.


Er — thanks for that Neil. Perhaps Milk Music will move the world. In the meantime, if readers want to write in with their faves, why not? There are great artists out there, unrecognised.

We have no word on completion date for the Beatles mono box set yet from EMi as they work to ensure authentic mono reproduction. NK

AUGUST COLUMN

I have a very old friend in England whose hobby is hi-fi. I recently visited him, and he is using 'streamers' as well as a pair of Voigt corner horns. He also has a decent record player — SME 20, Macintosh amp and a pair of very good big Tannoy speakers. He likes to collect vintage gear. He has music in every room of his house. He likes to play his ripped tracks randomly, because then he hears music he has forgotten in his large collection.

I can understand that, but why not make a list and then from time to time, be tempted by something you have not heard for ages, simply because you had forgotten it sounds so damn good?

I am not a hobbyist but have built up what seems to me to be an excellent system over many years - Brinkmann Oasis turntable, Naim 180/202 with Flatcap 2, CD5X and a pair of Sonus faber original Cremonas with JPS Labs Superconductor + cables.

I love to read the notes on the LPs and CDs I play. I am reassured by having hard copy of all my music, and contrary to Noel's remarks in his column in the August issue, I simply cannot comprehend the value, the complexities and risks of magnetic storage and reproduction. Neither can I imagine listening to music much better than I can now, except that next year, budget permitting, I plan to redo all connecting mains cables with JPS Labs, and replace the electronics with a Nagra CD player and preamp combined and their Match power amplifier.

I fully understand that I have been lucky and blessed to be able to indulge in such great gear, and that the magazine caters for all types of people and their budgets, but I really cannot believe that the current fashion for digital and the corresponding anonymity of music — everywhere, on top, no sleeve notes, in the background, often small sampling rates — can be a healthy sign for the future.

When I listen to music I like to sit and enjoy the special occasion. I have been lucky to attend many great live concerts, and it is fun to relive the experience closely. It's almost frightening to feel a full orchestra or an amazing band in our modest living room. Yes — 'awesome' in the real sense.

The whole computer music and digital thing leaves me utterly bewildered. In terms of politics, we were lied to about CD when it came out. You can scratch an LP and it will still play, not so a CD. But they do sound great now, even Red Book stuff, and I am happy to mop up others' secondhand discs from Amazon. But what if there is a sudden change in Earth's magnetic field? What if all the hard drives and chips and whatever fail? I can still play music. All the best,

Kingsley Flint
Cossoney
Switzerland

Many people were unhappy about my August column dismissing CD — see the next letter. I was echoing what others have told me and what seems to be a common enough view, that LP is seen as a valuable historic source, whilst CD can be — and now commonly is — ripped to a storage drive (NAS) or such like, then put in the loft.

But plenty of people still like to reach for a physical object in the comfort of their lounge, rather than fall around with computers, it seems. As you say, good modern recordings on CD are plenty good enough for most people and CD now costs little too. In all, that's a good raft of strengths and at present whenever I go to a press reception it is CD that is played. High resolution digital hasn't really sunk in yet!

"But what if there is a sudden change in Earth's magnetic field?" asks Kingsley Flint (this happens every few hundred thousand years, Wikipedia says). "What if all the hard drives and chips and whatever fail? I can still play CD!"

One point I need to make, especially with regard to classical instruments, is that 24-bit recordings made through a high-quality ADC sound creamy smooth and have deep, dark silences, as well as laser-etched imagery. Hi-res digital really is easier on the ear and more natural than CD and very much suits classical.

There are benefits, even if survival of global magnetic events is not one of them. NK

GALLIC VIEW

Sorry Noel, but I still listen to CD and LP and even tapes. I don't believe in computer-based music. It is only a fancy and nothing can replace a case or a sleeve with a booklet containing the lyrics, the recording studio, the engineers and of course the musicians — so I don't see any interest in music downloaded to a computer.

Remi Balestie
France

LESS BASS

Using your excellent magazine as a guide over the past 10 years or so, I have built up a well-balanced vinyl record playing system which I am very happy with. However I have run into a problem and need some help and advice, please.

The system is a 'vintage' one, consisting of a Garrard 301 on a Quadraspire wall shelf; a SME 3012 12" arm, a Naim NAC 32.5 preamp and matching MGop, a Leak Stereo 20 (Classiqued!), Heybrook HB3 or HB1 'speakers (refurbished by Wilmislow) on
Atacama stands 52cm high. The listening room is a minimally furnished medium size (60 cubic metres) with a square 5m x 5m carpeted floor plan (not ideal). There are some Auralex pyramids from Studiopanes on the walls. I am also using a superb Audio Technica AT-OC9ML/11 cartridge. The system works perfectly well with late 50s vinyl: Roy Charles, Miles Davis, Elvis, The Everlys, Patsy Cline and 60s material, e.g. Dylan, Stones, Beatles, Kinks, the Who etc. It is also good with acoustic material and jazz. Where it runs into problems however is when I try and listen to later 70s vinyl records especially English 'prog' and American rock or pressings from the 80s and 90s. The sound then frequently becomes rather swamped or dominated by bass, to the extent that it is often impossible to listen to comfortably. I also need to think about my neighbours as I live in a flat!

I should add that I have nothing against bass – I play bass guitar in a band – but tend to enjoy listening to it more when it is subtle. The biggest disappointment is with newly reissued 180gm 'cult classics' from the 60s that frequently seem to have been engineered for a 'modern' bass heavy presentation. I much prefer the originals – warts and all. A record dealer I was chatting to the other day listens to 78s on early one-box record players and says the sound from these is surprisingly good, powerful and well balanced. He suggests that recorded performances on vinyl need to be played with the technology that was available at the time to get the best from them. He thinks my system with the Garrard and the Leak amplification will always make 50s and 60s records sound good for this reason. My question therefore is: do I need to build another system for use with bass-heavy material? Should I begin again with a Linn Sondek? Or can I introduce something into the current set up which would reduce bass in this way? Would different 'speakers do the trick? I have experimented with room placement. I have experimented with preamps with tone controls but do not like them. For example the Quad 34, the Audiolab 8000C and the Audio Research SP3. The Naim preamp, with no tone controls, I hold in very high regard (superb PRAT amongst other things). I have also experimented with cartridges and find many of them just too bass heavy.

Stuart Dunbar-Dempsey
Winchester
Hampshire

The Leak Stereo 20 amplifier, owned by Stuart Dunbar-Dempsey – a beautiful sound, but it has limited power and the output transformers saturate quickly with subsonics from LP.

I suspect two problems here. The heavier bass cuts and re- equalised, re- issued LPs that, as you say, often have poor quality bass made more apparent, are putting too much low frequency information through the Leak's not- so- big output transformers, causing them to saturate, something they will do at just a few Watts at very low frequencies. The cure here is to use a phono stage with a switchable warp filter, like an Avid Pulsare II. This will both lighten the bass and improve bass quality.

I suspect your Leak Stereo 20 is running out of puff driving Heybrooks. A more powerful valve amplifier with bigger output transformers will improve bass quality, but the room, being 5mx5m, will have a strong resonance around 34Hz and this may well remain a limiting factor. I suggest you try to get a home demo of alternative valve amps, if this isn't sacrilege! NK

PLAYING DSD

After several conversations with you at various meetings I am saving up to upgrade my Sondek with an Ortofon Cadenza Bronze (this is the one, right?) to enjoy my vinyl collection, and in the meantime I continue to enjoy my digital collection. I am lucky enough to own a dCS Puccini DAC/SACD player. Sometimes I feed it with files pulled from my server using a Linn Akurate/ Kinsky system, and sometimes I send it files directly via USB from my computer/ Windows/IRiver Media Centre 18 setup. I have always enjoyed the sound.
of SACD. I have a fair collection of SACD discs, both popular music (I am of the Floyd/Genesis/Yes generation) and classical. Generally I find I prefer listening to SACD discs compared with corresponding PCM files, even at high-resolution — 24/96 or 24/192. I am aware that others disagree.

Anyway, I thought I would listen to some native DSD downloads, bypassing the SACD disc. With the help of Ray from dCS, who kindly sent me the requisite firmware, I updated the Puccini to play native DSD (thanks Ray). I then went to the Channel Classics site run by Jared Sacks in the Netherlands. Jared collaborates with a number of excellent artists to produce high-quality recordings in both PCM and DSD, Jared is obviously dedicated to his art and to his artists.

I downloaded Bach's Mass in B Minor by the Netherlands Bach Society; an astounding work, beautifully performed in this recording and available to download in MP3, standard (16/44.1) and high-resolution PCM and DSD (.dff file) format, as well as an SACD disc.

I couldn't help noticing that the PCM files, even at high-resolution (24/96 or 24/192) and SACD discs on the site were considerably cheaper than DSD (.dff file) downloads. Jared explained that this reflects the greater technical complexity of making these files as well as the greater server capacity required to store them. Apparently, discs and downloads are also taxed differently.

While I can quite see his points, if this is going to be a generalised phenomenon then it may set the cause of DSD downloading back in addition, the single .dff file containing all of the album tracks was not tagged; I had to add artist/album tags and import the album artwork from elsewhere before JRiver recognised it; I couldn’t get it to show up on Kinsky at all. And finally, to the principal point of this letter: the JRiver player converts my .dff file to a 32-bit, 192 kHz PCM file before sending it to the Puccini, so I’m still not hearing the native DSD. I cannot seem to stop it from doing this. It does not appear to be able to “play” .dff files directly. I am sure that you clever people at Hi-Fi World know how to deal with this, and would be most grateful if you would let me know.

Kind regards,

Chris Corrigan

Playing DSD is not a worked out process for computers. I found when reviewing Teac's UD-501 DAC, in that case I used their own free software player that you can download from http://www.teac.com/product/ud-501/downloads. Sorry, I can't guarantee success here and I would have thought dCS might know a thing or two about this difficult and fledgling topic. Also, see Blue Coast Records website for more info, as well as 2L site. Please let us all know how you get on. NK

Founded in 1921, The Netherlands Bach Society is the oldest early music ensemble in the Netherlands, and possibly in the whole world, they say.
the speakers. I wondered whether it could be down to the flat nature of the treble panel.

Alternatively, could it be due to beaming effects from the relative sizes of the bass and treble panels and the frequencies they operate at?

I noticed that in the second review of the Martin Logan Electromotions you described that they also had quite a narrow hot spot, would you say this problem is inherent to electrostatic speakers? Do you know if anyone has ever measured the panels of ESL57s separately to see what contribution the bass and treble panels make?

I would be interested to know what frequency the crossover works at and how steep the roll-off curves are. Is the hot spot effect caused at very high frequencies alone or at midrange frequencies? If the former is true then might it be possible to make a hybrid electrostatic with the very highest frequencies handled by a different device with better sound dispersion characteristics?

I did think about the Audax HD-3P as this has extremely low moving mass but unfortunately they are not made any more (although I do have a pair that were repaired by MOCA audio and can be re-pressurised as necessary). Alternatively ribbon tweeters are widely available but do these also suffer from limited dispersion?

Kind regards,
Clive Walker
Norwich

The Audax HD-3P piezo electric tweeter leaked its gas and deflated over time. They can be re-pressurised by Moca of France says Clive Walker.

"Can you explain the reason for the very narrow hot spot of the Quad ESL-57 speakers?" asks Clive Walker.

The limited horizontal dispersion of the ESL57 is not, necessarily, a characteristic of ESLs in general but can be found on many panel speakers. It is, in fact, quite possible to arrange an ESL that has wide dispersion but it does have to accord to a specific design. For example the current ESL2812 can maintain a reasonable +0-3dB characteristic across a 30 degree horizontal window for all mid/high frequencies. Looking at this plot — http://www.princeton.edu/3D3A/Directivity/Quad_ESL57/6.QuadESL57ContHor.jpg — we can see that, through the critical range of 2kHz to 5kHz, the ESL57 really only has a 10 degree horizontal window! To think of adding a wider dispersion driver to complement an ESL is folly. The biggest attribute of panel loudspeakers is their coherence across a wide bandwidth, there being no disruption (for the ear) caused by relatively abrupt changes in characteristics of drivers through the crossover region as commonly found in conventional multi-driver moving coil speakers. Nearly every example of panel loudspeakers which crossover to conventional drivers, whether in the treble, midrange or upper bass, detracts from this coherence. It is part of what makes an ESL such a special listening experience. True ribbon tweeters also suffer from reduced horizontal dispersion, particularly when horn loaded. There is no conventional crossover, per se, in a Quad ESL. Instead there is a very gradual roll-off (blending) of the panels either side of 1kHz which seems quite innocuous when listening.

Peter Comeau
Head of Acoustics
IAG

Dispersion of a Quad ESL-57. Go to http://www.princeton.edu/3D3A/Directivity/Quad_ESL-57 to see more measurements on this classic loudspeaker.
These two components form part of Teac’s Reference 501 series, which aims to combine audiophile performance and advanced technology in compact casework. The midi-sized PD-501HR disc player and AI-501DA DAC/amplifier combine to form a small footprint system — although each could be used with other equipment because standard interfaces, such as line-level phono audio outputs, coaxial/optical digital inputs and so on, are employed. Other products in the Reference 501 range include a DSD-capable DAC and a Class A headphone amplifier with adjustable damping-factor.

All look superb — you can select from black and silver finishes — and the backlit output level meters of the AI-501DA amplifier in particular give it added visual appeal. They’ll immediately bring feelings of nostalgia to anyone — myself included — who ever used the Teac analogue tape decks that were popular back in the 1970s. The meters here are — as with the recorders — calibrated in dB rather than watts.

The controls themselves also have something of a retro feel. One has only to touch those toggle switches or the amplifier’s click-detent volume control or input selector knobs (both beautifully-machined) to be transported back to a long-gone era of high-end Japanese electronics, enormous loudspeaker boxes and direct-drive turntables. Then build quality and reliability were seen as paramount — and it’s good to see that Teac is reviving these trends (both player and amp are robustly-made and reassuringly heavy) even though our review samples are made in China rather than Japan. Cheekily, it refers to the substantial casework as a ‘full metal jacket’. I wonder what Arcam makes of that?

A nod to the past, then, but the technology in these boxes is as far removed from the 1970s as an Android tablet is from a Commodore PET personal-computer. Let’s start with the PD-501HR. Sure, it looks like a regular CD player, albeit a slot-loading one. The internal optical reader is a notebook-computer mechanism that interfaces to the player’s electronics via a SATA cable. Teac have, however, employed what it calls ‘VACS vibration control’ to stabilise the mechanism. Basic transport controls are ranged to the
right side of the front panel, together with a dimmable organic-LED display that relays track information to the listener. A slimline remote presents users with an alternative to those front-panel controls.

On the rear panel are a power save switch that turns off much of the circuitry in standby mode to yield an electricity consumption of just 0.1W, and a standard IEC mains inlet enabling your choice of mains cable.

The audio outputs comprise a pair of (fixed-level) analogue phono's, plus coaxial and optical digital outputs. One function that's only available via the remote is 'pure' mode. This feature, which turns off the digital outputs, can only be engaged when a disc isn't playing; I got silence from the PD-S01HR plus a DAC, with 'pure' active! Which brings us to the PD-501 HR's most unusual feature, that will deny you a digital audio output regardless of how 'pure' is set.

This is DSD (Direct Stream Digital) hi-res replay, made possible by a Cirrus CS4398 DAC, which supports DSD natively (as opposed to converting DSD into PCM first). Although this chip can also handle PCM streams from CDs and so on, Teac has additionally-specified a Burr-Brown PCM5102 for such sources. Officially, the PD-501HR doesn't support the SACDs that are built around DSD, although the Hi-Fi World measurements show that a test SACD was able to play. If you want to try the DSD replay feature as recommended by Teac, you'll need to find a source of DSD files and then write them to a blank CD-R or DVD-R with a personal computer. I tried 'ripped' content from an SACD but free commercial DSD music downloads are available – labels include Blue Coast and Valence. A good starting point is http://dsd-guide.com/free-downloads, from which sample tracks can be downloaded.

The PD-501HR supports both DSD128 (2.8MHz, SACD-standard) and DSD256 (5.6MHz, i.e. twice the SACD sampling rate) content. Such files usually have a .dsf extension. The PD-501HR will also play PCM WAV files with resolutions of 16 or 24 bits, and sampling rates of 44.1kHz, 96kHz or 192kHz. Unfortunately, audio files employing non-DSD codecs (such as MP3 and FLAC) are ignored.

Next, we come onto the AI-501DA. This DAC/amp is built around an efficient Class-D output stage employing silicon developed in Norway by Abletec. Teac claim a maximum output of 90 Watts per channel into 4 Ohms. Other hi-fi manufacturers using Abletec technology, albeit in higher-end products, include Sweden's Marten and D-Sonic in the States. A separate headphone amplifier, which drives a 6.3mm socket on the front-panel, is provided too.

Its power supply arrangements are a combination of linear (i.e. based around a large – toroidal – transformer, for the delicate analogue and small-signal stages) and switch-mode (for the output amp). As with the PD501HR, an 'auto power save' switch is provided for keeping energy consumption low (a mere 0.2W) in standby mode. The AI-501DA is also interesting when it comes to inputs, your choice of which is confirmed by LEDs ranged around the selector knob. In addition to two pairs of phono sockets for line-level sources (no phono stage here!), the rear panel boasts two optical digital inputs, a coaxial digital input and a USB port.

You cannot plug a memory device containing music into the latter, which is a pity as doing so would be in keeping with the system's space-saving philosophy; instead, the connection is intended for connection to a computer. On Teac's website, you'll find sound-card driver software for both Windows and Mac platforms. The idea is that instead of listening to music (or any other audio, for that matter) via your computer's sonically-dubious hardware, it's instead streamed to the AI-501DA in uncompressed PCM form via USB. Any audio playback software running on your computer – whether Winamp, iTunes, VLC or Windows Media Player – will thus deliver results. Sampling rates of up to 192kHz, allied with 16 or 24-bit resolution, are supported.

Few PC programs support DSD,
and given that such streams would be converted into PCM for transmission to the amp via USB, you would be best advised to instead burn them onto disc and play them on the PD501HR. It's just a shame that the player doesn't have a USB port to spare you the bother of having to transfer files to DVD-R. Control of volume is achieved in the AI-501DA via traditional analogue means, the attenuator being motorised so that it can be controlled via the supplied handset. Remote selection of input is also possible by this means, as are muting, dimming of the meter backlights and basic control over the PD501HR's transport functions. Overall, then, an attractive package.

**SOUND QUALITY**

For the listening tests, I used my usual Acoustic Energy AE109 floorstanders. To add a little variety, I also referred to the superb Creek Evolution 50A that was reviewed last month. The 50A employs a conventional Class A/B transistor power amplifier, instead of Teac's pulse-width modulation Class D affair. Starting off with the 2009 remastered version of The Beatles' " Sgt. Pepper" on CD (my, wouldn't we all like to hear this album through the wonders of high-bitrate DSD!) I found that although the title track's bassline had a wonderful tautness, McCartney sounded rather coarse and strident whenever he raised his voice during the song. This was with the AI-501DA being fed by the PD501HR via the analogue connections.

Switching to a digital input yielded a definite improvement, demonstrating that in at least one respect the amp's DAC improves on the player's. Subsequent tracks on " Sgt. Pepper" also fared well, even if they did have that rather obvious stereo effect that we all know and love (oh come on, it was 1967!). The calliopes and fairground organs of the sound collage that forms a key element of 'Being for the Benefit of Mr. Kite' were enjoyably-presented, while the rhythmically-pacy final section of 'A Day In The Life' proved to be such an engaging listen that I had to listen to the whole wonderful track, complete with infamous sustained end-chord – and then the whole album – all over again!

It was then time to switch to something classical – specifically an ECM CD (New Series 1275) of Arvo Part's 'Tabula rasa' (and three other works – two different versions of Fratres, and the famous bell-led Cantus for Benjamin Britten). These are all fairly old recordings from varied sources, and the 'Tabula rasa' featured here is the newest on the disc, dating back to February 1984. For this, nothing is lost in terms of musical drama. The first movement's recurring theme repeats and each time builds up more. All the complex tonality and dynamics of this string-driven piece, which also employs a treated piano, is evident; yet it's possible to identify the individual contributions.

Next up was something rather more electronic – "Tapes and Money" from Totally Enormous Extinct Dinosaurs' Trouble CD. This punchy offering combines the analogue synth textures of a previous pop era with the sort of deep and fluid bassline that would have been difficult to capture on a 70s/80s mass-market LP! Unfortunately, the expansive bassline in question also overwhelmed this system to an extent; it tended to dominate at the expense of the track's other elements (notably the percussion) although obvious distortion was never audible. With the Creek Evolution 50A, the balance was noticeably better.

And so to hi-res, kicking off with a 2.8MHz 'A DSD download of Keith Greeninger & Dyan Ka's 'Looking For A Home', from the 2007 Blue Coast Collection sampler. This acoustic guitar-and-vocal number, recorded live in the studio, was given real insight by the Teac duo. Strong detailing enabled every breath and strum to be heard, and a sense of the performance space was projected into my living room. The 24-bit PCM material on DVD-R – notably audiophile transfers of vinyl – was also sympathetically dealt with.

I did find that using the AI-501DA with a Windows XP PC to play the same tracks via USB (I was running VLC – with the volume control set to 100% to avoid possible artifacts) resulted in a marginally more transparent performance. Using software like VLC also means that codecs and formats denied to the PD501HR, such as MP3, FLAC and AAC, are now playable. FLACs, including a straight conversion of Dave Brubeck Quartet's 'Take Five' from CD fared well. All of the musical elements were presented as a cohesive whole.

**CONCLUSION**

Taken as a pair, these Teac components are in a different league to the mid-audio systems of yesteryear insofar that they can capably reproduce music. One could argue that the space-restricted user...
with a PC could probably get away with just the AI-501DA and a decent pair of bookshelf speakers. For this reason, the AI-501DA would form the basis of an excellent system for home office use – far superior to, say, a cheap iPhone docking station.

On which subject, it’s a shame that the AI-501DA makes no provision for music stored on smartphones, or indeed USB memory devices. The PD501HR’s main claim to fame is its compatibility with DSD content, but what a shame that music downloaded in this format cannot be introduced to the player via USB. With DSD files, the PD501HR can shine but CDs can sound rather congested at times. The AI-501DA’s DAC, fed by the player’s coaxial output, was audibly better.

**MEASURED PERFORMANCE**

**TEAC PD-501HR CD PLAYER**

The PD-501HR CD player measured flat to 21kHz our analysis shows, although treble rolls down just a trifle at the top end, meaning it will not sound unduly sharp in its treble. Distortion levels were mediocre, with 0.2% being measured at -60dB – not an especially low figure. As a result, EIAJ Dynamic Range was 0.26% being measured at -60dB, not an especially low figure.

There was just 20µs of signal correlated jitter at 1kHz when playing a -60dB test tone at 1kHz. There was some uncorrelated jitter, but clock wander was absent.

With a 192kHz sample rate WAV file burnt to DVD-RW (using TMPG Video Author 3) frequency response measured flat to 46kHz (-1dB) and rolled off gently above, the Teac exploits high sampling rates. Distortion at 24bit resolution measured 0.14%, which is a trifle high. Around 0.05% is good and 0.08% typical, so the PD-501HR doesn’t resolve 24bit dynamic range very effectively. The main issue is noise, our analysis shows, which should be lower.

An anomaly of this player is the fact that it plays SACD discs, even though the handbook says it doesn’t. Measured results from our Philips SACD test disc were poor however, worse than CD, an unfortunately confusing condition for users who may slip an SACD into the player. Distortion at -60dB measured a high 0.6%, against 0.26% for CD, so what the PD-501HR was doing here is a mystery. It plays DSD files from DVD Teac say, but we are unable to record DSD test files to DVD because of copyright protection.

The PD-501HR offers reasonably good CD replay via its internal DAC, but the DAC within the A1-501 amplifier offers better performance so it is best connected digitally to the amplifier and used as a transport. NK

**TEAC A1-501DA AMP**

Power output measured 50 Watts into 8 Ohms and 95 Watts into 4 Ohms. Lack of line sag under load usually improves dynamics and a high damping factor of 44 comes into the picture, suggesting tight bass control, or even dry bass.

Distortion levels were low even at high frequencies, where the Teac produced 0.03% distortion at 1 Watt into a 4 Ohm load – a low value. Our analysis shows this was primarily odd-order components. The on-board DAC was very linear, producing little extra distortion; with 16bit at -60dB 0.21% was produced and with 24bit 0.05%, both very low values.

Frequency response of the amplifier reached 48kHz though the analogue Aux input and through the digital input with 192kHz sample rate digital and 44kHz at 96kHz sample rate. The EIAJ Dynamic Range values were very good at 103dB for 16bit (e.g. CD) and 113dB for 24bit. The Teac A1-501DA measured well in all respects and is likely to deliver good sound quality as a result. NK

**REFERENCE 501 SERIES**

**PD501HR DISC PLAYER £699**

**AI-501DA DAC/AMP £699**

**EXCELLENT - extremely capable**

**VERDICT**

Cutting edge complex Class D amplifier and hi-res ‘CD’ player. Great sound, from hi-res PCM and DSD, but for expert users.

**FOR**

- stunning ‘retro’ looks
- enjoyable sound
- DSD and hi-res PCM capable

**AGAINST**

- can’t play music from USB storage devices
- potent baselines can upset musical balance
- PD501HR incompatible with FLAC, MP3 and AAC

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Leicester UK
Here's your chance to win the superb Audiolab M-DAC we reviewed recently. Simply read the review excerpt below and answer the questions.

"Out of the box it is a sturdy unit weighing in at 4.95kg. The front is dominated by a large rotary control knob in the centre with the display at one side and four small buttons on the other for menu, input and filter selection along with the power on/off button and a headphone socket (which, incidentally, is powered by its own discrete circuit).

The rear contains both balanced and unbalanced stereo outputs together with a USB 2.0 input port and two optical and two coaxial inputs. There's also a set of S/PDIF optical and coaxial outputs should they be required.

Inside is a high-quality ESS Sabre32 9018 DAC chip, discrete transistor circuitry and copious power supply filtering. Audiolab also says special attention has been paid to jitter attenuation to ensure all sources are optimally converted once they reach the DAC.

Power comes from a chunky wall-wart type external supply and a small but fully functional remote completes the package.

Setting up the M-DAC for use with a Mac and iPad was relatively straightforward and issue-free (OS 10.4.11 and above recommended). For PCs the Audiolab loads its own drivers — and there's a handy nine pages of instructions in the manual to make sure you can complete the necessary installation".

For a chance to win this great prize, answer the four easy questions on the right. Send your entries on a postcard only by 2nd December 2013 to:

December 2013 Competition,
Hi-Fi World magazine,
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Mr John Byars of Northants

QUESTIONS

[1] Who makes the DAC chip?
(a) Wolfson
(b) Burr Brown
(c) ESS
(d) Michael Mouse

[2] Special attention is paid to —
(a) Jitter attenuation
(b) Paint finish
(c) Rubber feet
(d) Ventilation

[3] Power comes from —
(a) Hinckley Point
(b) External supply
(c) Battery
(d) Solar panel

[4] The weight is —
(a) 4 ounces
(b) 2lbs
(c) 10 stone
(d) 4.95kg
Basso time

iBasso's new DX50 portable digital player offers impressive performance at a wallet-friendly price. Noel Keywood is suitably impressed.

The DX50 is a relatively new portable digital audio player, a follow on from iBasso’s well-known but expensive £640 DX100. As you might guess the DX50 is further down the model chain, but because of rapid progress and rising competition, the DX50 still offers full 24/192 digital replay — but at a quoted price of just $239. That’s a low price for a portable able to drive a hi-fi system or headphones, delivering better sound quality than CD.

Much of the DX50’s case size is determined by the large, removable lithium-ion battery that can be replaced by a Samsung part. That’s handy because if or when the battery dies the player doesn’t die with it. Also, a spare can be carried.

Our player came in a simple carton with no instructions and no charger, but with a pouch, digital lead and micro-USB to USB cable for charging and file upload.

It had first batch 1.1.1 firmware that was buggy, crashed with Mac desktop files and would not output files above 48kHz sample rate from the digital output. An update to 1.1.5 cured this and another update days later to 1.1.6 fixed more small issues.

Our player updated perfectly, except that it had to be computer connected to download the firmware, and would not easily reveal its update menu until disconnected, whereupon it then had to be reconnected for the update to proceed because the player polls the computer update file. Performing a factory reset as per the instructions then erases all music files, so a master record is best kept available on the computer.

The DX50 has 3.5mm jack headphone and line outputs whose logic I couldn’t understand. The headphone output offers three switched levels; we measured 1V, 1.4V and 2.6V out. A small slide switch describes these as Lo, Mid and Hi. The high output is very high, higher than that from most CD players! It’s too high for most headphones, even insensitive ones. This output can feed a hi-fi direct however, where the extra voltage may be appreciated in getting a volume setting much like that of other silver disc players.

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It’s the Line output that baffles me, because its level is varied by the volume control. The volume control only serving to reduce resolution unless left at maximum. Its distortion spectrum suggests it comes from the same output.
amplifier that supplies the headphone socket too – odd.

The output jacks are at the bottom of the player, whereas they’re usually at the top for obvious reasons of easy cord lead out. At the top of the player lies another 3.5mm mono jack, this one for the digital output – a non-standard connector for Si-PDIF digital.

It’s common to provide S/PDIF via optical coupling through the headphone jack, Mac style, but not on the DX50. iBasso’s short jack-to-phono plug digital lead worked well with a Furutech Esprit preamp and an Audiolab M-DAC, streaming up to 24/192 resolution files with no problem, using 1.1.5 or above firmware.

A micro-SD card slot reads up to 1TB iBasso say, but currently 64GB is the maximum card size available and I used a 32GB card without problem. Internal memory is a limited 8GB, compared to Astell&Kern’s 32GB, so a big external card is needed.

My AK I 20 totes 96GB in all at present and the DX50 can manage 64/4, or 72GB – a respectable figure. Whether it is enough depends upon how much high-res you use, since 24/96 files are around 4x larger than CD files, or 200MB against 50MB for an uncompressed CD file and 25MB for a FLAC CD file.

A micro-USB socket is for connection to a computer’s USB input through a short cable supplied. The DX50 must be switched on to charge only. The charge warning and charge indicator are both clear and informative.

What files does it play? Initially I was taken aback to find only wav at maximum 24/192 resolution. The firmware updates cured this limitation though and our player settled down to play wav, flac and aiff up to 24/192 through the internal DAC to headphones, and via the digital output.

I say “settled down” because with early firmware it would jump around and skip files and such like. Even with 1.1.6 it played Marta Gomez at double speed, making her do a chipmunk impression. The system crashes and necessary reboots stopped with the later firmware.

The DX50 uses a capacitive touch screen for most actions. This worked reasonably well, except the small back button was often difficult to use. There are three main physical controls, a Play/pause button and forward and back skip buttons. They’re big and sculpted and can be located by touch in a pocket as a result.

The volume control Up and Down buttons were less successful. Each often, but not always, needed a double push to get going and the volume moved slowly through 255 steps; there’s no mute function.

The Menu system was simple and easy to navigate. A Settings menu offers an equaliser, gapless or gapped (5sec, 10sec) playback, and many other options, including a file spec that identifies bit depth, sample rate and data rate of a music file.

EASE OF USE

Clunky and unstable in its first firmware version, in 1.1.6 the DX50 became predictable in behaviour. Fear factor subsided from 95% to around 10% with firmware update, the residue of errors, such as Marta Gomez’s chipmunk impression, being tolerable.

The player is well built and finished, every bit as good as an Astell&Kern, but for half the price. It just fitted my palm, but may be a tad wide for smaller hands; it felt solid too. It’s neat black case won’t attract dust. It’s neat black case won’t attract dust. The small back button was often located by touch in a pocket as a result.

The headphone and line output don’t make good user or engineering sense. A headphone output doesn’t need 2.6V – this is daft. Around 1V is enough for insensitive headphones and an attenuator switch needs to chop this by one-third to 0.3V (an industry standard) for safe listening through sensitive headphones.

The line output should be a clean, full volume feed from low impedance to drive a long line with capacitance. However, with digital volume in this player applied before the analogue output chip that feeds line, this is not topologically possible. Line is redundant on this player; the headphone output offers the same result in more flexible form. More needed is an optical digital output and PSU for tethered play.

The menu system was easy to navigate and the touch screen effective. There are EQ options to fatten up headphones, or even soften them down. Bass heavy phones can be tamed, or bass light ones given a small extra boost.

There were four languages on our sample, Chinese, Japanese, Korean and English, which suggests to me digital audio players like this are purposed for – and better understood – in the East than the West. This is a tad sad; we’re stuck with stone-age MP3 whilst in the East high resolution digital audio is seen as the route ahead.

SOUND QUALITY

Like the Astell&Kern AK100 and AK120, and Colorfly C4 Pro I have reviewed, the DX50 was used as a ‘CD player’ driving a hi-fi system, and as a portable driving headphones. It was hooked into our office system comprising Quad Elite QMP monoblock power amps driving Tannoy Precision 6.5s, and my current home system where a WAD 300B valve amplifier feeds Martin Logan Electromotion electrostats. Headphones used were my excellent Jays V-Jays budget portables, as well as larger over-the-ear Philips Fidelio X1s and Yamaha HPH-MT220s.

Very obvious when playing Marta Gomez ‘Lucia’ (24/96) over headphones was her clear enunciation, delivered by what I’d describe as a tidy, open sound,
ESL 2812 & ESL 2912
we just got closer...

These ESLs incorporate Quad's classic electrostatic speaker design philosophy which has fed its reputation since 1957. Born from our continuous aim to further improve the ESL range, ESL 2812 and ESL 2912 represent the pinnacle of Quad's achievements. The closest approach to the original sound, just got closer...
strong
on midrange
information. However, neither high treble or low
bass were pronounced. It was the
mildness of frequency extremes that
drew attention to the mid-band. The
DX50 sounded clear and concise, but
not ballys like the Colorfly C4 Pro
— it lacked that player’s bass drive.
This was especially apparent
with Diana Krall’s ‘Narrow Daylight’
(24/96), where the bass line was clear
but not especially gripping in terms of
power through Fidelio X1s, which
have strong bass reproduction.

When compared to an
Astell&Kern AK120, the DX50
lacked the dark silence around notes
and also the sense of space around
instruments and singers — differences
were clear and stark.

The AK120 I use as a reference
is a lot more expensive, over £1,000,
but it showed clearly where the
DX50’s limitations lay. Technically, I’m
finding that this sort of difference
between digital players correlates
well to their measured dynamic range
and here the DX50 is little better
than CD.

The choir of the Chicago
Symphony Orchestra singing ‘Veni
Creator Spiritus’, Mahler’s Symphony
No8 (24/96), was stretched wide
across the end of my lounge between
static loudspeakers, showing clearly
that the DX50 images firmly, without
imprecision that jitter brings.

It was fascinating to hear
Duffy standing firmly centre stage
singing Warwick Avenue in a 24/96
recording made from LP through a
Furutech Esprit preamp, source being
a Garrard 401, SME312S arm and
Ortofon Cadenza Bronze.

The glory of these portables is
that they can store and play anything.
Next minute I was listening to the
Ortofon Cadenza Bronze.
A prolific player — if you don’t mind
buying direct from China. Very
good sound quality — better
than CD with high-resolution
recordings — if not the best.

I can’t say it compares with the
Astell&Kerns — headphone listening
clearly picked out limitations — but it
costs half as much as an AK100.

However, the DX50 can be
hooked up to an external DAC and
used as a high-resolution digital
player in a hi-fi, overcoming this
limitation. Used like this, as a hi-res
player, it’s a bargain.

At the price the DX50 is hard to
argue against as a great all-rounder,
a demo of what is coming down
the road to high fidelity. If I didn’t
already have (and need) an AK120, I
would buy the DX50, for its price/
performance punch.

**CONCLUSION**

The DX50 is a beautifully crafted
player. Its classy case feels solid in the
hand and the mechanical and screen
touch controls were firm and worked
nicely. It is light, small and portable,
fitting a trouser pocket.

Its screen menus were easy to
navigate and it has plenty of useful
options, including an equaliser that
worked well, plus gapped or gapless
playback.

However, our sample occasionally
decided to run at double speed — a
weird fault! But this was rare and
switching off then back on cured the
issue.

Battery life was long at 12 hours.
Sound quality was very good too,
clearly better than CD with good
24bit recordings, making the DX50
a good sounding player that, with a
decent pair of headphones, shades
MP3 and its ilk.

**MEASURED PERFORMANCE**

Analogue output from the headphone
socket measured 1V maximum at
Lo, 1.5V at Mid and a high 2.7V at
Hi. The last value is more than most
CD players deliver and is too high for
headphones. The volume control works
on all outputs and does not affect
frequency response. The Line output
delivers 1.4V maximum, attenuated
by the volume control. The website
mentions 9V but this is not available
and would not make sense if it was.

Frequency response extended to
37kHz (1dB) with 96kHz sample rate
data and 192kHz sample rate data
so the DX50 exploits high resolution
digital well in this respect.

With 24bit resolution distortion at
-60dB measured 0.15% and this could
have been better, 0.05% is typical and
0.02% possible from the best DACs.

Noise affected the figures and this also
impacted EIAJ Dynamic Range, the result
with 24bit being a mediocre 103dB,
where 110-115dB is common and
expected.

The digital output supported 192kHz
sample rate maximum, after firmware
upgrade to 1.1.5 and above.

The DX50 provides benefit with high
resolution digital, but it does not fully
exploit its potential. Dynamic range in
particular was disappointing at 103dB.
There is plenty enough output to drive all
headphones or a hi-fi system. NK.

**VERDICT**

An excellent, low-cost, high-
resolution portable digital
player — if you don’t mind
buying direct from China. Very
good sound quality — better
than CD with high-resolution
recordings — if not the best.

**FOR**

- small and light
- good sound
- replaceable battery
- easy to use

**AGAINST**

- occasionally runs fast
- awkward volume control
- midband glare

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Mention the name Meridian and thoughts invariably turn to high-end digital components with price tags approaching that of a small family car.

So it came as a bit of a surprise when earlier this year the Cambridgeshire-based company launched the Explorer - a portable USB DAC and headphone amplifier aimed at improving the sound from a PC or laptop and retailing at the wallet-friendly price of just £250.

Now the Explorer has been joined by a bigger brother in the shape of the £450 Director - another slim digital-to-analogue converter but this time promising even better sound quality and greater functionality.

In short, it's aimed at enabling better music replay from a laptop or PC or, alternatively, as an add-on to CD drives, network players or music servers with digital outputs. Sample rate support runs up to 24bit/192kHz and there's a choice of USB or both coaxial and optical Toslink connections.

Housed in a smooth metal tube-like chassis with shiny plastic end caps, the Director has the look and feel of a quality component. The front features five lights that indicate both the input and the rough incoming sample rate while a large centre button selects between USB or S/PDIF input.

With S/PDIF selected the unit automatically senses whether the signal is coaxial or optical.

The other end features the input sockets as well as a single pair of RCA phono outputs.

If the Director is used as a USB DAC the device draws its power supply from the computer. Connected to other devices such as a Sonos or CD drive via S/PDIF, however, requires the use of the included power adapter plugged into the USB port. It means it's difficult to power the device externally and use the USB input at the same time. There are, however, a few USB power line supplies able to provide independent power to a DAC like this, in place of the computer's 5V output.

Inside Meridian has utilised its in-house designed up-sampling technology with a direct-coupled fixed-level output.

Meridian also says the use of its proprietary Apodising filter results in a purer sound and can clean up some recording faults - particularly in earlier digital recordings. Standard sample rate signals (16-24bit, 44.1/48kHz) are automatically up-sampled to 24bit 88.2/96kHz while separate precision reference oscillators are included for sample rates based on 44.1kHz and 48kHz to minimise jitter.

The company adds that the same quality capacitors and resistors as used in its flagship 800 series components have been employed throughout the Director's circuits to enhance sound quality.

As a fully compliant USB 2 device...
The best manufactured and loveliest sounding valve amplifiers in the world.

In the last century Western Electric produced the 212 valve a classic valve disappeared from the market and NOS is not affordable for audiophiles at USD 25000/pair.

In 2012, a Chinese valve factory reengineered and produced the Western Electric 212 which formed the basis for our circuit design.

Mingda proudly presents the newest development from our drawing board and workshop- a perfect and hand crafted class A amplifier based on a remake of the highly acclaimed Western Electric 212 tube, producing 40 watts in pure A mode and 150 watts in AB mode, an amplifier for the condescending music connoisseur.

MC998-DW
Class A mono block amplifiers

Output Power: 40W
Frequency: 18Hz～25KHz±1dB
Tubes: WE212 x1, (JJ)ECC83 x1, (EH)6H30 x1
Net Dimension: 43Wx43Dx90H(cm)
Net weight: 60kg/one channel
Patent NO.201230601303.0

The refined sound of the MC998-DW was highly acclaimed in the Franco-phone world and the appearance as well as the price/value ratio received six stars in the French HIFI magazine Haute Fidelite as well as the circuit and the hand picked components.

Appearance : ★★★★★
Components : ★★★★★
Bass : ★★★★★
Midrange : ★★★★★
Treble : ★★★★★
Dynamics : ★★★★★
Performance : ★★★★★
Scene setting : ★★★★★
Transparency : ★★★★★
Quality/price : good

MC998-DW specifications:
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with some of the more processed pop tracks around at the moment — rounding off the rough edges to provide a more palatable sound. However, there will be some who prefer a little more excitement to their sound — although the Director will probably be the better bet for long-term listening than some of the more in-your-face examples of the DAC breed.

And, on the right material its open, sophisticated and enthusiastic nature means it puts in a very creditable performance.

**CONCLUSION**

Anyone looking for a standalone DAC under the £500 mark has no end of choices these days — and Meridian’s new Director DAC deserves to take its place on any buyer’s shortlist. It’s a well-judged product that gets most things right and is more than capable of turning a computer or laptop into a first-class sound source or improving on your current digital replay set-up.

It serves up a smooth yet detailed sound with no shortage of bass depth and power when needed. Add in its striking design and Meridian’s usual high standard of construction and it is a very tempting proposition indeed.

---

**MEASURED PERFORMANCE**

The Director has extended analogue bandwidth with 182kHz sample rate digital: it reached 90kHz before falling away quickly to the 96kHz limit. Similarly, 98kHz sample rate signals had an analogue bandwidth of 46kHz, close to the 48kHz limit.

With 24bit resolution distortion at -60dB measured 0.07%, where 0.02% is possible. As a result of this and some noise EIAJ Dynamic Range was respectable at 115dB with 24bit, but not in contention with the norm at 115dB or the best at over 120dB. With 16bit (CD) again the distortion figures were good, but unexceptional. Output measured a normal 2V.

The Director has wide analogue bandwidth but not the dynamic range of some. NK

**VERDICT**

Neat styling and good sound make the Meridian Director an eminently worthy addition to the ranks of standalone DACs.

**FOR**
- smooth, sophisticated sound
- attractive design
- 24/192 capable

**AGAINST**
- some may prefer more bite
- plenty of competition at the price

Meridian
www.meridian-audio.com
info@meridian.co.uk

---

No. 2 had a timbral richness and real sense of power.

Throughout this recording the Meridian proved it was more than up to the task of communicating the sheer musical power of an orchestra in full flight.

And it can also rock out with the best of them when needed. A 24/96 Megadeth download stormed along through a pair of Acoustic Energy’s new budget 300 standmount loudspeakers.

To be critical, there’s not quite the depth of detail and stop-start immediacy of some pricier designs. Some may also perceive a slight lack of bite to the treble. Instead the Director prefers to deliver a smoother, more velvety presentation of the music.

This actually works quite well away quickly to the 96kHz limit. Similarly, 98kHz sample rate signals had an analogue bandwidth of 46kHz, close to the 48kHz limit.

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**Frequency response (192k)**

<table>
<thead>
<tr>
<th>Frequency (kHz)</th>
<th>Response (dB)</th>
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</thead>
<tbody>
<tr>
<td>4kHz - 80kHz</td>
<td>-0.25 / -0.07</td>
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**Distortion, 24bit, -80dB**

<table>
<thead>
<tr>
<th>Distortion (16/24)</th>
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<tbody>
<tr>
<td>0dB</td>
<td>0.002</td>
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<table>
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<tr>
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<td>Noise (IEC A)</td>
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<td>103/110dB</td>
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<tr>
<td>Output</td>
<td>2.14V</td>
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</tbody>
</table>

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**SOUND QUALITY**

Meridian has more experience than most in the world of digital audio — having been the first high-end British manufacturer to produce its own CD players way back in 1983. And that know-how shines through on the Director. Hooked up to the MacBook Pro and playing a range of files from standard Red Book CD rips to 24/192 material the DAC sounded refreshingly light and nimble along through a pair of Acoustic Energy’s new budget 300 standmount loudspeakers.

As a CD rip of the Buena Vista Social Club full was relayed convincingly when fed into a Naim SuperNait — with notes and menacing on his ‘Murder Ballads’ handled. Eleanor McEvoy’s vocals on her ‘Yola’ collection sparkled while Paul Simonon’s classic bass line slammed all present and correct.

That same ability translated from classical music, where the timpani that opens the third movement of Mahler’s ‘Symphony No. 2’ had a timbral richness and real sense of power.

Throughout this recording the Meridian proved it was more than up to the task of communicating the sheer musical power of an orchestra in full flight.

And it can also rock out with the best of them when needed. A 24/96 Megadeth download stormed along through a pair of Acoustic Energy’s new budget 300 standmount loudspeakers.

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The Director has wide analogue bandwidth but not the dynamic range of some. NK

---

**REVIEW**

The Director is more than capable. (Back in 1983, Meridian was introduced by the likes of Paul Simon, Paul McCartney, and Mark Humby.)

The Director has wide analogue bandwidth but not the dynamic range of some. NK

---

**MERIDIAN DIRECTOR DAC £449**

**EXCELLENT - extremely capable**

**VERDICT**

Neat styling and good sound make the Meridian Director an eminently worthy addition to the ranks of standalone DACs.

**FOR**
- smooth, sophisticated sound
- attractive design
- 24/192 capable

**AGAINST**
- some may prefer more bite
- plenty of competition at the price

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info@meridian.co.uk

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**FREQUENCY RESPONSE, 192k**

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

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

## Turntables

<table>
<thead>
<tr>
<th>Turntable</th>
<th>Year</th>
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</tr>
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<tbody>
<tr>
<td><strong>Rega RPI</strong></td>
<td>2010</td>
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## Tonearms

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**STANDARDS**

**ORIGIN LIVE**
SILVER 3C 2010 £599
Excellent mid-price tonearm with a clean and open yet lyrical sound.

**HADCOCK GH-242**
EXPORT 2010 £770
Consistently musical, lyrical sounding tonearm, but needs the right turntable. Excellent value.

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

**FUNK FIRM FXR II** 2010 £1,175
Clever reworking of the ubiquitous Rega platform, the FXR II is a wonderfully musical, almost unipivot like performance.

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

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

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

**SME SERIES IV** 1988 £1,620
Offers nine teehnes of the SME’s magic at just over half price. Exquisitely built and finished, and a design classic. Faces stiff competition these days, but lovely nonetheless.

**SME 3125** 2010 £1,750
Twelve inch magnesium alloy arm tube plus SME V bearings makes an impressive transcription tool with an insightful yet composed sound. Superlative build completes the package.

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

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

**SME SERIES V** 1987 £2,389
Vice-like bass with incredible weight, ultra clear midband and treble around, although some don’t like its matter-of-factness!

**LINN EKOS SE** 2010 £3,700
Slight mod over the years, including revised bearings and the recent new wiring has kept it a serious player in the superarm stakes. Has a commanding musicality all of its own.

**OL ENTERPRISE 3C** 2010 £4,500
Few if any pivoted arms come close to this arm’s combination of liquid musicality and forensic grip.

**CARTRIDGES**

**AUDIO TECHNICA AT-95E** 1984 £25
Great starter cartridge that’s detailed and musical beyond its price. Superglue the stylus in for better 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.

**ORTOFON 2M RED/BLUE** 2007 £60/£120
Modern, high resolution budget moving magnet that are always an engaging listen.

**GOLDRING G1042** 1994 £239
One of the best MM s going, with sweet and extended treble and punchy, muscular bass.

**ORTOFON VIVO BLUE** 2011 £275
Super new budget moving coil cartridge from respected Danish manufacturer; a real step up from previous efforts.

**DENON DL103R** 2006 £295
Awkward to get working properly with a poor mounting arrangement, yet it rewards with a musical performance that makes similar priced cartridges sound cold.

**DYNAVECTOR DV10XS2003** £295
Distant decendant of the classic Ultimo I OX, this has warmth and sweetness in spades, allied to a punchy bass. Beats G1042 comfortably.

**DYNAVECTOR DV20X-HZ2003** £395
Deliciously sweet sound with fantastic get-up-and-go makes this a great value budget MC. High output version works a treat with valve phono stages too.

**ORTOFON RONDO BRONZE** 2005 £500
Excellent mid-price moving coil with real rhythmic slenderness and a decent deal of finesse.

**LYRA DORIAN** 2007 £649
Inclined and musical, this baby Lyra is one of the most powerful and revealing MCs at its price point. Beware the sharp treble, though!

**BENZ MICRO GLIDER L2** 2008 £650
Crisp, clean and detailed MC particularly impressive at both ends of the frequency spectrum.

**ZYX R-100H** 2005 £799
Exceptionally tight sounding and detailed cartridge with the musical skills to match, this is up with the best at the price, with a presentation all of its own.

**TRANSFIGURATION AXIA** 2007 £990
Musically adept and highly resolve cartridge with impressive tracking abilities. Top end lift means careful matching required, however.

**BENZ MICRO WOOD SL** 2010 £945
Highly finished 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 £1,650
Ultra incisive, transparent and dimensional moving coil with grip and punch aplenty.

**ORTOFON MC Windfeld** 2008 £2,250
Ortofon’s new flagship MC is a sophisticated and alluring performer that takes the vinyl experience to a new level.

**Koetsu Red K Signature** 2007 £2,399
The new K Signature adds a hefty dose of insight and finesse to the already impressive Red and the results are fabulous.
DIGITAL SOURCES
MUSICAL FIDELITY V-DAC £170
Clear, concise, low distortion sound belies giveaway price. Supersat value for money.

CAMBRIDGE AUDIO DAC MAGIC 2010 £230
A flexible new DAC, this is an impressively rhythmic and detailed performer.

ARCAM rDAC 2010 £300
Cracking budget DAC sporting a fulsome and rhythmic and detailed performer.

MUSICAL FIDELITY M1 DAC 2010 £600
Surprisingly sophisticated upsampling DAC with copious detail and air, but bass isn't quite as powerful as it could be.

STELLO DA100 SIGNATURE £750
Superbly finested sounding DAC at the price, with strong driving bass and plenty of air and space.

CAMBRIDGE AZUR 860C 2006 £800
Well built CD player with a silky, yet detailed sound and a whole host of useful facilities. Excellent value for money.

NAIM CD5i 2008 £895
Naim's new italic Y variant improves even further on the original mid-price classic, offering super tight, grippy and musical sound.

ROKSAN KANDY K2 CD 2010 £900
A charmingly musical performer at the price, this is a surprisingly sophisticated CD player for the money.

BENCHMARK DAC-1S 2009 £930
Power, precision and poise - allied to real seat-of-the-pants musicality, this DAC justifies its premium price.

MUSICAL FIDELITY M3 CD 2011 £995
Excellent mid-price machine with slick slot loading and an open and inviting sound.

ELECTROCOMPANIET PD-1 2011 £1,250
Quirky but highly capable digital convertor with an effective wireless radio option (£250) and balanced outputs.

SIMAUDIO MOON 300D 2010 £1,290
Lovely fluid sounding DAC with a deep, dark, velvety tonality.

CYRUS CD8 SE 2008 £1,350
Bespoke Servo Evolution mech makes this the most musically engaging machine at the price, with super smooth tonality to boot. Optional PSX-R adds bass and dimensionality.

DENON DC2010A-E 2010 £1,700
Powerful, open sound allied to a rich tonality and satisfying subdutey make this an excellent mid-price buy.

NAIM DAC 2010 £1,995
Superb high end digital convertor with a probing, punchy and forensically detailed sound.

MUSICAL FIDELITY DAC MAGIC 2010 £2,300
Everyman's modern high end CD player: the stylish, well made Meridian has an extremely enjoyable yet refined and accurate sound.

MARantz SA-KI PEARL CD 2010 £2,500
Finely honed affordable high end silver disc spinner, this has a musical lucidity that's unexpected at this price.

LEEMA ANTILLA HIS ECO 2011 £2,995
Stable and smooth yet superbly detailed and musically engaging, this is class of the £3,000 CD player field.

CHORD QBD64 2008 £3,000
Bespoke architecture gives a uniquely musical sound that's beguiling yet proffers dizzying incision and grip.

ELECTROCOMPANIET EMC-1 UP 2009 £3,450
Quirky yet extremely capable high end upsampling CD spinner, with a musical fluency that beguiles more than it impresses.

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.

NAIM CD55S/555PS 2006 £14,000
Very probably the best CD player yet made - certainly the most expensive; a digital tour de force.

NAIM CDX2-XPS2 2009 £16,500
The most polished Naim CD to date, tremendously capable and musical but lacks the Rotterwell quality of the cheaper CDX2-XPS2.

dCS DEBUSSEY 2011 £17,500
Compact, stylish DAC bringing the gloriously smooth, sweet, spacious sound of dCS to a wider audience.

ACCUSTIC ARTS DRIVE 1 MK2/ TUBE DAC 2 2007 £19,990
Superbly built high end CD transport and DAC combo that shows just what the format can be capable of. Very tangible, musical sound with wonderful dynamics and listenign harmonics. Only curious styling and clunky build detract from its brilliance.

DCS PAGANINI DAC £22,999
Digital rarely sounds better; dCS's bespoke Ring DAC makes for power, punch and insight on an epic scale. Add clock and upsampler for an even more profound experience.

NAIM CD555/555PS 2006 £26,000
Naim's new italic Y variant improves even further on the original mid-price classic, offering super tight, grippy and musical sound.

Network: Naim HDX 2009 £4,045
Interesting one-box network enabled hard disk music system gives superb sonics togeth- er with impressive ease of use.

LINN KLIMAX DS 2007 £5,900
Landmark network music player, offering brilliant sonics at up to 24/96 resolution from hard disk/NAS. Expensive, but you can hear why...

PHONO STAGES
CAMBRIDGE AUDIO 640P 2009 £99
Excellent entry level design that raises the bar for budget phono stages. Crisp, smooth yet brightily lit sound on both MM and MC that's a vast improvement on most budget inboard designs.

GRAHAM SLEE ERA GOLD V 2004 £370
Warm, open and musical nature makes this a great budget phono stage.

ASTIN TREW AT8000 2010 £880
Expansive, detailed, powerful sound makes this a leading sub-£1,000 contender.

CHORD CHORDETTE DUAL 2010 £799
Well presented mid price designed with detailed sound and USB input for archiving.
**STANDARDS**

**ICON AUDIO PS1.2** 2007 £599
Excellent valve phono stage with good range of facilities and fine imaging abilities.

**A.N.T. AUDIO KORA JT LTD** 2010 £995
Exceptionally musical and natural sounding all discrete transistor phono stage, with high-kid, valve-like presentation.

**AVIS PULSUS** 2010 £1,100
Powerful, propulsive, expansive sound puts this right at the top of the £1,000 phono stage tree.

**QUAD Q24P** 2007 £1,200
Dynamic performer that can be used on its own as a complete phono-level preamp.

**ICON AUDIO PS3** 2008 £1,500
Super sounding valve phono preamplifier, with an expansive, engaging and organic nature that makes vinyl sheer joy!

**SUTHERLAND 20/20** 2010 £1,999
Well engineered, smooth sounding solid-state phono stage with a charm of its own.

**EMILLE ALLURE** 2010 £2,495
Just as the name suggests, this is a lovely way to play LP with an exceptionally open and lucid sound.

**AVIS PULSARE** 2010 £3,800
This superbly built, well specified phono stage has a powerful and authoritative sound that bristles with detail and energy.

**WHEST PS.30 RDT SE1011** £4,500
The least solid-state sounding Whet we’ve heard, this builds on the family strengths of precision and grip but adds a welcome poise and fluidity.

**NAT AUDIO SIGNATURE** 2011 £5,633
Sophisticated sounding, unusually engineered MM and MC phono stage, but faces stiff competition at this lofty price.

**AMPLIFIERS**

**ICON AUDIO STEREO 40/III** 2010 £1,200
Excellent starter tube integrated, with plenty of detail and an expansively musical sound.

**NAIM NAIT 5** 2007 £725
The italic ‘Y’ version remains one of the most musically competent and dynamically engaging integrations at the price.

**AUDIOLAB 8000S** 2006 £400
In another life, this sold for three times the price, making it a stand-out bargain now. Very clean, powerful and tidy sound but not the world’s most beguiling.

**CAMBRIDGE 840A V2** 2007 £759
Version 2 addresses version 1’s weaknesses to turn in a mightily accomplished performance, offering power, finesse and detail.

**SUGDEN MYSTRO** 2010 £1,225
Sugden’s first Class AB integrated in a long time surprises; rollickingly good fun, it losses surprisingly little in smoothness to its Class AB siblings.

**SUGDEN A21A S2** 2008 £1,469
Crystaline clarity, dizzying speed and forensic detailing makes this seminal design the most musical at the price, but power limited so needs sensitive speakers.

**CYRUS 8XPD** 2010 £1,500
A quality integrated that suits all genres of music providing insight and clarity in a compact but flexible package.

**ANATEK A5OR** 2007 £1,600
Simple integrated amplifier with super bass grip and effortless dynamics.

**VINCENT SA-236MK** 2010 £1,749
Big, powerful and expansive sounding hybrid transistor amplifier, with a lively, musical nature.

**NAIM SUPERNAIT** 2007 £2,475
Integrated tour de force from Naim that combines impressive functionality and connectivity with super sound.

**AUDIO RESEARCH V5160** 2009 £3,298
Load of tube power allied to a strong bass and smooth open midband makes this a grin-inducing listen.

**LEEMA TUCANA II** 2010 £3,495
Polished high end integrated amp that combines power, detail and genuine musicality with a good range of facilities.

**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-integrations.

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

**QUAD II CLASSIC INTEGRATED** 2010 £4,500
Thoroughly modern music maker with classic style and great pedigree, this amp sings with gentle music but is no headbanger!

**SUGDEN A7** 2008 £7,500
Sturdy build, useful facilities and a wonderfully relaxed, seamless and even-handed sound will win this many friends.

**MUSICAL FIDELITY AM35i** 2010 £6,000
One of the best high end integrations we’ve come across, this combines hear-through transparency with musical get-up-and-go.

**HEADPHONE AMP**

**HEADPHONE AMPLIFIERS**

**FIDELITY AUDIO HPA 100** 2011 £350
Great little headphone amplifier with a lively yet refined and open sound.

**MUSICAL FIDELITY X-CAN V8** 2008 £350
Open and explicitly detailed sound plus serious bass wallop and the ability to drive anything to very high levels makes this a great partner for most mid-to-high end headphones.

**PREAMPLIFIERS**

**MING DA MD7-SE** 2012 £152.00
A valve preamplifier with an open, effortless sound and big sound stage. It has plenty of gain so will accept any source and drive any power amp. A tuneful beauty.

**CREEK OBH-32** 2008 £350
Brilliant value budget passive, with remote control, mute and input switching, plus an easy, neutral sound.

**ICON AUDIO LA-4** 2011 £800
Uses early 6SN7 triodes for liquid sound, has plenty of gain and remote control.

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

**MELODY PURE BLACK 101D** 2007 £2,995
The clarity and openness of valves plus firm grip and fine detail make this a preamplifier masterclass.

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

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

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.

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.

QUAD II-80 2005 £6,000
Quad's best ever power amplifier, this is a dramatic performer with a silky but dark tonality, blistering dynamics, serious power and a compellingly musical sound. They don't come much better.

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.

LOUDSPEAKERS

Q ACOUSTICS 2020 2010 £140
Great little standmounters with a friendly, fun yet surprisingly refined grip. Excellent value starter speakers.

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

MY AUDIO DESIGN MY1920 2011 £1350
Exceptionally smooth, spacious and refined mini monitors that beguile and excite in equal measure.

DPA SA-1 2010 £2,850
Pacy, engaging and rhythmic almost to a fault, this solid-state power amplifier isn’t the world’s most powerful but is none the worse for it.

QUAD 2090 2001 £900
The latest 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. Lovely build, finish and Quad’s legendary service are nice.

NUFORCE REFERENCE 95E V2 2006 £1,750
Brilliant value for money monoblocks with massive power and super-clean, three dimensional sound.

B&W 686 2007 £279
B&W’s new baby standmounters offer a sophisticated and mature performance that belies both their dimensions and price tag.

WHARFEDALE DIAMOND 10.3 2010 £290
Great small standmounters for audiophiles on a budget; dry punchy sound with impressive soundstaging at the price.

MORDAUNT SHORT AVIANO 2 2010 £300
Classy sounding standmounter at a still affordable price.

KEF IQ30 2009 £330
Beautifully built, classily styled standmounters with exceptional image projection and a very clean, detailed sound.

ELAC BS243 2010 £1,000
More transparent and spacious than they’ve a right to be at this price, these refined mid-price standmounters represent top value.

RRR FS100 2007 £1,055
Mind-boggling amount of loudspeaker for the money. Big and sturdy built with serious bass and awesome soundstage scale. A real bargain.

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

GURU QM-10P 2007 £1,595
Quirky but adorable standmounters that are way off the pace in respect of detail and power, but well capable at playing a tune and pulling you in to the music.

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

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

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

STANDARDS

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STANDARDS

SPENDOR S8E 2008 £1,895
Generously large, silky smooth delivery. This dynamic sounding floorstander is an excellent allrounder.

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

PMC OB1i 2008 £2,950
Cleverly updated floorstanders give scale and solidity in slim and well finished package.

EMINENT TECHNOLOGY LFT8B 2010 £2,100
Brilliant ribbon/moving coil hybrid with seamless, delicate and expansive yet tremendously musical nature.

MAD MY CLAPTON GRAND MM 2010 £3,999
Distinctive coaxial standmounters with wonderful soundstaging, bright lucid midband and true musical insight.

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

ECLIPSE TD712s/2 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 soundstaging.

ARS AURES MI 2006 £5,995
Sublime build and finish allied to an insightful, assured and even-handed musical performance makes these an essential high end audition.

QUAD ESL-2005 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.

SPENDOR ST 2010 £5,995
This classy sounding, superbly presented big floorstander will appeal to those seeking high end sonics with subtle looks.

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

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

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

TANNNOY 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.

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

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

ACCESSORIES

WADIA 170i 2010 £349
The first iPod dock to extract the music digitally, letting you hook your little Apple direct to a DAC for superior sound.

TOWNSHEND MAXIMUM 2003 £800
Classy ribbon superwetter with flexible level settings and cool styling - you'll be amazed at the difference it makes, especially with Quad electrostatics.

HEADPHONES

JAYS X-JAYS 2010 £69
Wonderful little budget over-ear portable phones with a clean, smooth sound to beat the best of the rest at the price.

SENNHEISER MX-550 2005 £19
Our unqualified recommendation for those seeking a serious sounding pair of in-ear phones. Smooth, detailed and musical.

SENNHEISER PX-100 2002 £29
Cracking pair of lightweight open back cans ideal for personals, but good enough for real hi-fi use. Superb build allied to a smooth and engaging performance make them the spiritual successor to the HD400s.

GOLDRING DR150 2006 £70
Excellent build and fine sound makes these budget cans supertative value for money.

SENNHEISER HD-590 1998 £199
The company's best real-world cans to date. Open and smooth with plenty of detail. Brightly lit midband makes them an ideal partner for a valve headphone amp.

SENNHEISER HD-650 2004 £250
A super all round reference design with crisp, detailed and even sound allied to supertative build and comfort. Cable upgrade yields great results.
THE SOFTER, MORE BEGUILING RIVAL STAXES.

THE ULTIMATE EXPRESSION OF THE SENNHEISER PHILOSOPHY OFFERS MASSIVE SPEED, CLARITY AND INIGHT, ALTHOUGH LACKS SOME OF THE CHARM OF THE SOFTER, MORE BEGUILING RIVAL STAXES.

SENNEISER HD800 2010 £1,000

THE ULTIMATE EXPRESSION OF THE SENNHEISER PHILOSOPHY OFFERS MASSIVE SPEED, CLARITY AND INIGHT, ALTHOUGH LACKS SOME OF THE CHARM OF THE SOFTER, MORE BEGUILING RIVAL STAXES.

MISSING LINK CRYO REFERENCE 2008 £375

CURRENTLY OUR FAVOURITE 'AFFORDABLE HIGH END' INTERCONNECTS, WITH A DELICIOUSLY SMOOTH, OPEN AND SUBTLE SOUND WITHOUT A HINT OF EDGE OR GRAIN. SUPERB VALUE, IN SUCH AS IT'S AS GOOD AS SOME DESIGNS AT THREE TIMES THE PRICE.

TUNERS

DENON TU-1500AE 2006 £120

EXCELLENT ENTRY LEVEL ANALOGUE TUNER; SLEEK SONICS AND FINES FEATURES COUNT MAKE IT A BARGAIN.

CAMBRIDGE AUDIO 640T 2005 £250

SWEET SOUNDING DIGITAL/ANALOGUE HYBRID WITH FINE BUILD AND FINISH AT THE PRICE.

ARCAM FMJ T32 2009 £550

EXCELLENT HYBRID FM/DAB+ TUNER WITH A SMOOTH, ENGAGING SOUND. FACTOR IN ITS FINE BUILD AND IT'S A SUPER VALUE PACKAGE.

CREAK CLASSIC TUNER 2006 £550

NO TUNER OFFERS BETTER SOUND PER POUND; WONDERFULLY THREE DIMENSIONAL AND SMOOTH FROM BOTTOM TO TOP.

MICRO MEGO FM-10 2010 £750

DON'T LET THE MODERATE PROPORTIONS FOOL YOU, THIS IS A STATE-OF-THE-ART MODERN ANALOGUE TUNER WITH BESPOKE INTERNSALS GIVING A WARM, EXPANSIVE SOUND.

MYRRAD MXT-2000 2005 £800

SUMPTUOUS SOUND AND EXCELLENT BUILD IS ALL MOST WILL EVER NEED IN A TUNER; SUPERB.

MAGNUM DYNALAB MD-90T 2010 £1,295

EXCEPTIONALLY ABLE, BUT COMMENSURATELY PRICED, AUDIOPHILE TUNER THAT CAN'T FALL TO CHARM.

MAGNUM DYNALAB MD-100T 2006 £1,895

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This intriguing tweak caught my eye and I just had to try it out. It consists of a small glass jar filled with an ultra-pure silver flake that has been enhanced by cryogenic treatment. In effect, this gooey looking substance, that also includes an organic carrier, chosen for its dielectric qualities, looks like runny silver paint and is ready for application by any one of the supplied sponge applicators.

Using one of these, which also arrives with small plastic hoods to preserve the silver-soaked sponge, you apply just a small amount of the precious silver on half to three-quarters of the length of the male end of the interconnect pin. Then you add the silver to the outside only of the female end of the related socket. All that is left to do is plug in your cable and listen. The treatment can also be used on XLR plugs, power cables, speaker cables and more. You can even add the SST to the pins of valves (after a light application of sandpaper).

Spinning the Ennio Morricone's classic, 'The Good, The Bad And The Ugly' via my Densen B-475 CD player, and treating the interconnect between it and my pre, it was notable how much more reverb was present over the entire performance. The owl-like whistling at the beginning of the track was smoother while the midrange, generally, was richer and more melodic.

Moving to my Origin Sovereign turntable and 10cc's title track to the LP 'How Dare You', via treated speaker cables, the results were remarkable. The bass offered a weightier bottom end and the brief, introductory speech, presented enhanced clarity. Secondary percussion was precise with a more effective attack. Me? I'm off to paint all my cable ends silver! PR

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The National Audio Show, held at Whittlebury Hall – near Northampton. Here are highlights captured by our team.

**Whittlebury Show**

Pro-ject were showing their impressive Signature 10 turntable in the room of their importer, Henley Designs. It uses magnetic suspension for the platter and plinth to provide isolation against vibration and noise. Belt drive is used from an electronically controlled motor. The arm is a 10in unipivot of their own design. [www.henleydesigns.co.uk](http://www.henleydesigns.co.uk)

We spotted a rare loudspeaker from Janszen of the U.S.A (www.janszenloudspeaker.com), with an electrostatic panel that reaches down to 400Hz flanked by twin bass units. Side-firing tweeters add a sense of spaciousness. Company owner David Janszen, son of the founder, travelled from Columbus, Ohio to demo at the show.

Timestep were showing a novel and fascinating external power supply for the Technics SL-1200 Direct Drive turntable. Using a Direct Digital Synthesiser, normally found in radios, it feeds a stable and precise signal to the turntable in order to dial up just about any speed, from 16rpm up to 100rpm. It is used by national libraries to spin historical discs at exactly the right speed. [www.time-step.com](http://www.time-step.com)
The Carbon Age

Introducing the multi-award winning Debut Carbon from Pro-Ject Audio Systems. The Debut record player is an icon of the entry-level audiophile market, and this latest incarnation elevates the model to a new level of audio quality.

Debut Carbon

Brand new one-piece 8.6" Carbon Fibre tonearm - New motor isolation set-up - Upgraded 12" platter with higher mass - New mains supply method - Cable junction box - Ortofon 2m Red Pre-Fitted - Available in 7 high-gloss colours

Pro-Ject Audio Systems is distributed in the UK by Henley Designs Ltd.
Telephone: 01235 511 166
Email: info@henleydesigns.co.uk
Web: www.henleydesigns.co.uk
A Roksan Darus S1 standmount loudspeaker with folded ribbon tweeter and 6in bass unit looked compact and smart. The price is around £4,000 including stand. We're told sensitivity is high - around 90dB. It's due to be launched in a month's time. www.roksan.co.uk

A heavily modified Garrard 401 on a plywood plinth graced the Loricraft stand. It has a cork mat and speed is controlled by the motor's power supply - not an eddy current brake as on the standard 401. The knob at left is a mechanical on/off connected to the idler wheel. www.garrard501.com

The Kraik Audio room (www.kraikaudio.com) was home to the company's own loudspeakers, and this beautiful Garrard 301 replica built from gold-plated brass. It is sold through Peak Hi-Fi and priced at around £4000 according to specification. Peak Hi-Fi also have New Old Stock 401s for sale (i.e. new and boxed), as well as used 301s and 401s. Lovely.

How about this for an eye-catcher? The Audio Music AM-833S (see www.am-hiend.com) uses a massive 833 double-triode to deliver 120 Watts of Single-Ended power, they claim. Just look at that glow! The power supply is separate and sits under the amp. It's imported by LW Audio - see www.lwaudio.co.uk.

In the Audio Reference room (www.audioreference.co.uk) they were playing The Shadows Greatest Hits - and, boy, did it sound wonderful! A good analogue recording made long ago, before heavy studio processing started to degrade sound quality, Hank Marvin's guitar sang out in a lovely open acoustic. The system comprised an Amazon-audio turntable with Morch arm and Transfiguration Proteus cartridge, through Gamut amplification and Acapella loudspeakers.

A confection of a turntable was on show in the Analogue Alchemy room. This interesting company is based in London, run by Russians and sells mainly to Russia - work that one out! They have a lovely range of quality turntables, loudspeakers and much else - see www.analoguealchemy.com.
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Yamaha's latest headphones are built for indoor music monitoring — but they're also superb for those seeking music on the move, says Noel Keywood

Built for comfort

Yamaha's latest headphones are built for indoor music monitoring — but they're also superb for those seeking music on the move, says Noel Keywood

With a name known throughout the music world for their pianos, synths and musical instruments, plus a big exposure in hi-fi, Yamaha is a brand that signals pedigree to onlookers. So a pair of Yamaha headphones like the HPH-MT220s reviewed here look cool on the move, even though Yamaha bill this model as suited to home recording monitoring. They may be trying to talk up the semi-pro nature of the MT220s here, because at just over 400gms they are light enough to be used on the move.

Their closed back, over the ear design minimises sound leakage, so passengers on a commute aren't annoyed by them. I found the soft kid leather (or that's what it felt like) ear pads comfortable, pressure from the headband being just enough to maintain a seal for good bass, but not so strong as to be uncomfortable. My ears didn't get hot after long use, a problem with memory foam surrounds.

The headband adjusts for height, but that's all. Although the ear pieces swivel, the MT220s don't fold up. The coiled headphone lead is heavy, and it doesn't detach, which is a pity Yamaha have purposed it for studio use, making it bullet proof. On the end is a small 3.5mm jack that screws firmly into a larger 1/4 adaptor. The lead is 1.3m in length, enough to stretch to a mixing desk or a portable music player. £200 is a critical price point in the headphone market and these 'phones come in well underneath at £150. They are sturdy built and well finished and look a bargain.

SOUND QUALITY

Yamaha bill these as suitable for music monitoring, not as rivals to Dr Dre's Beats, and I detected this straight away when playing a rock standard from the Eagles' 'Somebody'. The lower registers, occupied mostly by kick drum and bass guitar, had no emphasis applied; the MT220s are quite dry in their lower end balance, but this also means they play clean bass lines, free of bloat — something that I always appreciate. Bloated, resonant bass gives me a headache, on phones or loudspeakers.

Yamaha are serious about what they do so the academically correct balance of the MT220s didn't come as a surprise to me. As most portable devices have an equaliser those who want more bass on the move can dial it in on the player.

Bass guitar notes on 'Somebody' had clear frequency differentiation; I could follow the bass tune easily and there was little overhang or time domain blur.

At the other end of the frequency spectrum the MT220's treble was finely differentiated and sweet as a nut. As with the bass, Yamaha ensure treble is clear but in balance, so cymbals and tambourine on 'Somebody' carried no threat! There was no sign of sibilance from Glen Frey either. But his enunciation was a tad soft.

This softness or slight sense of warmth to vocals I first noticed playing Marta Gomez's 'Lucia' (24/96). A track of superb clarity that I play often when reviewing. Marta's voice had a softness, even warmth in its nature. I was going to say "veiled" but the MT220s are in fact very detailed and this description would give the wrong impression. From measuring and listening to loudspeakers I suspect there is an upper midrange dip in the these phones that brings a sense of warmth with it, especially noticeable with the strings of the Trondheim Soloists playing 'Divertimenti' (24/192). Philips Fidelio XIs were better in this respect, but they are more expensive and not really usable on the move — nor as comfortable.

CONCLUSION

For £150 Yamaha offer a lovely balance with these phones. Purposed for indoor monitoring, they are light and comfortable enough to be used on the move. Their closed-back design minimises sound leakage, but the MT220s don't sound fat or resonant like many closed backs.

Over long listening periods the Yamahas didn't become uncomfortably hot, like so many memory-foam surrounds, and they didn't flatten my ears either! Sound quality was excellent, married only by some warmth to vocals and violins that robbed them of a top spot.

VALUE - Keenly priced

VERDICT

Billed as suited for music monitoring, the Yamahas are also light enough to be used on the move. Sound quality is excellent with excellent detail but a slight warmth to vocals.

FOR
- excellent sound
- comfortable fit
- detailed presentation
- bullet-proof build

AGAINST
- slight warmth to the upper registers
- nothing else at the price

Yamaha
+44 (0)844 811 1116
http://uk.yamaha.com/
Crafted with a similar high quality build and finish as VTL’s more expensive models, the TP2.5II has an elegant silhouette, and the features to match. With an eye toward flexibility and user friendliness, the 2.5 offers user-adjustable cartridge impedance, and two levels of gain, with inputs for both MC and MM cartridges. JFET/tube hybrid circuitry is used for the MC stage, and all-tube circuitry for the MM stage.

The signal path is purposely kept simple and direct, with audiophile-grade components throughout, for ultimate sonic purity. With the new TP2.5II phono stage, we have created an entry to true high-end analog sound. The VTL ‘family’ genes of highly resolved detail, linearity and controlled bass are all there, along with a musicality, depth and spaciousness you won’t find in most phono stages.

For the true music lover seeking to capture the special magic that only a fine analog system can provide, the new TP2.5 Series II phono stage is an essential component.

Low noise hybrid JFET/tube active MC stage, and pure tube MM stage
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Front panel Power, Rumble and Mute switches
Audiophile-grade components throughout, including REL caps
Toroidal power transformer with comprehensive AC RF filtering
UK models feature a selected NOS CIFTE tube in the MC stage

"VTL’s new 2.5 phono preamp is chock full of good parts and built beautifully within a solid chassis. I got a chance to listen to it...and it sounded full bodied, detailed and dynamic on an upcoming double 45rpm LP from Analogue Productions of Elvis Presley’s experimental 1957 binaural recordings produced when RCA Nashville received its first two-track tape recorder. The sense of Elvis on the microphone right in front of you is chillingly real on this recording and the 2.5 did a very good job of reproducing that..."

Michael Fremer, Analog Planet, January 2013

IT-85
Integrated amplifier

"...such a great amplifier, it becomes something of a natural choice for those after a really right sounding device that will give you years of pleasure."

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Alan Sircom, HIFI+ magazine issue 76

"With a well recorded source, the VTL made me forget that I was listening to a hi-fi system at all. The music existed like a sonic projection. That’s what the VTL is capable of doing, becoming seemingly invisible. It is one of the most ‘realistic’ integrated amplifiers on the market I feel and highly recommended."

Paul Rigby, Hi-fi World October 2012
Head to head

Tony Bolton explores the capabilities of Pro-Ject’s top-of-the-range headphone amplifier.

The successful ‘Box’ range of miniature electronic components from Vienna-based Pro-Ject audio has been expanded yet again. Sitting at the top of the range of three headphone amplifiers, the Head Box DS is a sophisticated piece of equipment that offers a three-input DAC as well as the usual analogue connection.

All of this is housed in a 103 x 72 x 150mm steel case that has a brushed alloy fascia finished in either black or silver. This contains a legible screen and, below it, four buttons. The left applies power, the next scrolls through one analogue and three digital inputs, while the last pair adjust volume. Below this is a 1/4in headphone jack.

Turning to the back, this is well-populated with digital and analogue input sockets, the former providing for co-axial, optical and USB connections, the latter consisting of two gold-plated phono sockets. Beside these are the analogue outputs and the DC power input from the wall-wart mains transformer.

Internal electronics offer up to 24bit/192kHz resolution, depending on the quality of the source, via a Cirrus Logic CS4344 Delta Sigma DAC chip. Ultra-low noise semiconductors are supplied by Burr-Brown.

Given the choice of inputs, and the analogue outputs, this unit functions as a freestanding DAC as well as a headphone amp, allowing it to be connected to the majority of digital sources. I ran it as a DAC from my television, using the co-axial connection; the optical digital lead was used with my MacBook Pro, as was the USB option (a lead is provided). I also used the analogue source from my Townshend Allegri passive pre-amp.

I started listening with some Rossini Overtures and was impressed with the level of resolution to the sound for such a modest price. String sounds, often an Achilles heel for digital kit, were quite accurately reproduced, avoiding undignified piercing sounds and providing a smooth but detailed, and quite well-textured presentation. The bandwidth seemed wide and the stereo imaging, although not as broad and spacious as I have heard through some headphone amps (which were considerably more expensive) was well-defined and populated, without seeming crowded or hemmed in.

Later on I was playing the complex but smooth harmonies of the Mamas and The Papas and had the interesting experience of Mama Cass’s voice seeming to appear inside my head, just behind my right eye. Counter harmonies provided by Michelle, Denny and John were spread across to the left, each having a properly defined space that enabled me to listen to either an individual melody line, or to absorb the sound as a whole.

The rolling beat of ‘Creeque
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*Terms and conditions apply.
Alley' was presented with substance and an appropriate weight that drove the tune along but didn’t dominate the sound. Overall, I felt that the tonal balance was about right, with equal precedence given to bass, midrange and treble.

I moved on from these easy-flowing hippy sounds to music that modern hippies are playing; the new Shpongle album. This is their fifth release and combines the usual samples and electronic noises with live instruments and vocals.

Longstanding collaborator Michele Adamson’s vocals on the opening track ‘Brain In A Fish tank’ were beautifully relayed, placed slightly off to the left, with their haunting melody combining with the guitars and synths to create a mesmerising sound.

As I have mentioned, I tried all of the digital inputs, comparing USB and optical from my laptop, having loaded the Mamas and The Papas CD into the machine. To be honest I could find little variation in the sound quality between the two formats, and would be happy to use whichever was the easiest to connect.

The Head Box proved its worth as a DAC when connected to the television and playing through the hi-fi. I was impressed at the levels of detail, both obvious and subtle, that helped flesh out the images on screen in front of me.

In short, I really could find nothing to fault in the Head Box DS. For the price it offers superb sound quality via either analogue or digital feeds. As a headphone amp it gave me an involving and detailed sound with good imaging. As a DAC it enhanced the sound of any digital source plugged into it.

I have little doubt that this will be a successful product. It is solidly built, and my experience of Pro-Ject equipment is that it is reliable over several years of service. The finish is good and the sound quality seems rather better than can be expected for the £299 price tag. Even if you are only an occasional headphone user, the DAC facilities make this a worthwhile purchase, allowing most mainstream digital sources to be heard with greater clarity than the onboard decoders fitted to most TVs, DVD players and computers will provide. In short, I thought it was excellent.

MUSIC USED


It's interesting to examine the rock'n'roll stars of the 1950s and see how they fared through later decades.

By the time Jerry Lee Lewis reached 1974, he had a host of country music albums under his belt. The quality, on the whole, was erratic, although all of the LPs are worthy of attention.

Up to this point, Lewis' career had been filled by commercial highs and lows and frantic desperation for success. Too often, his record label contract was on the verge of termination. Professionally, he was on the edge.

So the Mercury record label, desperate to make money from their unpredictable wildman paired him with another maverick talent in producer Huey Meaux and together they created an intriguing suite of session tracks. Half of them made the subsequent album, which bombed commercially, but it's arguable that the unused Southern Roots session tracks would have made a far better album.

In fact, Meaux tried but Mercury declared that they had 'lost' them. No matter, Meaux told Bear Family that he had been running his own 2-track tape machine during the sessions which form the basis of this magnificent 2CD set containing the original album, the missing tracks plus studio chatter.

The result is a highly-enjoyable record. It's not perfect, Lewis walks through 'Blueberry Hill' and 'When A Man Loves A Woman' is sung on autopilot.

But there are many highlights including the lasciviousness of 'Meat Man' and the crawling sex of the slowed 'Hold On I'm Coming'.

Also look out for other Bear Family treats including 'Four Legends Of Rock'n'Roll' featuring Warren Smith, Buddy Knox, Charlie Feathers and Jack Scott plus 'Psycho', the K-Ark and Allstar recordings from 1950s country man Eddie Noack.

The coming together of talented session men doesn't always mean that a resultant band and album will find success. In this case, however, The Tractors scored an immediate success with their self-titled debut — released in 1994 and featured here as one of the CDs in this two-disc set.

The debut release is a real 'down home' affair with a deep, rootsy feel suffused with a Southern, hard-drinking, good ol'boy vibe. You'll find a hard-core mix of Western swing, blues, R&B and more that shines from originals such as Steve Ripley's 'The Tulsa Shuffle' but also via covers such as Chuck Berry's 'Thirty Days'.

There's also a star-filled array of associated musicians: Eldon Shambling appears on 'Doreen', Telecaster king James Burton does his thing on 'Baby Likes To Rock It', while Bonnie Raitt applies a bit of slide guitar and Ry Cooder and Jim Keltner also make appearances. Phew!

Also in this set is the band's 1998 album, the equally brilliant, 'Farmers In A Changing World', retaining their original style and keeping the roots music flowing.

That's not to say that the band are afraid of experimenting. That's why they dip their big toes into soul and rockabilly — check out 'The Elvis Thing' featuring Scotty Moore, no less.

The original music is superb but the choice in covers no less so. Also recommended are other SPV releases including singles collections from Charley Pride, Alabama and Earl Thomas Conley along with two-album collections from Tommy Cash, Gene Chandler, Steve Wariner, Radney Foster, Bob Luman and Barbara Fairchild.
In Munich, Germany, sits the Haus der Kunst — one of Europe's most important museums for contemporary art. One of its recent exhibitions included ECM — A Cultural Archaeology, based on Manfred Eicher's lauded record label that includes jazz and contemporary recordings as part of its roster.

The basic idea was for Okwui Enwezor and Markus Müller, the curators, to present to the public the breadth of ECM's artistic activities. That included music, yes, but also graphic art, photography, film and more.

This box set is an accompaniment to the exhibition and features a wide range of tracks from a host of celebrated artists on six CDs that are held within a superbly produced box set. Each CD is situated within a gatefold sleeve while audiophiles will be happy to see that the disc itself is held within a wax-coated inner sleeve.

The sheer range of musical styles present is quite breathtaking and should appeal to most people. You will hear plenty of jazz mixed with ambient minimalism combined with improv of varying types and soundtrack projects.

Featured artists include jazz greats such as Keith Jarrett, Paul Bley, Jan Garbarek, Jack DeJohnette and John Surman with film soundtrack-type scores from the likes of Andrey Dergachev, Betty Olivero and Eleni Karaindrou. Experimental sounds come from Steve Reich, Heiner Goebels, Arvo Part, Ernst Stötzer, Arto Lindsay. There's also a host of intriguing cross-over pieces that spark interest and tickle the imagination.

And this is the point of the box set. Combining musical styles and artists in such a way that you can never really relax into a comfortable rut. There is always something happening. New challenges to the ear make listening to this musical sequence anticipatory.

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Bar Silver

Samsung's HW-F751 silver soundbar uses valves for a better TV sound. Noel Keywood gets interested.

Soundbars are understandably popular. They claim to improve the audio from your TV as well as offering surround-sound without all the wires and boxes usually required. You get it all, or so it seems.

And with Samsung’s new HW-F751 Soundbar, you get even more — valves! Yes, Samsung claim their use of vacuum tubes means the HW-F751 soundbar gives ‘warm natural tones’. Its valve amplifier ‘filters out unnecessary noise to provide the cleanest and purest of sound’.

I was fascinated. How would this soundbar fare against my own AV system, with its Martin Logan Electromotion Electrostatic loudspeakers?

It isn't really a fair comparison of course — because the Samsung costs around £500 and is in effect an AV
receiver combined with loudspeakers. There are two 40 Watt amplifiers inside, plus an associated wireless subwoofer with 150 Watt amplifier inside. The bar is meant to be mounted on a wall below the TV and the subwoofer placed wherever it is convenient. An auto-tune system gets the two into balance.

The idea of a soundbar on a wall is as superficially attractive as a TV on a wall but, if you have one in just such a place, you will know that wires dangling down the wall are an eyesore. The Samsung soundbar cannot avoid this – although to its credit it does have Bluetooth-linking when paired with Samsung TVs which eliminates one cable.

I used it connected via an HDMI cable to a Samsung TV (with ARC), fed by a Cambridge Audio 650BD Blu-ray player, again via an HDMI cable.

A TV with an Audio Return Channel (ARC) feeds audio to the soundbar that, with larger powered loudspeakers and subwoofer, gives better sound quality than the standard TV’s own small internal loudspeakers. Then again, it isn’t difficult to improve on the quality of modern, flat TV loudspeakers as they are so small.

The real question here is how well the HW-F751 handles high-resolution sound – such as from a Blu-ray player or other suitably equipped sources. Will it be up to the task or will it just fall silent? Coming from Samsung, the HW-F751 has plenty of features and ability – although there is just one HDMI input which could prove a bit limiting for some. In my case I couldn’t use both my external Humax TV tuner and Cambridge Audio 650BD Blu-ray player at the same time. It was one or the other.

So, using the TV’s tuner instead of the Humax I fired up the 650BD to find it played through the Samsung fine. The soundbar decoded pure PCM up to 24/192 from 2L music Blu-rays of Percy Grainger playing Grieg’s Piano Concerto and the Trondheim Soloists playing Divertimenti. It also played Dolby True-HD and DTS HD Master Audio encodings, so there were no problems playing highest quality Blu-ray discs.

There is also a Bluetooth radio link that works with the A2DP audio profile and extensions like apt-x. This link pre-processes audio by reducing sample rate to 48kHz maximum and using 5.1 compression – so you don’t get full quality, but most of it.

The great thing about a Bluetooth link like this is that you can stream audio from an iPhone or Android device from the comfort of your settee with no wires involved. I had no problems pairing an iPhone and an Astell&Kern AK120 portable high resolution player to play music over the system, right up to 24/192 resolution.

There has to be an analogue input of course, but this has been reduced to a single, 3.5mm stereo input jack – there are no phone sockets. This input could in practice be driven either by the headphone output of a portable player, or the tape out of a hi-fi amplifier.

Tape Out of a hi-fi amplifier.

One caveat though – all inputs are hidden within a rear cavity so if the HW-F751 is wall mounted they effectively become inaccessible. Unfortunately there’s no connection panel on the accessible underside.

That same cavity houses an optical digital input (S/PDIF) that worked fine up to 24/96, but with 24/192 files from my portable AK120 player the soundbar fell silent. This was something of a surprise because HDMI accepts 24/192. I suspected the optical receiver was the limitation and it may have been – but the USB input suffered this limitation too.

One other small irritation with ‘D. Input’, as Samsung label it, was that the TV’s ARC function grabbed it, unless the TV was switched off. Why I don’t know because there is a TV input too and ARC works with it.

On the top of the soundbar lies a USB socket that will accept a memory stick. It plays up to 24/96 FLAC or WAV I found. Samsung list also MP3, AAC, WMA and Ogg Vorbis in their manual. Unfortunately, the single line scrolling display made menu access very difficult; an on-screen display is needed for this function.

So the HW-F751 has a wide array of inputs and for the most part they all worked reasonably well, USB excepted. Only my 24/192 high resolution audio files reduced it to silence, but that isn’t surprising.

Physically, the soundbar itself has forward facing speakers and downward firing speakers too. To ensure these were unobstructed I
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mounted the unit on a loudspeaker stand under the TV.

The separate subwoofer connects through a wireless link, so it just needs to be connected to the mains. The bar can also be laid flat, perhaps on the floor, with its main speakers firing upward, and there is a repeat display on the underside to facilitate this.

An external power unit supplies 24V in through a small diameter electrical cable. It is less visible than a mains cable and safer but it does mean another power brick on the floor.

Operation is through a small remote control whose keys were illegible in low light, due to black text on grey buttons, with no backlight. My Samsung TV remote uses big white text and is clearly legible at all times, suggesting the company understand this issue but haven’t bothered much about it with the HW-F751.

Switch on causes the valves to glow bright orange through a window — although much of this is produced by LEDs because small signal valves don’t glow so bright — and switch on is silent. There are no whistles or thumps to make you jump.

The system automatically tunes to the room and listening position (ASC), using a microphone, as AV receivers do. Plugging in the measuring microphone, which must be held steady at the listening position, initiates auto-tuning using a series of noise sequences.

There is no on-screen display of ASC nor any way to alter equalisation other than through pre-set modes such as News, Music, Sports, Games etc. ASC can be switched on or off, but not modified.

In addition to this auto-tune function the HW-F751 can also provide 3D sound, suggesting faux surround-sound. I wasn’t very convinced by this, but more later.

**SOUND QUALITY**

My main interest lay in judging basic sound quality and competency from an audio viewpoint and for this I span a wide variety of music Blu-rays, including orchestral and piano in DTS HD Master Audio at 24/192 resolution, with Percy Grainger playing Grieg’s Piano Concerto, the strings of the Trondheim Soloists playing Divertimenti in 24/192 through PCM, DTS HD MA and Dolby True-HD streams, plus various Rock performances.

With orchestra – strings in particular – there was a papery coloration and the soundstage extended just past the ends of the soundbar with 3D (Music/Movie) switched off.

Within these limitations though, the orchestra sounded dense and well composed, with plenty of low-end weight. There was, quite obviously, no high treble and a distinct lack of high-end sparkle, meaning that – as billed – the soundbar sounded warm and easy on the ear, at least with ASC selected and not any special EQs.

Selecting Music EQ pushed the upper mid-range forward a bit and improved brightness and intelligibility, but I would have appreciated a treble control. Measurement showed the right speaker lacked upper treble, while the left speaker was flatter, so there was inconsistency here that Quality Control had not picked up, explaining the lack of sparkle.

**CONCLUSION**

The HW-F751 did a good job and I liked it. However, I got the feeling it was a rush design job with many important details unresolved. I know from measurement that Samsung technology is superb. But in this case the acoustic design needs more thought – as is better loudspeaker drivers. On the plus side the subwoofer worked very well and I was surprised at how good it was. But the overall package’s user interface is poor and sound quality not much better. A bar like this improves TV sound and can work as a hi-fi of sorts, except that wall mounting of the HW-F751 makes inputs inaccessible, and pre-fitted cables will dangle down the wall.

To be frank, a small amplifier with budget loudspeakers would give better sound quality at lower cost, and with an external DAC and Bluetooth receiver, better sound for similar cost! So the soundbar offers facilities, strong bass and your floorspace back. But those valves didn’t redeem its sound.
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ne of the joys of collecting music, of all formats, is its genealogical aspect and how seemingly stand-alone bands and artists are, in fact, connected to each other in a complex spider’s web, to just about everyone else in the business. It’s totally inces-tuous.

In my recent Classic Cuts piece on 10cc’s ‘How Dare You’ album, I made a casual reference to the guys pre-10cc existence. In fact, the complex history of the band can be partly traced to a pre-Graham Gouldman trio, when the band, Hotlegs, were active during 1970 and 1971. Gouldman would join the rest of the band at the end of Hotlegs’ life.

At their height, Hotlegs consisted of Eric Stewart, Lol Creme and Kevin Godley. Readers of a certain age might just remember ‘Neanderthal Man’ which reached #4 on the ‘Made In England’ chart and was a continued evolution that saw many of the bands mentioned is the soul of many future bands. They were struggling to stifle a yawn at this point, that sort of information is grist to my nerd-like mill and reflects the highly-active and fluid nature of the core of many bands and artists around the world during the 60s. During this time, there was a continued evolution that saw future music stars and, even more interesting to me, stalwart band members forge artistic links.

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Many of these individuals would eventually help to develop the true soul of many future bands. They didn’t sit within the commercial spotlight but moved through the ranks, jumping from one band to another, starting and disbanding bands before settling on the outfit that would make their career.

Jim Pons, anyone? He founded the garage band, The Leaves, who recorded the ‘All The Good That’s Happening’, album for Capitol in 1966. Their one and only album. The Leaves were then disbanded whereupon Pons joined the Turtles as their bass player, just after that band had hit the top of the charts with ‘Happy Together’. He then settled within Frank Zappa’s band appearing on ‘200 Motels’ (1971), ‘Fillmore East: June 1971’ LP and ‘Just Another Band From L.A.’ (1972).

Then there’s Bob Weston whose Ashkan only existed for a few months - just long enough to record a series of vivacious psychedelic blues for the Decca Nova label. Just as the album ‘In From The Cold’ was about to be released in 1970, the band disbanded. Weston then became a guitarist for Fleetwood Mac, appearing on that group’s albums, ‘Penguin’ and ‘Mystery To Me’.

Andy Scott and Ted Yeadon should ring a bell for some of you, out there. Members of the Welsh group Elastic Band they progressed from Mod-style pop to progressive and hard rock before creating the album ‘Expansions On Life’ for the Decca label. Yeadon broke up the band (nice of him) to become a member of Love Affair (remember ‘Everlasting Love?’) while Scott would later leave to form the glam rock band Sweet. Ah, now you remember, eh?

This genealogical digging can be taken to extraordinary lengths, of course. You can find yourself running off on all sorts of ridiculous tangents, suddenly finding yourself up to your neck in trivia and ephemera. Of course, I love that too.

For example, if you can grab a copy of the self-titled album by Edwards Hand, from 1969, you will find an attractive suite of songs resembling the late-1960s version of the Bee Gees delighting your ears. Surrounding this album are connections with the Electric Prunes (the band were managed by Lenny Poncher, who managed the Prunes) and The Beatles (the LP was produced by Beatles’ man George Martin and engineered by Beatles’ engineer Geoff Emerick; their first project after The Beatles’ ‘White Album’).

You can, in fact, spend half your life digging through this sort of stuff. One of my favourites is the band Bulldog Breed and their psychedelic pop album, from 1970, ‘Made In England’. Specifically, the final track, ‘Austin Osmanspare’. Why? Because it features a cameo appearance from Janie Jones. Jones was quite a woman...well, more a ‘Madame’. Otherwise known as Marion Mitchell, three years after her appearance on this album, Jones was in jail. Convicted for the infamous ‘sex for airplay’ scandal over at the BBC’s Radio 1 (Aunty’s recent sex-related indignities are not isolated incidents), as well as ‘controlling prostitutes’.

After this very English payola scandal, The Clash name-checked Jones on the first track of their self-titled 1977 debut LP with ‘Janie Jones’. Jones later became a great friend with, of all people, Myra Hindley until later turning on her and writing a book about the Moors murderer.

You see how this sort of research can have you sailing down unexpected highways and byways? If you want to follow up on the above then a good musical source for many of the bands mentioned is the Grapefruit label grapefruit-disco.

http://www.cherryred.co.uk/grapefruit-disco.asp.

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"great sound comes all bubble wrapped"

Tony Bolton

You may remember that a few months ago I was involved in helping a friend with a very tight budget put together a hi-fi system. Our local auction came to the rescue, providing a very good condition Pioneer system from the late 1970s. It was all duly installed in his front room, having been granted ‘wife approval’ and has since been giving good service with the TV and Playstation wired into the back of it.

Since then, said friend has made a couple of visits to my own abode and noticed the various items that provide isolation underneath most of the hi-fi dotted around the house.

There is a motley collection of varying ages of product. Some, like the Voodoo Airtek air suspension stands, have been in place for years, while others, such as the Blue Horizon Spike Shoes that are underneath my equipment racks and speakers, are more recent additions.

Immediately questions were asked as to the cost of some of these products – but the query was silenced with ‘the look’ from his wife. So I put my thinking cap on and suggested we isolate his hi-fi using some of the DIY techniques I used of some of the DIY techniques I used a number of years ago when an impoverished hi-fi enthusiast.

Last week we went on a shopping trip around the local junk shops and recycling centre, which is blessed with a very well stocked shop that includes records, books and examples of just about every domestic product that has been produced in the last fifty years. Apart from increasing his record collection by quite a substantial amount (which I promised to sneak into his house once I had put them through my record cleaning machine) we managed to acquire a selection of items that, with a little adaptation, could become isolation products.

The main purchases were a selection of hardwood bread boards, some cork wine coasters and a few wooden ones that have a velvet backing and printed pictures of country houses on the front. The total expenditure for all of this came to just over £7.

We returned to my house and collected some of my seemingly endless supply of both big and little bubble wrap, so that we could compare the sonic benefits of each type. After that we went over to his house and showed our finds to his wife, who gave us one of those ‘boys never grow up’ looks that wives and mothers seem to perfect, shook her head and left us to play.

Our first experiment was with the bread boards. We placed one under each hi-fi component and sat the board on a layer of bubble wrap. There was a small but useful improvement in sound quality from the DVD player (which doubles as a CD player in this system), not much change in the sound from the amplifier and a major improvement in the sound from the turntable. We tried experimenting with single layers of both types of bubble wrap, and then with double layers. We found that we got slightly better results with the two layers mounted with the bubbles facing away from each other.

As a general rule we found that we heard greater bass extension and a more detailed midband. The treble also sounded a bit smoother, even when playing CDs that had been burnt from MP3 sources.

We then tried sandwiching the layers of bubble wrap between two bread boards. At this point the sound from the turntable, which had previously been acceptable, if unexceptional, seemed to improve hugely. This is a Direct Drive, mid-range unit fitted with a Stanton 680 cartridge. When sat on the twin, big bubble wrap/bread board combination the sound quality and detailing improved to an amount akin to a cartridge upgrade.

The next experiment was trying the same exercise using the various combinations of coasters and bubble wrap. For some reason this seemed to work better under the amplifier and Playstation. At this point my friend’s wife came back in, took one look at our Heath Robinson contraptions and informed us in no uncertain terms that they were not staying in her front room. I went and made tea while negotiations were carried out.

An agreement was reached where as long as the boards were painted in colours to blend in with the decor; and the rough edges of the bubble wrap tidied up, then they were allowed to stay.

So that evening we set to work with primer, undercoat and gloss paints to make some socially acceptable items. A couple of days later the paint was dry and we installed our new isolation platforms and feet and settled back to listen. The results were quite impressive, not as good as the sound from the commercially-made examples that I had brought over for comparison, but a definite improvement on running the equipment mounted directly on shelves and the TV stand (a modern alloy and glass affair).

Even my friend’s wife, who still claims that she can’t hear a difference in these things, admitted that there was a difference in the sound, and that she liked the ‘tone’ of the system a bit more.

As I said before, such home made items will not compete with most of the professionally-made kit that exists for this purpose, but if you are on a budget, it is a cheap and easy way of tweaking the sound of your hi-fi. I also successfully got the new records into the house under the wifely radar, so a successful mission was accomplished for next to no expense.
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"no wonder everyone's wearing headphones these days"

Remember the wonder of using a portable Sony Walkman WM-D6C cassette player, the one with quartz-locked motor and amorphous heads. It had a great sound when fed a diet of TDK Metal Tapes recorded on my Nakamichi ZX-9. I was so blown away by Jimi Hendrix playing "Voodoo Chile Slight Return" when I went to my local that I stood at the bar and forgot to order a drink!

Then cassette died and that was that.

As wonderful as a portable can be, I've never thought of headphone listening as comparable to listening at home to loudspeakers; they're two quite different experiences, each with its own merits — and drawbacks. Unsurprisingly, I prefer a full blown hi-fi system, even when Stax electrostatic headphones are on offer.

So the comment that "my headphones sound better than grandad's hi-fi" from a Head-Fi forum user startled me. I have seen how lowly Apple earbuds have evolved into full sized headphones — often Dr Dre's Beats — on the London underground lines that I use, but I never imagined listening on 'phones like these, priced around £200, was as good to them, for the time being at least.

Whether all this will change, as high-resolution players like the iBasso DX50 enter the market, is questionable. I hope so, but only when, or if, Apple make high-res digital files available on iTunes. Until then I'll stick with "grandad's hi-fi!"
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.

**CLASSICS**

**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.

**DIGITAL**

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

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

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

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

**MERIDIAN 207** 1988 £95
Beautifully-built two-box with pre-amp stage. Very musical although not as refined as modern Bistasream gear. No digital output.

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

**MERIDIAN 207** 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.

**MARANTZ CD 75** 1983 £700
A riot of gold brushed aluminium and LEDs, this distinctive machine squeezed every last ounce from its 14x4 DAC - super musical.

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

**TECHNICS SL-P1200** 1987 £800
CD version of the Technics SL-1200 turntable. Massively built to withstand the rigours of ‘pro’ use and laden with facilities - a great eighties icon. Sonically, it’s pure fun, with hefty bass that can still show weedy modern players a thing or two!

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

**COMPACT DISC TRANSPORTS**

**TEAC VRS-11** 1994 £600
Warm and expansive sound made this a mid price hit. Well built, with a slick mech.

**ESOTERIC PD** 1997 £8,000
The best CD drive bar none. TEAC’s Tokyo boys pushed the boat out in style. Brilliantly incisive, ridiculously over engineered.

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

**DACs**

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

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

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

**We do not sell these products. It is for your information only.**
PINK TRIANGLE
DACAP0 1993 £ N/A
Exquisite; the warmest and most lyrical 16bit
digital audio we have ever heard; Clever plug-in
digital filter modules really worked!

QED DIGIT 1991 £ 60
Budget bitstream performer with tweaks aplenty. Positron PSU upgrade makes it
smooth, but now past it.

TURNTABLES
ARISTON RDI1S 1972 £ 94
Modern evolution of Thorens' original belt
drive paradigm, Scotland's original super-
deck was warm and musical, albeit soft. Still
capable of fine results today.

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

PIONEER PL12D 1973 £ 38
The beginning of the end for the British
turntable industry. 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.

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

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

GOLDRING LENCO
GL75 1970 £15.65
Simple, well engineered motor unit with soft,
sweet sound and reasonable tonearm. Good
spares and servicing support even today from
specialists. Eminently tweakable. Similar 88
and 99 motor units are budget 301/1TD124
rivals.

LINN AXIS 1987 £ 253
Simplified cut-price version of the Sondek
complete with LVX arm. Elegance and decently
performing mid-price package. Later version
with Akito tonearm better.

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

MICHELL GYRODEC 1981 £ 599
Thanks to its stunning visuals, this bold design
wasn't accorded the respect it deserved
until recently. Early examples sound cold and
mechanical, but now right on the pace. Clean,
solid and architectural sound.

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

REGA PLANAR 3 1978 £ 79
Brilliantly simple but clean and musical per-
former, 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.

GARRARD 301/401 1953 £ 19
Heavy metal - tremendously strong and artic-
ulate with only a veiled treble to let it down.
In many respects, better than the seventies
'superdecks' that succeeded it.

ROKSAN XERKES 1984 £ 550
Supposedly the first to 'better' the LP12.
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.

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

THORN'S TD134 1959 £ N/A
The template for virtually every 1970s 'super-
deck', 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.

TOWNSEND ROCK 1979 £ N/A
The product of academic research by the
Cranfield Institute, this novel machine has an
extremely clean and fluid sound. Substantially
modified through the years, and capable of
superb results even today.

TRIO LO-7D 1978 £ 600
The best 'all-in-one' turntable package ever
made. Trio/Kenwood throw their 'engineering
best practice' book at this one with startling
results. Clean, powerful and three-dimension-
al sound, ultimately limited by the tonearm.

TONEARMS
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.

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

ALPHASON HR105S 1981 £ 150
First class arm, practically up to present-day
standards. Buy carefully, though, as there is
no service available now. Totally under priced
when new, exceptional.

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

GRACE G707 1974 £ 58
This early Japanese example of the tonearm
art has a smooth, lyrical sound. Imported by
Linn, fitted to early LP12s. Sonically way off
the pace now, though.

REGA RB300 1983 £ 88
Inspired budget esoteric. Detailed, tight, neu-
tral sound but tonally grey sounding in abso-
lute terms. Responds well to tweaking, and its
cheaper RB250 brother better still.

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

LINN ITTOK LVII 1978 £ 253
Arguably the first 'superarm'; Japanese design
to Linn specs made for a muscular, rhythmic
sound with real dynamics. Now off the pace,
but the final LVIII version worth seeking out. HADDOCK GH1228 1976 £664
Evergreen unisopent with lovely sweet, fluid sound. Excellent service backup.

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

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

INTEGRATED
AMPLIFIERS/COMBOS
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.

ROGERS A75 1978 £220
The prototypical Audiolab 8000a - 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 and open to listen to.

EXPOSURE VII/VIII 1985 £625
Seminal mid-eighties Exposure pre-power, offering most of what rival Naim amps did with just that little bit extra smoothness and sweetness. Still, it's by no means 'sweet' by today's standards, being lean, punchy, musical. It's also possessed of that quintessentially eighties look - frumpy black steel boxes with rough silk screened logos!

VTL MINIMAL/50W MONOBLOCK 1985 £1,300
Vacuum Tube Logic was one of the Europe's biggest tube names in the eighties, and it shows. Rugged, professional build and finish allied to a lively and punchy sound (albeit with limited power) make them an excellent used buy.

A & R A60 1977 £115
Sweet and musical feature-packed integrated; the Audiolab 8000A used its blueprint to great effect.

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

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

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

SP-8 1982 £1,400
Beautifully designed and built high end tube preamplifier with deliciously sweet and smooth sound. Not the last word in incision or grip, but that didn't matter to those who aspired to it.

MUSICAL FIDELITY A11985 £350
Beguiling Class A integrated with exquisite styling. Questionable reliability.

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

CHAPMAN 305 1960 £60
Smooth pre/power combo with a sweet and open sound. Not quite up to Link/Quad standards but considerably cheaper secondhand.

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

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Beguiling Class A integrated with exquisite styling. Questionable reliability.

MUSICAL FIDELITY A11 1985 £350
Beguiling Class A integrated with exquisite styling. Questionable reliability.

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

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

LEAK STEREO 60 1958 £N/A
Leak's biggest valve power amp offers 35 Watts per channel and more low end weight than the smaller Stereo 20. Despite concerns over reliability their rarity means high prices are the order of the day.

LECON API 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.

LEAK POINT ONE, TL10, TL12.1, TL12 PLUS 1949 £28
Early designs that are getting expensive. Overhauling is de rigueur before use, using original parts if possible. Surprisingly crisp and musical sound, that's far more modern than Quad 11. Deeply impressive when in fine fettle.

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

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

MICHELL ALECTO 1997 £1899
Crisp, clean and beautifully controlled with gorgeous styling. Partnered with the £1650 Orca this sounds delicious!

MUSICAL FIDELITYXA200 1996 £200W of sweet smooth transistor stomp in a grooved tube! Under-rated oddity.

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

MICHELL ISO 1998 £N/A
This Tom Evans-designed black box started the trend for high performance offboard phono stages. Charismatic, musical and punchy - if lacking in finesse.

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.

THE CREEK CAS 3140 1985 £199
Excellent detail, separation and dynamics - brilliantly musical at the price. T40 continued the theme...

NAD 4040 1979 £79
Tremendously smooth and natural sound allied to low prices and good availability make this budget analogue esoterica. Needs a good antenna to work properly, however.

NAIM NAC 325 1993 £595
The warm, atmospheric sound is further proof of Naim's proficiency with tuners.

MICHELLE ALECTO 1997 £N/A
Partnered with a Goldring G1042 for an unbeatable budget combination.

NETT 500 1996 £131
Krell-designed MC phono stage built to partner the original Naim NAIT - yes, really! Fine sound, although off the pace these days.

PHONO STAGES

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 eighties-tastic experience.

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

RADFORD STA 25 RENAISSANCE 1980 £977
At the time, very possibly the least cool amplifier on the planet - and we're not talking heat dissipation here. 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.

TUNERS

NAIM NAIT 3 1997 £595
Unbeatable budget combination.

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

MARANTZ ST-8 1978 £N/A
Reputedly the best of the classic Jap analogues, this combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

PHONO STAGES

PHONO STAGES

PIONEER TX-9500 1976 £295
Another of the serious classic solid-staters, Boasts the usual high end Jap package of fine sound, brilliant sensitivity and superb build.

NAD 4140 1995 £199
Brilliant affordable digital tuner has a smooth, detailed musical sound plus sensible real-world facilities.

PIONEER TX-9500 1976 £295
Another of the serious classic solid-staters, Boasts the usual high end Jap package of fine sound, brilliant sensitivity and superb build.

YAMAHA CT7000 1977 £444
Repulsively best of the classic Jap analogues, this combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

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LEAK TROUGHLINE 1956 £25
Series I an interesting ornament but limited to 68-100MHz only. II and III are arguably the best-sounding tuners ever. Adaptation for stereo easy via phono multiplex socket. Fed to a modern outboard decoder they’re deliciously lucid with true dimensionality.

ANALOGUE RECORDERS

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

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

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

REVOX A77 1968 £145
The first domestic open reel that the pros used at home. Superbly made, but sonically off the pace these days. B77 better, but couldn’t match the Japanese.

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.

SONY TC-377 1972 £N/A
A competitor to the Akai 4000D open reel machine, the Sony offered better sound quality and is still no slouch by modern standards.

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

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

KENWOOD DM-9090 1997 £500
Serious and sophisticated sound thanks to well implemented ATRAC 4.5; surprisingly musical MD recorder.

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

LOWTHER PM6A 1957 £18 EACH
This seminal full-range driver is still manufactured. High sensitivity, as fitted to many classic horn designs.

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

JR 149 1977 £120
Infamous cylindrical speaker that was ignored for decades but now back in fashion! Based on classic KEF T77 / B110 combo as seen in the BBC LS3/5a. Doesn’t play loud, needs a powerful transistor amplifier, but rewards with fine clarity and imaging.
TANNY
WESTMINSTER 1985 £4500
Folded horn monoliths which certainly sound good if you have the space. Not the last word in tautness but can drive large rooms and image like few others.

SPENDOR BCI 1976 £240
Celestion HFI1300 tweeter meets bespoke Spendor Bextreme mid-bass unit – and the result is a beautiful warmth yet very well focused sound. A little bass boost necessitates careful loud-stall mounting, but these prove that the seventies did have some fine designs after all!

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

MAGNEPLANAR SMGA 198X £800
Technological loudspeaker with genuinely musical abilities; fast, smooth, open, dry.

KEF R105 1977 £785
Three way Bextreme-based floorstander (complete with cabinets!) gave a truly wideband listen and massive (500W) power handling. A very neutral, spacious and polite sounding design, but rhythmically well off the pace. The quintessential nineteen seventies loudspeaker.

IMF TLS80 1976 £550
Warm and powerful nineteen seventies behemoth with transmission loading and a mixture of KEF and Celestion drive units. Impressively physical wideband sound but rhythms aren't its forte.

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

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

HEYBROOK HBI 1982 £130
Peter Ormeau-designed standmounters with an amazingly lyrical yet distinctly refined sound. Great enough to partner with very high end ancillaries, yet great with budget kit too. A classic!
Ingenium offers the same obsessive design philosophy of our more expensive designs, a ground-up construction engineered for pure audiophile performance.

The unique skeletal design offers unparalleled versatility with a huge choice of single or double arm options. Our prized sapphire bearing and platter system has been retained from the DIVA II, as has the option of using our unique clamping system, which efficiently channels unwanted vibrations away from both the record and platter.

Call today to arrange your private audition.

www.avidhifi.co.uk

AVID HIFI LIMITED, Bixton Industrial Park, Kimbolton, Huntingdon, Cambs, PE28 0LW
Tel: +44(0)1480 869 900 Fax: +44(0)1480 869 909 E-mail info@avidhifi.co.uk

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Analogue Seduction, 6 Manor View, Whittlesey, Peterborough Tel: 01733 350 878

Fanthorpes, Hepworth Arcade, Silver St, Hull, East Riding of Yorkshire HU1 1JU Tel:01482 223096

O'Brien Hi-fi, 60 Durham Road, West Wimbledon, London Tel: 020 8946 1528

Progressive Audio, 2 Maryland Court, Rainham, Kent, Tel: 01634 389004
It was named from a childhood memory of Miles Davis. He heard a black gospel singer perform in Arkansas. That woman, her experience and the experiences of most black people in the USA was, "a kind of blue experience," he said.

How important is this album? It is one of the few jazz albums that appeals to those who avoid the genre.

For long-term jazz fans, though, it holds the status of a holy relic and provides a template for those who want to enter the world of improvised music.

There are many facets to 'Kind Of Blue', reissued recently by Vinyl Lovers (www.discovery-records.com), many components that can be discussed and debated. Above all, it is music that is without pretension. It is jazz that is pared down to the essentials.

Veteran trumpeter Olu Dara said: "When I was young, my ears popped when my roommate first played it for me. It made me want to quit college right there".

While the revered jazz critic Stanley Crouch, exclaimed: "Everybody was listening to it. In many homes, I heard (drummer) Jimmy Cobb's work on the track, 'Freddie Freeloader' in the homes of a mailman, domestic workers, auto-mechanic. It didn't make any difference. There was something to that".

'Kind Of Blue' was a sort of transitionary album, becoming an important boundary for Davis' career, moving away from the tight quintets of the early 1950s to the loose sound of the post-'Blue' works such as 'Bitches Brew' and then the freer electric groups.

Davis was 32 at the time and at the top of his game. Under him he had what has often been called the best jazz line-up of all time. "It's really Coltrane who really stands out," said jazz historian Dan Morgenstern. "This is Coltrane's first great modal solo. There's a wonderful mood to that, there is such stillness, it's an amazing piece".

We look back on 'Kind Of Blue' and see its greatness but, at the time of its inception, it wasn't really seen like that. As drummer, Cobb, explained, "I didn't know if it was 'Kind Of Blue' or 'Kind Of Green', at the time".

"As far as I was concerned, it was just another Miles Davis gig that we did and came out all right".

"It was only later, when I heard it through, that I realised how well the guys played on it".

Oh yes, they played well all right. In fact, they played much better than that. PR
DIVERSE VINYL
We’ve been neglecting Diverse Vinyl (www.diversevinyl.com) of late, so let’s correct that now. Look out for Eddie Reader’s pop/folk outing, ‘The Songs Of Robert Burns’ (2003) and its first appearance on vinyl. Offering a broad presentation instead of the expected intimacy, the album succeeds via Reader’s unique delivery.

Polly Paulusma’s ‘Leaves From The Family Tree’ (2012), her third release, is a beautiful album with a soundtrack construction.

Also look out for Richmond Fontaine’s new album, ‘Winnemucca’, including the exclusive track, ‘El Rancho’ while Danny And The Champions Of The World’s ‘Hearts & Arrows’ (2011) roams a Springsteen-esque road, providing a bouncy New Jersey rock sound.

MILES AND MILES AND BILLY
New from Mobile Fidelity (www.mofi.com) is a pair of absolute stunners from the master of jazz, Miles Davis. ‘Milestones’ (1958) features his original sextet and arrives with a strong blues flavour, while the title track introduced modal jazz into the genre. ‘In A Silent Way’ (1969) is a classic jazz piece for the electric era, a suite of music with no boundaries.

Next is Billy Joel’s Phil Ramone-produced ‘52nd Street’, featuring the hit single ‘My Life’, an album with Broadway overtones. ‘Glass Houses’ (1980) is harder edged while Joel’s bitterness at his then unwanted ‘soft rock’ label shines through. An album with bite.

NINJA TUNE
Via Just Isn’t Music (www.justisntmusic.com), Ninja’s publishing arm, Thundecrat’s ‘Apocalypse’ utilises a cool, funky, hooky, beat-ridden R&B with a soul-infused vocal. Thundecrat is Stephen Bruner, ex-Suicidal Tendencies tour bassist. Nice.

BACK ON BLACK

Lots of rock from this respected reissue label. Nazareth's third album, 'Razamanaz' (1973), moved the group from a Rolling Stones style to a harder rock. A top quality LP, produced by Roger Glover, it effectively combines other genres, such as country and rockabilly. 'Expect No Mercy' (1977) plays it safer but still offers a hard rocking sound. Also look out for a double album from ex-Skid Row vocalist, Sebastian Bach. 'Abachalypse Now' features tracks from three live concerts. Then there's the supergroup, Snakecharmer, created by former Whitesnake members Micky Moody and Neil Murray. This double album is finely crafted with blues overtones. Crashdiet's 'The Savage Playground' is a bit of a mixed bag, compared to earlier efforts, with a less than sparkling production.

TRAGEDY AND MORE

A new batch of vinyl from Music On Vinyl (www.musiconyvinyl.com) begins with The Tragically Hip duo: the Canadian blues/pop artists second album, the 1989 release 'Up To Here', screams potential on this country/rock piece while 'Road Apples' (1991) is a roots rock gem.

Iggy Pop's 'Instinct' (1988) and a 25th anniversary numbered edition in limited red vinyl, although the LP itself fails to gel.

Elvis Presley fans will love 'Elvis At Stax', a 40th anniversary double album, the 1973 recordings have been remastered from the original session tapes and are accompanied by newly-mixed outtakes.

It's about time that we saw a reissued LP from Kris Kristofferson, 'Kristofferson' (1970) was his debut that was initially ignored but, nevertheless, was a supreme country/pop outing.

Prong's 'Cleansing' (1994) uses industrial touches, adding variety that made it the band's best album at that time.

Meanwhile, Bonnie Raitt's 'Give It Up' (1972), was her second album that mixed country, rock, folk and blues.

Also look out for Corrosion Of Conformity's 'Vileblood' (1996), a steady blend of heavy metal, industrial and thrash; Paul Butterfield Blues Band's self-titled debut album (1965), a boisterous and intense jazzy blues affair; Free's blues-rock 'Fire And Water' (1970); A Flock Of Seagulls' self-titled debut (1982) a new wave fun collection with forgettable lyrics and ex-Little Feat guitarist, Lowell George's 'Thanks I'll Eat it Here' (1979), his one and only album but a cracker, nevertheless.

...AND FINALLY

Norway's Spirits Of The Dead's 'Rumours Of Presence' (The End; theendrecords.com) takes their stoner-psychadelic sound but keeps the beat light enough to avoid the mud-slug of some contemporary stoner outings.

Also from Norway, Atlanters's 'Vidde' (Jansen PlateProduksjon; www.jansenplateproduksjon.no) is a slice of Scandinavian experimental blues rock with an alt-folk infusion to provide an edge.

On the same record label, Mona & Maria are, you guessed it, from Norway. 'My Sun' has a slight West Coast, sixties feel to it, an easy-going vibe combined with uplifting, almost Sigur Ros elements.

Palm Highway Chase's 'Escape From New York' (Editions Mego; editionsmego.com) has a distinct retro synth sound soundtrack feel that features hooks and grooves a-plenty.

The Octopus Project arrives with their fifth LP, Fever Forms (Pee k-a-boo; www.peekaboorecords.com) is a female-fronted slice of electro with a slight eighties, shoegaze element to their presentation.

In a similar vein, Italy's Satelliti's 'Transister' (Cuckundo; cuckundoorecords.com) displays a mixture of electronica with rocking-out electro over a uncompromising beat.

Finally, Alela Diane's 'About Farewell' (Rusted Blue; www.aleladiane.com) is a country-tinged outing that 'uses' her divorce as inspiration. Featuring sparse arrangements and a vocal delivery from times gone by, this LP is worthy of attention.
Tony Bolton goes scouting around this updated turntable from VPI.

Be prepared

The Scout 1.1 turntable under review here is the most affordable in the VPI range. It's the latest incarnation of a model that has gleaned favourable reviews from the press on both sides of the Atlantic, for VPI are American. Formed some 35 years ago by Harry and Sheila Weisfeld, they have built a solid reputation for making well engineered and finished turntables and record cleaning machines.

There is a certain sense of solidity about this turntable which is confirmed by handling the 19in x 13in x 4in plinth which is made of 11/8in thick MDF bonded to a 12-gauge steel plate.

The black satin finish was well-executed and contrasted nicely with the silver alloy conical feet mounted under the four corners. These are threaded and can be adjusted for fine leveling of the turntable.

The platter is equally hefty, made of 13/8" thick aluminium that sits on a 60 Rockwell case-hardened shaft that rides in an inverted Teflon and brass bearing. This is lubricated at the factory and should require no attention until it is a year old when a blob of white lithium grease needs to be placed on the ball. At this point the motor also requires a little drop of oil.

The 500rpm synchronous motor sits in a separate case that fits into a cutout on the left side of the plinth. The IEC socket sits at the back of this unit and the mains cable can be threaded neatly out of the way underneath the deck.

Care is needed in siting this turntable, since it is both heavy (32lbs) and not suspended, so could suffer from footfall problems if not placed on a very stable surface. The instructions suggest a 1in to 3in thick Maple shelf, mounted on rubber isolation feet. I mounted it on a wall shelf in place of the Clearaudio Master Solution on my Voodoo Airtek air suspension platform.

Among the upgrades to this deck are a new version of the JMW Memorial tonearm to become the JMW 9t (it is named after the Weisfeld's eldest son Jonathan who was involved in designing the arm when killed at the age of 17 in a car accident). This model sports a tapered arm tube that is filled with a proprietary damping material which, it is claimed, reduces resonance. Our measurements back this up.
There are certain practical touches I liked, such as the ease of interchanging arms wands, allowing easy use of different cartridges, simply by lifting the arm off its stainless steel rod and unplugging the connector block mounted to the left of the arm assembly. RCA sockets are provided at the back of this for the signal output so that your own choice of interconnects may be used to connect to the phonostage.

On this mounting block there is also an anti-skate mechanism. According to the instructions the usage of this is optional, since the manufacturers feel that the spring effect of the arched arm cable, where it rises out of the bearing housing and reaches to the plug, should provide enough anti-skate force to maintain the stylus in the centre of the groove. I tried listening with the anti-skate mechanism engaged and disengaged, and felt that the sound seemed a little freer and more flowing without it, so all listening was done with the anti-skate disconnected.

"I was pleased to discover that deep bass really did mean deep when played through the Scout/JMW9t combination."

Set up is fairly straightforward, although it is vital to read the instructions since there are a couple of points that are unusual.

A good-quality metal alignment jig is provided which, at one end, has a hole that is placed over the spindle, and a V-shaped section at the other that can be extended until it rests against the bearing shaft. The needle is then placed on the grid on the jig and the cartridge aligned in the normal manner.

Failure to do this will result in an inaccurate tracking force being applied when the arm is in a playing position. The vertical setting of the arm can be adjusted by either twisting the counterweight around the stub or by adjusting the azimuth ring which sits around the base of the bearing housing.

Before playing a record a black washer must be placed on the centre of the platter, the record placed over it and a clamp installed. I found that there was enough inertia from the mass of the platter and the grip of the belt that operating the clamp could be done with one hand if so desired.

I was impressed by the ease at which the heavy platter gained speed from a standstill — accompanied by a sort of growling noise for a split-second as the motor spun against the belt until the latter got a firm grip on things.

I have met very few belt drive turntables that have virtually instantaneous start up. But this one was so quick it could give a lot of Direct Drives a run for their money in 0 - 33rpm start times.

The instructions suggest a 20-hour break in period for the turntable, and although it sounded good from when first plugged in a few hours play saw a greater sense

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**The Scout's motor is mounted in a separate casing that sits in a cut out on the plinth. The power button is visible in the centre, below the motor pulley.**

Adjusting the tracking force requires the arm to be increased in height by loosening the two Allen keys at the 12 and 3 o’clock positions on the arm mounting, and turning the knurled ring underneath the bearing until the arm is level when the stylus is resting on the scales. After setting downforce, the needle is then placed on a record and the arm height reset.

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The anti-skate mechanism can be seen jutting out of the junction block, just below the arm lead.

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classical music and is equally capable with modern electronics or early rock and roll. The timing is precise, the imaging quite expansive.

Although £1890 is not cheap for a turntable, I felt that the build, finish and sound quality justified the price and any purchaser will be more than happy that they have spent wisely. Most definitely recommended.

SYSTEM USED:
Benz Micro Ace L cartridge.
Leema Acoustics Agena phono-stage, Tuscan Il amplifier.
Chario Ursa Major loudspeakers.

MUSIC USED:
Mozart. 'Clarinet Concerto In A Major. (K.622).’ Gervase De Payer (Clarinet) London Symphony Orchestra conducted by Peter Maag. London Records CS.6178. c.1960

Nat King Cole. 'Love Is The Thing'. Capitol Records. LCT 6129. 1957.


MEASURED PERFORMANCE
The turntable ran a negligible -0.3% slow and held speed very well, varying little around nominal. As a result basic rotational rate wow at 0.55Hz (33rpm) was very low for a belt drive, measuring just 0.1%. The W&F Wow & Flutter meter needle holding steady at this value - unusual. Belt drives commonly measure 0.3% wow and fluctuate significantly around this value, so the Scout performs unusually well, likely because it uses a quality low-speed motor and a belt with consistent properties along its length. These results were achieved with a motor-to-platter spindle centre distance of 78mm.

The arm's main bending mode was at 225Hz our analysis shows, a normal enough value. It was quite well damped, not up with the best here. Dynamics and stereo stage width should be good all the same. Another resonant peak exists at 1050Hz but it is narrow and does not encompass much energy. The sturdy headshell platform was quieter than most above lkHz and should give smooth, clear treble.

Measurement showed the Scout is better engineered than most rivals and should give better sound as a result. NK

FOR
-excellent build and finish
-polished and sophisticated sound
-deep bass
-measured sense of timing

AGAINST
-size may be an issue

VERDICT
Successful update of a well-reviewed American turntable, offering an improved tonearm and platter which improve on an already good performance.

FOR
-excellent build and finish
-polished and sophisticated sound
-deep bass
-measured sense of timing

AGAINST
-size may be an issue

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VPI SCOUT 1.1 TURNTABLE £1890

OUTSTANDING - amongst the best

DECEMBER 2013
Vinyl is black!

The Evo! What an evocative name and rightly so too! The SL-1200 evolved from a Hi-Fi turntable into a DJ deck and now we turn it back into a Hi-Fi turntable again! Fitted with the legendary SME 309 tonearm and the Audio Technica AT33EV your emotions will run wild. The AT33EV is itself an evolutionary cartridge hence its EV suffix and matches the SME 309 so well. We have worked with direct drive turntables and moving coil cartridges for over 30 years now and the EVO has evolved into a mature product that is quite simply a world beater. We can supply completely new units with 5 year guarantees, used ones with 2 year guarantees, or we can convert your own.

The new and much heavier 31Kg SME model 20/3 turntable is a breath of fresh air and music to our ears! This finely engineered precision turntable is built to exacting SME standards.

This massive construction incorporating extensional damping of major surfaces, combined with a lack of vibration from moving parts, ensures exceptional resolution and uncoloured performance.

Driven by a three phase, brushless, eight pole DC motor, with hall effect sensors and closed loop speed control, this turntable gives truly excellent pitch stability.

The T-01MC moving coil phonostage has been designed to work with every moving coil cartridge from a DL-103 to a Clearaudio Goldfinger Statement. We know that because we have tried them all and many, many others. The design comes from Dave Cawley who designed and built his first MC phonostage in 1981 and recently manufactured the award winning A.N.T. Kora phonostage. Building on his experience Dave has now produced a dual-mono phonostage with not a single integrated circuit or PNP/NPN transistor in sight! No less than 16 FET's are used including a FET discrete power supply. The input FET's are laboriously hand tested and categorised before being inserted in blocks of 8 into the PCB.

The SME 309 tonearm is a delight to use, to look at and more importantly to listen with! Featuring the very same tapered magnesium armtube as the SME V you might wonder why this tonearm has such a low price tag. SME have a very long history and pedigree of making as they say "The best tonearms in the world" and we agree with them. This might be the last tonearm you buy, and in the long term has to be the very best value for anyone.

At the 2013 Whittlebury HiFi Show all the SL-1210s exhibited had SME 309s fitted, even those not from us, why? Because the 309 works so very well on the Technics! We supply and fit more 309s than all other arms added together, we simply love them to bits!

Who are we and what makes us tick Part I. We are passionate about vinyl and supply cartridges from the DL-103 at £159 to the Clearaudio Goldfinger at £8,850, we keep both in stock! We can modify a used and battered SL-1200 or supply a 1/4 million pound High End system in complete confidence. We have done both recently and we enjoyed one as much as the other. What really drives us, is getting a system right, never mind the cost, it has to be as good as it can be for the price, no half measures here.

In the evenings at HiFi Shows, you will often find us in the bar talking to other manufacturers. at Whittlebury this year we had a beer with the legendary CEO of Clearaudio Robert Suchy. By the time you read this we will have been to the Audio Engineering Society Convention in New York where we will have shared ideas about restoring 78rpm records. We love 78s especially the pre-electric ones where they are recorded and duplicated with absolutely no electronics involved at all. It's this level of interest, dedication and sharing that makes us different.

We both listen to equipment and measure it. We firmly believe in both and one of our mantras is "if it measures well and sounds good, then it is good: if it measures badly and sounds bad then it is bad: if it measures badly and sounds good, then it could be improved: if it measures well but sounds bad then it is bad" © Dave Cawley

Clearaudio Goldfinger - Transfiguration Proteus - Benz LPS - Denon DL103 - Audio Technica AT33/0C9 SME Turntables & Tonearms - Oyaide - Furutech - Klipsch - Whest Audio - 78rpm - SL1200 Mods

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Italian for brio

A valve phonostage from Synthesis reminds Tony Bolton about 'brio'.

Italian hi-fi has long had a reputation for being well presented and the Synthesis Brio phonostage is a good example of this. The design is understated with just a single pale green LED to indicate that power is on. This ornaments the polished wood fascia, as do two valves rising out of the top protected, if required, by a removable black metal grille. The presentation of the Brio is excellent, the lacquered woodwork extending around the sides of the case, and a polished black metal top plate that bears a gold coloured plaque with the company name etched on it.

The slimness of the phonostage (145 x 220 x 100mm) is made possible by the use of a freestanding transformer unit housed in a white plastic case. On one end is an IEC socket, while at the other is a long connecting lead so that the power supply can be placed out of sight.

The back of the phonostage contains the RCA input and output sockets, an earthing post and the power connector which also houses the power switch. There are no other controls since this is a Moving Magnet (or high-output Moving Coil) phonostage with no user adjustable features.

The two 12AX7 (or ECC83) dual triode valves are allocated one to each channel, with half of each valve providing the driver and the other half giving the gain to provide one of the most substantial line level outputs that I have ever encountered in a phonostage.

I plugged it into the Townshend Audio Allegri pre-amp in my upstairs system and attached it to the leads from the Hadcock arm, currently fitted with a Goldring 1022GX cartridge. I initially set the volume control at my normal listening level and immediately had to turn it down by a couple of steps to return the sound to my normal listening level. Even though the Goldring has a high output the strength of signal from this phonostage is very high, and users of highly sensitive pre-amps may find little room for adjustment of the volume for low-level listening.

Having got the volume sorted out, I settled down to listen to the Latin sounds of Astrud Gilberto wistfully crooning her way through "The Girl From Ipanema". The vocals were presented right in front of me, with Stan Getz's Bossa Nova backing instrumental slinking along to each side of them. The rhythm was infectious, and the duration of the sound of each beat had well defined beginning and end points, making for a very tightly described flow to the music. The gently brushed percussion stood out, occupying its own space, perched atop of the sound of her husband Joao Gilberto's guitar. The sound had warmth, without being cloying.

I stayed in the '60s for the next LP, but chose the somewhat more aggressive sounds of the Rolling Stones.

The band's debut LP opens with a raw and driving version of "Route 66" and I was pleased to find the sound was not softened
The new MC Anna from Ortofon sits at the highest echelon of Moving Coil cartridges. This state-of-the-art product is representative of numerous design elements and ideals pioneered by one of the world-leaders in analogue technologies. As a result, the MC Anna is truly capable of the highest degree of performance possible, and will provide a sound which is literally unsurpassed. The MC Anna is named after and inspired by the world-renowned operatic soprano, Anna Netrebko.

The stylish Xpression cartridge from Ortofon bridges the gap between SPU-type designs and High-End models like the MC Windfeld and MC Anna, which are designed for headshell mounting. The result is a high-performance moving coil cartridge with the convenience of a standard headshell connector. By using some of the best technologies available to them, Ortofon have made the Xpression into not just a convenient and attractive design, but also one of the finest sounding cartridges available on the market.

The Cadenza series represents another example of Ortofon’s constant push toward technological perfection. By taking various design characteristics acquired through market leaders, such as the MC Jubilee and Kontrapunkt series, Ortofon have developed Cadenza to elevate any decent Hi-Fi system to a whole new level. The range consists of 5 different models, including a Mono version, but they all adhere to Ortofon’s core principles of accurate information retrieval and phenomenal sound performance.

Ortofon is distributed in the UK by Henley Designs Ltd.

W: www.henleydesigns.co.uk | T: 01235 511 166 | E: sales@henleydesigns.co.uk
Since the mains transformer is housed in a separate casing, the space in the phonostage can be devoted to the audio electronics.

and wispy, but instead carried that dangerous, slightly rough edge to it that characterised the early '60s R & B sound. This is an original mono release in pretty good condition, but with some surface noise. This was mostly disposed of adequately but I would have heard less of it if there had been a mono/stereo switch fitted.

otherwise I could not complain about the presentation. The image was quite big, filling most of the space between the speakers and extending well back.

The same parameters seemed to apply with the Von Karajan recording of Holst's 'Planets.' The orchestra was clearly defined into sections in the classic horseshoe shape and I was able to focus easily on individual parts of the instrumentation.

My one complaint would be a little lack of weight in the lower registers during the more emphatic parts of the 'Mars' movement. There wasn't a sensation of lack of bass, but I have heard greater weight in these areas from similarly priced phonostages.

Overall, I felt that the Synthesis Brio offered very good performance. It is capable of reproducing both gentle and aggressive sounds with equal panache, displayed rhythms in a confident and compelling manner and created a sonic image that was detailed and well defined.

If I was a keen listener to rock music, heavy orchestral or organ music then I might wish for a little more weight in the lower frequencies, but for most types of music this is unlikely to be a problem.

The Synthesis Brio is an elegant and well-presented design, both aesthetically and sonically. At £ 1140, it offers the sort of sound quality you would expect at the price.

In essence it provides a simple and effective plug and play solution to those wanting the distinctive triode sound from their phonostage. It is beguiling in every way, from its classic but understated looks to the sound that it manages to produce. Definitely one for any buyer's shortlist.

### Music Used

- **The Rolling Stones. 'The Rolling Stones.'** Decca Records. LK 4805. 1964.

### System Used

- Linn Sondek/ Hadcock 242 Cryo/ Goldring 1022GX.
- Townshend Audio Allegri pre-amp.
- 2 x Quad 303 power amps.
- Kelly KT3 loudspeakers.

### Measured Performance

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency response</td>
<td>40Hz-20kHz</td>
</tr>
<tr>
<td>Separation</td>
<td>68dB</td>
</tr>
<tr>
<td>Noise (e.i.n.)</td>
<td>0.4μV</td>
</tr>
<tr>
<td>Distortion</td>
<td>0.26%</td>
</tr>
<tr>
<td>Gain</td>
<td>x380 (52dB)</td>
</tr>
<tr>
<td>Overload</td>
<td>35mV in/13V out</td>
</tr>
</tbody>
</table>

The Synthesis has much more gain than most MM phono stages, a key feature. This is tied up with its use of valves, that allow a very high output swing of greater than 20V (13V, 1% thd), 6dB above the 10V upper limit of silicon chips (ICs). This extra overload headroom means very high gain of x380 can be used, where so many chip based preamps offer a barely usable x100.

Equalisation was accurate above 100Hz but below this frequency gain falls away steadily, weakening bass, as our frequency response analysis shows. The -1dB lower response limit is still 40Hz but the Brio will not have especially strong bass, subjectively, although it may well sound supplie and 'fast'.

Equivalent input noise was 6dB higher than transistor MM phono stages, measuring 0.4μV against 0.2μV for MM, but because MM cartridges generate high amounts of thermal (Johnson) noise related to their coil resistance this is of little consequence.

The Synthesis Brio will likely offer a very clear and liquid sound with MM cartridges, but deep bass will likely be a tad restrained in power. NK

### Verdict

A good-looking and compact triode phonostage from Italy with an elegant and detailed sound

**For**
- good imaging
- persuasive rhythms
- tactile textures

**Against**
- could be a little bass-shy for some types of music
- no mono/stereo switch

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Excellent isolation

Tony Bolton tries out some vibration damping components that have an industrial heritage.

Materials and technologies make their way into the hi-fi industry from various sources. Sound Damped Steel started out making vibration and resonance damping materials for industrial usage in various applications, from generator housings to general noise suppression.

Founder Les Thompson is also a hi-fi buff and started using his SDS materials to great effect within his system. This resulted in the development of the two products reviewed here: the Isofeet and the Isoplatmat.

Taking the former first, as the name suggests these are 3mm thick feet to be placed underneath either electronic components or loudspeakers and consist of two layers of stainless steel that are bonded together with a 60 micron thick layer of polymer. This constrains the interaction between the pieces of steel, causing any vibration to be converted into heat and thus dissipated. It is called constrained layer damping.

The feet are finished in black and have Neoprene pads underneath to prevent them from marking surfaces.

I tried them underneath a variety of components, starting with the Leema Acoustics items on my downstairs system.

It took only a few moments listening to realise that the bass seemed to reach deeper, the midrange was smoother and more expansive and the treble a little more extended. There was a more obvious change when I tried them under a valve amplifier. They were also effective under the motor of the Clearaudio Master Solution turntable.

Next I tried the Isoplatmat. There are two versions of this, one in stainless steel for use in non-suspended decks, and a lighter aluminium version for Sondek and the like.

Again these are made of two layers of metal, joined by a polymer. A Neoprene mat is provided so that the record has a forgiving surface to rest on, or the original mat may be used instead. Arm height may need to be adjusted to take into account the couple of millimeters thickness of the Isoplatmat.

There was no subtlety about the difference here. Bass extension and clarity improved greatly, with a midband that suddenly seemed less cluttered and more defined. I noticed more texture and detail to various sounds, with trumpets losing an edgy sharpness and having, instead, a more realistic rasp in their notes.

Detail around percussion improved with cymbals having a shimmer to the sound that decayed gracefully into the distance, while high-hats lost the trashy dustbin sound, becoming more tightly described and controlled.

Both of these products seem really effective, although this perception may vary depending upon the specific component. Users of valve phonostages will particularly appreciate what the Isofeet can do in tidying up the sound. I tried the Isoplatmat on a variety of turntables and found it effective on each one, including those with acrylic platters. Machines with metal platters really benefitted.

These are two excellent products that are affordable and very effective, offering a value for money performance upgrade for all of your equipment.

ISOFEET £36.00 + P&P

OUTSTANDING - amongst the best

VERDICT

Neat and unobtrusive isolation feet that prove particularly effective under valve equipment and anything with a motor in it.

FOR

- easy to fit
- effective
- minimal increase in component height

AGAINST

- nothing

ISOPLATMAT

FROM £89 + P&P

OUTSTANDING - amongst the best

VERDICT

Very effective turntable mat that reveals definition, texture and space in the sound from your record player.

- easy to fit
- wider bandwidth
- better imaging
- improved tonality

AGAINST

- arm height will need adjustment to maintain correct stylus angle

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The smallest of the floorstanders in the R Series. Uses the latest generation Uni-Q driver array and two 5.25-inch aluminium bass drivers. Its slim proportions and sleek cantemperar; looks make it perfectly suited for any interior.

MONITOR AUDIO SILVER 6
2-way speaker system combining excellent dynamics with a naturally rhythmic sonic character and tight, controlled bass. The Silver 6 is an outstanding communicator of music and film audio.

KEF • L500
An innovative concept derived from the legendary LS50. Rarely the case in such a compact design, the L500 monitor delivers a rich, multidimensional soundstage experience that is out of all proportion to its size.

TANNY • REVOLUTION DCX7 SE
Award-winning compact, floorstanding speakers featuring Tannoy’s unique Dual Concentric™ drive unit along with trapozoidal cabinets. Exclusively finished in luxury Espresso colour real wired veneer.

KEF • LS50
Rarely the case in such a compact size. The LS50 is a true Mini Speaker with a naturally rhythmic sonic character and tight, controlled bass. The LS50 is a deceptively modest member of the ultra-stylish Imagine Series. The deceptively modest Imagine Mini makes an impact on any already impressive range of award-winning speakers.

PSB IMAGINE MINI
Meet the newest and smallest member of the ultra-stylish Imagine Series. The deceptively modest Imagine Mini makes a big impact on an already impressive range of award-winning speakers.

PMC • TWENTY-23
Hi-fi, engaging and communicative to dispeaker that defies its size both the depth of low-end and scale of presentation by taking any music or film material in its stride. The sound is vivid and dynamic, delivered with authoritative bass.

WHARFEDALE DIAMOND 122
Stand/bookshelf speakers featuring a 25mm soft dome tweeter and 150mm woven Kevlar mid/bass driver. The Wharfedale Diamond 122 offers high-performance and great value for money.

BOWERS & WILKINS P7
HEADPHONES
With P7, everything is designed to allow you to live your own music. Bass is tight, vocals are precisely defined, and there’s a wonderful sense of space, balance and clarity across the whole frequency range. P7’s cable comes with a remote/microphone attachment, so it works seamlessly with all compatible devices.

BANG & OLUFSEN • BEOPLAY A8
WIRELESS MUSIC SYSTEM
The B30 brings a fresh new design twist to the iPod dock, adding wireless streaming through AirPlay and Bluetooth or AirPlay enabled smartphone, tablet or laptop.

SONOS • THE WIRELESS Hi-Fi SYSTEM
The award-winning Sonos lets you play your favourite tunes all over the house and control them from the palm of your hand. You can even play different songs in different rooms.

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ADVERT VALID UNTIL 19/11/2013. E&OE.
Hundreds of Direct Drive turntables were produced by the Japanese during the 1970s and 80s. The market was so huge that although more complex than their belt drive counterparts, the Direct Drive motor was actually cheaper to mass produce.

JVC and others made a motor, bearing and PCB in one small unit that could simply be fitted into any plinth. It was complete, only requiring a base of some sort, a platter and a few switches/controls. They made so many they are still available new on eBay right now. Even the mighty linear tracking Revox B795 used a Direct Drive PCB motor.

Early Direct Drive — and that includes almost every Technics without the Mk1 suffix — were relatively simple devices that often cogged and hunted with bad speed control. The technology was in its infancy and price was the main driving force.

Speed setting was often by a pair of pots on the plinth and these are now often noisy and worn. They might not have rumbled, but speed stability of these early Direct Drives wasn't anywhere near the post-1979 models.

As an example, the mighty Technics SL-110 with its wonderful wooden plinth and white arm marking drawings was often fitted with a SME 3009 but it didn't have great speed stability.

All these early turntables had two speed pots — 33 and 45rpm — and strobe markings for both 50 and 60Hz. That's because there was no absolute speed stability and the rotating turntable platter had to be compared to the frequency of the AC mains supply.

In 1979 everything changed as Technics and many others adopted 'Quartz PLL' (Quartz Phase Locked Loop) as pioneered by Toshikazu Yosumi in his seminal white paper 'Designing of Quartz-Lock Turntable'. In practice he used a normal stability crystal, divided down to the same speed as the 190 or so sensor points around the platter. The two signals are then compared in a complex phase locked loop, in a two stage process. A 'speed loop' got the platter up and running quickly at almost the correct speed. It was followed by...
an accurate phase comparator that maintains absolute phase lock and hence arguably the most accurate speed control possible.

Some critics say this speed control produces hunting and liken it to an almost stop-go digital speed control. Nothing could be further from the truth.

The three coils on the motor are driven with a sine wave of varying amplitude as determined by the phase comparator. The output of the phase comparator is an analogue signal and that is passed into a low pass loop filter before being applied to the motor drive electronics.

If a very tiny correction is needed, that is exactly what it gives. A tiny smooth change, no big step changes at all. It is possible to monitor the loop control voltage whilst playing a record in real time. The correction is very small but perfect.

In my opinion this tiny, accurate, smooth and necessary correction is less audible than the relentless hysteresis of a belt drive where the tension on the belt can be constantly changing. Put simply, a properly designed quartz lock turntable provides unrivalled pitch stability and less cogging and variance in the drive system than either DC or AC belt drive systems.

What about stylus drag? Yosumi said in his paper: "There is gossip about influence being given to sound quality by a jogging motion of the DD motor which is caused by fortissimos of the record".

Yosumi had set up a turntable with two identical tonearms, each arm playing a different part of the record. One tonearm’s output was carefully monitored on low modulation parts of the record whilst the second tonearm with a much heavier vertical tracking force was playing a high modulation passage.

The result was not what is widely quoted on the internet. In fact he said: "There is no remarkable difference between quartz lock turntable and conventional speed turntable".

However, there was a small and measurable difference and he was, after all, comparing against another Technics. As he said, it was not remarkable, but it was present.

Maybe it would have been more definitive if he had compared the quartz lock against a belt drive. It would be good to repeat the experiment, however Yosumi had special records made for this and they are no longer available.

He concluded the advantages of quartz lock were:
1. Becomes stronger against external disturbing load torque, meaning stylus pressure.
2. Attains better rotational accuracy (± 20ppm).
3. Improves the rotational stability (temperature and time-lapse variation).

But does flutter and stylus drag really matter? Hisao Sakai in the AES publication, June 1970, entitled “Perceptibility of Wow and Flutter” concluded that: “The threshold of perceptibility was smallest for piano music at 0.14%”. But subsequent letters suggested that the figure depended on the weighting used.

Bruel & Kjaer presented a paper to the AES in 1977 entitled “Audible Effects of Mechanical Resonance in Turntables” that concentrated on wow and flutter. They concluded: “In this paper we have pointed out that traditional specifications like rumble, wow and flutter and required tracking force are both unreliable and inadequate”.

They went on to say: “Our investigations tell us that here is an area which at present has rather poor correlation between the measurement methods available and the impact on sound quality”.

So where does this leave us? Well all the Technics quartz lock turntables share a feature that not all other manufacturers’ similar turntables and none of the older Direct Drive have – that is not only a speed lock but also an absolute phase lock.

A simple if none too reliable test for this, is to run any Direct Drive turntable and look at the strobe, then slowly put your finger on the edge of the platter. You will find that on all Technics Mklls the strobe will stay locked but the strobe lines will retard just a little. It will still be locked though.

When you take the load off they will recover to their original position. This is a very tough test and turntables such as the Trio L-07D will fail. However the L-07D does not actually claim 100% phase lock in its sales literature.

All this becomes important when you consider the essential elements of music replay. Pitch stability is very important to many listeners. Sustained piano notes are a big point in question and for me the relentless rhythms generated with crystal controlled synthesisers are disturbed by any wow or stylus drag.

In his conclusion Yosumi wrote: “The audible point was very close to the best turntables”.

But below audibility is the sense or feeling that something is not quite right. If this ‘sense’ was only 10dB down then some listeners would be able to distinguish clearly between belt drive, Direct Drive and Direct Drive quartz-lock turntables.

GOLDEN DAYS

The golden days of quartz lock Technics turntables seem a long way away now, and the age of ordinary Direct Drives has faded into the sunset – probably where they belong.

In my experience only the Technics Mkll series and upmarket JVC turntables are really pitch stable. The L-07D, Nakamichi TX1000 and many quite recent low-torque Direct Drive turntables have for me failed the synthesiser electro-pop music test. Many more feel the same about their inability to handle piano.

As we have seen, a Direct Drive needs quartz lock to get real pitch stability and even then many do not achieve it. So if your turntable is not quartz locked or doesn’t achieve phase lock, then it’s time to upgrade to a Technics Mkll turntable of some sort.

Although I am personally obsessive about pitch stability and flutter, others are not and for them a high mass turntable with ultra low mechanical resonance and a massive platter might sound better. As they say, your mileage might vary.

In summary, my experience has taught me that you cannot measure everything. We are tantalisingly close but not yet close enough.

Maybe with a little knowledge, vanishingly low flutter measurements and the finger test we can live happily ever after.

Or we can just play safe with almost any Technics quartz-lock turntable.

JVC and others made a motor, bearing and PCB in one small unit that could simply be fitted into any plinth. All it needed to make a Direct Drive deck was a base, platter and a few controls.
For superior sound quality, you should try the Isoplumat. Made from SDS Aluminium, the Isoplumat isolates your vinyl and needle from vibrations and feedback giving an exceptionally high quality audio. Just place the Isoplumat on your turntable and to further enhance your music, you can also use Isofeet placed under the components, subwoofers and speakers. You will be amazed at the sonic improvement to your system.

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Jumble of fun

Vintage cassette decks, reel-to-reel recorders, exotic loudspeakers and CD players from the very dawn of the silver disc — there was something for everyone at the latest Audiojumble. Martin Pipe blew the cobwebs off his wallet to hunt out the bargains.

On a warm October Sunday, several hundred audio enthusiasts and traders from around the world gathered at the Angel Leisure Centre in Kent to buy, sell and talk about all things audio.

John Howes' Audiojumble events, that take place twice a year, are red-letter days for anyone with an interest in hi-fi, electronics, music and 'wireless' sets of all eras.

From the tables piled high with hi-fi equipment of all ages and provenances, you can put together a complete CD or vinyl-based music-playing system for a modest outlay — and whilst doing so, enjoy a face-to-face chat with the vendors. Try doing that with eBay and its ilk!

Yes, Audiojumbles are about people as well as products; these are very human affairs. Expect a busy day, especially if you're among the early birds queueing to get in at 9.30; your efforts will be rewarded.

And after you've assembled a system, you can find material to play on it. Vying for your attention are stacks of records and CDs covering every genre. Jazz, orchestral, opera, hard rock, psychedelia, folk, soundtracks and electronica — it's surprising what you'll find. Much of the stock is new; Diverse Vinyl had their limited edition 'Music Signature' turntable — made by Rega — on show that day. Plenty of second-hand vinyl is vying for your attention too. Although the records in question are usually cheap, it's always worth checking the condition of the sleeve's contents before shelling out. Some specimens show obvious signs of wear or poor storage. One guy told me that a proportion of his stock originates from car boot sales and similar sources; if you're paying only £1 for a LP, you can't expect a busy seller to check and grade every one.

But the typical Audiojumble goes beyond the common formats. You'll find plenty of analogue recording tape, from tiny 3in 'voice-letter' quarter-inch speeds to ex-studio 2in tape stock. I also found Elcassetts, DCCs, 8-tracks and Minidiscs; the audio Compact Cassette was also much in evidence, while a pro Tascam DAT machine with an allegedly famous past could have been yours for £20 (it worked, too!). Electronics enthusiasts and repairers appreciated the vast quantity of test gear (including scopes, meters and generators), components (among them plenty of boxed valves) and cheap equipment in need of repair (an immaculate Creek CAS4040, one channel down, for a couple of crisp pennies). Although there were numerous bargains, some of the merchandise — usually vintage and valved — was laughably over-priced; I expect the sellers were hoping it would be 'snapped up' by wealthy foreign collectors. Much of this gear went back home at the end of the day, though...

Opening time - and eager traders start wheeling in their precious merchandise for the hordes of buyers.

The next Audiojumble takes place on Sunday 9th February 2014.

www.audiojumble.co.uk

Pictures: Martin Pipe and Adrian Caspersz
WE WANT TO BUY YOUR RECORD COLLECTION

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LATEST USED EQUIPMENT

AMPLIFIERS, DACs, PHONO STAGES

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CD PLAYERS

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TURNTABLES, TONEARMS, CARTRIDGES

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<td>Ortofon Infl. Mmc 303 Lp12 12&quot; Tonarm - Goldplated Version</td>
<td>£4,950</td>
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<tr>
<td>Roksan T5s 3 lamellar With Reference PSU</td>
<td>£4,250</td>
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<tr>
<td>SME 300</td>
<td>£200</td>
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<tr>
<td>Technics SL-B150 Turntable Upgraded Psu, Suspension, Mat &amp; Origin Live Silver Arm</td>
<td>£750</td>
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<tr>
<td>Thorens TD200 Turntable</td>
<td>£725</td>
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<tr>
<td>Vpi Tt1 3.5 Turntable With Transformation Spirit</td>
<td>£3,500</td>
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<tr>
<td>Well-tempered Amadeus Gt Turntable</td>
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CABLES AND INTERCONNECTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
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<tr>
<td>Khamaia Kg-Sr 1A 1 Metre Interconnects Pair</td>
<td>£995</td>
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<tr>
<td>Synergy Research Resolution Reference Mq Qm Balanced Xlr Cables</td>
<td>£600</td>
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<tr>
<td>Tellurium Q Graphite 1 Metre RCA Interconnect</td>
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MISCELLANEOUS

<table>
<thead>
<tr>
<th>Product</th>
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<tbody>
<tr>
<td>Revolix A77 2 Track Reel To Reel</td>
<td>£200</td>
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<tr>
<td>Revolix B77 2 Track Reel To Reel</td>
<td>£400</td>
</tr>
<tr>
<td>Fanfare Pfi Tuner With Remote Control</td>
<td>£420</td>
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<tr>
<td>Krell Hts Home Theatre Standard</td>
<td>£1,200</td>
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<tr>
<td>Meridian Soloos Ensemble 1TB</td>
<td>£1,650</td>
</tr>
<tr>
<td>Naimarchy 700</td>
<td>£800</td>
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<tr>
<td>Osom Q10 Music Server Updated To Q10</td>
<td>£1,250</td>
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emporiumhifi@yahoo.co.uk
It may have sold by the container-load, but most Amstrad audio products were fairly dire. This Laboratory Series A101 power amp was part of an attempt to attract a more up-market customer. However, much of the core circuitry within was inherited from earlier products. A 'mug's eyeful' indeed...

Before the adoption of tape, audio was frequently cut on (highly-flammable!) cellulose-nitrate discs. The BBC used portable disc-cutters for frontline reporting duties during WWII. This self-contained French equivalent moved the cutting head on a screw thread driven from the turntable spindle via a flexible coupling.

Here we have a trio of Armstrong 600 Series components - two 626 receivers and a 623 tuner. These distinctively-styled products, from a British company with a long hi-fi pedigree, were well-built and sounded good for the time. I bought one of the 626s for £20, with a view to exploring it in 'Olde Worlde'.

In the days when tape recorders were expensive, Gramdeck sold this innovative tape-conversion contraption that straddled a record player. Tape speed, only one of which (19cm/s) was standard, depended on turntable setting. Beneath is the transistorised pre-amp unit. But what if you wanted to tape a record?

The unusual LST ('laboratory standard transducer') from American speaker manufacturer AR dates back to the early 1970s. Far from minimalist, each cabinet contains no fewer than nine transducers including a 12in. bass driver. In the US, they sold for $600; our optimistic European seller was hoping to fetch £900!

2013 represents the 30th anniversary of CD in the UK. Both of these Marantz-branded first-gen players are rebadged Philips models - not surprising, as the Dutch giant owned Marantz at the time. Beneath the top-loading CD63 is a CD73 front-loader. Both were claimed to work.
Plenty of home cinema gear, from old Celestion Pro-Logic decoders to some very nice Sony ES-series AVRs, was doing the rounds. But for sheer class, how about a Krell S-1000 processor? Originally selling for over £5,000, this one could have been yours for £1,000. Although it has 192/24 DACs and HDMI, Blu-ray hi-def audio alas isn’t supported.

We came across a Philips DCC-170 personal recorder; quite timely, given our recent DCC feature. ‘New old stock’, this example had never been used and came in its original packaging. Even so, the £150 pricetag was rather high. Blank 90-minute DCC tapes were available elsewhere for a tenner a shot.

Claimed by some to be a ‘Linn-beater’, the belt-driven STD 305 seen here also had the benefit of a 45rpm speed as standard. This example came with a SME Series III tonearm and an Audio-Technica cartridge and was a £220 bargain - especially considering its excellent physical condition.

In these Leak Sandwich speakers from the late ’60s, the 13in. bass/mid driver’s diaphragm was composed of polystyrene-foam ‘sandwiched’ between two sheets of aluminium foil. Leak’s goal was to achieve a stiffness and lightness that improved on the era’s paper cones. A triumph at the time, but by today’s standards bass is rather mellow and power-handling limited.

Meet the precision-engineered Nagra T - one of the finest quarter-inch tape machines ever built. This visually-pristine and well-maintained specimen was, I was told, privately-owned. It has speeds of 19, 38 and 76cm/s, and is equipped with the optional meter bridge. A true collector’s item, what you see here eventually sold for an astonishing £6,000.

Tannoy’s dual-concentric 12in. speakers are seen as audiophile classics, and have been used as studio monitors. The back from one of the pair being sold here for £850 has been removed to reveal the drive unit’s hefty magnet - the custom cabinet’s acoustic wadding is also visible. If you have the space, Tannoy 12 Golds will reward you with a fine performance.

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A recent Olde Worlde covered Sony’s ill-fated Elcaset format, which can sound good even today. Sony wasn’t the only Elcaset manufacturer, as this Teac AL-700 3-header demonstrates. It may have been in tremendous shape but £450 was too much! Shrink-wrapped Type II (FeCr) tapes were selling for £10 apiece.

Beautiful, isn’t it? Yet few of these late-80s Technics SL-MA1s were ever sold in this country. This is a microprocessor-controlled automatic turntable with a direct-driven platter (its quartz-locked motor is apparently the same one that’s fitted to the famous SL-1200). The ‘intelligent’ tonearm expects a P-mount cartridge.

Going back in time to the 1960s brings us to the heavyweight Thorens TD-124 Midi, which employs a novel belt/idler drive system. This one may have been tatty (just ‘*what*** is that stuff on the mat?) but it was fully functional. 124s are in demand, and so our vendor got his £200 very quickly.

The Uher 4200 is a portable half-track stereo tape deck able to accommodate 5-inch reels. A three-head configuration allows recordings to be monitored ‘off-tape’. Machines of this family were the mainstay of BBC local radio and the field-recording enthusiast community for years. This one, in good condition, was being offered for a fair £50.

Also celebrating its anniversary was another Philips development - the humble cassette, which hit 50 this year. With this in mind, Jim Reed treated us to an attractive display focused on the lo-fi mono EL-3300 portable – the first cassette recorder sold by Philips, back in 1963. Rapid advances in cassette technology eventually gave us machines like Nakamichi’s 1000ZXL.

There was far more to Audiojumble than hardware. A number of stalls were selling music in a wide variety of formats, but mostly vinyl and CDs. Condition and pricing varied wildly but an eclectic range of tastes was covered.
free reader Classifieds

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ACOUSTIC ENERGY

TANNOY 611 speakers £(400) £160 ono. Armstrong 625 receiver, £45. Pink Triangle LPT turntable, Rega 3, £300. Teac Z5000 cassette deck (£800) £175.


LOTH X BS1 standpipe loudspeakers. 94dB sensitivity. Ideal with valve amps. Excellent condition. £295. Leak Mini Sandwich loudspeakers. 15ohm. Very good condition. £40. Tel: 0114 237 8731

TANNOY CHEVIOTS (£200) £160 ono. 12" dual concentric H.RD. standpoints speakers, 1/2 cherry, mint, £400. (£1260) Tel: 01243 835 734 (Margate area)

KEF REFERENCE speakers 1/2 cherry, mint, £400. (£1260) Tel: 01243 574828 (Hambrook, West Sussex)

TANNOY CHEVIOTS (£200) £160 ono. 12" dual concentric H.RD. standpoints speakers, 1/2 cherry, mint, £400. (£1260) Tel: 01243 574828 (Hambrook, West Sussex)

KEF Q100's. Immaculate. £200. Tel: Nick 01442 874 749 (Herts)

EGGLESTON WORKS Andra speakers in gloss black Fully working in vgc. Audiophile Speaker of the Year 1997 £4000 ovno. Collection Only Basingstoke 01256421923 07786636593 itsiandavies@aim.com

KIMBER KCAG interconnects. 0.5m length ultralite phono plugs, deep cryogenic and super burn in enhancements, rrp £602 - £300 or £295 collected Tel: 01902 884694 or email jukey39@yahoo.co.uk

JUKEY 39: Email jukey39@yahoo.co.uk

RAK GARRY GT55P turntable. Must be complete and preferably mint. Tel: 01344 485 418

MARANTZ MA500 mono power amps. 150 watts per channel. Mint condition. Original owner. £200 the pair. Tel: 07817 365 393

WANTED: Daliquest DQ10 speakers. Tel: 01446 418 207 or 07792 221917

NAIM FLATCAP for sale. Olive front model. Excellent working condition. Boxed and interconnects included. £120. Tel: 07538 774 946 (Northants)

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2 RUSS ANDREWS Signature Powerkords 1m length, Wattgate 350i IEC plugs, mint Condition rrp £440 - £300 each, £590 for both. Cheaper if collected tel: 01902 884694 Email jukey39@yahoo.co.uk

LEEMA ELEMENTS CD player mint silver (£1150.00) £420.00 Onn tel: Robert 07976 621529 for a dem.
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SPECIAL one-off pair designed and built to very high standards. Scan-Speak and Morel drive units. 35 litre rear ported cabinets £300. 07743921678 rmbandrv@live.co.uk for photos.

GRAHAM SLEE SOLO
headphone amplifier (serial # 0111-382) with PSU1 power supply (latest version), (£480), £195.00. SHURE SRH840 headphones (£200.00), £95.00. AKG K550 headphones (£175.00), £95.00. All in excellent condition and original packaging. Tel:Text Richard on (07772) 711342/01494 521359 (Bucks) or email richard.schofield521359@btinternet.com. 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.

BBC RADIO 1 early 1970s’ Cassette tapes
Wanted Tapes of complete programs by Noel Edmonds, Dave Lee Travis Paul Burnett etc. tanrel@gmail.com

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TANNYO F30 monitor loudspeakers,£1695.00.Tel:02392 453382. Hants.

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SMGA speakers £150 ovno excellent condition classic hi fi to big for new flat,one owner from new kernkarm @yahoo.co.uk Hornchurch Essex.

WANTED:TOP quality Hi Fi seperates and system, Naim,Linn,Cyprus,Meridian,Arcam etc.fast,friendly response and willing to travel/pay cash Please call me on 0781 5892458

PROJECT GENIE Mk3
Ortofon OM2 red + Perspex cover £150 tel 01777 711386 Email: stafford7gg @btinternet.com

AUDIOLAB 8200P Stereo Power Amplifier. 9 months old fully working with remaining 2 year warranty. Very good condition with Box. £450 ONO.0115 984 1699

1 X GRAEME SLEE
Gramamp SE2. 1 x GRAEME SLEE PSU1 all boxed and mint condition.all paperwork, reason for sale upgrading. £240 01382 644815

WANTED:Hi Fi Choice Magazine February 1988 No. 55.Must be in Very Good/Excellent condition offering £35.00. Contact fiskallen@aol.com.

CAMBRIDGE AUDIO
Azur 404E-S pre-amp, balanced/se, silver, boxed, mint. (£800), £300. Ruark Solus speakers, rosewood, superb Scanspeak drivers, WBT binding posts, etc. Few chips, but perfect working order, (£1200), £250. 01992 626138 (Herts.)

GOLDBAILE 300b SE
amplifier. Chinese Audio at it’s best. Mullard and Genelec Gold Lion valves. Excellent sound and as new condition, 3 years old. Cost £200.00, £350.00 ono. Tel: 0116 2849087.

CLASSIC NAIM tuner
NAT101 complete with SNAPs power supply. Excellent condition giving superb performance. Serviced by Naim, receipts available. Recently checked by local Naim Dealer. Complete with Naim Boxes. £475 +PP. Tel: 01768 870214.

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WANTED:ROKSAN
Caspian CD player. Telephone 01395 576644, or email: jmichaelbrittain@yahoo.com

LFD NCSE Integrated Amplifier (number 187). Gun Metal Grey finish, mint condition, one year old, very little use. Have original box, packaging and user leaflet. (£4500) £2250 ono excludes postage. +353 87219 4900

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Caspian CD player. Telephone 01395 576644, or email: jmichaelbrittain@yahoo.com

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MARANTZ PM7200 Amplifier in brushed Champaign Gold. £95+95VW per channel or 25+25 in Class A mode. £195 VGC 07544 810438 Evenings (Shropshire)


TOM EVANS
MicroGroove Plus Phonostage Mint condition as new,£500 offers invited Can demonstrate, call for details (Bedfordshire) e: stuartdarshan67 @googlemail.com T: 07870 912 963

LFD PA2M Power amp Excellent condition £900 offers invited Can demonstrate, call for details (Bedfordshire) e: stuartdarshan67 @googlemail.com T: 07870 912 963

WANTED: SME 309, black finish if possible. South West area. Must try before purchase. Also wanted, Fidelity Research FR54. Tel:01392 460 373

ROGERS CADET valve amplifier and control unit: Garrard 865B belt drive turntable. Rogers Ravensbourne transistor FM tuner. All in working order. £1 30. Tel: 01254 51295 Blackburn
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Also coming next month is an exclusive, in-depth review of Quad's new top-of-the-range Platinum series DMP digital media player and its matching 170 Watt per channel stereo power amplifier. Plus you can test your music and hi-fi knowledge with our fun Christmas crossword and quiz.

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SONY F866 WALKMAN
FIIO X3 8GB DIGITAL MUSIC PLAYER

AMPLIFICATION
MING DA MC3008A CAVATINA MONOBLOCKS
AUDIOLAB M-PWR POWER AMP

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

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FEBRUARY 2014 - 2ND DECEMBER
fans of funk will point to James Brown as the man who created the genre but it was Sly Stone who refined and took it to a completely new level as the songwriter, producer and chief vocalist for the group, Sly & The Family Stone.

Stone embraced racial and gender differences while tackling, head-on, political issues, subsequently becoming a major influence on many iconic artists in later years.

To celebrate the work of the band and the fact that Sly Stone has reached the grand old age of 70 (a major achievement, considering his hedonistic lifestyle), Music On Vinyl has released a luxurious, hand-numbered, limited-edition, box set called 'Higher!'

This is the first time that a comprehensive, career-spanning, anthology has been released on the group. This set exceeds even that accolade by doing it over eight vinyl LPs, including 77 tracks — of which 17 are previously unreleased. They include mono, single and alternative versions, instrumental tracks, live concert and television recordings, plus demos.

In addition, the box is weighed down further by the inclusion of a 104-page book of liner notes, track-by-track information and a timeline that is taken from a new autobiography on the band from the authors Edwin & Arno Konings. You'll also find concert posters and ticket pictures, band photographs, plus rare record sleeve images.

Creating these seminal tracks, Stone often found inspiration from within, shall we say, secluded spaces. As he admitted in the early 1970s: "My songs come from environments. I just go about my day and as things come to me, I write them down. I write on the toilet 'cos no one bothers me there. I enjoy myself best on the toilet and I wouldn't invite you there".

Which assumes that the interviewer would have even considered such an invitation!

The songs that did appear were musically significant, although their gestation wasn't complete until it was taken into the band sphere.

Family bassist, Rustee Allen, interviewed this year, declared that on the track, 'If You Want Me To Stay' (present on disc seven, Side B of the box set): "Sly kind of like gave you an idea of what he was thinking and then you took it from there. A lot of those sessions were just one or two takes. The spirit was so strong at the record playing end, it really didn't take much effort or a lot of thought".

"It was kind of like, here's the concept, start recording".

He was a creative force, but Stone was also every inch the star. In June 1974, he decided to tie the knot with model-actress Kathy Silva in front of 21,000 fans while on stage at the Madison Square Garden in New York (they divorced just five months afterwards).

"It was chaos! Total chaos! What a happening. It was sold out", said Allen, who was there at the time.

"All I remember were the circle of limousines that were going up to the parking lot at Madison Square Garden. Every band member and every friend of each member had a limousine. Even if they were sitting in each one alone".

"I thought, 'why are we having all of these cars?' But it was a gig too, man. After Sly said, "I Do" the gig was on!"

In the mid-1970s the artistic maelstrom began to be complicated with Stone's own drug-related problems that began to affect the band's performance (he began to show up late for gigs or missed them altogether. Check out his interview slot on the Dick Cavett 'Rock Icons' DVD box set to see spaced-out Sly in action).

The band and Stone himself were slowly torn apart. Stone admitted that he was still drinking and taking cocaine on a regular basis in 2011, despite being homeless and living in a trailer.

Have we seen the last of Sly Stone as a creative artist? According to Allen: "He's got lots of stuff. He's been playing some things that he's been working on. I just hope that he can find it in himself to do something because he can still do it, man. That guy can write. He's a songwriter".

As we have established, Stone was much more than that. He matured the funk sound during the 1970s and inspired music greats such as Miles Davis and Herbie Hancock to pursue the genre while the art of Michael Jackson, Stevie Wonder, Prince and Chuck D all feature the genius of Sly Stone. A true icon.
The USHER Dancer Diamond Series features the world's first amorphous DLC (diamond-like carbon) diaphragm tweeter. This is a tweeter which is second to none in the current market. To find out more, visit www.usheraudio.com or your nearest USHER dealer...

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- 2-way system: 1.25" Diamond DMD dome tweeter, 7" midrange
- Sensitivity: 87 dB @ 1 watt / 1m
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- Crossover frequencies: 2.3 kHz
- Weight: 15.5 kgs/34.2 lbs. per piece
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Behind the scenes
Dr. Joseph D'Appolito, a world-renowned authority in audio and acoustics, designs the crossover and performs prototype testing/final fine tuning for USHER Audio. Consulting to a couple of famous audio companies, Joe always finds the tremendous value USHER Audio products represent a delightful surprise in today's high-end audio world.

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It is no exaggeration to say that MartinLogan speakers are as beautiful as speakers can be and bear aesthetics worthy of the sound they reproduce. They enhance your musical pleasure and your living space.

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