

HI-FI WORLD

JUNE 2013

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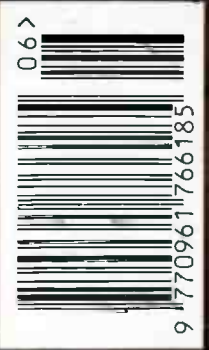
EXCLUSIVE!
loudspeakers
WHARFEDALE
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World Radio History

JUNE 2013



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L-550AX

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welcome

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verdicts

●●●●●	OUTSTANDING
●●●●	EXCELLENT
●●●●	GOOD
●●●	MEDIOCRE
●●	POOR
£	VALUE



In this issue we dare mention the unmentionable: networking! As in computers. As in headache. But network engineer and hi-fi enthusiast Jim Roberts has kept much of his look at wired and wireless networks remarkably simple, without losing useful detail. We don't get into IP addresses, router client lists and such like and perhaps we need to, but I feel Jim's unravelling of basic functionalities, identifying the role of a Router,

Switch and Access point for example, is illuminating in a subject that is heavy going wherever you read about it. I did not realise that my own run of cables, switches and wi-fi transmitter at home constitutes a star network, but Jim's piece on page 36 clarified its structure and I hope you find it similarly useful. OK, it's computers, but these days they're intertwined with audio and Jim adds in plenty of audio-only specialist knowledge you won't come across in computer magazines.

Seemingly a million miles away as a subject, and almost as far geographically, is our look this month at the massive Wharfedale Airedale Classic loudspeaker, designed and built in China. Many readers will know that Peter Comeau, designer of the Airedale, used to write detailed articles on loudspeaker design for this magazine, and even ran World Design, before he was made a great offer to live and work in Shenzhen, just north of Hong Kong. Knowing Peter well and having worked with him and visited the IAG factory, it was natural that he should ask us to cover this unusual model. Our review doesn't take the usual form, because carriage was impossible, but the story on page 10 is an interesting one all the same I believe.

Did I enjoy visiting Manchester in the winter? Er, no. Standing on Euston station at 5 a.m. in the bitter cold wasn't nice, standing on Crewe station for a connecting train at 8 a.m. was no nicer – then it was cancelled! But I arrived at the show by 11 a.m. and it was superb – see page 66. Manchester Shows are always friendly and relaxed and there were some interesting new products, mainly from UK manufacturers, many of them based 'up north'. It hasn't all gone to China yet!

I hope you enjoy this issue of Hi-Fi World. There's still a lot happening in the world of audio and high fidelity and we bring it to you.

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.



ELECTRONIC MAGAZINE

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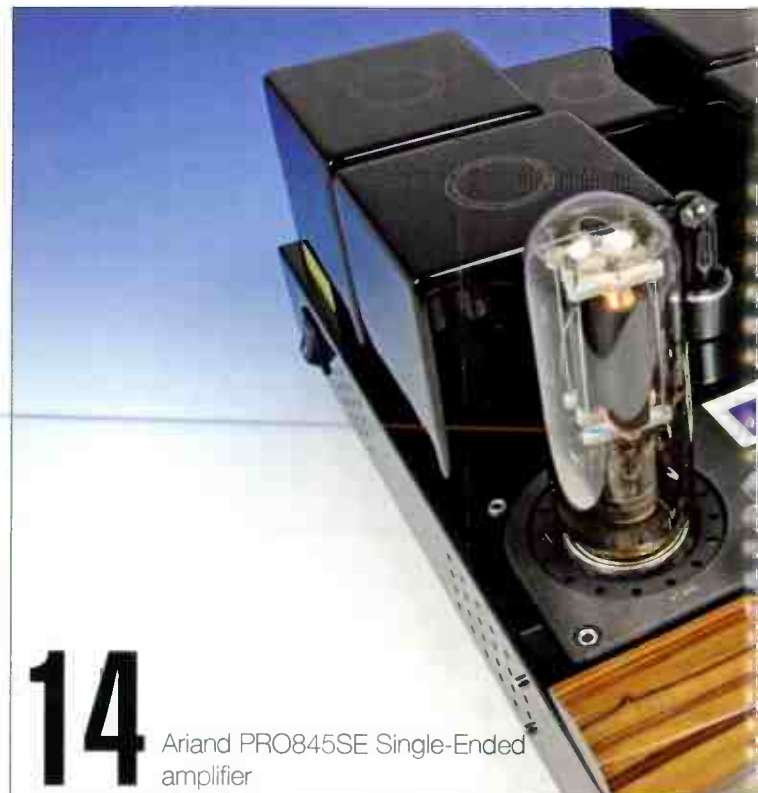
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email:news@hi-fiworld.co.uk

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NEW AE REFERENCE

Acoustic Energy has a new flagship floor standing speaker, the Reference Three. Drawing on the original AE5 design, the Reference Three boasts a heavyweight self-damping cabinet using a proprietary AE laminate, a Dual Ring Radiator tweeter set in a DXT lens, AE's signature alloy driver with conical dust cap and a high-end straight path crossover. It is finished in full gloss Macassar Ebony veneer.

Price is £3,995. Click on www.acoustic-energy.co.uk or call 01285 654 432 for more information.



STANDARD UPGRADES

Chord has upgraded its Standard Series power amplifiers to Mk.II status. Four models have been updated: three stereo power amps and one monoblock. The revisions have been implemented to: SPM 1200MkII (350W); SPM 4000MkII (480W); SPM 5000MkII (500W) plus the SPM 1400MkII monoblock (480W).

On the outside, the new Mk.II models sport a new front-panel design and rear connector plate, featuring heavy-duty, gold-plated insulated speaker terminals. The new rear connector plate also enables third-party power connectors to be used.

On the inside, the refinements include a new power-control and sequencing board, refinements to the filter components plus circuit board and earthing changes to improve high current power flow.

Prices are: SPM 1200MkII, £8,220; SPM 4000MkII, £12,540; SPM 5000MkII, £15,000 and SPM 1400MkII, £9,090.

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

ONKYO ONBOARD WI-FI AND BLUETOOTH

Onkyo has unveiled three network A/V receivers, the TX-NR727, TX-NR626 and TX-NR525, with the following upgrades: built-in Wi-Fi supported by a remote App that enables 'lossless audio' streaming from iPhone and Android-based devices (i.e. FLAC, Apple Lossless, Dolby TrueHD, LPCM and DSD hi-res streaming from NAS and personal computer via network and DLNA); onboard Bluetooth technology to enable audio streaming from smartphones, tablets and computers; an expanded selection of music streaming services and internet radio providers (including Spotify, TuneIn Radio and Last.fm) selectable via remote App; 4K Ultra HD pass-through via HDMI from media players and projectors (all three models) and Qdeo 4K video upscaling technology (TX-NR626 and TX-NR727) plus upgraded Audyssey Multi-EQ room acoustic correction to equalise and calibrate subwoofers as well as satellite speakers.

The TX-NR727 7.2-channel Network A/V Receiver with built-in Wi-Fi/Bluetooth is priced at £800; the TX-NR626 7.2-channel Network A/V Receiver with built-in Wi-Fi/Bluetooth fetches £500 and the TX-NR525 5.2-channel Network AVR receiver is available for £400.

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



SONY ONE TOUCH

The Sony CMT-BT80WB and CMT-BT60B wireless audio systems feature CD, DAB/FM radio and digital music play. Owners of Sony Xperia or NFC-enabled smartphones or tablets who place them near to the speaker for a moment can instantly establish a Bluetooth wireless connection. The CMT-BT80WB and BT60B also supports AAC and the high quality apt-X codec over Bluetooth.

On-board Wi-Fi (CMT-BT80WB only) lets you stream music straight from PCs and servers on your home wireless network via DLNA. There's also a USB hook-ups for playback (CMT-BT80WB) and charging the battery (CMT-BT60B) of your iPad, iPhone or iPod.

The included Magnetic Fluid speakers use ferrofluid developed for the NASA space programme together with S-Master Amplifier technology. Click on www.sony-europe.com for more information.





VPI SCOUT 1.1

VPI has upgraded the Scout turntable to 1.1 status. Featuring a new 4.3kg damped aluminum platter with a special mesh sorbothane-like mat for better isolation. The Scout 1.1 features a JMW 9T with a low friction bearing mounted on a stainless steel rod with markings to set the VTA (Vertical Tracking Angle). Price is £1,890.

Click on www.renaissanceaudio.co.uk or call 0131 555 3922 for more information



B&W DUO

B&W has released the Z2 and Zepplin Air Wireless AirPlay speaker docks with Lightning connectors. The two wireless iPhone docks include a Lightning connector for the latest iPhone 5, iPod Touch and iPod Nano while AirPlay provides wireless streaming from older Apple devices, all iPads and from a Mac or PC running iTunes. The Z2 will be available for £330 in black and white. The Zepplin Air is priced at £500. The existing Zepplin Air with the old 30-pin connector is also still available at the same price.

Contact www.bowers-wilkins.co.uk or 0800 232 1513 for more information.

THE BRADY BUNCH

Warrington's Doug Brady HIFI, is now under new ownership following the retirement of the great man himself. Improvements have been completed within the company to include two refurbished demo rooms and a coffee bar.

Click on www.dougbradyhifi.com or call 01925 828009 for more information.



PIONEER DOCKS

Pioneer has launched a range of compact speaker docks with a wide selection of connectivity options. The X-SMC00 is the follow-up micro docking solution to 2012's X-SMC range, having smaller, sleeker and changeable front panels. All models are fully certified to control, playback and charge iPhone 5/new iPod/iPad Mini devices via the front USB port, a stand is included to support this purpose.

Prices include: X-SMC00, £150; X-SMC00BT, £170 and the X-SMC00DAB for £180.

For more information call www.pioneer.co.uk

TIVOLI FURNITURE

Tivoli Audio has collaborated with German-Danish designer, Gesa Hansen, to produce the Hansen Family Tivoli Audio Collection, a selection of minimalist pieces of furniture.

The handmade 'Remix Sound Sideboard' allows you to store separates from Tivoli Audio's 'Model' series as well as accommodate the likes of books and magazines. To enable further personalisation, the design allows you to select décor-matching audio alcove surrounds from a selection of different colours and finishes. The 'Remix Sound Coffee Table' also provides room for the Model One radio and your favourite reading material.

The Remix Sound Sideboard is priced at £1,875 with the Remix Sound Coffee Table fetching £290.

Click on www.tivoliaudio.co.uk and www.amara.co.uk for more information.



HEED DAC UPGRADE FOR OBELISK

Heed Audio's Obelisk da digital to analogue converter has been upgraded to include a new DAC card. The DAC Card v2.1 is available as an option for purchasers of the Obelisk da DAC or Obelisk pre pre-amplifier. The new card features a Wolfson WM8741 DAC chipset, which also provides the user with selectable digital filters.

Three settings, adjustable via a board mounted jumper, vary the high frequency roll off curve from 'linear phase soft knee' to 'linear phase brickwall' and 'minimum phase soft knee'. Each provides a slightly different effect on the very highest frequencies and overall sound presentation. With sampling frequencies of up to 192kHz and a resolution of 24 bits, the new DAC card is compatible with all commonly available digital audio files, whether CD rips or high resolution downloads.

The DAC Card v2.1 is available as a stand-alone card, to enable the upgrade of existing Obelisk da and pre products or as a standard fit in the Obelisk da at a reduced price from the stand-alone cost. The original da will continue to be available for purchase.

Prices are: Obelisk da with DAC Card v2.1, £1500; DAC Card v2.1, £450 and Obelisk da with standard card, £1300. Click on www.heedaudio.co.uk or phone 01242 547663 for more information.



RUARK WIRELESS MUSIC SYSTEM

The new Ruark MRL speakers feature two new drive units, Bluetooth and apt-X technology. Priced at £300, the new speakers feature handcrafted cabinets with metal fittings and cloth grilles in a choice of walnut, white and black lacquer finishes.

Call 01702 601410 or click on www.ruarkaudio.com for more information.

YAMAHA NEW AV RECEIVER RANGE

Yamaha has introduced the RX-V75 series of AV Receivers. Five different models include the: RX-V375, RX-V475, RX-V575, RX-V675 and RXV775.

CinemaDSP processing will be featured on all receivers. The RX-V675 and 775 will make use of surround sound DSP technology; the RX-V375 will feature discrete amplification across its 5 surround speaker channels and the RX-V475, in an upgrade from the RX-V473, will now feature a rear USB port and a 5-in 1-out HDMI interface solution.

Also look out for the RX-V500D which features a built in DAB Tuner.

Prices are: RX-V375 - £249.95; RX-V475 - £349.95; RX-V575 - £449.95; RX-V675 - £499.95; RX-V775 - £649.95; RX-V500D - £399.95.

Click on uk.yamaha.com or more information.



JABRA HEADPHONES

Jabra has announced a series of new headphones and accessories.

The Revo Wireless headphones include Turntable Touch Controls that allow you to control music and manage calls along with a tangle-free cord.

The Vox earphones sport a sculpted design and specially designed ColorCore EarGels along with reinforced, tangle-free cables with magnets for easy unwinding.

Jabra has also teamed up with Dolby to provide its customers with a free Sound App for iOS and Android devices. The Sound App attempts to improve the quality of digitally compressed audio.

Finally, Jabra's Bluetooth Solemate speaker connects to any compatible MP3 player, tablet or laptop, although a 3.5mm audio socket is available too.

Prices include £80 for Jabra Vox, £160 for the Revo and £199 for Jabra Revo Wireless plus £99 for the Solemate.

Click on www.jabra.com for more information.



xqPRO 3.0

The new wireless xqPRO 3.0 speaker from xqisit features a multi-point touch panel. It can be used not only as a wireless mobile music speaker but as a hands-free Bluetooth speakerphone with integrated microphone for calling from any smart phone, tablet or laptop, with background noise reduction. Featuring two Bluetooth drivers, a ten-hour playtime and a three-hour charge period, it features A2DP, AAC, apt-X and SBC codecs. Weighing in at 230g, it offers a small footprint of just 118x108x55mm and can connect to two mobiles at a time. Price is £120.

Contact www.Mobilefun.co.uk for more information.



WILSON BENESCH CARDINAL

The new Wilson Benesch flagship, 'The Cardinal' on show at Bristol Sound & Vision Show 2013, is a summation of decades of work in the fields of cabinet, drive unit, and material innovation. This development has been evolutionary, building upon each and every success. Out of a passionate commitment to manufacturing, innovation and an adherence to the highest standards of craftsmanship, comes a product that could only emerge from one company.

A key design principle of The Cardinal has been to deliver extended low frequencies as well as an additional impact in the upper bass register. Notably these objectives have been realised without any compromise to the speed, agility and tonality achieved by the flagship designs that precede it. Mid-range frequencies are handled by two highly optimized upper and lower mid-range Tactic-II Drive Units. Meanwhile, the Isobaric Tactic formation makes a return in the Cardinal with four Tactic-II Drive Units deployed to achieve a new benchmark in dynamics and transient response.

Price £54,950 click on www.wilson-benesch.com for more information.

MINIWATT N4

The Miniwatt N4 is a USB2 asynchronous, 32bit/192kHz, all-in-one DAC, headphone amplifier and USB2-S/PDIF converter.

According to the company, the N4 features Electrical Noise Immunity via the USB Digital Link, a PCM1795 DAC, 123dB dynamic range, independent left and right channel circuits at the output stage and digital attenuation to deliver a balanced volume out.

No external power supply is required, all power arrives via the USB connection. Spanning 115x74x20mm, it arrives with a CNC silver powder-coated aluminum panel with laser etching and a stitched leather extrusion. Click on www.miniwatt.com.hk for more information.



MONSTER DIAMOND TEARS – SALLY SOHN EDITION

Got £20,000 kicking around in your back pocket? Then you're in the market for a 18k gold pair of headphones from Monster.

Monster collaborated with Korean artist and jewelry designer Sally Sohn to also add black diamonds totaling 5.56 carats. The headphones feature the Pure Monster Sound, tuned by Head Monster, Noel Lee, the audio engineer behind the sound of Beats by Dr. Dre headphones.

In addition to the Diamond Tears, Sally Sohn Edition Headphone, Harrods will also offer an exclusive new White and Black Tuxedo Monster DNA version, created by Monster as part of a global alliance with Viacom.

Click on www.monsterproducts.com, www.facebook.com/monsterproducts or www.twitter.com/monsterproducts for more information.



ROBBIE M1

The Robbie M1 from Pig Iron Co is an isolation plinth designed to hold a turntable. It includes eight, 'fully floating' cast iron diffusers, each resting on an absorption pad.

Different densities of pad allow diffusers to behave differently while subject to a common vibration frequency. This results in the diffusers working against each other, transferring the energy into heat. Plinth dynamics are also adjustable by operation of the four 'Press Wheels' located at the top corners allowing the plinth to be tuned to the user's own conditions.

Other materials used in the plinth include plate glass, stainless steel and aluminum. Each plinth weighs in at a hefty 116kg. All units are custom-built to order. Diffusers are powdered coated and are available in a variety of colours. Price is from £499 with an order delay of around four to six weeks.

Call 07980 973456, 01937 830697 sales@pigiron.co.uk or click on www.isolation-plinth.co.uk for more information.

KIMBER'S HDMI CABLE

Russ Andrews Accessories has introduced the HD-09e network-enabled Kimber HDMI cable. The HD09e is an enhanced version of the company's entry-level HDMI cable, the HD09. The new version has the ability to carry Ethernet signals, allowing you to cut down on the amount of cabling required to get network signals to all the components in the system.

A multi-layered shield is used around the 32 gauge copper signal conductors, with a dual density, nitrogen injected dielectric employed. The slim line cable, 5mm in diameter, also includes an audio return channel and features true pin-to-pin termination in the HDMI plugs.

Prices for the Kimber HDMI HD09e are: 0.5m, £33; 1m, £42 and 2.5m, £69. Click on www.russandrews.com or ring 0845 345 1550 for more information.





Airedale update

Wharfedale have introduced a new classic Airedale. Tony Bolton listens to the only pair currently in Britain.

There are some words that have an ability to reach across the ages; the word Wharfedale for instance. Founded in 1932 and synonymous with quality

loudspeakers, they have used the name Airedale before, usually with cabinets as massive as the rock-laden Yorkshire countryside from which they originally sprang.

The latest incarnation of the

Airedales is the Heritage Classic which stems from the pen of Wharfedale's Director of Acoustic Design, Peter Comeau.

There is no other way of describing these speakers, other than



Designer Peter Comeau outside the factory in China, with Hi-Fi World representative Anna Chang.

massive. I listened to them in the house of Dave Cawley, of Dartmouth based distributor, Sound Hifi (www.soundhifi.com). On my previous visit, the room was occupied by a pair of Klipschorns, and it is fair to say that the Airedales are some of the few loudspeakers that can actually make the former look small! They measure 1354 x 800 x 540mm (H x W x D) and weigh a truly back-breaking 108kg. Dave told me it took three men from a removal company to carry them into the house, after they had been shipped on pallets from the factory in Shenzhen, China, where Peter Comeau works.

As befits a top of the range product, the hand oiled and waxed

walnut veneering on the cabinet is exemplary. This covers 25mm thick MDF, which is braced internally with plywood. The trims are solid wood.

They look impressive with the covers on, but lurking beneath is a 130mm bass driver sitting above a generously sized port. Above this is a 200mm bass/mid unit. The 75mm midrange unit is incorporated in a die-cast aluminium mounting shared with the 25mm front tweeter. On the top of the cabinet sits the 25mm supertweeter which is accompanied by a rocker switch to turn it on and off. I tried it in both modes over a few tracks and settled for leaving it switched on for the rest of the listening session. I found that I preferred the air that it gave to the sound, and also the increase in definition and extension that it seemed to give to sounds right across the frequency range.

The bass, bass/mid and tweeter all use Alnico magnets, while the midrange cone is backed by a barium ferrite magnet and the supertweeter uses a neodymium magnet. Cone material also varies, with silk used for the three high frequency drivers, Kevlar and paper for the bass/mid, with the bass cone being of a tri-laminate construction of glass fibre/ carbon fibre/ glass fibre.

The signal is distributed through a hard-wired crossover in which all connections are crimped. It uses hand-wound laminated silicon-steel inductors for the bass sections and specially selected low-loss 630V polypropylene capacitors for the mid and treble units. The components are

mounted on two separate boards, and the terminals are bi-wireable.

Dave was powering them with a Luxman L-505 integrated amplifier and his own Timestep phonostage, both of which I happen to have reviewed recently (see Hi-Fi World October 2012 and April 2013 respectively). The Timestep powered Technics turntable and Marantz CD player were known to me from previous visits.



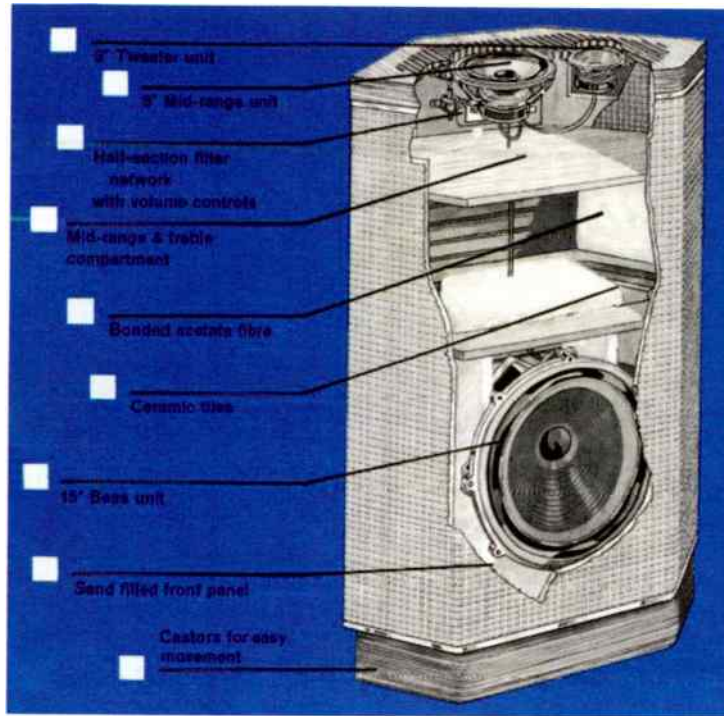
Rear terminal panel carries heavy duty bi-wire terminals with shorting links. They accept 4mm banana plugs, spades and bare wire.

I had brought a large bag full of favourite records and proceeded to spend the next eight hours track hopping my way through as wide a range of music and genres as I could.

Early on I tried out some heavyweight orchestral music courtesy of Wagner. The Airedales were in their element, presenting me with a large-scale staging of the Overture to 'Die Meistersingers von Nurnberg'. The impact and weight of the drums were nicely balanced against the rest of the performance,

The original Wharfedale Airedale conceived by Gilbert Briggs in 1961. It had a 15" bass unit and upward facing midrange and tweeter. Loudspeakers like this were put against the wall and the resulting reflections from the wall gave an omnidirectional property to mono sound. The new Heritage Airedale mimicks this effect with an upward facing super-tweeter.





Cut-away drawing of the original Airedale, 1961, showing its upward firing drive unit array.

but they were intimidating in their intensity all the same. They stood in equal proximity to a beautifully integrated midrange and treble that had shape and texture aplenty. As the Overture ends the orchestra fades back to the sound of a choir and organ being played softly (this is the complete opera rather than a concert version) as the action starts in a church.

After the grandiloquence of the opening, the change in mood to small orchestration and voices was handled well. When there is such a change in both dynamics and atmosphere a lot of big speakers leave me feeling that something is suddenly missing. The Airedales, instead, left me feeling more drawn into the sound as the intimacy of the setting graduated to a solo voice with a few strings accompanying. It was smoothly done, and felt both natural and realistic.

A while later, I was exploring jazz sounds and received a vivid demonstration of just how responsive these speakers really are. I was playing Louis Armstrong's live recording made at New York's Town Hall in 1947. It sounded flat, uninteresting and almost recessed away from me. Yet the next record, 'Ella and Her Fellas' sounded fresh and enjoyable. Knowing that Audio Technica cartridges tend not to flatter older records (to my ears, at least) I was not surprised by the alteration in sound quality, but by the obviousness

signal was fed to them.

The change from mono to stereo with the Ray Charles LP resulted in little expansion of the soundstage, but an alteration in the way it was populated. The sound in mono was so deep and detailed that I felt that the soundstage extended quite a way back through the walls behind and beside the speakers, and that everyone playing had room to move and breathe. The stereo placement augmented this with an equally extended and spacious staging, with Ray well lit at centre, the orchestra behind and around him. The backing singers seemed to appear over to the right, from an inky blackness, with voices well enough separated that, had I felt inclined, I could have been tempted to try counting them.

The opening track of Lou Reed's 'Coney Island Baby' LP, 'Crazy Feelin' had an altogether nearer perspective, due to his close-miked voice and the guitars gently backing him. Again, I felt that the scale of the presentation was about right, leaving me

"I expected scale and majesty but was pleased to find that they also do closeness and delicacy with the same level of appropriateness"

of the difference. Any preconceptions that the Airedales might be enhancing or enriching a sound were negated, and I came to the conclusion that they seemed to give a pretty faithful rendition of whatever standard of

with the feeling that I was in a small environment with a full sized person singing in front of me.

I ended my listening with a wander through some electronica, starting with (inevitably) a Shpongole



No fewer than five men work on finishing an Airedale cabinet in the Shenzhen factory. It's 35 degrees Centigrade outside and in, hence the fan.



The Heritage Airedale on display at a hi-fi show in Guangzhou, China. It is distributed there by SWT – Sino Wharfedale Trading, one of China's biggest audio distributors. China and the Far East like traditional Western products, especially Wharfedales.

"they are truly magnificent in looks and sound"

LP then diverting to the more brutal sounds of Dave Tipper's CD 'Music For Sound Systems'. This is hardcore trip-hop and not really my sort of music, but it is very useful for testing the performance extremes of both an amplifier and speakers. The bass is deep, pounding and utterly relentless, and at high volume can very easily show up a speaker that is hanging onto a note a little too long. It also reveals sonic imbalances, where the bass appears to overpower the other sounds for example.

The Airedales and Luxman together acquitted themselves well, with bass that was floorshakingly deep, very fast, and followed a tune all of the way down to the lowest note. The last few tracks contain short test tones starting at 40 Hz, rising to 45 then dropping to 30Hz. Sitting on the sofa, armed with Dave's SPL meter, I found a pretty even response across the range.

'Even' is a good word for the sound of these speakers. I was impressed by the speed and power behind their presentation. I expected scale and majesty, but they also do closeness and delicacy with the same level of appropriateness. They seem highly responsive to source and would, I think, sound amazing fed by a valve amplifier of suitable quality and power. With a claimed 90dB efficiency and a nominal 6 Ohm load they are well within the capabilities of the

Icon Audio 845 monoblocks that reside at World Towers, for instance.

So if you have a biggish room, high quality source and amplification components, and £24,995 spare, then I would thoroughly recommend treating yourself to a pair of Wharfedale Airedale Heritage Classics. They are truly magnificent in looks and sound.

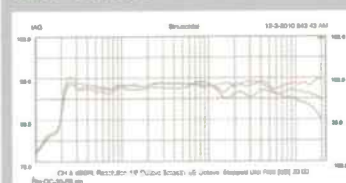
MEASURED PERFORMANCE

The on-axis forward response of the Airedale is shown in the red trace. There is strong subsonic output at 26Hz from the 15in bass unit and this will provide a sense of bass power even in big rooms.

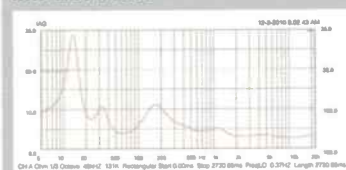
The lower midband above 180Hz is reproduced smoothly by the loudspeaker's lower midrange unit. This

FREQUENCY RESPONSE

Red - on axis



IMPEDANCE



MUSIC USED:

Wagner 'Die Meistersinger Von Nurnberg'. Hans Knappertsbusch conducting the Vienna Philharmonic Orchestra, Chorus of Vienna State Opera, Schoeffler, Edlmann, Gueden. Decca Records Ltd. LXT 2659 - 64. 1954.

Louis Armstrong and His All Stars. 'Louis Armstrong New York Town Hall Concert Album'. His Master's Voice. DLP 1015.

Ella Fitzgerald. 'Ella And Her Fellas'. Brunswick Records. LAT 8223. 1957.

Ray Charles 'The World of Ray Charles' London Records. SPA U 361. 1974.

Lou Reed. 'Coney Island Baby'. RCA Records. NL 83807. 1981.

Tipper. 'Music For Sound Systems'. Fuel Records Ltd. RED 12/4/99. 1999

SYSTEM USED:

Technics SL1210 Mk.II (with Timestep T-01PSU) / SME V / Audio Technica AT33EV. Timestep T-01MC phonostage. Marantz KI Pearl Lite DC Player. Luxman L 505 amplifier.

hands over to a dome midrange unit that extends output smoothly upward to 3.5kHz, the response graph shows. A slight trend down above 4kHz will make the midrange easy on the ear. A partnering dome treble unit comes into action above 9kHz and slowly lifts treble upward toward 20kHz. The upper firing treble unit shares its output, but can be switched off.

The impedance curve shows the 15in bass unit has a high dc resistance and it will not draw a lot of current, in spite of its size. Couple this with a high 90dB sound pressure level at one metre, from one Watt input power and you have a loudspeaker that is easy to drive and draws little power; 40 Watts per channel will be more than enough for very high volume.

The Airedale will have strong low bass and a smooth midrange measurement shows. It is tailored for accuracy. **NK**

WHARFEDALE AIREDALE HERITAGE CLASSIC LOUDSPEAKERS £24,995



VERDICT

Classic name and styling allied to 21st Century cabinetry, crossover and drivers to produce a class leading speaker.

FOR

- phenomenal but controlled bass output
- open and very detailed
- supertweeters add air and definition

AGAINST

- size and price

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'A' POWER

Pure Class A power is on offer from the elegant Ariand Single-Ended amplifier by Yarland. Noel Keywood listens in.

Single-Ended (SE) amplifiers sit at the top of the quality tree: their design is simple and conceptually pure, their sound quality superb. But as you might guess there are drawbacks; power is low and heat production high. And, being esoteric they're expensive too.

So SEs are not for everyone, but all the same if you crave quality over all else Single-Ended are worth exploring. The Ariand PRO845SE is a valve SE that uses a single 845 triode

power output valve in each channel. The 845 glows like a lighthouse, so there's no ignoring its retro chic. This is a valve amplifier that appeals to the senses even before you hear it – and at £1499 it isn't unappealing to the wallet either.

The Ariand is made in China by Yarland, who've been in business since 1996. The handbook identifies them as Yarland Sound Enterprises Factory of Wenzhou, but the name Ariand pops up on their website and is I suspect the company's choice of

a more globally suitable brand name, since Yarland they say is Chinese (meaning 'elegant').

The company manufactures a wide range of esoteric valve amplifiers so they've plenty of experience in the subject, which is just as well because SE valve amps need special output transformers, gapped to avoid saturation from the d.c. that passes through them.

The PRO845SE is strongly built and has a well applied gloss lacquer finish. Numerous purpose built

trims, like a wooden front panel with curved top and machined trim plate surrounding the valves, carrying a selection of gold screen printed legends, contribute to a thoughtfully styled and neatly finished product a notch above the simpler unadorned chassis commonly used in small scale manufacture.

The special gapped output transformers I mentioned earlier are big and heavy, needing a lot of iron in them to avoid magnetic overload (saturation). Behind them sit independent mains transformers, one per channel. It's a lot of iron, contributing much to the amplifier's 29kgs weight; it's a two man lift.

Adding to this amplifier's incandescent glamour is an LCD meter that lights blue, showing bias voltage. It is switched to show conditions on each output valve and small screwdriver adjusters allow bias to be tweaked to stay within limits as the valve ages. There are also hum bucking potentiometers that need occasional adjustment to ensure hum is minimised, a necessary process with old, directly heated valves like the 845, lacking a cathode.

That might make the 845 seem hopelessly archaic, which it is quite frankly, appearing in 1931 as a high power amplifying triode for radio and audio work. To withstand 75 Watts anode dissipation without deforming due to heat, the anode is machined from graphite, making it a big, solid and well damped structure. The thoriated tungsten heater consumes a massive 30 Watts too, which is why it glows so bright. So the big 845 is a blast from the past as valves go, bearing in mind that electronic amplification appeared around 1920.

There's an upside though. Early valves were not compromised by size reduction so they give great sound quality as a result, as enthusiasts around the world are finding as ever more 845 based amplifiers appear. This is one of my favourite valves and we use massive Icon Audio MB845m based valve amplifiers in-house, that deliver 110 Watts per channel as sound quality references. So the Ariand fell into sympathetic hands!

Having designed and built valve amplifiers I understand the difficulties, especially of these old triodes. It is possible to place them into a modern context though to get far more than was originally possible, using high quality audio grade components throughout, and that is what Yarland have done with



A simple rear panel, with 4 Ohm and 8 Ohm loudspeaker outlets, and just three line inputs.

the PRO845SE. They claim to use an Alps volume control (de rigueur) and Clarity Caps (capacitors) and the volume control was motorised, making remote control possible – a handy feature. Supplied is a small but weighty remote with up and down buttons. Internally, our picture shows a cramped environment, partly due to the biasing system, with most

used as a limit, suggesting lower power than quoted.

And that proved to be the case: we measured 8 Watts at 1% distortion, or 18 Watts, as quoted, at 5% distortion, but the signal was clipping hard, due to severe output overload. So Yarland's figures are somewhat optimistic: technically, this is not a powerful amplifier and

"the PRO845SE was silky smooth, gentle at low levels, full bodied and powerful on crescendos"

components mounted on a circuit board.

The tube line up comprised two 6N8P drivers, a 12AX7 double triode preamp and a 5Z2P double diode rectifier in the power supply. The 6N8P and 5Z2P are Chinese valves, but a 6SN7GT and 5Y3GT (USA) are suitable replacements, I believe. There's no problem with getting 845s nowadays, or 12AX7s. The 6SN7 is also widely available but the 5Y3GT rectifier is unknown to me and may be difficult to obtain in the UK.

There are three line inputs on the rear panel, with a rotary switch on the right side of the front panel to switch between them. Loudspeaker outputs cater for 8 Ohm and 4 Ohm loudspeakers, the 4 Ohm tap best suiting current loudspeakers. Power output is quoted as nominally 25 Watts per channel, or 18 Watts at 5% distortion, a worrying caveat because 5% distortion is a lot; 3% or 1% are usually

it needs sensitive loudspeakers to go very loud, meaning large floor standers. But this is the case with all SEs, otherwise they need paralleled output valves (i.e. four 845s instead of two), and output transformers so large and heavy they must take the form of monoblocks.

In use however, it was difficult to believe the PRO845SE was power limited, because it has such strong dynamic punch and such good dynamic resolution.

SOUND QUALITY

Reservations raised by the weight, low power and heat were quashed



Giant 845 ceramic valve bases dominate the underside.

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Early production photos. Showing PS3 upgraded version with JJ and Treasure valves, and Jensen Copper foil in paper and oil caps, Icon Audio W transformers



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This year marks the first major update we have made in order to make some improvements to the power supply and circuit whilst updating the looks to match our other products.

The brilliantly conceived 1950's RIAA equalisation for LP reproduction calls for a simple low noise valve stage which attenuates treble according to frequency. This may be done easily with three valves preserving the minute musical details recorded in the groove giving a "warmer" satisfying sound without emphasising surface noise and scratches that older vinyl is prone to have. Whilst technically speaking modern solid state designs work well, their more complex design "loses" something in comparison and can sound cold, clinical and uninteresting, lacking the passion and emotion in the music whether it be Vivaldi or the Verre.

As has been often been stated: whilst the Compact Disc is stuck with its 1977 software. With vinyl new stylus shapes new tone arms keep pushing the boundary on what can be recovered from an LP groove. At Icon Audio we too are striving to this end. As the definition of equipment improves we have refined our designs to maintain the focus and presentation to be without any "mechanical" or contrived quality.

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MK I version: "5 Globes £" Hi Fi World 2010.08

The PS3 MK II. This design is unique in having a "state of the art" power supply. A valve rectifier, two very special "chokes" for ultra smooth power, a unique pure valve referenced and regulated circuit to give current of the very highest purity. Our very low noise high definition pre amplifier then uses the superb 6SN7 output valve. Optional British made moving coil transformers, or our newly developed "premium" type suited to the finest moving coil pick up cartridges.

MK I version: "OUTSTANDING PRODUCT" Hi Fi News 2010.07

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by this amplifier's sound quality. In true SE fashion it imparts a lovely full bodied, rich quality to music that is seamless in character, top to bottom, and a feeling of rightness that makes all else seem barren, forced or clinical. Caecilie Norby sounded big at the microphone and dynamically expressive, her small vocal nuances beautifully conveyed by this amplifier. There was a lifelike feeling to the presentation; it lacked the hard, clinical outline common to solid state; it was purer and more dynamic than a push-pull valve amplifier. The backing singers hung in space many feet behind her whilst a Hammond organ wheeled along vigorously and an acoustic bass walked up and down the bass scale with laconic ease. In spite of the amplifier's low damping factor our Quadral Wotan loudspeakers didn't boom and the full richness of the acoustic bass came across nicely.

The amplifier had a lovely sense of easy clarity that gave it a feeling of supreme depth; the drummer in Dave Brubeck's 'Take Five' appeared to be sitting in front of a drum set that had scale in all directions, and it was dynamically fast and lively too, making the whole very immediate and believable.

The PRO845SE was silky smooth, gentle at low levels, full bodied and powerful on crescendos and had a tonality that made vocals and instruments seem relaxed, yet forceful too. This performance was far above that of any transistor amplifier, reminding me just how delicious SEs sound. Drums had a lovely vibrancy and the start of Toto's 'I Will Remember', rolling across the sound stage, Simon Phillips singing in a cavernously deep space of his own centre stage, sounding convincingly human, rather than the sort of contrived and mechanical image we usually hear and accept without questioning.

The PRO845SE did not lack treble, nor strong high frequency detailing, but it was so easy and natural in its delivery nothing hurt! The ribbon tweeters of the Wotans lapped this up of course, making clear to me what an ornate tapestry of sound this amplifier could weave.

Renee Fleming's voice seemed more finely modulated and expressive than ever through the PRO845SE, her gentle phrases easily intelligible, her vocal crescendos soaring out with an easy power that underlined just why she is

such a famous soprano – Madame Butterfly never sounded so good, so real and so emotionally wrought as through this amplifier. The orchestra swelled to great scale between the loudspeakers and never seemed at all held back. I felt I could listen to Renee Fleming all night through the PRO845SE.

CONCLUSION

Single-Ended amplifiers are a genuine piece of audio magic it always seems to me when I listen to them, curiously not always for the same reasons; valve SEs are quite different in character to transistor SEs, yet both seem able of amazing things quite beyond the norm.

The Ariand is the first 845 valve based SE I have heard and it sounded so immediately gorgeous, easy going yet forcefully dynamic at the same time, tonally natural and revealing of timbral nature of instruments, I was both charmed and disarmed. Relative to this the price of £1499 is low; I was expecting double this.

So as you might guess the PRO845SE I cannot recommend



A blue display screen shows bias voltage, for easy bias adjustment.

enough, whilst at the same time realising that such amplifiers are too specialised to ever be mainstream. It's a pity; we all fell for it at HI-FI World; it would be nice if more amplifiers could approach such quality.

MEASURED PERFORMANCE

The Ariand 845 is a single-ended (SE) pure Class A design, with a single 845 valve per channel delivering output. Power was inevitably limited, measuring 7 Watts into 8 Ohms or 4 Ohm loads for 1% distortion. Yarland quote 18 Watts at 5% distortion and this figure was just met under test, but 5% distortion is severe. The nominal 25 Watt power figure isn't easy to justify. A high sensitivity loudspeaker is needed, bigger Tannoy's

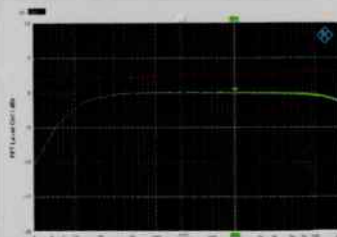
being the most obvious choice.

As expected, distortion levels were stable at all power outputs and frequencies, comprising 0.5% second harmonic. The important point here is that the distortion pattern does not change dynamically, and a small amount of second harmonic is inaudible. The simplicity and purity of SE looks well preserved in this design.

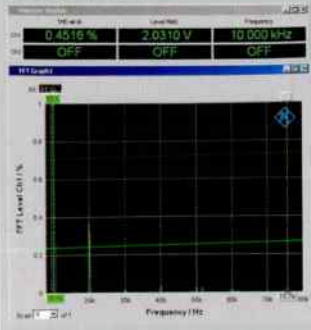
Frequency response measured 15Hz-20kHz within 1dB limits, high treble rolling away smoothly. It appears deep bass has been rolled down too, to limit bass distortion and core saturation, and keep bass clean sounding. A damping factor of 0.8 is very low and likely there is no loop feedback.

The Ariand measures well as low power single-ended triode amplifiers go. It produces little power and needs sensitive loudspeakers, but anyone using such an amplifier will be aware of this I suspect. SEs produce a lovely sound and the Ariand looks as if it may do so too, as its measured performance is good. **NK**

FREQUENCY RESPONSE



DISTORTION



Power	7watts
Frequency response	15Hz-20kHz
Noise	-90dB
Distortion	0.5%
Sensitivity	230mV
Damping factor	0.8

ARIAND PRO845
£1499
TUBE CAGE
(ALUMINIUM) £39



VERDICT
 Limited power, like most Single-Endeds, but an utterly gorgeous sound marks out the Ariand PRO845SE as a top quality amplifier. Its 845 valve gets the best from this amplifier topology.

FOR
 - sound quality
 - appearance
 - remote control

AGAINST
 - valve availability
 - low power
 - weight

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Here's a Blu-ray player that brings light to formats beset by darkness – DVD-A and SACD! It handles all audio discs and top quality digital downloads too, Noel Keywood finds.

Ray of light

Last month I reviewed Yamaha's network connected CD player, the CD-N500, purposed for a stereo system. The BD-A1020 Blu-ray player reviewed here is similar in concept, but purposed for an AV system; its navigation menus appear only on TV, the on-board display conveys little. A TV must be switched on to navigate a memory stick, for example. But the TV menus also showed me what this player can do – and it was pretty comprehensive, especially for £399.

The BD-A1020 plays every silver disc: Blu-ray, CD, DVD and – fanfare – SACD and DVD-A (DVD Audio-only discs). So anyone with a broad disc collection can play them all, and this included my Carlos Santana 'Supernatural' DVD-A in pristine 24/96, that makes the CD sound a mess. It also included all my music Blu-rays because the BD-A1020 plays

Dolby TrueHD as well as DTS HD Master Audio, up to 24/192.

The only other players able to do all this are from Cambridge Audio and Oppo, based on a Mediatek (Taiwan) platform, but this player behaved so differently from the Cambridge Audio 650BD I normally use, and from the mainstream, I suspect a different manufacturing source.

In addition to its full range of silver disc skills, the BD-A1020 will also read music from a USB memory stick, or a computer. It lacks a Bluetooth receiver, and internet radio, but it gets Netflix, YouTube and Picasa streaming services. It saw my wired ethernet network immediately when plugged in, and played music from my Mac through its EyeConnect UPnP server, and from Windows 7 running on Bootcamp. This was all seamless and problem free with DHCP, something I appreciated, but network

settings can be made manually.

Physically, the BD-A1020 is no beauty, lacking the style and build quality of the company's more expensive product lines. It measures 435mm wide, 258mm deep and 86mm high, and weighs 2.9kgs. The front panel carries only basic controls; many more sit on the remote control alone. These include Direct and Pure Direct (all displays off) modes, and a CD/SACD selector. This switched between CD and SACD layers, an action not strictly necessary because the SACD set up menu makes this selection and the Cambridge and Oppo players do without, but the CD layer came up with track info from some SACDs whilst the DSD layer did not, so perhaps this is why it exists. However, this toggle switch works only with the draw open, not when playing, an inconvenience that affected other operations.



Switch-mode power supply at left, disc tray centre and comprehensive signal processing, needing a heatsink, at right.

The rear panel carries stereo analogue audio outputs only – no surround sound – plus digital audio output via S/PDIF through optical or electrical connectors. These can be set to PCM for stereo, or bitstream to carry Dolby surround-sound. There is also an HDMI output of course, that will usually go to an AV receiver.

Analogue video can be output in high quality Component form, or low quality Composite form. The rear panel also importantly carries an RJ45 ethernet socket (there is on-board wireless too) and a USB socket for long term music/video storage. The front panel also has a USB socket where music from the computer can be plugged in on a shorter term basis.

I found the Yamaha often baffling in its control sequences, mainly because I am used to what has become the industry norm. For example, pressing the Return button usually steps a player back through music menus when a track is playing, but not on the BD-A1020. The only way out was back to Home, then USB to see the menu again, a convoluted route that was frustrating.

Also, it does not software update directly from its net connection; a file (55MB) must be downloaded from Yamaha's web site, put on a USB key then walked to the player, which was a bit tedious (our player had the latest software). The handbook was difficult to understand on this matter; you can download it from Yamaha's website <http://uk.yamaha.com>, under Support.

Turn on was sluggish, as was reaction to control functions. Loading the Java menu of John Meyer's Blu-ray 'Where the Light Is' took 32 seconds

against a norm of 28 seconds, so here it was little slower than other players.

Other foibles, such as Home being unavailable to look at and choose other sources whilst a disc is playing, stereo from surround-sound SACD when video resolution is set low (?), and an awkward CD navigation system made me suspect software from a Chinese sub-

"It played whatever was thrown at it, right up to 24/192, and always sounded concise and insightful"

contractor where they do things differently.

After a short while I learnt the sequences and my frustration subsided, but all the same the BD-A1020 does things differently and not better. What you have to balance this against is its very wide range of ability and low, low price. The big CE manufacturers don't bother either with SACD (Sony excepted) or DVD-A, and nor do their Blu-ray players read any higher than basic CD quality digital from a memory stick.

The BD-A1020 does all of these things; I was almost shocked when it played 24/192 WAV and FLAC files from a Whizkey without so much as a murmur of complaint (I get all sorts of spluttering sounds, actions and 'invalid content' warnings when trying to play these on most players). Yamaha quote only FLAC to 24/192 resolution, but WAV 24/192s (higher data rate than FLAC) played fine

for me, at least when using the high speed USB memory of a Whizkey. Music and test files at 24/96 also played of course.

SACD aficionados may like to know the Yamaha outputs raw DSD code if your receiver accepts this, or PCM that all receivers accept, through the HDMI output. There is an on-screen menu for SACD alone; the player is usefully configurable with this high quality audio disc.

The remote control is simple but I found it easy to read and use. It carries the Pure Direct and Direct functions too.

SOUND QUALITY

The BD-A1020 has the same sort of dry and slightly terse sound of the CD-N500 I reviewed last month and initially I had some reservations. However, after a while I realised that although the sound stage lacked the depth of Naim network players with high resolution digital music files from memory stick, and it certainly lacked their smooth almost warm treble quality, the BD-A1020 had great insight. The strings of the Trondheim soloists (24/192 WAV) were

presented with washes of detail. Then plucked bass suddenly made a quick appearance, sounding a little more woody and characterful than usual and a cello also had a convincing wooden thrum. By the time this track ended I realised the Yamaha is brightly lit, but also dryly forensic in its analysis of music and impressive in its ability here. Although it doesn't have the almost warm sound of dedicated high resolution digital players, it doesn't have their price either.

I initially heard just a smidgen of fuzz or blur around Marta Gomez singing Lucia (24/96 FLAC) that first I thought was jitter, then decided it was the



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The rear carries stereo audio outputs, Component and Composite video outputs HDMI and a network connection, plus S/PDIF digital audio.

player's insight into the recording combined with that of the Martin Logan Electromotion electrostatic loudspeakers I am currently using. I was hearing the limitations of the original recording, or so I thought at the time.

However, subsequent measurement showed my first assumptions were correct: this was caused by jitter from the player. Subjectively, the impact is subtle, but having heard tightly clocked and carefully crafted players I now find jitter's signature identifiable.

Plucked bass at the start of 'Vultures' from John Meyer's Blue-ray 'Where the Light Is' (24/96) was firm and strode along nicely. The Yamaha isn't big or bold in its bass, but it is composed and times cleanly.

Working through a wide range of music, played from USB memory stick, CD, Blu-ray, SACDs, DVD-As and my computer, showed the BD-A1020 was stable and consistent in its sound. It played whatever was thrown at it, right up to 24/192, and always sounded concise and insightful. It lacks the richness and stage depth of more expensive machines, and has a tad less focus.

There was little difference in sound quality from HDMI, S/PDIF and analogue. I marginally preferred S/PDIF over analogue, where the receiver's (Marantz SR-8002) DACs are used, using an optical cable. Analogue was just a touch less clear and dynamically defined, whilst HDMI was just a tad sharper (all display info off), but then optical is usually a trifle softer than electrical with digital connections and differences were minute: all three outputs were well matched, showing the on-board DACs to be good, as measurement suggested.

Where I got the App for Yamaha's CD-N500 working after entering the player's network IP address, I had no such luck with Yamaha's AV App on my iPhone; it refused to see the BD-A1020, via its wireless link into my network. As the App is only a

controller this did not worry me: the remote control was adequate.

CONCLUSION

I can see why Yamaha identify this player as an 'audiophile' machine using the Aventure moniker. It has a wide range of ability, being able to play all silver discs as well as highest resolution 24/192 digital music files from USB memory, and music stored on a computer via ethernet. With YouTube as well, there's little the Yamaha cannot do. It handles a wide

range of video too. Its operational logic was unusual and at times frustrating, but I got used to it and for the most part it didn't worry me, but you have to switch on the TV to use this player. Whilst its sound is fundamentally very good, jitter is a blemish, if a small one. Such drawbacks have to be balanced against the player's low price and the absence of competition: few Blu-ray players can do so much. I'd rate Yamaha's BD-A1020 as a great player at the price.

MEASURED PERFORMANCE

CD measured well all round from the analogue outputs, with low distortion, noise and good EIAJ Dynamic Range as a result. Frequency response was ruler flat to 21kHz too.

SACD bandwidth stretched to 30kHz through the analogue outputs and distortion at -60dB was very low at 0.05%.

From memory stick a 192kHz

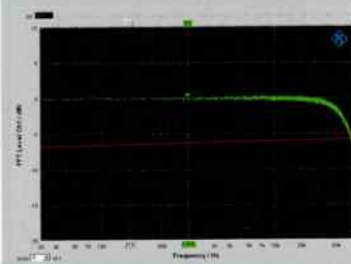
sample rate test file showed bandwidth of 40kHz, and the same result was recorded from 192kHz test file on DVD-A, so bandwidth was wide.

USB was a little noisy as they often are and this restricted EIAJ Dynamic Range to just 93dB with 16bit and 103dB with 24bit.

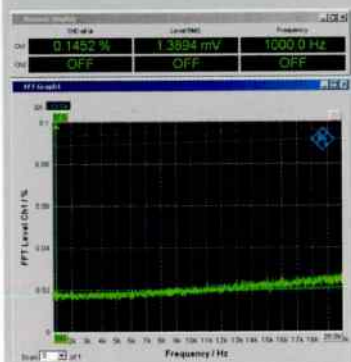
The jitter pattern from USB was identical to that of CD, with 400pS of signal-correlated jitter on the digital output; it should have measured 40pS max. so the Yamaha was ten times worse than the norm. here.

The BD-A1020 measured well in most areas and was impressive with SACD. It has wide bandwidth with 192kHz sample rate PCM and low distortion, but USB does suffer some noise. Jitter was also higher than it should be and may well be detectable. **NK**

FREQUENCY RESPONSE, 192k



DISTORTION, 24bit



Frequency response (-1dB)	
CD	4Hz-21kHz
USB, DVD, BD	4Hz-40kHz
SACD	4Hz-30kHz

Distortion	(24bit)
0dB	0.005
-60dB	0.14
Separation (1kHz)	107dB
Noise (IEC A)	-101dB
Dynamic range (16,24)	101/103dB
Output	2V

YAMAHA BD-A1020 BLU-RAY PLAYER £399



VERDICT
A Blu-ray player able to play all silver discs, including SACD and DVD-A, as well as top quality 24/192 digital audio from USB memory stick. Not perfect, but it offers huge ability at a low price.

FOR
- plays almost all digital sources
- low price
- comprehensive setting menus

AGAINST
- navigation by TV only
- jitter
- awkward menu structure

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www.uk.yamaha.com

mail



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

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

LETTER OF THE MONTH PRIZE



KEF Q100 LOUDSPEAKERS

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

A pair of KEF Q100 loudspeakers are on their way to **GRAHAM GOUGH**, Letter of the Month winner in our May 2013 issue.

Letter of the Month

RECORDING VINYL

It was with great interest that I read your article in the February 2013 issue about recording vinyl to digital formats. Having recently embarked on the task of transferring a couple of thousand 12" singles and albums to Lossless files, I investigated a few different software options and hardware setups. I think I may have a software tip for you and your readers, and maybe you'll have some hardware suggestions for me...

This recording process is a labour of love but a very enjoyable way of rediscovering forgotten favourites and bringing back memories. I actually digitised about 200 of my favourite tracks about 10 years ago, but back then disk space was at a premium (my laptop only offered a tight 40GB in total) and I didn't understand much about the limitations of compressed audio. I was a digital sinner: most of those recordings were AAC files made at 192kbps using Rogue Amoeba's excellent Audio Hijack Pro. It's a very easy to use application for recording (or "hijacking") any audio flowing through your Mac. It includes many audio plugins for processing incoming audio and offers many file format options, which it records natively.

However, I needed to move on from Audio Hijack Pro because (apart from AIFF files) it only records in 16bit up to 48 kHz, and my plan was to record to Apple Lossless files at 24/96. Also, as Audio Hijack Pro focusses on

VinylStudio from AlpineSoft (www.alpinesoft.co.uk) costs just £24 and is the best software for digitally recording vinyl and tape, says Noël Cottle.

recording, you need a separate App to edit – such as Rogue Amoeba's very fine Fission, which has a very similar feel to the Audacity App you reviewed.

In search of the (my) perfect solution, I trialled a number of free, shareware and pro paid-for options. GarageBand, Logic, Peak, Sound Forge, Final Vinyl, Audacity and more. They are all fantastic pieces of software but none are particularly tailored to the

vinyl digitiser's needs. Many are full-on multichannel audio workstations, which is a bit of an overkill for dubbing a Lloyd Cole 12". Others are sadly too simple and don't stretch far enough in terms of audio quality.

Finally I stumbled upon Vinyl Studio from Alpine Soft. This ticks all the boxes. Recording to all the major formats (including WAV files up to 32/192) is done natively, avoiding quality issues

with transcoding after recording. Files can be easily split into tracks. All the regular useful features are included too: you can adjust level and EQ after recording, remove hiss and rumble, even correct pops and clicks automatically – or manually by “re-drawing” the sound wave. But what really pushes Vinyl Studio beyond the competition is its integration with the Discogs.com database. You can search by artist, song title or – as I prefer – catalogue number, and your recording will populate with all the correct metadata for all an album’s tracks, including artwork. In terms of workflow, not having to manually type in the details for every track saves me hours.

Sadly, nothing is perfect and I need to throw out a few caveats. Vinyl Studio won’t win any design awards. The GUI is not pretty and it has a tendency to chucking everything at you, rather than guiding you through the steps, and too many windows pop up unnecessarily.

Getting to grips with its workflow is quite counter-intuitive. For example, most of the software listed above let’s you record audio first, then name and save it. Vinyl Studio sort of does this backwards: you must create a record ‘Collection’ first and then title-up the file you are about to record.

Many things could be streamlined, but you soon find your way and the time saved thanks to the Discogs integration makes the process quite painless. And by avoiding typing out song names, I can focus on the music and those rediscovered memories.

On the hardware side, 10 years ago I was using a Technics SL-1210 turntable plugged into my Mac’s Line In jack, via a Pioneer DJ mixer. Sounded awful. Flat and muffled. My system now is certainly not high end but hopefully a happy mid-range affair: Dynavector 10X5 cartridge on a Rega RP3 turntable with separate PSU. This is hooked up to a Naim Stageline (N version) powered by a ‘borrowed’ Supercap. I am a little concerned by the low gain that the Dynavector allows through the Naim phono stage, but having auditioned it against Dynavector’s own P-75, I preferred the Naim’s warmer tone despite the lower volume and slightly reduced level of detail. Sometimes I think I made the wrong choice of stage, but the rest of my system is Naim so it may be a better match.

Finding an affordable Analogue-to-Digital Converter (ADC) was more difficult. The Benchmark ADC1 would be great for mixing down a multitrack



The Furutech Esprit preamplifier turns analogue to digital through a 24/96 convertor, then delivers it to USB for recording to a computer. At present there are few stand-alone hi-fi products able to do this.

masterpiece from Logic, but my requirements are simpler and budget smaller. Options are quite limited here. I wanted a hi-fi product rather than a ‘pro-sumer’ one (e.g. brands like M Audio).

I was quite impressed with Project’s Phonobox USBV as a budget combo solution, but it’s quite a noisy little box and only offers 16bit at 44.1kHz sample rate via USB. Just as I was giving up the search, I read in your magazine that HRT were launching the Linstreamer + ADC. This asynchronous bus-powered little box delivers music at up to 24/96 and nothing else but the music: it is very low noise and neutral in character. At the time (2012) I think it was the only hi-fi ADC product on the market in this price range (£300). I took the plunge without even auditioning it and couldn’t be more pleased. It’s perfect for the task.

That task of turning LP to digital is taking a long time. An hour snatched here and there after 4 months I’ve done less than 10% like I said, a labour of love.

If you find any of the above worth sharing with your readers, I’d be very honoured and won’t mind one bit if you hack away at this email to make it relevant / interesting / much shorter! Many thanks and keep up the good work!

Noël Cottle

Hi Noël. That’s all very interesting and I’m sure it will interest a lot of readers – it certainly interests me! Turning LP to digital isn’t a straightforward business and you have identified and found a solution to many of the problems it appears.

The only ADC I have found to date I felt up to the task – of hi-fi quality rather than ‘studio’ quality

– is the Furutech Esprit preamp, with its 24/96 ADC that offers true high quality digital, without the noise and quantisation products of cheaper/older ADCs. Ortofon MC cartridges offer higher output than most and I would suggest you consider one of the Cadenzas, perhaps the Blue. I hope that helps. **NK**

RECORDING VINYL 2

Thank you for the article by Martin Pipe in February, 2013 Hi-fi World describing how to make use of the free Audacity software to convert old audio sources to digital. This article was very informative and explicit, and doubtless will be of immense interest to your readers, particularly those like myself who have sizeable collections of music on vinyl and tape cassette.

Although I have been aware of Audacity, I have never used it. I did try Nero some years ago, but gave it up in favour of Magix Audio Cleaning Lab, which to my mind is a superb product for anyone who wishes to archive old analogue recordings. Not only does it incorporate the usual range of features which one would expect to find in software of this type, but it has one function which in my experience sets it apart from the opposition, namely that it permits track numbers to be placed automatically and numbered during the transfer process from the analogue input. As I understand it, with Audacity and Nero, track numbers have to be added after the digital conversion has taken place.

On the odd occasion when, for one reason or another, Magix doesn’t get these quite right, it is simple to either insert any missing track numbers, or to drag them into their proper place on the recording screen.

I use Version 12, which came out

Magix is easily the most user-friendly of the current software offerings for digital conversion, says John Boyd Nottingham.

some years ago, because it includes an extremely useful feature called Maxi Print Studio. This permits vinyl album sleeves to be scanned in two halves, then dragged into one image, which is downsized to produce a reduced copy of the vinyl sleeve for use as the front pictorial insert for a CD jewel case. This gives a very professional finish to a Compact Disc copied from vinyl. The inserts from tape cassette boxes can also be played around with to produce acceptable graphics when tapes are archived to compact disc.

However, sadly, the most recent versions of Audio Cleaning Lab appear to omit this useful print program (or else I haven't managed to find it!) For all that, in my opinion, the Magix product is easily the most user-friendly of the current software offerings for digital conversion activity.

To further increase the professional look of Compact Discs produced from vinyl and tape, I'd recommend the use of Sure Thing CD Labeller software, which is currently available in its sixth version. This does what it says on the tin, in that printed self-adhesive labels can be produced for placing on the completed Compact Disc (using a jig), or the label data can be printed directly onto printable discs, if one has a computer printer with this facility. All the other inserts can also be produced using this software. Lots of fun can be had.

I hope that this information may

be of interest to the readership of your excellent magazine. Keep up the good work!

John Boyd Nottingham.

I haven't tested any Magix products in a long time (the last was a video editing package that I reviewed for a now-defunct camcorder magazine), but they are quirky and have a user-interface that differs from the norm (yet actually has sensible design rationale behind it). I found that they offered excellent value for money and perform well. Readers can find the product to which Mr. Boyd is referring here:

<http://www.magix.com/gb/audio-cleaner/pro/> (Mac) <http://www.magix.com/gb/audio-cleaning-lab/> (Windows)

Of course the main reason we focused on Audacity is that it's free, as well as comprehensive and powerful. The Magix products are, however, only £40. **MP**

MC LOAD

A technical question: I recently bought a pre-loved Musical Fidelity A1008 integrated amp for those times that I feel the need for more oomph than my valve system can provide. It has a phono amp built in but the MC impedance is set the same as for MM, i.e. 47 kOhm. I

use a step-up through the MM input so it is not an issue. However, I noted that MF use 47 kOhm on its other amps of this style instead of 100 or 200 Ohm which would make sense. But why 47 kOhm?

Regards

Adrian van Tonder

Australia

This is a default value when it appears in an MC input, being the MM load, unmodified, to avoid the cost of a switch. When choosing MC on an amp configured like this, the MM preamp's gain is increased, usually by x10, and the input load left unchanged at 47k, instead of the 100 Ohms value usually used. Because an MC cartridge has a resistive generator of a few Ohms at most, this affects performance little, so it is no big issue. **NK**

PHONO STAGE UPGRADE

In the last year I have made a leap of faith to cross the 'vinyl frontier', having listened to CD for many years. I always knew it sounded different/ better but due to lack of knowledge, never looked into it seriously until I met some audio buddies who encouraged me.

To cut a long story short, I bought a second-hand Rega P3-24 with electronic speed control, all in good condition. It sounded fine with a Goldring 1042 MM cartridge, Rega Fono MM phono stage, Unison Research S6 (Mark 1 version), Tannoy Glenair 10 all hooked up with Nordost original version Blue Heaven interconnects and speaker cables (2 pairs hooked up in 'shotgun' configuration).

It seemed to lack something musically, was a bit indistinct in some ways. At a whim I bought a Sony PS 2250 Direct Drive in mint condition (Sony's first DD turntable) for very little – a lot less than the Rega.

Wow! It was tighter, more defined and musical (this character was contrary to what I have been told about Direct Drives in general) with the same Goldring cartridge. Before I knew it I'd become curious about Direct Drives ... now I have a Sony PS 8750, Kenwood KD600 (which I fitted a Alphason HR100s MCS). The three are great turntables. I use the Goldring 1042 MM cartridge.

Now I am wondering about how I can get better sound, listening to my friend's systems, I think I get as much musical satisfaction as they do from theirs (considerably more expensive) but I'm wondering about the merits of going

Letters On-Line!

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

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

World Mail June 2011 issue

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

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

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

Your experts are -
DP David Price, editor; NK Noel Keywood, publisher; PR Paul Rigby, reviewer; TB Tony Bolton, reviewer; RT Rafael Todes, reviewer (Alegri String Quartet); AS Adam Smith, reviewer; DC Dave Cawley, Sound HI-FI, World Design, etc.

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

Add your comment

Your name:

Subject:

Comment:

Word verification:

Post Preview

The screenshot shows the HI-FI WORLD website interface. At the top, the 'HI-FI WORLD' logo is prominent. Below it, a 'Magazine issue date' section lists issues from September 2011 back to March 2010. A left-hand navigation menu includes sections for 'FRONT PAGE', 'REVIEWS', 'FEATURES', and 'CONTACT'. On the right, there are promotional banners for 'COMPETITION PRIZE' and 'SEVENOAKS & AUDIO T STORE'. A search bar is located at the top right of the page.

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



Sony PS-2250 turntable was 'tighter, more defined and musical' than Rega P3-24, says Anthony Yung.

moving coil. They seem quieter, better overall sound quality but cost a lot more to implement.

I have been reading and wonder should I:

- (1) change the phono stage or (2) change Goldring to Ortofon 2m Black or -*
- (3) add a step-up transformer and get a MC cartridge like a Benz Micro ACE SL or -*
- (4) add a step up transformer, Benz Micro Ace SL and get a new phono.*

Option (4) seems the way forward ultimately, but I can't do it all at once. The phono stages I have been looking at include Musical Fidelity MI ViNL, Heed Quasar II, Micro Phono, Creek Wyndor, Luxman E200, Eastern Electric phono and the new Project RS. Living in New Zealand means I can't get some of the phonos locally, let alone listen to them in my system. I am thinking of upgrading to the Musical Fidelity MI ViNL first (available locally and can demo at home probably), then add a Benz Micro ACE SL and step up transformer.

I also wondered as an alternative, to get a Graham Slee Audio Jazzclub Revelation, then later either add a step-up transformer or a Graham Slee Elevator when I go to moving coil cartridge, mainly because I am sure that matching the EQ for different age vinyls should mean they should be played more faithfully as they were recorded.
Anthony Yung

Sounds like you have your heart set on a good moving coil cartridge – and why not? They do give a fabulous sound.

Direct Drives are audibly tighter timed than belt drives and the Rega is known to wow. But it has a very good arm. Old 1970s tubular arms are not the best mounts for modern MC cartridges; ideally you should

mount the Rega arm onto the Sony, if that is possible. Then get the Musical Fidelity MI ViNL and you should be a happy man. NK

HYBRID AMP

I have enjoyed reading your magazine regularly for the past several years and would like to pick your brains regarding my next upgrade. My system comprises Primare CD31 and I30 with Triangle Antal 30th Anniversary speakers. To this I have recently added an Audiolab M-DAC (which I am using purely as a DAC at the moment) to see what improvement a modern DAC would give my system – the answer is a considerable improvement!

My only issue is the slightly dry nature of the DAC has exposed the 'cold' nature of the speakers which wasn't obvious before. So I am looking to 'warm-up' the sound without losing anything I have gained. I like the speakers a lot and would like to keep them, so do I change the amplifier for a hybrid or maybe a valve amp or replace the CD and DAC for a CD player with a warmer sound? The bass in my room verges on boomy at times so I would like to maintain the bass control provided by the Primare (my listening room is 30m, slightly live with solid stone walls).

I have had a brief experience with valve amplification and like what I heard and think I might end up heading in that direction but am concerned about the bass control provided by valve amps which is why I am thinking about a hybrid amp such as the Pathos Ethos. As you can tell I don't know which way to go so any advice would be greatly appreciated. I have a budget up to £3k. Thanks

**Yours Faithfully
Gareth Williams**

If you have room boom I suggest you try resolve this first by putting some acoustic foam into the ports. Initially, roll a sheet 1cm thick into a tube with a central hole and put that into the port. Also, keep the speakers away from walls and corners if you can, to lessen energy into the room's main modes. And buy the biggest, foam filled settees and armchairs as you can! When I put a three-seater, two-seater and armchair into my lounge it changed bass completely, damping it right down. Big areas of foam also remove reflective energy from the room, damping down flutter echoes and such like.

I found the Antal's dry but clean sound a perfect match for valve



Should I use a hybrid amplifier to warm up the Triangle Antal 30th Anniversary 'speakers, asks Gareth Williams?



Roll up some acoustic foam and put it into the port to damp down deep bass, to lessen room-boom.

amplification, and their high sensitivity makes the most of low-ish power. You should not need more than 40 Watts per channel. I would tend toward the valve route, which will improve the sound no end and a 40 Watt/channel with KT88s, like the Icon Audio Stereo 40 MkIIIm for example, would work nicely. The Pathos Ethos would also be a good choice as it will sound a tad tighter, if not so open and full bodied. Try to get some demos if you can. **NK**

SAMPLE RATE CONVERSION

In HFW 23(1) page 79 Noel Keywood quite correctly bemoans the multiplicity of audio formats used in modern digital audio products. With respect to sample rate conversion, however, I must stand up for the mighty XLD CD ripping and audio conversion software. The statement "XLD format-converts but it doesn't sample rate convert" isn't correct if you are converting to Apple Lossless; the preference page allows you to set both sample rate and bit depth if exporting in Apple Lossless. If you have a large batch of files to convert from a high to a low / standard resolution format you could always use Apple Lossless as an intermediate format. This might prove quicker than using Audacity (which is also an excellent tool, but perhaps not the first choice for batch conversions).

Both Max (sbooth.org) and XLD are excellent for CD ripping and format conversion for Mac users. If one is using Windows, however, both Foobar and dBPoweramp can do pretty much any conversion you could possibly want, and the dBPoweramp CD ripper is peerless.

James Atkinson.

Thanks James. All those pieces of software are useful and their airing by readers such as your good self is a great way to keep readers informed of their options. **NK**

SPEAKER CHOICE

I have recently been reminded that loudspeaker choice for a home hi-fi system is perhaps the most difficult of all when buying new equipment. I recently became NAIM-less by changing my NAIT 5i for a new EL84 based valve integrated with both 4 and 8 ohm outputs. I thought it would be helpful to explain how I was able to narrow down my choice of replacement loudspeakers for those about to embark on a similar path.

Most would agree the specifications of most other hi-fi components are pretty well defined and much easier to compare allowing the informed buyer a good idea of what the unit should be capable of before ever seeing it. This is not true of loudspeakers as they are the least accurate of our components and one of the main areas of distortion, resonance and coloration. They will also interact with the listening environment and with the listener's ears. Also two people will hear sounds differently so with different kinds of music at different listening levels this complicates speaker selection even more.

One key area affecting choice is the loudspeaker sensitivity and from the amplifier perspective you need to know how much power it takes to drive your loudspeakers to reasonable listening levels. Domestic loudspeakers

generally have a maximum power handling capability which is usually between 50 and 250 watts RMS. Sound is a movement of air particles and this movement is generally expressed in decibels (dB) as sound pressure level (Lp) and is typically around 86dB for domestic home HiFi speakers, though this can vary considerably. For example the Dynaudio Excite X12 speakers are quoted as a Power handling of 150w and Sensitivity (1w/1 m) 86dB. Klipschorn floor standing speakers are quoted as a Power handling of 100W and Sensitivity (1w/1 m) 105dB.

So 86dB compared to 105dB is only 19dB difference on paper but here are some features of sound pressure levels and decibels, +3 dB gives two times the sound pressure at the same distance and +6 dB gives four times the sound pressure. As you see the difference between the Dynaudio and Klipschorn is a now whopping great 19dB. So the higher the sensitivity (efficiency) of the loudspeaker the louder they will sound and will therefore require less amplifier power to achieve high volumes.

You would exceed the 150 watt power handling limit of the Dynaudio long before it could approach the sound pressure level attainable by a very efficient Klipschorn. So a loudspeaker's efficiency is a more important measure than its power handling capability in determining the maximum Lp; but both will need to be considered.

Produced is a useful table below (not my work, I hasten to add). It should help you work through the myriad of speaker specifications to allow you to focus on what will work with your system and thus give you a more informed choice allowing you to whittle down your choices to the speakers that will provide sensible listening levels when matched to the amplifier you chose.

Regards
**Garnet Newton-Wade
Wiltshire**

Hi Garnet. The figures in that table look a little unrealistic to me. For 90dB SPL at 4.6m you need to generate 103dB SPL at 1m, or +13dB more according to calculation, in anechoic conditions (e.g. outdoors). With a 90dB sensitive loudspeaker (i.e. 90dB SPL at 1m from 2.8V into 8 ohms) this requires a 13dB increase in output to 12.6V into the loudspeaker – just 20 Watts. In a real room, that reflects sound energy off walls, ceiling and floor, you actually need less, but let's forget details, because this is not a precise



"I have heard that valves can sometimes explode or implode" says Dr K Fonseca. Is my Sense G1 headphone amp safe?

gone into thin air but Linn, eclassical, the classical shop, 2L and several others are now making classical downloads at very high resolution available. I am ignorant about sites for more popular music but am sure there are many. One disappointment is that iTunes only does its own hi-res. system (ALAC).

I download at the highest rate available (usually 24-bit/192 kHz) and get superb results from the Naim. Before I got the memory stick I used to make discs in my computer and they have proved very good if less convenient.

Of course downloading costs money and apart from the actual music you have to be careful you are not exceeding your server's monthly allowance. I try to buy only two downloads a month and this seems to get by. Mark you, classical music tends to come in large chunks, so maybe I am sounding a bit stingy.

I have one niggling doubt; I have read somewhere that computers sometimes do not do exactly what you ask them and when putting music from one onto a memory stick or other device they might limit the quality. I have no idea if that happens or when and any help from the experts would be most welcome.

I hope that this will help Dave Mayer and anyone else who is thinking of diving into the streaming world. It is simpler than it sounds but does take some time to puzzle out the complications. I look forward to the article in Hi-Fi World promised by Noel in the March issue. Could I make a plea that it includes a list of all sites that offer hi-res. downloads and which genres each one does?

James Bruxner

Hi James. Your experiences match mine. Wi-Fi has been flaky and insecure, and slow at a distance. I now use wired ethernet across my

house to eliminate reliance on wi-fi, but I prefer to use a memory stick like you.

Providing you do not import a file into a player like iTunes, or transmit it through Bluetooth or suchlike, it will not be processed. Downloading introduces no processing. Macs automatically unzip a compressed file but this will not affect audio quality. Copying to a memory stick on Mac or PC (I use both) and transferring to a player like the Naim SuperUniti will also maintain the file's integrity.

As you say, once you have bought a quality player like the Naim, and a good memory stick (I use LaCie Whizkeys which have fast memory, no LED and are shielded) it is all very simple. Much of the jargon relates to computer processing and this method of playing high resolution digital music avoids it all. I hope other readers will take heart from your experiences. **NK**

VALVE SAFETY

I purchased my first ever valve product. It is a USB headphone amp which makes some superb sounds when connected to my Audio Technica ES7 headphones.

The blurb on ebay states that "2P2 directly heated cathode Tube+VMOS Tube Circuit, Combined with respective advantage of the electronic tube and a field effect tube, so that the headphone amplifier not only has warm soft guts of the electronic tube but also has the quick & strength effect of Field Effect Transistor(FET)." "The description is quite hilarious and not to be missed! Please See the link below.

My question is I have heard that valves can some times explode (or rather implode?) with catastrophic consequences. While this unit has been

perfectly reliable I don't want to get a face full of glass for the sake of music!!! This runs in Class A and generates a huge amount of heat so I guess a cover is not an option. Your expert opinion would be most helpful

Dr. K. Fonseca

LINK

<http://www.ebay.co.uk/itm/>

New- SENSE-G1-USB - DAC

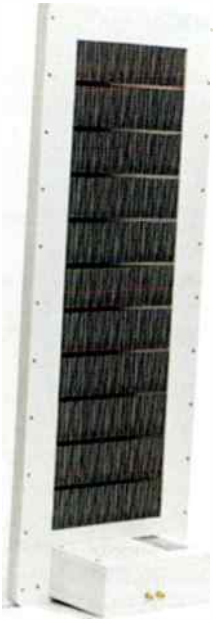
- Function-Tube-headphone- amplifier- 2P2-VMOS- classic - match-1 221062397008

I'm surprised this USB receiver/DAC and headphone amplifier "generates a huge amount of heat". The 2P2 tube it uses, a Chinese version of the 1L33/34, is a small, low power pentode, designed for portable radios. The heater consumes 0.1 Watt and the anode dissipates 0.2 Watt; if it is getting hot it is being over-run, meaning the anode voltage is too high (60V is quoted). This seems unlikely though, because high HT has the drawback of needing more expensive capacitors and ruins a valve's life span; there's no benefit except increased output power, but it has enough for headphones. As the unit has a USB receiver and DAC inside the designers should know how to use a valve, which is a rather simpler technology. If the 2P2 is being over-run then its anode – the plate around the electrode structure – will glow red. Don't confuse this with the central filament. But again I can't believe the designers would not notice this. The 2P2 should barely run warm.

Small signal pentodes such as the 2P2 don't explode or implode. The common failure mode in power valves is warping of the electrode structure causing an internal short from anode to ground. But none of this should happen with a 2P2 and it will have a life of around 10,000 hours, if run within specification. If the anode isn't glowing cherry red – very unlikely – I would relax. Small signal pentodes don't explode or implode. There's no mechanism for this to occur, unless hit with a hammer! **NK**

STATIC CRITIC

In the March 2013 magazine, having been a lover of electrostatics for many years, I was very pleased to see the article on page 19 about available electrostatic speakers until I turned the page and realised you'd missed one very important person and maker – Ben Peters and Audiostatic <http://www.>



We should not have missed the Audiostatic electrostatic loudspeaker, says Phil Cowling.

audiostatic.com/

If you had done your research properly, you would also have known about the Geschke variant of the Audiostatic Wing speaker – http://www.geschka-hifi.de/hifilb_audi_en.htm and you would also have found out about the licensing issues between Ben Peters and Geschke. It's so sad that these issues exist, but that's folk for you!

It's not as those these speakers have been hidden away in the murkier depths of the hi-fi world so for a magazine with a reputation such as yours to miss them amazes and saddens me.

*Yours sincerely,
Phil Cowling*

Hi Phil. It was a round-up of common and available brands in the UK, to illuminate the market; it was not a complete list. Sound Lab electrostatics also look interesting but were not included, nor were Braun, to mention a few more. Please don't be sad. We will get round to other makes in due course I am sure. **NK**

The wonderful Audiostatic full-range electrostatic is only available to UK purchasers by buying direct from Audiostatic in the Netherlands. The round up wasn't intended to be comprehensive (if it were, I'd have insisted the wonderful Audio Analysis models be included!)

Electrostatics are still very much

a 'minority interest' and that means there's a bit of 'churn' amongst electrostatic manufacturers. Another Dutch brand, Final Sound is a case in point – their designers' new brand, PioSound, will be available in the UK later this year. So compiling a definitive list isn't so straightforward.

RA

DIFFERENT VIEW

A thirteen year old wants a record playing system, works at a paper round to save the money, saves up £100. Enter Tony Bolton ...

Mr. Bolton spends 75 percent of budget on wires and goes 18 percent over budget ... In his piece he doesn't mention the model of the Optonica receiver or turntable, but points out the particular type of VdH cables he buys.

It just shows where "audiophile" priorities are now. So sad he's leading the young lad down that perverted path.

**Jim Simpson
Australia**

The Optonica range was introduced by Sharp in 1976 to be a higher end brand to compete with companies such as Panasonic. The brand only lasted for four years before being discontinued. The equipment in question in my column (HFW Nov. 2012 P.77) was a SA-2121 receiver and a RP-105H turntable.

As part of the process of helping my friend's son put together this system we first listened using the "boot-lace" interconnects and 13 strand speaker cable that were originally supplied with the equipment, and the sound was, quite frankly, uninspiring, bassless and rather harsh. Once more modern cabling was introduced the sound was transformed into something that could compete with modern budget equipment. The effect was so transformative that my friend was happy to pay the extra to allow me to go a bit over the allocated budget.

I am a firm believer that cables; mains, speaker and interconnect, have a major affect upon the sound of a system. Poor quality leads can make even the best designed and built equipment sound lack-lustre, while, as witnessed by my experience in setting up this system, good cables can bring out the best in what would nowadays be considered quite modest equipment.

A lot of the problem seems to stem from the way electricity is used in the modern home. Nearly everything nowadays, from televisions

through to fridges, use switch-mode power supplies that send a backwash of noise pollutants into the mains (computers are especially bad for this). Also, there is vastly more RFI (Radio Frequency Interference) floating through the air around us. Audio equipment amplifies anything fed into it, and if this includes mains borne noises we hear it as either a background mush, or pops and bangs coming through the speakers. Because this rise in pollution has gradually happened over the years, it is only obvious how bad it is when listening with it removed by mains purifiers and better shielded cables.

When setting up a system my



"Mr. Bolton spends 75 percent of budget on wires and goes 18 percent over budget" complains Jim Simpson. But cables make a big difference and are worth spending more on, replies Tony.

preferred way of allocating the budget is to get the source right, then spend money on mains leads, interconnects and speaker cables, then amplification, and then speakers. The finest amps and speakers in the world will only respond to whatever

Raise your cartridge performance to that of one up to 40 times the price



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2012 Tonearm of the
Year award

A Tonearm is probably the most overlooked yet rewarding component to dramatically improve system performance.

The results obtained are indeed extraordinary, as testified by Origin Live users, who find their cartridges performing at hitherto, undreamt of levels.

Such claims seem unlikely, but the truth is that improvements over established reference arms are so great, that delighted owners let us know how pleased they are on constant basis.

To find out why these arms can transform systems in a way that no others can, please read www.tonearm.co.uk

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Haden Boardman's Leak Point One Plus preamp, has disc equalisation time constants for a variety of early LPs.

they are fed, and if the cables are strangling the sound then you will not get the full benefit of the equipment's capabilities.

My friend now stands at the bottom of the stairs shouting at his son and heir to turn the volume down, adopting exactly the same posture and tone of voice that his father used 35 years ago. He was less than amused when I pointed this out!

TB

MONO

I read with interest George Hulme's letter in the April edition. George is 100% correct in pointing out the vital differences between true mono recordings and later stereophonic discs. A 78 electric cut record (most post 1923) require a much larger stylus profile, so that the stylus sits halfway down the modulated record's groove.

For example a 78 rpm disc requires a stylus radius of around three thousandths of an inch, early nineteen fifties LPs (33 or 45 rpm) one thousandth of an inch.

Stereophonic and anything post 1960 and using the RIAA equalisation curve can be classed as true modern micro groove requiring as small a tip as possible, certainly less than half one thou.

Back in the day there was of course a colour code: GREEN pick up for 78s, RED for micro groove LP and BLUE / WHITE for Stereophonic. Witness Decca recordings of the era. Decca FFSS pick up heads came as Stereo (Diamond Stylus 0.0005 tip - colour coded white) Micro groove (0.001 tip - red) and 78 rpm (0.0028 tip - green).

When playing back any pre-1960 mono record, it is vitally important, if using a stereo pick up, to parallel the left and right channels of the cartridge to cancel out any vertical elements of the replayed disc. Mono records shake the stylus from side to side, a stereo disc modulates up and down as well, this translates as noise and distortion when replaying a true mono-cut disc.

The other parameter seldom

mentioned on these pages has been record equalisation or EQ. The established RIAA standard is different for these earlier discs, the equalisation curve much less severe. There are many, many different curves, but the differences in turn over and slope not quite as massive. A basic LP or 78 setting does 95% of all things for these early mono discs.

There is no point feeding a standard 78 rpm disc into a modern phono stage. The equalisation is wrong and the massive output generated by the larger modulated disc and larger stylus profile will overload most phono stages, exaggerating record noise and scratches (maybe TB's problem?).

To recover every drop of fidelity a specifically tailored pre amp is required. I personally use an old Leak Point One Plus in which I have simply removed the dreadful input potentiometer, replacing that with a fixed 100k resistor and have replaced the original phono socket with a mono wired pair, and provided a twin out feed. The Leak provides correct EQ, has tone controls suited to tweaking the EQ and provides just enough output to drive the rest of my system.

My Garrard 401 turntable has two arms fitted. With the differing electronic and mechanical requirements between true mono and modern RIAA / stereo discs it made sense to use a separate pick up arm, in my case a Audio Technica ATP-12 with detachable headshell for easy cartridge swaps. This is left plugged in to the Leak pre amp. I have invested in many cartridges, and have found the Moving Coil Denon D1102 and Audio Technica AT33 fitted with 78 or mono stylus. But I also use Ortofon OM (hint; check some of the DJ styli!) and Shure M95 moving magnets. There is a surprising amount of choice in these devices.

The fidelity offered by these early micro groove discs is quite fabulous, and despite the limited bandwidth offered by pre WWII 78s, given the right EQ and pick up, the music can really flow given 1) correct stylus profile 2) if using a stereo pick up cartridge mono'd 3)

a pre amp with correct EQ curve. It all sounds a lot of effort, ah... but the high fidelity!

And of course NK is 100% correct that the Beatles monos will be perfectly compatible with a modern stereo pick up, anything else would be pointless unless you want one of the above mentioned set ups.

Haden Boardman, Wigan.

Modern mono cuts, meaning the upcoming Beatles Mono LPs, pose a problem. They can be played with normal modern stereo cartridges and most will be in practice. Left and Right channels will give identical outputs, creating the usual phantom centre image. However, as you say, vertical information will also be reproduced, meaning disc surface noise, ticks and pops.

The simple and quick way to suppress this is, as you suggest, is to flick a mono switch – if you have one. Trouble is, most phono stages do not, Icon Audio do.

Perfectionists who insist on perfect replay conditions – and here we are talking typically about Beatles collectors – observe that a true mono cartridge gives better results than a stereo cartridge electrically mono'd in this fashion.

The reason is that small differences between left and right generators in amplitude or phase will result in incomplete cancellation. So a mono switch is not ideal.

To avoid this we have to use a mono generator (a single coil), meaning a true mono cartridge. But mono cartridges usually have mono styli of the sort you identify, dimensioned for old wide-groove 1950s vintage mono LPs, not modern microgrooves. These will not suit the forthcoming Beatles Mono LPs.

As you suggest it is best to have an arm with a detachable headshell, plus headshells with suitable cartridges fitted to cope with these issues, which can get challenging. **NK**



Kiko class

Linn has released the network music player for the rest of us. Paul Rigby reviews the Linn Kiko DS.

Linn has a range of network music players but an entry-level system has been noticeable by its absence. The (still relatively high priced) Linn Kiko has been designed to fulfil that requirement. David Williamson, Product Designer for the Kiko, explained, "Linn was very keen to try to reach a different audience. We wanted to give you everything that is Linn but in a more aesthetic package that is easier to integrate into homes".

Examining the main chassis of the Kiko, it's a pretty plain shell, "The curved chassis is made from an aluminium extrusion," explained Williamson, "with a window that wraps around the front. There is an

on/off switch plus a headphone and auxiliary input on the front". It spans 256x146x187mm, is available in six colours and weighs 3kg.

The user interface employs icons rather than text, to convey meaning. "The box can be stood upright or sat flat, and the icons rotate to accommodate. For the speakers, there's a slight slope at the top so, if you place them in a bookshelf, the port at the top still fires forward," said Williamson.

On the rear of the chassis there are a pair of analogue inputs to connect to a standard hi-fi, S/PDIF and TOSLINK, three HDMI inputs plus one HDMI output and Neutrik speaker connectors. "We are trying to make the Kiko very easy to

install," said Williamson, "this is the type of customer that we are trying to target. We don't want them messing about".

The included Ethernet port provides a consistency of service that you cannot get via wi-fi; wi-fi is not included with the Kiko. The whole thing is controlled via the included remote but other control options include an iPad, iPhone, Android phone, laptop and more.

The two-way speakers feature a connector that's hidden underneath the cabinet so that you can position it as close to the wall as possible. Also, there is no crossover or electronics in the speaker cabinets. The active mode – or Aktiv as Linn has it – features a digital filter

that takes place before the power amp section in the main chassis, "It's utilised in the digital domain before the DACs which gives us even more control. This enables us to put more complex stages into the crossover. Doing that in a passive crossover may have triggered noise. That power amp, by the way, is a 33W Class D, a genre of amp that has made significant steps forward of late" said Wilson.

IN USE

Installation was made awkward by the recessed sockets on the speakers. Inserting and twist-locking the thick Neutrik cables proved rather cumbersome.

The step-by-step, Internet-only, installation wizard software includes an internal OS software update procedure followed by a search for compatible media devices. You designate your own devices, giving each a name then allocating Kiko ports to each. It's a shame that the Kiko couldn't have had a stab at fully automating this process because it adds an unnecessary layer of complexity.

Linn's support software can then be installed. Songcast allows you to send music from a computer to the Kiko, Songbox is a media server that connects directly to an iTunes library and more, whilst Konfig provides setting changes and Kinsky provides control of the Kiko from a computer.

A wide range of third-party software is also supported, including Twonky and SkweezyDS on a Mac and BubbleDS via Android phones.

Kiko is a supposedly friendly, lifestyle-like, network player but there are too many installation demands for that market, too many software support download packages, too many additional software updates (as this is an internet-only install routine, why can't Linn preload the latest versions into the wizard?) and too many computer restarts (I felt that I was installing a new version of Windows OS).

SOUND QUALITY

The Kiko has been designed as a life style system so I placed it on a desk in a busy study near to the rear wall, as per Linn's recommendations. On my quad-core PC, I accessed the Kinsky/Songcast front-end system to access a limited range of Internet radio stations. In this case, Linn's own



HDMI sockets pass through video, whilst playing audio.

Jazz station running at 320kbps MP3, playing Willard White's 'Lazy Bones'. Taking the limitations of the format into consideration, the performance, despite a lack of control in the upper areas, was open and crisp in the midrange with a vigorous bass response.

Upping the sound quality, I turned to Paul McCartney's 'It's Only A Paper Moon' using a 256kbps AAC file via my iMac and the Mac version of Kinsky. The soundstage inhabited a broader base while the transient performance of the rhythm guitar and violin was impressive. Although McCartney was tinged by vocal bloom during crescendos the cool midrange featured subtlety and bass took an admirable, supportive role.

Knowing that the system support wasn't exactly audiophile in nature, I placed a set of Sorbothane supports underneath the system and speakers,



Neutrik terminated loudspeaker cables were awkward to use.

and this immediately removed the bloom, tightening up the lower frequencies.

Moving higher up the quality scale to the 24bit/192kHz FLAC of Vivaldi's 'L'Amore per Elvira' by La Serenissima I opened Twonky on my Apple iPad, highlighted the Kiko which then popped up in the Twonky device list. I selected this FLAC track and it was then sent to the Kiko, producing a dynamic, incisive presentation with a commanding soundstage.

To test AirPlay support, I accessed the flying guitar of Shuggie Otis' 'Oxford Gray' (via a 320kbps MP3). The Kiko handled the AirPlay

commands quickly and without fuss. Playback was very pleasant, being musical, offering vigorous and forceful bass plus toe tapping, snappy upper mids.

I then moved to my TV and Apple TV, playing a range of YouTube videos and using the Kiko as a sound source. Using a Creative 2.1 channel system as a reference, the Kiko playback was excellent, spacious within the mids with a punchy bass to bring the lower frequencies alive.

Finally, for a more audiophile test, I placed the system within my reference listening room. The chassis was situated on a PAB Isolation platform, the speakers on a pair of Track Audio Precision 600 stands and I plugged the Kiko into an Isotek Aquarius mains cleaning system. I then used the iPad to send a 24bit/192kHz version of Let Us Garlands Bring, Op.18: Come Away Death. The Kiko produced a keenly dynamic presentation. In these rarefied testing condition, the vocal, despite slightly struggling to cope with the complex harmonics at the very top end, and lifting a little in the upper mids, offered both a perceptive and emotive delivery while the piano accompaniment, although lacking in true bass grip during the lower frequency sequences, enjoyed an admirable degree of space and air.

Changing to a WAV rip of the AC/DC track, 'All Screwed Up', the Kiko exuded tremendous energy. The rather forward upper mids added shine and speed to the lower frequencies, giving an edge to the bass punch, while the vocal and lead guitar brimmed with passion.

CONCLUSION

Despite a rather involved installation routine, the Linn Kiko provides a wealth of media options over a range of different platforms that will satisfy all music and hi-fi fans. While the small speakers lose out in terms of deep bass response, it would seem churlish to beat the Kiko over the head because of it, especially when it offers admirable refinement and articulation.

LINN KIKO

£2,500



VERDICT

An ideal second hi-fi or specialist small room media player, the Linn Kiko provides a useful, all round entertainment system.

FOR

- broad media options
- timing
- soundstage
- build quality

AGAINST

- overactive midrange
- installation sequence

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Streaming Audio

Computer network engineer and reader Jim Roberts sent us this practical look at streaming music from your computer to your hi-fi. Here's a beginner's guide to networking.

Over the last couple of years I have read many reviews of music streaming devices, but there's little or no discussion about the infrastructure needed to make streaming work. There may be talk about an ethernet cable, or a network, but little to explain it all. Here's how to setup music streaming in your home, based on my knowledge and experience as both a hi-fi enthusiast and a qualified network engineer.

Streaming means sending music through a computer network, from computer to a 'streaming player'. The player acts as a receiver, as it were, receiving music in digital form from the computer, converting it to analogue through a Digital-to-

Analogue convertor (DAC) so it can be output to the hi-fi, usually through phono sockets. There are no compatibility issues. The signal output is the same as CD, so you connect up to any CD input or any Aux (line level) input on a stereo amplifier.

You 'rip' (copy) your CDs onto a computer or download music from the internet to it, via its web connection. This music collection can then be streamed across the network, from computer to player.

The advantage of this is that your entire music collection is then just a click away. I can browse my whole CD collection from my armchair and play any track that takes my fancy – even though the physical CDs are now gathering dust out in the shed. Because of this convenience I listen

to more music now than I have done for years.

The potential downside is that you have introduced computers and networks, with all of the pain that can imply, into your music hobby. However, the network can have a simple arrangement – just a straight wire – or complex with a switch unit in the loft and cables through the house. Or wireless, if you don't want cables. I'll explain here what your options are, and how to use such a network.

PLUG AND PLAY

'Universal Plug and Play' (uPnP) is the industry standard for allowing devices, particularly music and video devices, to work with each other across a computer network. DLNA



Cambridge Audio StreamMagic 6 Network Player. In this article we use the term 'streaming player' or 'renderer'. This player – and the many like it – read music from the computer, or from a memory stick. Most can also receive internet radio, making at least 10,000 radio stations available from around the world.



The StreamMagic 6 rear panel illustrates a wide variety of connection options. There is a USB socket for long term storage of music on a memory stick, an ethernet socket for connection to the network, and both XLR (balanced) and phono socket (unbalanced) analogue outputs. Also included are optical and electrical digital outputs, for an external DAC or digital amplifier, and digital inputs so the player can be used as a DAC as well.

stands for 'Digital Living Network Alliance' and is an organisation setup to refine the standard and certify uPnP devices to ensure that they interoperate as they are supposed to. Most mainstream streaming products use uPnP and some are DLNA certified (some products use their own proprietary standards, not uPnP, but I will not discuss these here).

The uPnP standard requires three items for a complete music streaming system. They may stand alone as separate devices or be combined into a single device (e.g. modem and router).

PC, a laptop or a dedicated 'NAS' box. NAS stands for 'network attached storage' and is basically a small, special purpose computer that is used only for holding data – in our case music.

To make this hardware work as a uPnP server it needs to run uPnP server software. On a PC, Windows Media Player performs this role, or you can install programs like 'Asset', 'Twonky' or 'MinimServer'. Macs do not come with a uPnP server, so you must install one, such as Twonky or EyeConnect (free).

Typically NAS boxes come with uPnP software pre-installed so all you need do is turn it on.

2 - STREAMING PLAYER

Think of a streaming player (renderer) as a 'source' like a CD player or tuner. It is part of the hi-fi system and retrieves the music on your computer, sending it through the hi-fi.

Bear in mind that if you have a huge music collection on your computer, seeing it all displayed on a player the other side of your lounge raises difficulties. Budget players have a one line display only (Cambridge Audio), or even no display – a TV must be used (Yamaha). Some models have a colour screen (Musical Fidelity) that you peer at across the lounge, whilst Cyrus players have this on a remote control. Because such screens draw current the remote has to have high capacity, rechargeable cells. Or you can use an App on your iPhone or iPad, where the manufacturer makes this available (most now do).

3 - CONTROL POINT

This allows tracks on the computer to be selected and may be part of the player, as discussed above, or an App on a portable device like an iPhone or iPad.

I have just explained that a uPnP

system requires three 'logical' devices. This does not necessarily mean that you need three separate boxes. Sometimes two logical devices can coexist in the same box. Nonetheless there are good reasons to opt for three separate boxes. I use a NAS box for my server, a dedicated Linn streamer for my renderer and various control points on the family iPad. This means the server can be outside the music room, I can change my renderer should I wish without affecting my music collection, and I can control it all with the convenience that comes from an iPad.

THE NETWORK

You cannot stream without either a simple ethernet cable link or a

full network.

There is no getting around the fact that getting a full network up and running requires a degree of commitment and knowledge – see more in the Boxout.

An ethernet computer network takes the form of a star, at the centre of which lies a Switch. However, whilst you can wire up your home like this, most people are likely to



Cyrus N-Remote brings the music menu to the remote control.



A NAS drive must have a uPnP or DLNA compatible media server installed. Use RAID array for reliability. A NAS like this is always on, offers good speed and stability and is cost effective for storing large amounts of music. Pictured is a Netgear ReadyNAS 102 with DLNA certified music streaming.

1 - SERVER

This is the computer that holds the music, along with a software program, confusingly also known as a 'uPnP server', running on that computer that enables it to serve music.

The hardware can be a desktop

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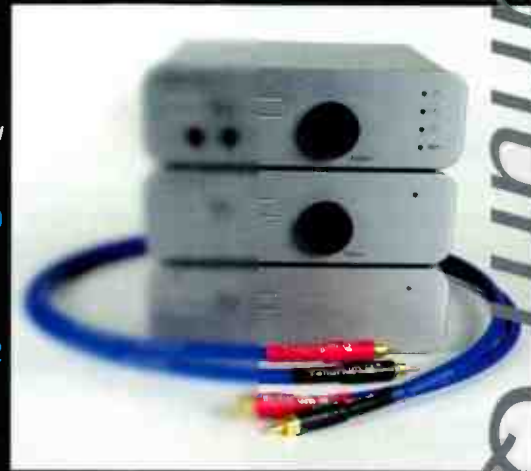
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An inexpensive network switch like this 5 port Netgear unit allows streaming players, receivers etc to be connected into a network.

have a simple straight link between internet modem and their computer, which actually amounts to the same thing, being one arm of a star. Further Switches can be added in, into which you may hook up your hi-fi through the Streamer. Just note that switches form the centre of the star, with links to connected devices on this network.

RIPPING AND TAGGING

The process of copying music from your CDs to your server is called 'ripping'. Computers display files in a directory tree. Whilst you need directories to organise files when saving them on your server, directories are not the main way uPnP views your music collection.

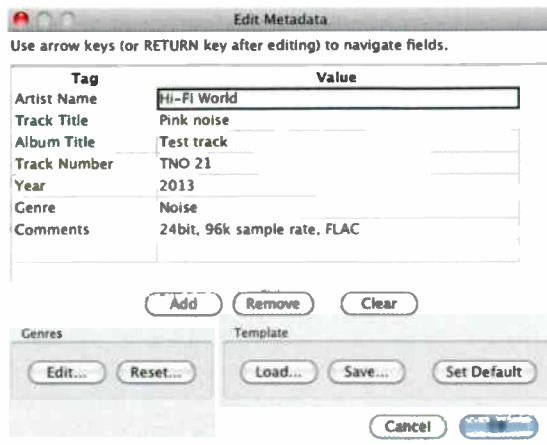
Instead uPnP uses 'tags'. Every song on your CD is saved as a separate file and each file contains both the music and a set of tags. Tags contain 'metadata' – information about the track. There is an 'Artist' tag, a 'Title' tag, a 'Year' tag, etc., and it is these tags that the server uses to organise your music. It would be a bad idea to do so, but you could if you wished put all of your music tracks in the same folder, and as long as they are tagged correctly the server will still present them to the control point organised correctly by artist, album, genre, etc. It does this by reading the metadata for every track when it starts up, putting it into an internal database. It really is a good idea to get your tagging right from day one.

This leads to the decision about what music file format to use. The open standard is FLAC – Free Lossless Audio Codec – and this is supported by all of the mainstream hi-fi companies (two exceptions are Apple and Microsoft, but neither are hi-fi companies). As the name suggests, FLAC is lossless – and free! FLAC files are compressed but in such a way that none of the quality

is lost. A FLAC file can re-converted back to the exact data that was on the original CD. It works much like the 'zip' programs that shrink computer files then expand them back again perfectly. FLAC also supports rich metadata and this, plus lower data rate, sets it apart from basic WAV. WAV offers the same quality as FLAC, but with larger file sizes and data rates, meaning FLAC is preferable. As a result FLAC is now very popular and a good choice.

Some companies sell server devices that do the ripping for you, but I prefer to rip on a computer then 'upload' the ripped files to my server as I feel this gives greater control. I use 'dbPoweramp' software for this – daft name but superb software. It reads and re-reads discs until it gets a bit-perfect rip. It confirms this perfection by comparing with an on-line database of previous rips done by other customers. It also automatically downloads tag information and cover art graphics. I buy second hand CDs off Amazon for pennies. It doesn't matter if they are a bit beat up. dbPoweramp gets a perfect rip 99% of the time. Wonderful!

I also use the excellent 'mp3tag'



Metadata tags contain disc information used for disc cataloging.

software to retrospectively tweak any tags I am not happy with. Despite its name it works with FLAC.

BACKUPS

It took me a year to rip my CDs and I don't want to lose this work the day a disc fails – as inevitably it will. So I need backups. I backup in two ways. I have a large capacity hard drive in the computer I use for ripping and periodically copy everything from my NAS to this drive. I also bought a large capacity USB 3 external hard drive which I keep at a friend's house. Once a month I bring it to my house and copy everything to it, then take it 'off site' again. In this way, if I am burgled, they may get my kit but they won't rob me of my music!

Whilst a RAID array does ensure against failure of a single disc in the array, through redundancy, it won't save you if you accidentally delete a bunch of files, or from the burglar! With 64GB memory sticks and SSDs (solid-state hard drives) now becoming affordable these are potential alternatives, or you can back up to cloud (off-site) storage like iCloud of course – another whole topic.

CONCLUSION

Switching to a streaming solution is the best hi-fi move I have made in forty years in the hobby. The sheer convenience of browsing my entire music collection from the comfort of my favourite chair is unbeatable. Streamers also work up to top 24/192 resolution, potentially offering better quality than CD. They are the way music replay is going, so I encourage you to try it and hope my explanations and suggestions help.

BIOG

For the last 15 years I have made my living in computer networking. I have three 'Microsoft Certified System Engineer' qualifications and a 'Cisco Certified Network Analyst' qualification. I'm also a hi-fi nut. I run a single-ended triode (Almarro 318B) into Tannoy Westminster TWs – in a typical suburban lounge in Birmingham. But my only source is a streamer! A Linn Akurate.



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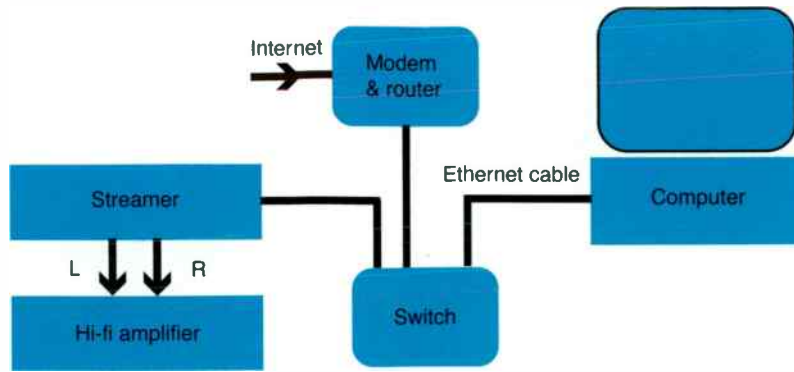
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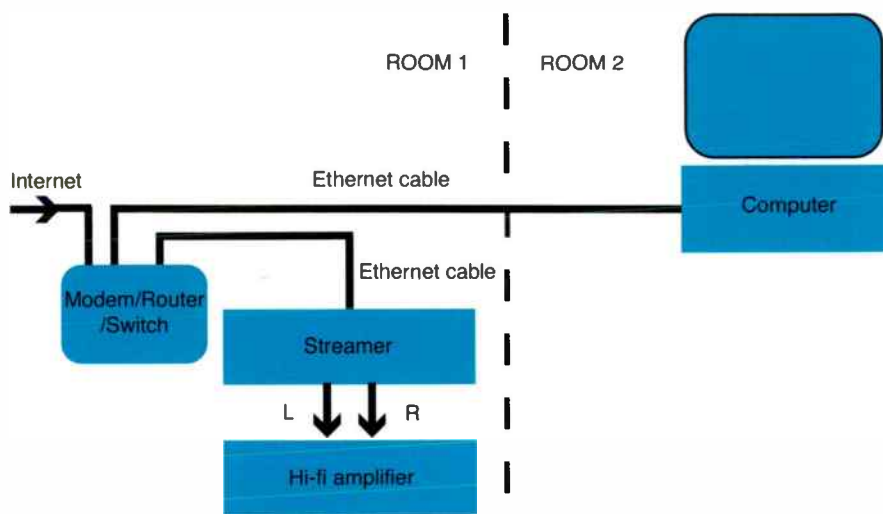


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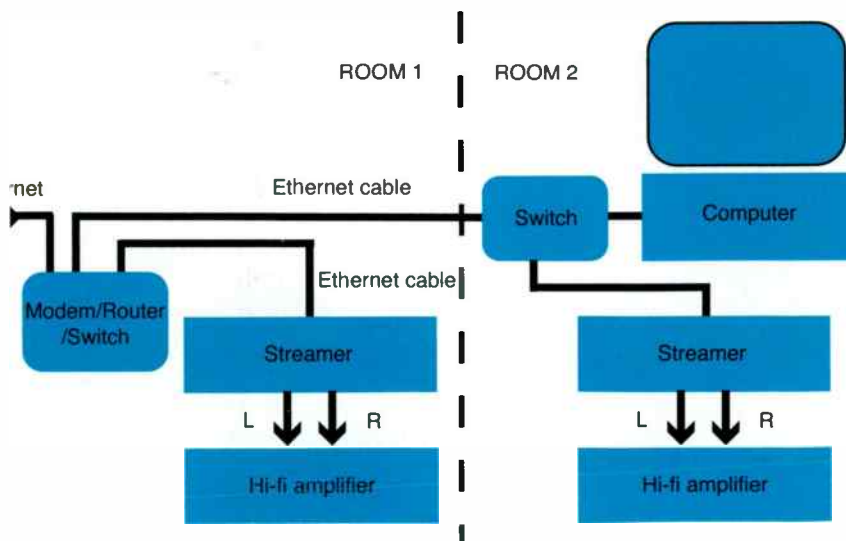
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A Star Network, with Switch at centre. This diagram illustrates basic layout, with devices connected to the Switch. Common practical forms are shown below.



The Switch is usually combined with a Router that connects to the internet through a modem. A wireless access point is commonly included too. Although the streamer is in a different room to the computer, it can still read and display the music files.



In this arrangement two Switches are connected together at the centre of the Star, as they can be, feeding streamers in different rooms. One Switch combines modem and Router.

ETHERNET WIRED AND WIRELESS NETWORKS

All home networks use a technology called 'Ethernet' and a network language (or 'protocol') called TCP/IP. I will describe a wired network first, then talk about wireless.

Ethernet uses a 'star' topology, which is just a fancy way of saying that there is a gadget called a 'switch' in the middle and every device is connected to this switch by its own dedicated cable.

Most wired networks use 'structured cabling' which means that the switch is hidden away in a cupboard (or in my case the loft) and next to the switch is a 'patch panel'. This is a passive device simply used for terminating cabling. Permanent cables run from the patch panel through the building to be terminated in RJ-45 network wall sockets (similar to phone sockets) at various points around the home. Loose 'patch cables' join the switch to the patch panel and similar 'fly leads' connect the kit to the wall-sockets. Network cabling comes in different qualities: cat 5; cat 5e; cat 6; etc. 5e is fine for a home network and is cheap when bought in bulk.

Clearly the problem with a wired network is running the cables. You will need to drill holes in walls and lift floorboards. Nonetheless this is the best way to go if you can face it. Wired networks are more dependable than wireless ones. High-end streaming products such as those sold by Linn are wired only. Most NAS boxes also require a wired connection. I ran the 'easy' cables myself and got a burglar alarm installer to install the more difficult runs. He did a great job and the price was not bad compared to what we sometimes pay for our kit.

The easier alternative is to use wireless networking. Here radio waves replace the cables. It's still Ethernet and still a star – but the switch has a 'wireless access point' built in which transmits and receives the data from each of the connected devices. The 'WAP' can go somewhere convenient, like on a shelf. Wi-fi standard 802.11g & n both have plenty enough speed for high resolution audio, since top rate 24/192 requires a throughput of 9Mbps and this is at the lower end of what wireless can achieve. However, data rate falls with distance and wi-fi is never as dependable as wired.

Whether wired or wireless, every device on the network needs a unique identification number called an 'IP address'. These can be configured manually or automatically using a piece of software called a 'DHCP server' which is built into most routers or NAS boxes. Google this, then recruit the help of a mate who knows what he is doing – probably a teenager!

Wired or wireless, get your network operating reliably before you start setting up your streamer.

Just In Time

Looking to improve your mobile audio sound? Paul Rigby presents Just Audio's mobile headphone amplifiers, the μ HA-120 and AHA-120.

Headphones are one of the most popular accessories in hi-fi at the moment, but getting a decent sound from a mobile set-up is not easy. Just Audio has released two mobile, battery-based headphone amplifiers that promise to give audiophiles the quality they demand.

"I created the headphone amps after working at Nokia and Motorola specialising in baseband (i.e. user interface, audio and displays)," said Just Audio proprietor, Justin Harris. "I used to listen to headphones regularly at work, specifically a selection of Sennheisers and Beyer Dynamics through basic interfaces. I played around with different projects and this is where the μ HA-120 came about, which incorporated the Lithium-Ion battery that I was using in the mobile industry".

"This model was created as a discrete design to run at low voltages, discrete meaning that I could choose all of my own

capacitors, resistors and so on. It took a while because you have to work out your inputs and outputs, what headphones you're going to be driving and more. I initially had three prototypes, offered them to beta-testers and they all zeroed into the design used for the final μ HA-120. The only addition to that early beta mode is a set of jumpers that you can access inside the chassis that will enable you to use In Ear Monitor (IEM) designs".

For the μ HA-120, the front of the chassis offers an in-house modified volume pot, a 3.5mm headphone socket (an adaptor is available for full-sized plugs) and input socket. The rear offers a micro-USB charge port, an adjacent charge light, which changes from red to green when the charge has completed plus an APSS switch: a charging selector. Normal charging mode in APSS is Battery but you can change the

switch to the USB setting when

listening to vinyl, during a ripping process, for example, to cater for the greater dynamic range. This switch handles a larger current".

"Finally, the Charge switch normally stays at Fast charge but you can change to Norm for older charge connections offering lower power servers. Basically, if the charge light dims dramatically, you need to change the switch from Fast to Norm".

The μ HA-120 utilises a Class A/B amplifier. "I tried to utilise Class A only but the battery was just too small to cope", said Harris. "I considered Class D but didn't feel that the quality was high enough".

Other components include an Op-amp for the input stage, and the battery has a 30 hour life in between charges.

The AHA-120 features the same basic external controls (including IEM jumpers) with the addition of a rotary selector to select the optimum amount of Class A bias for a given headphone impedance, in this case from 32-600 Ohms. "No-one has made a portable,



battery powered, Class A headphone amplifier with USB charging before, that I know of" added Harris.

"Distortion is kept low by optimising the discrete stages coupled with the input stage by knowing what each of the components do and how they interact with each other".

The AHA-120 also features an improved power conversion capability to effectively double the voltage of the battery, improving overall sound. "In fact, both amps are quite conservatively specified. Both have more headroom available which helps to boost the sound quality still further".

Despite the extra power drain, the unit still offers 20 hours of use in-between charges.

SOUND QUALITY

To begin, I first played the 24bit/96kHz FLAC of Gerald Finzi's 'Let Us Garlands Bring, Op.18' from the album, 'Come Away Death' by Marianne Beate Kielland & Sergej Osadchuk via my SSD-powered MacBook, using an Epiphany EHP-02 headphone amplifier as an aural reference. Both were run off battery power, as were the Just Audio amps.

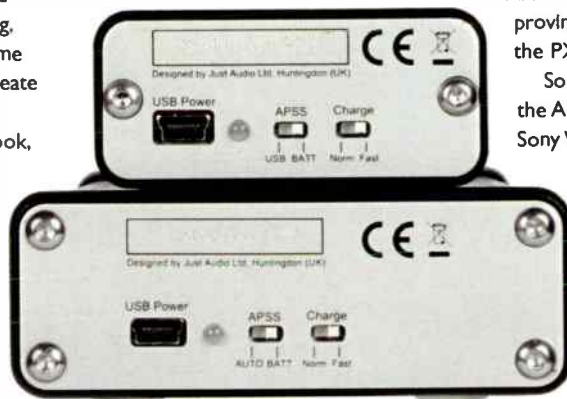
First up was the Micro μ HA-120, starting from a low cost option and recognising the mobile nature of Just Audio product, I plugged in my Sennheiser PX-100 headphones. A mixture of a haunting vocal plus strong, yet melancholy piano accompaniment was well handled by the μ HA-120. There was a strength and fortitude that underpinned the entire track, lending weight and gravitas to the music. A sense of focus prevented excess bass bloom on the piano's low-end frequencies while the vocal exhibited a welcome clarity that, despite some diffuse frequencies appearing during crescendos, provided a keen sense of emotion during the delivery. Generally, however, the presentation offered a single-minded approach to deliver the message of the music to the ear.

Moving to 'Big Bad Girl' from Harry 'Big Daddy' Hypolite as a 24bit/96kHz FLAC and plugging in B&W's more costly, yet equally portable, P5 headphones, this bass-influenced design was ideal when tackling the raw, passionate blues

tones. The μ HA-120 tracked the guitar very well. Its upper mid frequencies were well timed with a crisp detail that added space and an extra dimension to the soundstage. Meanwhile, Hypolite boomed with an expansive delivery that provided both texture and power.

Skunk Anansie's 'Hedonism', ripped via EAC as a WAV from a CD, successfully reflected back onto the B&Ws, showing how, during heavy rock, the phones can be bass dominant. There was plenty of guts and bass heft here, while lead vocalist Skin's earnest delivery was packed with power and upper mid detail.

Moving to the jazz tones of 'Blagutten' via the Hoff Ensemble at 24bit/192kHz and plugging in my top-of-the-range Sennheiser HD800s, the Just Audios had no problems in driving these superlative transducers. The μ HA-120 can be slightly dry in



the upper midrange area and this showed itself here; the trumpet was tracked very well but didn't fly, dynamically. What it did offer, however, was meticulous detail that was both considered and studied.

Moving to the AHA-120 and continuing with the same track, while moving the load switch to the HD800's required 300 Ohms, the AHA provided a great deal of extra space and air around the soundstage. The latter, in fact, was now much larger, giving instruments space to better present the music in realistic fashion. Piano was tonally accurate while percussion was nuanced and powerful. Trumpet had a sublime brassy-smooth grain that was infused with a soulful delivery.

Both 'Hedonism' and 'Big Bad Girl' lifted the B&W P5 headphones to new heights from the AHA-120, opening up the midrange – a difficult job for any headphone amp. The sense of dynamic space was obvious on the AHA-120, as well as a distinct

tonal correctness that gave the music a natural, relaxed presentation.

Moving to the classical tones of 'Let Us Garlands Bring' and the PX-100 headphones, the music now had a broad base from which to deliver its despondency. Happily, there was no sense of any invasive bloom to spoil the delicate arrangement, just an open, rather epic soundstage plus ambitious midrange scale.

Turning to my iPod Classic 80GB as a musical source and playing a WAV of Mozart's Symphony No 7 in D through the PX-100s, the AHA-120 made sense of what can often be a muddled and muddied musical output via the iPod. Despite the budget headphone choice, the strings sounded smooth and confident while the wind instruments had, at a times, an almost ethereal aspect about them. That said, in many respects, the μ HA-120 sounded better than the AHA-120 with an iPod sound source, proving to be more sympathetic with the PX-100s.

So I took the higher resolution of the AHA-120 and plugged it into my Sony Walkman WM-D6C cassette deck, spinning a metal tape (recorded on a Nakamichi Dragon) of Madness's selected hits.

On this analogue source, the AHA-120 truly soared, opening up the soundstage. Piano was vivacious in its presentation, while percussion offered heft and a certain snappy response that added momentum to the overall track. Allied to that, the treble-infused cymbals shimmered while the lead vocal was both responsive and persuasive.

CONCLUSION

Both the μ HA-120 and its more expensive brother, the AHA-120, provide a high standard of playback quality, especially for mobile devices. The μ HA-120 is a true pocket-sized amp that will enhance the performance of any mobile device, whether it's an MP3 player, phone or laptop. It provides much needed control and detail retrieval that will prove a revelation against the standard outputs of these devices.

The AHA-120 is aimed at the user who wants nothing but the best in the mobile field. With its loading tweakability to suit serious headphone fans and its open, subtle yet powerful presentation, this design will satisfy the most demanding of mobile audiophiles.

REFERENCE SYSTEM

- Epiphany EHP-02
- Sennheiser PX-100
- B&W P5
- Sennheiser HD800
- Apple iPod Classic 80GB
- Sony Walkman WM-6DC
- Apple MacBook Pro with SSD

JUST AUDIO

μ HA-120
£200



VERDICT

Small in stature but big-hearted in terms of sonic performance. Brings new levels of performance to all mobile sources

FOR

- focus
- bass confidence
- upper mid detail

AGAINST

- upper mid control

JUST AUDIO

AHA-120
£350



VERDICT

A mature tonal delivery added to an expansive soundstage provides a high quality presentation.

FOR

- air and space
- natural presentation
- transparency

AGAINST

- nothing

Just Audio
www.justaudio.co.uk



CANOR

HIGH-QUALITY RELAY
ATTENUATOR VOLUME CONTROL
FEATURES PREMIUM CMT™ TECHNOLOGY
EL 34 HIGH-POWER TUBES
OUTPUT POWER 2 X 35W
PURE CLASS A UP TO 2 X 10W

VERDICT ●●●●●

Hi-Fi World, Tony Bolton,
March 2012, Overall: 5/5



Hi-Fi Choice, Ed
Selley, January, 2012 Overall: 5/5



CANOR TP134 TUBE AMPLIFIER

For orders and information contact;
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sound foundations
www.soundfoundations.co.uk

WORLD STANDARDS

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

TURNTABLES

REGA RP1 2010 £225

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

REGA P2 2008 £300

Excellent value for money engineering, easy set up and fine sound.

REGA P3-24 2008 £405

Seminal affordable audiophile deck with fine bundled tonearm. Tweakable, and really sings with optional £150 outboard power supply.

MICHELL TECNODEC 2003 £579

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

FUNK FIRM VECTOR II 2009 £860

Innovative engineering gives a nimble, pacy and musical sound that's one of the best at the price.



MICHELL GYRODEC SE 2005 £1,138

Design icon with superlative build and finish. Sound is beautifully smooth, effortless and exceptionally expansive. No longer peerless at the price, but still a brilliant platform.

MARANTZ TT-15S1 2005 £1,299

Cracking all in one deck/arm/cartridge combination, this must surely be the best sounding 'plug and play' package at this price point.

ROKSAN RADIUS 5.2 2011 £1,450

Although getting expensive, the latest Radius is a highly grown up package with a flowing yet engaging nature; a fine package.



AVID DIVA II SP 2010 £2,000

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

INSPIRE ECLIPSE SEV2 12

2010 £2,349

Finely engineered, smooth and detailed sounding deck offering valuable twelve inch tonearm compatibility.

NOTTINGHAM ANALOGUE

HYPERSPACE 2010 £2,390

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

MICHELL ORBE 1995 £2,500

The top Michell disc spinner remains a superbly capable all rounder with powerful, spacious sound that's delicate and beguiling.

DR FEICKERT WOODPECKER 2010

£3,445

Elegant deck with great low frequency solidity, coherent soundstaging and a precise midband.



LINN LP12SE 2010 £3,510

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

ACOUSTIC SIGNATURE

STORM 2011 £3,612

An excellent high end design with a smooth, solid, open and lyrical sound and razor sharp styling and build.

FLETCHER AUDIO OMEGA .5

2010 £3,699

Charming high end turntable that's a fitting testament to the late Tom Fletcher.

PALMER 3 2010 £3,750

Eccentric hand built high end turntable with a pleasingly smooth, sweet and lucid sound.



E.A.T. FORTE S EVO 12 2010 £4,750

Excellent premium price turntable with power, precision and passion aplenty, but relaxed and easy going by nature too. Great value package with the Pro-ject Evo 12" arm option.

ACOUSTIC SOLID

ONE 2007 £4,050

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

SME MODEL 10A 1995 £4,556

Exquisitely engineered deck and SMEV tonearm combo that's an extremely accomplished performer with classical music.

AVID VOLVERE

SEQUEL 2007 £4,600

Stylish high end vinyl spinner with industrial strength build quality and a sound to match. Exceedingly neutral yet powerful sound is edge-of-the-seat stuff.

BRINKMANN

BARDO 2010 £5,845

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



McINTOSH MT10 2008 £8,995

Big, expensive, controversially styled and glows more than some might consider necessary, but an astonishingly good performer.

EAT FORTE 2009 £12,500

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

TONEARMS

REGA RB251 2009 £136

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

MICHELL TECNOARM A 2003 £442

The late John Michell's clever reworking of the Rega theme, using blasting, drilling and rewiring! Surely the best overall performer under £500.

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



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

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

FUNK FIRM FXR II 2010 £1,175
Clever reworking of the ubiquitous Rega platform, the FXR II gives 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 care for. Fit, finish and sound truly impressive.

NAIM ARO 1987 £1,425
Charismatic 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 tenths of the SME V's magic at just over half price. Exquisitely built and finished, and a design classic. Faces stiff competition these days, but lovely nevertheless.

SME 312S 2010 £1,750
Twelve inch magnesium alloy armtube plus SME V bearings makes an impressive transcription tool with an insightful yet composed sound. Superlative build completes the 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 astound, although some don't like its matter of factness!

LINN EKOS SE 2010 £3,700
Subtle mods over the years, including revised bearings and the recent new wiring has kept it a serious contender 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 magnets that are always an engaging listen.



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

ORTOFON VIVO BLUE2011 £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 DV10X52003 £295
Distant descendent of the classic Ultimo 10X, this has warmth and sweetness in spades, allied to a punchy bass. Beats G1042 comfortably.

ORTOFON 2M BLACK 2007 £350
Staggeringly good high-end MM that uses a stylus from the MC Jubilee and easily rivals similarly-priced MCs

DYNAVECTOR DV20X-H2003 £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.



AUDIO TECHNICA AT-OC9MLIII 2010 £399
New stylus and cantilever breathe life into this feisty, punchy and detailed performer.

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

LYRA DORIAN 2007 £649
Incisive 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 £890
Musically adept and highly resolute cartridge with impressive tracking abilities. Top end lift means careful matching required, however.

BENZ MICRO WOOD SL 2010 £945
Highly finessed Swiss moving coil that plays music with riflebolt precision.



ORTOFON CADENZA BLUE 2009 £1,000
Musical, out of the box sound, allied to real finesse, makes this a great do-it-all high end moving coil.

ORTOFON CADENZA BRONZE 2010 £1,350
Smooth and engaging high end MC with a slightly warmer and more relaxed presentation than its superb bigger brother.

ORTOFON CADENZA BLACK 2010 £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. Superlative value for money.

CAMBRIDGE AUDIO DACMAGIC 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 musical sound with gorgeous build and styling.

MUSICAL FIDELITY M1 DAC 2010 £400

Surprisingly sophisticated upsampling DAC with oodles of detail and air, but bass isn't quite as powerful as it could be.

STELLO DA100 SIGNATURE £750

Superbly finessed sounding DAC at the price, with strong driving bass and plenty of air and space.

**CAMBRIDGE AZUR 840C 2006 £800**

Well built CD player with a silky, yet detailed sound and a whole host of useful facilities. Excellent value for money.

NAIM CDSi 2008 £895

Naim's new italic 'i' 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-IS 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 DCD2010AE 2010 £1,700

Powerful, open sound allied to a rich tonality and satisfying subtlety 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.

MERIDIAN G08.2 2011 £2,400

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 IIS 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-1UP 2009 £3,450

Quirky yet extremely capable high end upsampling CD spinner, with a musical fluency that beguiles more than it impresses.

**ACCUSTIC ARTS CDPiMK2 2007 £3,985**

Styling not to everyone's taste but build quality is impeccable and the performance is stunningly musical.

ESOTERIC X-05 2010 £4,495

Superlative 'affordable high end' CD/SACD spinner with excellent build, massive detail and great poise.

WEISS DAC202 2010 £4,600

Brilliantly open and insightful sounding DAC with a range of useful features.

ELECTROCOMPANIET EMP-1/S 2011 £4,650

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

NAIM CDX2-XPS2 2003 £4,950

A fine high end machine, but add an XPS2 and it becomes one of the most charismatically engaging 16bit machines we've ever heard. Plays music with such passion!

NAIM CDS3 2003 £7,050

The most polished Naim CD to date; tremendously capable and musical, but lacks the Rottweiler quality of the cheaper CDX2-XPS2.

dCS DEBUSSY 2011 £7,500

Compact, stylish DAC bringing the gloriously smooth, svelte, spacious sound of dCS to a wider audience.

ACCUSTIC ARTS DRIVE I MK2/TUBE DAC 2 2007 £7,980

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 glistening harmonics. Only curious styling and clunky build detract from its brilliance!

DCS PAGANINI DAC £9,599

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 £14,000**

Very probably the best CD player yet made - certainly the most expensive; a digital *tour de force*.

**NETWORK****NAIM HDX 2009 £4,405**

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

LINN KLIMAX DS 2007 £9,600

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 brightly 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.

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



A.N.T. AUDIO KORA 3T LTD 2010 £995
Exceptionally musical and natural sounding all discrete transistor phono stage, with highly lucid, valve-like presentation.

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

QUAD QC24P 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.



AVID 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 SE2011 £4,500
The least solid-state sounding Whest 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 5i 2007 £725
The italic 'i' 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 £750
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 loses surprisingly little in smoothness to its Class AB siblings.

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

CREEK DESTINY 2 2010 £1,445
Beautifully voiced integrated amplifier with a distinctly seductive, tube like sound. A solid-state superstar!

SUGDEN A21A S2 2008 £1,469
Crystalline 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 A50R 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 VS160 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!

SIM AUDIO MOON 600i 2010 £5,750
Sturdy build, useful facilities and a wonderfully relaxed, seamless and even-handed sound will win this many friends.

MUSICAL FIDELITY AMS351 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.

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

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 £1520.00
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-22 2008 £350
Brilliant value budget passive, with remote control, mute and input switching, plus an easy, a 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 meticulously detailed and propulsive sound, but a deep velvety tonality.

MELODY PURE BLACK 101D 2007 £3,295
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.

POWER AMPLIFIERS**XTZ AP-100** **2010 £520**

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

QUAD 909 **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 9SE V2 **2006 £1,750**

Brilliant value for money monoblocks with massive power and super-clean, three dimensional sound.

**DPA SA-1** **2010 £2,850**

Pacey, 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 II-40 **2005 £3,230**

Modern tube monoblock power amplifiers with plenty of power, liquid and open mid-band and spacious, airy treble. Explicit, engaging sound, but not as euphonic as some.

ELECTROCOMPANET NEMO **2009 £4,450 (EACH)**

The Norwegian power station is as cool as a glacier tonally, yet impresses with its sheer physicality and fleetness of foot, 600W per channel makes for a massive bang per buck.

**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 gait. Excellent value starter speakers.

ACOUSTIC ENERGY NEO I**2007 £199**

Tidy and well balanced standmounters with pleasing clarity and detail.

MISSION MX2 **2011 £200**

Sophisticated sound alloyed with real musical insight makes these small standmounters super value for money.

ACOUSTIC ENERGY NEO I v2**2010 £225**

Civilised sounding speaker with fast and tuneful bass.

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.

**USHER S-520** **2006 £350**

Astonishingly 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, evenness and delicacy, although not the world's most powerful 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.

**ACOUSTIC ENERGY AE1 CLASSIC****2006 £845**

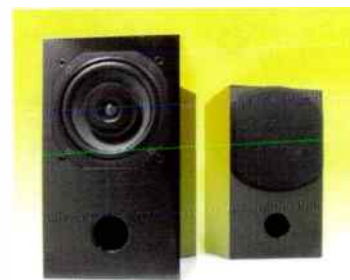
Brilliantly successful remake of an iconic design; not flawless, but surely one of the most musical loudspeakers ever made.

SPENDOR S3/5E **2004 £950**

A natural successor to the BBC LS3/5a, whose impressive neutrality, imaging and evenhandedness makes this a superior, if less charismatic, loudspeaker.

MY AUDIO DESIGN**MYI920** **2011 £1350**

Exceptionally smooth, spacious and refined mini monitors that beguile and excite in equal measure.

**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 sturdily 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 BE-718 **2007 £1,600**

Beryllium tweeters work superbly, allied to a fast and punchy bass driver. The result is subtle, smooth and emotive.

ISOPHON GALILEO **2007 £2,100**

Big standmounters that really grip the music and offer quite startling dynamics and grip.

MY AUDIO DESIGN**MYCLAPTON SE** **2010 £3,299**

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

SPENDOR S8E 2008 £1,895
Generously large, silky smooth delivery, this dynamic sounding floorstander is an excellent all rounder.



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

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

EMMINENT TECHNOLOGY LFT8B 2010 £2,300
Brilliant ribbon/moving coil hybrid with seamless, delicate and expansive yet tremendously musical nature.

MAD MY CLAPTON GRAND MM 2010 £3,599
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.



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.

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

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

ECLIPSE TD712z/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-2905 2006 £5,995
The old 989 with all the bugs taken out, this gives a brilliantly neutral and open sound like only a top electrostatic can; still not a natural rock loudspeaker, though.

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, superlative coherence and dizzying speed make these one of the best standmounters ever made - providing you like their 'studio sound'.



GERMAN PHYSIKS LIMITED 11 2011 £7,800
Don't be fooled by the austere looks; this is a superbly enjoyable omnidirectional speaker with a wonderfully fast, expansive sound.

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

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

MARTIN LOGAN CLX LINEAR 2010 £15,990
Meticulously crafted electrostatic that's free from traditional limitations, this is one of the very best loudspeakers money can buy.

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 superlative build quality result in an immensely capable loudspeaker. Not an easy load to drive, however.

ACCESSORIES WADIA I701 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 supertweeter with flexible level settings and cool styling - you'll be amazed at the difference it makes, especially with Quad electrostatics.

HEADPHONES JAYS V-JAYS 2010 £49
Wonderful little budget over-ear portable phones with a clean, smooth sound to beat the best of the rest at the price.



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 superlative 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 superlative build and comfort. Cable upgrade yields great results.

SENNEISER HD800 2010 £1,000

The ultimate expression of the Sennheiser philosophy offers massive speed, clarity and insight, although lacks some of the charm of the softer, more beguiling rival Staxes.

**STAX SR-007T OMEGA II/SRM-007T 2006 £2,890**

Simply the best headphones we've ever heard at any price, these sweetly translucent electrostatic earphones are like no other headphone, or loudspeaker for that matter...

INTERCONNECTS**TELLURIUM Q BLACK 2010 £276/3m**

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

**TECHLINK WIRES XS 2007 £20**

Highly accomplished interconnects at an absurdly low price. Stunning value for money.

WIREWORLD OASIS 5 2003 £99/M

Excellent mid-price design with a very neutral, silky and self-effacing sound. Superb value for money.

CHORD COMPANY CHAMELEON 2 £90/M

One of our favourites, these are musical performers with a smooth yet open sound.

**DNM RESON 2002 £40/M**

Neutral and transparent - a steal!

VDH ULTIMATE THE FIRST 2004 £260/0.6M

Carbon interconnects that help you forget the electronics and concentrate on the music. Miraculous transparency. Tight and tuneful bass mixed with air and space results in a cracking cable for the money.

**TCI CONSTRICTOR I3A-6 BLOCK 2003 £120**

Top quality 'affordable' mains outlet block, with fine build and good sonics. Well worth the extra over standard high street specials, which sound coarse and two-dimensional by comparison.

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, inasuch as it's as good as some designs at three times the price.

TUNERS

DENON TU-1500AE 2006 £120
Excellent entry level analogue tuner; slick sonics and fine feature 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.

CREEK CLASSIC TUNER 2006 £550

No tuner offers better sound per pound; wonderfully three dimensional and smooth from bottom to top.

MICROMEGA FM-10 2010 £750

Don't let the modest proportions fool you, this is a state-of-the-art modern analogue tuner with bespoke internals giving a warm, expansive sound.

MYRYAD 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 cannot fail to charm.

MAGNUM DYNALAB MD-100T 2006 £1,895

One of the best ways to hear FM that we know; superbly open and musical sound in a quirky but characterful package.

**SYSTEMS**

YAMAHA CRX-M170 2007 £200
One heck of a lot of quality performance on DAB, CD and FM for £200! Optional matching £120 NX-E300 loudspeakers aren't too shabby either.

TEAC DR-H300DAB 2008 £329
Nicely built and styled mini with fine performance on all sources that even plays DVDs!

**NAD C-715DAB 2008 £429**

Small, neat looks cover a truly capable system that shows just what a compact design can achieve.

ARCAM SOLO MINI 2008 £650

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

SHANLING MC-30 2007 £650

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

PEACHTREE AUDIO IDECCO £1,000

Excellent sounding iPod dock, impressive DAC and fine amplifier section make this an excellent one box style system.

ARCAM SOLO 2005 £1,249

Excellent all-in-one system, with a warm, smooth and balanced sound to match the features and style.

LINN CLASSIK MUSIC 2008 £1,250

Neat update of the original and best one-box stereo system; superbly musical sound beats equivalently priced separates.

NAIM UNITIQUE 2010 £1,350

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

MERIDIAN F80 2007 £1,500

Fantastically built and versatile DVD/CD/DAB/FM/AM unit, designed in conjunction with Ferrari. Ignore nay-sayers who sneer that it isn't a 'proper' hi-fi product; most see sense when they listen to it...

**AURA NOTE MUSIC CENTRE 2007 £1,500**

Lovely shiny CD/tuner/amplifier with fine sound quality and dynamic abilities.

NAIM UNITI 2009 £1,995

Uniquely versatile one box music system with excellent ergonomics and sonics to match. A landmark product for Naim.

LINN CLASSIK MOVIE 2007 £2,250

Superbly built all-in-one that offers excellent sound across all formats and is surprisingly easy to use.

**MERIDIAN SOOLOOS 2.1 2010 £6,990**

Thanks to its crisp styling and bright, colourful touchscreen, plus excellent search facilities this is one hard disk music system with a difference. Best partnered to Meridian active loudspeakers.

MARANTZ 'LEGEND' 2007 £22,000

The combination of SA-7S1 disc player, SC-7S2 preamp and MA-9S2 monoblocks delivers jaw-dropping performance.

Q SERIES

KEF
INNOVATORS IN SOUND



a class above

The Q Series from KEF represents a quantum leap in terms of listening pleasure.

From compact bookshelf designs to serious hi-fi speakers and dynamic home cinema systems, all available in a choice of beautiful luxury finishes, the highly versatile nine-model line-up will truly satisfy your need for class-leading audio purity.

So whether it's music or movies, Mahler or Massive Attack, what you experience is the captivatingly sweet, accurate and natural live sound of the original performance.

'...in many respects it is exceptional at the price in terms of the power and physicality it offers.'

Q700 - Hi-Fi Choice Magazine - March 2012



@KEF Audio

KEF Audio UK

Canor

Tony Bolton visits specialist valve amplifier manufacturer Canor Audio, in East Slovakia.



Canor – then known as Edgar – produced its first amplifier, the TP 101, in April 1995. The name was changed to Canor in 2007. The current Canor factory was built two years ago to the company's requirements, and is equipped with an antistatic floor.

Canor Audio have their factory in the Eastern Slovakian city of Presov, whose population of over 91,000 makes it the third largest city in the country. Hi-Fi World reviewed their Edgar CD-I valve CD

player in the February 2008 issue and we all loved it.

It was obvious from a look inside the CD-I that Edgar – now Canor – use modern solid-state circuitry to support valve amplification, but they also ensure the valve stages are of

high performance. Canor CD players and amplifiers consistently measure well and sound excellent – and they are very well made too. So I was happy to visit them to see what lay behind their unusual and impressive products.



◀ *The founders of Canor Audio; Zdenek Brezovjak (Chief Engineer), Jozef Curiik and Jan Kosco.*



▲ *All of Canor's products are hand assembled. These are the cases for the TP 134 amplifier having their sockets fitted.*

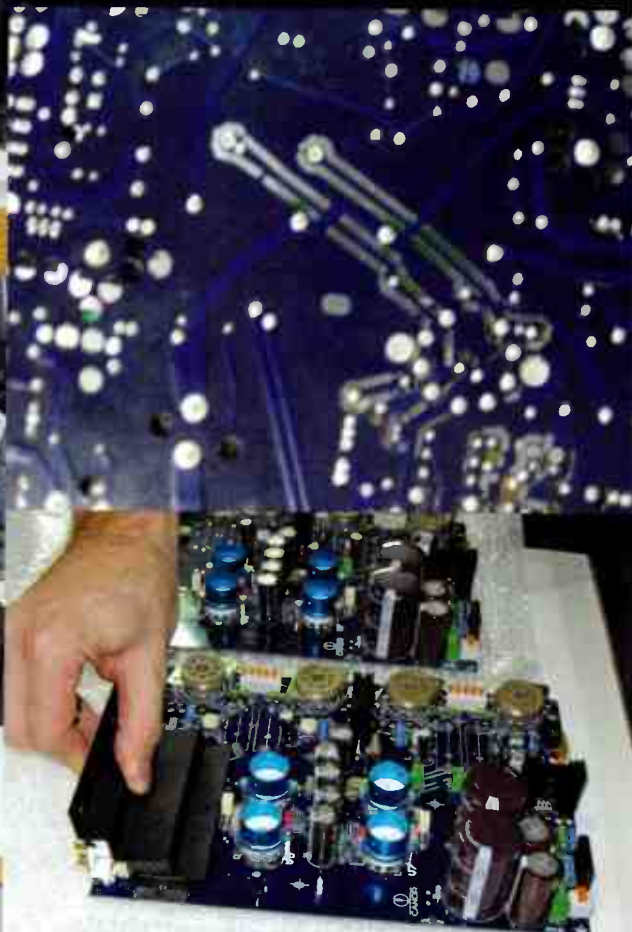
▶ *All of the product's rotary controls run on a bearing assembly.*



▶ Partially completed transformers awaiting their cores.



▼ Circuit boards for the TP 134 amplifier. After the tracks are laid, the fibreglass board is cut away, leaving the track standing proud. This reduces the dielectric capacitance of the circuit board and aids signal flow.



▶ TP 134 circuit boards being assembled.



▶ All valves are burnt in for 100 hours on this machine. These are Svetlana EL34s.



▲ The cover being held against the casework is a panel fitted with sound-deadening material, that fits over the backs of the sockets to reduce resonance.



▶ The valves are then tested on the Aladdin II valve tester. This was developed by Chief Engineer Zdenek Brezovjak, and measures all aspects and parameters of a valve's performance. Tolerances are tight and Canor reject an average of 30% of all valves.

▼ A completed TP134 amplifier connected up for testing.



◀ After completion, each unit is connected to this computer for performance testing.



◀ All new products are evaluated in the company's custom built listening room. During my visit the resident system consisted of a Pro-Ject RPM 10.1 turntable with a Van Den Hul Colibri cartridge and a TP 306 VR+ phonostage. Digital source was a CD2 VR+. Amplification was provided by a TP 106+ amplifier and a prototype TP 234. The speakers are also prototypes, the Gustav 1 floorstander and the Gustav 3 stand-mount.



◀ The walls of the listening room are stepped in three places along the sides, and are covered with painted plasterboard that has had varying size holes drilled through it in a random order to help eliminate room resonances. The ceiling has also received acoustic treatment.

◀ This is the new CD 11. It is a DAC that has a high quality disc drive in it as well. It is due for release in the next few weeks.



I would like to thank the staff at Canor and particularly Zdenek Brezovjak, Pavolf Curlik and Igor Ovad who were excellent hosts.



**1962 BRITISH HIT PARADE:
BRITAIN'S GREATEST HITS
VOLUME 11/THE B-SIDES**

**Various
Acrobat**

Well this is a mighty collection and no mistake. What we have here is a total of six box sets with four CDs in each that cover every hit single that appeared in the British Hit Parade during the year of 1962. Not only that but also the B-Side to every hit single. Acrobat has been running the series since the launch of the music charts in 1952. By charts, the company means those found in the Record Mirror, NME, Record Retailer and Disc.

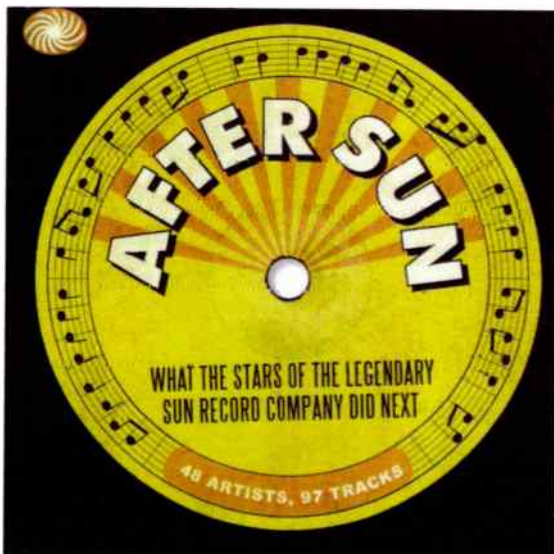
Completists will be happy to learn that the sets also include those Double-A sides and EPs that were also released.

The sets themselves have not been thrown together. They have obviously been organised in chronological order depending on their chart entry date. For every A-Sides Part I there is a B-Sides Part I box set too, of course and so on until the end of 1962.

Those detail fans that are meticulous about their music (so that's, what...everyone who reads this magazine?) will be happy to find the forty four-page booklet, situated inside. After a brief tracklisting, there is an excellent yearlong analysis of the chart action with star names highlighted regarding their performance.

I'm delighted to also see an examination of, not only musical genres but also songwriters and how music was reflecting both culture and politics. The booklet then takes us on a track-by-track analysis with around three songs per page showing how much depth this booklet includes. Sound quality is excellent which is a testament to the source 45s.

Also look out for other Acrobat releases: The George Shearing Collection (over four CDs, including many rarities) and Woody Herman's 'The Third Herd 'Live' 1952' CD, a previously unreleased live set.



AFTER SUN

**Various
Fantastic Voyage**

This is a three-disc package that serves as a companion piece to the Bear Family Sun box sets that are examined elsewhere in my Opinion column. This set focuses on Sun artists, after they left the legendary Sun record label. In fact, this set is subtitled: 'What The Stars Of The Legendary Sun Record Company Did Next'. Compiled by Dave Penny, it packs in ninety-seven tracks that span rockabilly, blues and country.

Within my Opinion column, you'll read about the unique and often startling Sun-derived country music produced by Charlie Feathers until 1956 on Sun. So what happened to Feathers later? You can find out here via 'Too Much Alike', published just a year later on the King label.

There's space for the likes of Ike Turner who was more of a session musician, A&R man and production assistant for Sun despite

recording a smash hit at the Sun studios with 'Rocket 88'. On this compilation, you'll find the 1959 cut, a jerky, jumping guitar instrumental called 'Ho Ho'.

Elvis is there too, of course. One of the most interesting cuts is 'Reconsider Baby', a Lowell Fulson track that was a hit for him on Checker in 1954. Presley recorded it in 1960 but he first sang it as a jam/demo for, you guessed it, Sun Records with Jerry Lee Lewis and Carl Perkins.

Also look out for other label releases including 'High Voltage', an examination into 20th Century electronica including pioneers, the avant-garde and synth protagonists.

'Soul City Detroit' is the first of a new series focusing on city centres, 'She's So Fine' tracks the rise of the girl groups while 'The Many Moods Of Mad Men' covers the first five seasons of background music played on the TV series 'Mad Men'.

The concept of the Super Group was a fashionable one by the mid-seventies. It seemed that everyone was doing it, so why not Widowmaker? In this case, you had four band members who had been around a bit. Fronting the band were Steve Ellis who had found fame by fronting Love Affair (anyone remember 'Everlasting Love?') while the enigmatically monickered Ariel Bender (whose real name was Luther Grosvenor, making him sound more like a soul singer than a rocker) had occupied a seat at Spooky Tooth's and Mott the Hoople's table while fellow guitarist, Huw Langton Lloyd was a member of space-rockers, Hawkwind. Even supporting member Bob Daisley was to become part of rocking outfit Rainbow, while final band member, drummer Paul Nicholls, was an ex-member of Lindisfarne.

One of the joys – but also one of the problems – of a collaborative effort like this is the diverse

influence that each band member brings to the party (in fact, this very same diversity lead to the band's break-up in 1978). Hence, this album, released in 1976, was a conglomeration of musical styles that begins with a high-tempo, hard blues rock of 'Such A Shame' and 'On The Road' but then splinters into proto-funk and gospel with 'Shine A Light' and then veers more towards pop with 'Running Free'. The end result is an album that is exuberant in its stylistic variation, you really don't know what's coming next. What the album lacks in consistency and structure, it definitely gains in variety and sheer fun.

Also look out for other Angel Air releases such as The Deviants' legendary 1967 underground rock debut 'Ptooff!', ex-Three Degrees founder member Fayette Pinkney's acclaimed debut solo album 'One Degree' from 1979, and SNAFU's self-title album from 1973, featuring ex-members of Procol Harum, Juicy Lucy and Airforce.



WIDOWMAKER

Widowmaker
Angel Air

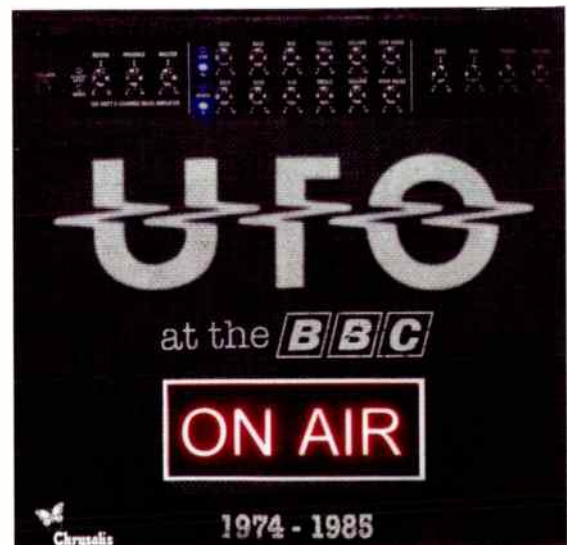
Named after the legendary, underground London club, UFO (originally called Hocus Pocus), the band offered a classic hard rock – some would say, space rock – sound that has helped to form the backbone of the genre in the UK and abroad. Albums such as 'Force It', 'Lights Out' and 'Strangers In The Night' have helped to provide the band with a fearsome reputation for concise riffs, mammoth drumming and more.

This exhaustive set, arriving in a clamshell box, spans five CDs plus a DVD, all in their own wallets and features fifty-two tracks, all of which have been remastered for this box set. Highlights include the band's first appearances on 'In Concert' on 6 June 1974 and the session with Bob Harris in October of the same year, to appearances on John Peel's programme in 1977 all the way to live appearances at Knebworth on 22 June 1985.

The additional DVD disc provides a selection of gems including an Old Grey Whistle Test appearance on 16 January 1977 playing their hit 'Doctor Doctor' as well as a Top Of The Pops showing on 1 February 1979 playing the single 'Young Blood'.

BBC appearances are a staple of any successful band during the 20th Century and often provide fans with unique variants on established songs, along with standout performances. Both are certainly present here. Fans need this new box set, and pronto.

Also keep an eye out for other EMI reissues such as Marillion's 'Singles Vol 2 '89-'95', that also features a number of live cuts and rare demos over four CDs, a remastering of Morrissey's less than successful 'Kill Uncle' (1991) and The Michael Schenker Group's 'Walk The Stage: The Highlights', a one disc distillation of the recent five CD box set. PR



UFO

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EMI

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Eastern delight

Legendary Far East brand Luxman is aiming for a slice of the computer DAC market with its latest product. Jon Myles says it's well worth a listen.

Japanese manufacturer Luxman has a long and storied history stretching back to its foundation in 1925. Its range of tube and power amplifiers ranked alongside some of the top marques with audiophiles worldwide during the 1970s and 1980s.

A series of ownership of changes saw it fade from view on these shores in more recent years – but the brand is now back under the auspices of the IAG group.

Its range consists of a dizzying array of products including cables, loudspeakers, tube and solid state amplifiers, universal disc players and various accessories.

On test here is its D-100 DAC – a compact unit aimed firmly at those wanting to extract the best quality audio from their computer-based music collection.

In essence it's a cut-down version of Luxman's larger – and more expensive – DA-200 DAC, boasting much of the same circuitry but with fewer features

and in a smaller, more portable package.

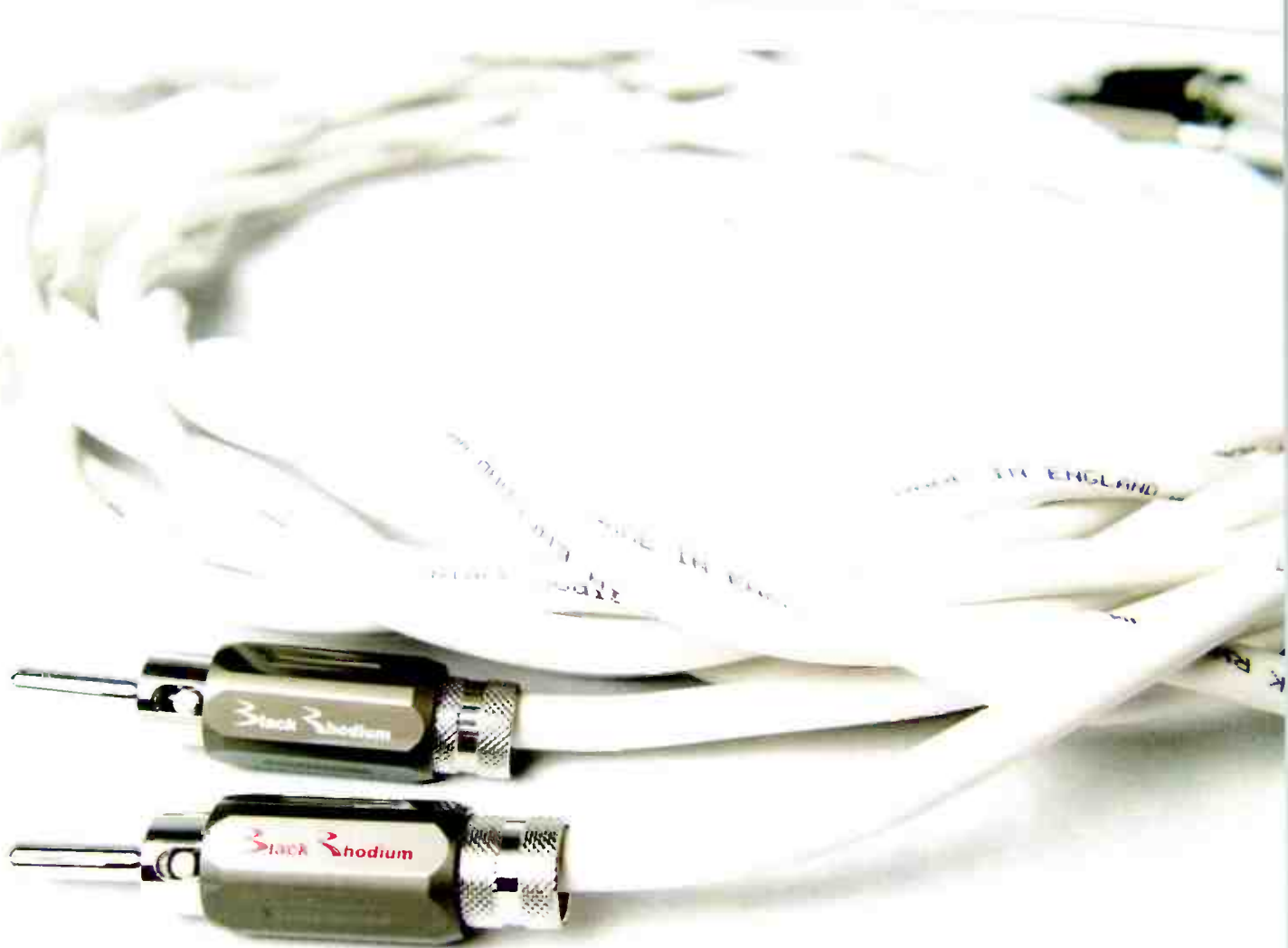
First impressions are undeniably positive. The D-100

is housed in a solid metal case and weighs in at a reassuringly chunky 2.3kg. Inside is a Burr Brown PCM5102 DAC module which can handle 24bit/96kHz files via USB and up to 24bit/192kHz via the optical/coaxial inputs. Both analog and digital outs are included on the tidy back panel.



A full selection of USB/coaxial and optical inputs and gold-plated RCA analogue output sockets.

**Simple design,
elegant construction,
and does not miss a beat!**



SAMBA

incorporating the best technology

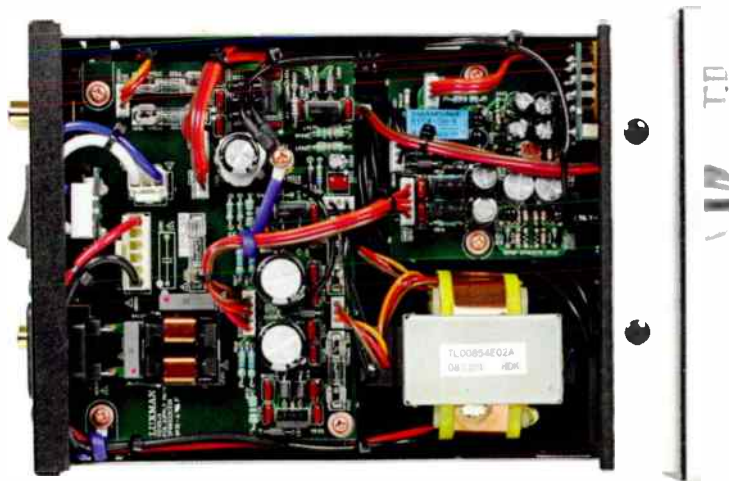
The simple yet elegant construction of Samba loudspeaker cable can easily distract you from the advanced technical design features that are incorporated in its manufacture. To hear the bass lines in your music in greater detail, appreciate the artistry of choirs singing in harmony or simply get more pleasure from your music collection, try Samba speaker cable in your system.

Find out how we have gone from our very first cable to Samba by downloading our FREE report, the Samba Story at www.blackrhodium.co.uk/samba



"Offering a clear midrange with tight and efficient bass, the Samba is a refined speaker cable"

HI-FI World, February 2013



The DAC-100's circuit features Luxman's traditional round pattern PCBs and spiral-wrap shielded wiring.

The front sports a headphone socket with well-weighted volume control, USB/Optical/Coaxial input selector and an admirably clear LED read-out to indicate sampling rate. Do note that the volume control only works on the headphone output – all other connections are fixed level.

Completing the features is the ability to switch between two digital filters – a choice of either FIR or IIR which provides a subtle difference.

SOUND QUALITY

Anyone looking for a DAC to extract music from their computer has no end of choice nowadays. So it's to Luxman's credit that they've managed to engineer a unit with a sound distinctive enough to stand out from the crowd. Right from the off the DA-100 displayed a warm, detailed and spacious balance. Hooked up to a MacBook Pro and fed a variety of files ranging from Red Book standard to high-resolution 24/192, its overriding quality is one of an unforced ease that simply lets the music flow. And that was straight from the box. Two days in after some heavy rotation and the sound had improved even more.

While it errs on the smooth side, the Luxman loses nothing to rivals in terms of transient attack, immediacy and detail. Peter Gabriel's 'Solsbury Hill' sounded particularly fine – the various elements of this classic 1980s track ringing out clean and true with just the right propulsive thrust.

One of the DA-100's best qualities is in its handling of vocals. Contrast some early Bruce

Springsteen with his latest 'Wrecking Ball' outing and the DA-100 leaves you in no doubt as to how much gruffer his voice has become with the intervening years – while a slice of classic Julie London sounds suitably sultry and as her voice seems to hover in the air.

Headphone users are also in

for a treat. All the above qualities apply to the Luxman's dedicated headphone circuit – with the added sense of immediacy a really good pair of over-ears can bring. I'll admit, most of my headphone listening is commuter-based via an iPhone – but the Luxman could just convert me.

Valery Gergiev's 'Shostakovich Symphony No. 5' was presented with detail and dynamics and the Luxman's innate warmth never tipped over into sogginess or a congealed soup of massed strings. Instead there's a clear delineation between instruments – the sense that you are listening to multiple string instruments being played.

CONCLUSION

Luxman have engineered a fine-sounding unit with the DAC-100. It manages to sound smooth, warm and musical while retaining a sense of detail and attack that keeps it from tripping over into too smooth territory.

Factor in superlative build quality and its outstanding headphones facility and this is one DAC that is definitely worth a listen.

MEASURED PERFORMANCE

The electrical S/PDIF input accepted a 192kHz sample rate input and, on this DAC, so did the optical input (not all optical receivers accept 192k). The upper response limit was 53kHz (-1dB) so the DA-100 offers relatively wide analogue bandwidth at this high sample rate. With 96kHz sample rate this fell back slightly

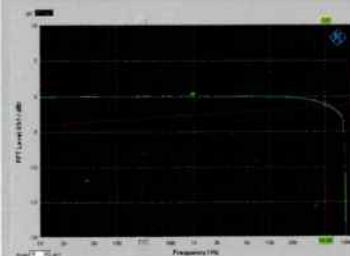
to 46kHz. The filters affected only stop band attenuation.

Linearity with 24bit resolution was good at 44.1kHz sample rate, distortion measuring a low 0.04% at -60dB. With 48kHz sample rate this rose to 0.08%, suggesting the DA-100 uses a CD clock and sample rate conversion. Multiples of 44.1 were all more linear than multiples of 48k. With CD EIAJ Dynamic Range was high at 101dB. With 24bit it increased to 113dB, a very good result.

The USB input reached 96kHz and would both play and record from a MacBook Pro. However, whilst the upper response limit was again wide, this input was no more linear with 24bit than 16bit, suggesting it is basically a 16bit system; most USBs these days offer better linearity with 24bit.

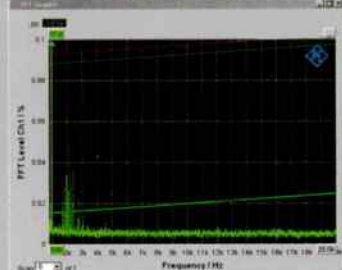
The DA-100 measured well, but USB and sample rate conversion could have provided better results. **NK**

FREQUENCY RESPONSE, 192k



DISTORTION, 24bit

THD @ 0	2.1414 mV	997.00 Hz
0.0800 %	OFF	OFF



Frequency response (-1dB)	CD 4Hz - 53kHz
Distortion (%)	(24bit)
0dB	0.005
-60dB	0.08
Separation (1kHz)	100dB
Noise (IEC A)	-119dB
Dynamic range	101/113dB
Output	2.1V

LUXMAN DA100 DAC/HEADPHONE AMPLIFIER - £630



VERDICT

There's a whole range of stand-alone DACs out there – but the Luxman DA-100 is among the best at its price. Solid construction, great sound and a superior headphone amplifier section add up to a very tempting package.

FOR

- solid construction
- rich, smooth, musical sound
- excellent headphone performance

AGAINST

- faces stiff competition
- little else at the price

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"...the low end is a real strength of The Wand as it captures bass lines expertly and never seems to run out of puff or feel that it was lacking authority. I would say that it is almost impossible not to fall for The Wand's charms." HiFi World January 2012

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John Peel



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ISOTEK EVO3 ELITE £325 FOR 2M

The new Evo3 replaces the GII Elite cable and sits in the range, just above the EVO3 Premier. The Elite features seven 1.25 sq mm conductors made of silver-coated 99.9999% oxygen-free copper (OFC) with a Teflon

FEP dielectric sheath and cotton filler. A Mylar wrap surrounds the conductors, enclosed in an earthed shield of OFC. Termination is via IsoTek's bespoke connectors, with conductor pins made of solid OFC and coated in 24ct gold.

Playing jazzman, Sonny Rollins' 'The Bridge' via my Avid Acutus and comparing the Evo with a basic power lead into the Acutus' power supply, the Evo opened up the tenor sax, providing air and space around Rollins while giving him more time to emote. Bass was now fixed within the stereo image instead of wandering around the soundstage, providing the track with a rhythmic force and grounding. Percussion, meanwhile, was bouncy and vibrant, crisp and responsive

to what was going on. Hall's guitar offered improved timing signatures that provided better focus and detail.

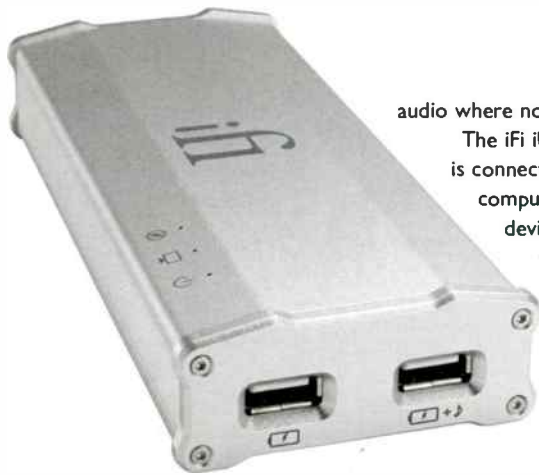
Black Rhodium's Libra was now introduced. At only £100, it provides immense value for money and trumps many cables of a higher price. I plugged that into my Densen B-475 CD player and span Yes' 'The Yes Album'.

Although the Libra tried hard to replicate the epic presence of the band on the soundstage, the Evo impressed because it gave them plenty of elbow room during their performance. The Evo provided a rich, detailed playback. Again, bass was excellent via the Libra but the Evo tightened the focus a few extra notches, giving this frequency more command of the soundstage.

The IsoTek Evo3 Elite is a top quality cable. **PR**

[Contact: info@soundfoundations.co.uk www.isoteksystems.com]

SOUNDBITES



iFi MICRO iUSB POWER SUPPLY £175

Modern computers universally use small, compact switch mode power supplies (SMPs). They are noisy: high frequency switching generates RF and it spews everywhere. When you connect a USB powered device to a computer this noise is transferred to that device along the 5V USB power line – unwanted with high quality

audio where noise is a killer.

The iFi iUSB Power supply is connected between computer and USB 2 device, replacing the computer's supply with a dedicated super-quiet audio supply that is quieter than even a rechargeable battery,

iFi say. The digital audio simply passes through.

Additionally, there is a power-only output that provides 4.98V our measurement showed, to a circular power connector. Note this socket will not charge an iPhone (but the other will!)

Specs are input voltage range 100V-240V a.c., output 5V at up to 1 Amp. The mains wall-wart has an identifying sticker on it so it cannot

be lost amongst others. The unit measures 158mm long, 68mm wide and 28mm high, and weighs just 195gms. An Iso-earth minimises noise, but can be switched out if there are problems.

Connected up to power an Epiphany E-DAC connected to a Mac Mini, the iFi sure enough did offer a smoother, silkier sound than the Mini alone and was a welcome addition to my late night headphone listening sessions. It also gave appreciably slicker sound with more solid imaging when the E-DAC fed Martin Logan Electromotion electrostatic loudspeakers, that are image kings.

All in all then, this little unit offers useful improvement to USB powered devices, is nicely made and finished, and is recommended. **NK**

[Contact: www.ifi-audio.com www.selectaudio.co.uk]



Showtime

Noel Keywood visits the Audio World '13 show, held March 23rd-24th at the Radisson Blu hotel, Manchester airport.

Northern Shows are always a little bit different: friendly, personal and relaxed. And they're in venues that work well, I was reminded by one exhibitor. That sums up the attraction of this year's Audio World show held at the Radisson Blu hotel, Manchester airport by Chester Group Exhibitions. The only sour note was the weather: with cruel timing snow blanketed the U.K. Friday 22nd March, triggering a blizzard of traffic warnings and advice not to travel. This didn't help attendance – and neither did the reality which saw little or no snow around Manchester, but icy cold winds blowing furiously in from Siberia – or so it felt.

All the same, in true Northern tradition those that attended were dyed-in-the wool enthusiasts. They filled the rooms and enjoyed the event. many told me. So did I. The rooms were a good size, the corridors navigable, the restaurant food reached a high standard and was affordable; there were no £17 sandwiches the Heathrow hotels so generously offer. What Mancunians got instead was an array of interesting products, and some great sounds too. One reader scouted the exhibition on Saturday he told me, then returned Sunday to spend time in front of the best systems – and he loved it.



VIVID AUDIO

Stumbling in from the cold to the eye catching Vivid Audio room, after a six hour train journey from London (the train's windscreen broke!) was a great start to my visit. Blue spotlights played onto an array of loudspeakers, some looking like coiled ammonites. If they remind you of B&W's Nautilus design, that's because Laurence Dickie shown here designed the Nautilus whilst at B&W. Since then Vivid have slowly gathered worldwide sales in countries less conservative than the U.K. he told me, and had a wide range for demonstration. www.vividaudio.co.uk

ICON AUDIO

Designer David Shaw talked me through a collection of new models. Shown here is a prototype 50 Watt per channel stereo integrated amplifier, based on the MB845 monoblock circuit. It offers the sound of the graphite anode 845 triode in a smaller package. I originally suggested to David he try the 845 because of its big, powerful sound, availability and reasonable price (compared to the 300B) and it has proved popular. So this amplifier will be interesting.

Also there was a re-package of their popular PS3 all-valve phono stage, including valve power supply, that benefitted from minor improvements. www.iconaudio.com.

**MUSIC FIRST AUDIO**

I received a fascinating lecture from Lucy of Music First Audio about the mystical art of winding a good audio transformer, of the sort used in their Ruby Reference magnetic preamplifier shown here. Multiple windings must be laid down, in sections on layers separated by paper. There are internal connections between sections and lead out wires from taps and layers. The wires can be thinner than a human hair and enamelled, and this must be gently removed to allow soldering. One winding out of place means a restart, Lucy told me as a cold wind blew around us in the lobby. It takes a day to carefully build one transformer. Beside the Ruby Reference is a Hi-Fi World Award globe, for outstanding sound quality. www.mfaudio.co.uk

**INSPIRE**

Bob Isherwood of Inspire had a large room with a range of turntables on display. The Monarch with its heavy machined platter driven by a Technics Direct Drive motor, in their plinth of wood and aluminium, was centrepiece. It's being run here by Bob, demo'ing to an intrigued audience. Also on display was Inspire's new entry level turntable, the Black Magic. www.inspirehifi.co.uk

**BURMESTER**

German high-end brand Burmester, whose systems grace Porsche cars, were showing an 037 power amplifier and B80 Mk2 loudspeakers fitted with Elac Jet ribbon tweeters. Also present was a new DAC that ex-Hi-Fi World editor (and now Bur-meister!) Simon Pope was eager for us to review. www.burmester.de & www.midlandaudiox-change.co.uk

**TIMESTEP**

Timestep were running their EVO 1 modified Technics SL-1200 Direct Drive turntable, fed by a Shunt power supply and fitted with an SME309 arm and Audio Technica AT33EV moving coil cartridge. It fed their new T-01MC discrete transistor phono stage and a pair of headphones via a headphone amplifier. Designer Dave Cawley wasn't local, like many exhibitors, driving all the way from Devon. www.time-step.com

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Linn LP12 LV/IV Troika	£990	Nagra PL-P	£4,500	B&W ASW 4000	£1,450	SMZ HT 200	£600
ATC SCA2	£1,490	Krell SACD MKIII	£1,790	Avalon Acoustics Opus	£3,990	Sonus Faber CONCERTO GRAND PIANO	£900
ATC ATC SCM 100A Speakers - black piano finish	£5,900	Krell Evo 505 SACD	£3,490	Krell FPB 250M	£2,690	dCS Purcell Digital Upsampler	£1,000
Linn Axis	£300	Krell S1200U	£4,990	Neat Acoustics MF9	£4,450	dCS Delius Digital to Analogue Converter	£1,200

CD Players and DACs

Accuphase DC 101	£3,490	Eclipse TD512, AS02 + Stands	£2,000	Cajio Duet 350 stereo power amplifier	£3,490	Sony TAE 900	£4,990
Audio Aero Capotile Signature	£3,300	Eggleston Works SAVOY	£15,000	Classe Audio CA2300	£3,990	Tom Evans The Vibe pre & Pulse power supply	£2,750
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Chord Electronics Blu & DAC 64 & Choral Rack	£4,995	Focal JM Lab Stella Utopia III EM	£49,990	Krell FPB 250M	£2,690	Brinkmann Oase	£5,500
Cyrus CDBX	£400	Focal JM Lab Stella Utopia III EM	£49,990	Krell FPB 350m	£3,995	Calix Cartridge	£4,000
dCS Delius Digital to Analogue Converter	£1,200	Focal JM Lab Stella Utopia III EM	£49,990	Krell kav 150i	£950	Clear Audio Titanium V2-NEW	£4,490
Densen B400 PLUS	£650	Focal JM Lab Stella Utopia III EM	£49,990	Krell Masterclass Hydra stereo power amp	£1,675	Dynasvector DV507 mkII	£1,995
Krell SACD MKIII	£1,790	Focal JM Lab Stella Utopia III EM	£49,990	Luxman B-1000f	£18,500	Gale GT201 Turntable	£9,990
Krell Evo 505 SACD	£3,490	Focal JM Lab Stella Utopia III EM	£49,990	Mark Levinson 33H	£9,900	Garrard 401	£750
Krell KPS 25s 24/96	£4,990	Focal JM Lab Stella Utopia III EM	£49,990	Mark Levinson 532H stereo power amp	£4,995	Goldmund Studiotea	£895
Linn Unidisk 2.1	£750	Focal JM Lab Stella Utopia III EM	£49,990	Mark Levinson No 532H Reference High current	£17,362	Goldring Lenco 705	£250
Marantz SACD1	£1,995	Focal JM Lab Stella Utopia III EM	£49,990	Dual Mono Power Amp	£7,500	Goldring Lenco tonearm	£100
Mark Levinson 31 & 30.5 Transp/Dac	£7,450	Focal JM Lab Stella Utopia III EM	£49,990	Michell Aleo Mono-blocks	£1,250	Koetsu Rosewood Standard	£1,400
Mark Levinson 39	£1,495	Focal JM Lab Stella Utopia III EM	£49,990	Naim Audio NAP 150x	£5,500	Kuzma Stabi (wood) & Ref pau	£1,990
Mark Levinson No 512 CD/SACD	£7,995	Focal JM Lab Stella Utopia III EM	£49,990	Paslabas XA160 5	£14,500	Lehmann Black cube	£200
Mark Levinson 390s (NEW)	£3,490	Focal JM Lab Stella Utopia III EM	£49,990	Perreaux 750 Phnma Monoblocks	£3,500	Linn Axis	£300
Mark Levinson No 512 CD/SACD	£12,255	Focal JM Lab Stella Utopia III EM	£49,990	Plinius P10	£2,100	Linn LP12 LV/IV Troika	£900
Meier Audio Slagadac	£350	Focal JM Lab Stella Utopia III EM	£49,990	PS Audio Classic C-250	£2,450	Oracle Dohri V, turbo PS, Lid & hinges	£3,750
Mendian Audio 507 24 Bit CD Player	£400	Focal JM Lab Stella Utopia III EM	£49,990	Sony TA N11 monoblocks	£9,990	Origin Live Conqueror 3c (carbon arm)	£2,000
Meridian Audio 508	£600	Focal JM Lab Stella Utopia III EM	£49,990	Soulution Audio 710 Stereo Power	£24,990	Origin Live Digital Stylus Forza Gauge	£65
Micro Seiki CDM2	£1,490	Focal JM Lab Stella Utopia III EM	£49,990	Suggden Masterclass stereo Power	£1,995	Origin Live Sovereign Mk1 / Illustrious Mk2	£2,350
MICROMEGA Microdac	£295	Focal JM Lab Stella Utopia III EM	£49,990	Tenor HP 300	£15,500	Origin Live Ultra phono stage	£1,250
MSB Platinum III	£950	Focal JM Lab Stella Utopia III EM	£49,990	Tom Evans Linear A	£3,850	Orion Jubilee (VdH re-top)	£695
Musical Fidelity nu-vista 3d cd player	£800	Focal JM Lab Stella Utopia III EM	£49,990	Tube Technology Genesis Monoblocks	£1,499	Orion MC2000 mkII	£495
Musical Fidelity A3 2 CD	£345	Focal JM Lab Stella Utopia III EM	£49,990	VTL MB 450-III Signature Monoblocks	£17,500	Paslabas XP15 Phono pre	£2,500
Naim Audio CD5	£350	Focal JM Lab Stella Utopia III EM	£49,990	YBA Passion 1000 stereo	£5,990	Pink Triangles Export/ Zeta	£1,495
Opera Consonance Droplet CDP 5.0	£1,295	Focal JM Lab Stella Utopia III EM	£49,990	Pre Amplifiers		Plinius M14 mm/mc Phono Stage	£990
Orrale CD 100e CD Engine	£250	Focal JM Lab Stella Utopia III EM	£49,990	ATC SCA2	£1,490	Shure V-15 TYPE II	£95
Primate BD32	£3,500	Focal JM Lab Stella Utopia III EM	£49,990	Audible Illusions Modulus 3A	£2,250	SME Model 20/12A	£11,567
Procead CDP CD/HDCD player	£995	Focal JM Lab Stella Utopia III EM	£49,990	Audio Innovations L1	£240	SME Model 30/12A	£21,995
RE.T Audio Design Orpheus mk2	£500	Focal JM Lab Stella Utopia III EM	£49,990	Audio Research PHONO 7 MM/MC	£2,999	SME Series 312	£1,350
Theta Compli	£1,595	Focal JM Lab Stella Utopia III EM	£49,990	Ayre Acoustic K-1xe Pre and phono	£3,950	SME Series V (gold print)	£1,995
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B&W DM 70 Continentals	£1,800	Focal JM Lab Stella Utopia III EM	£49,990				
B&W Matrix 800	£9,990	Focal JM Lab Stella Utopia III EM	£49,990				
Beaumont B2 2 Revelation	£1,800	Focal JM Lab Stella Utopia III EM	£49,990				
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World Radio History

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LUXMAN

Steve Riddick of Select Audio, was showing a range of Luxman products, including the big L-550AX Class A amplifier here. To one side were a new DA-200 DAC and M-200 matching power amplifier. www.selectaudio.co.uk



CLARO AUDIO

The impressive Claro Clarity Dual turntable in silver, together with our five-globe review in the April 2012 issue of *Hi-Fi World*. Situated near the show's entrance this was the coldest place to be, but Clarity are based in Yorkshire and survived it well! www.claro-audio.co.uk



AVID

Avid Ingenium (left) and Volvere turntables, fitted with SME arms, in the Avid room run by owner Conrad Mas. A spacious room and growing interest in quality turntables brought in a crowd. www.avidhifi.co.uk



BRIAN AND TREVORS

A pair of giant Adam Audio Tensor Alpha loudspeakers, with their X-Art ribbon tweeters, graced Brian and Trevors room. Listeners were awe struck! Brian Morris told me it was a struggle involving many men to get them into the hotel and up to the third floor. I replied with a tale of how *Hi-Fi World* once got Tannoy Westminster Royals into the same show for dem purposes. www.brianandtrevors.com



MCRU

Isotek power supply conditioners were on demo at MCRU (once Mains Cables R Us), plus a host of cables and accessories. Designer Nick Gorham of Longdog Audio was there to provide expert advice. www.mains-cables-r-us.co.uk & www.longdogaudio.co.uk

ACOUSTIC ENERGY

We spotted Acoustic Energy's new Reference 3 loudspeaker taking a rest in a corner! *Hi-Fi World* hopes to get a review soon. www.acoustic-energy.co.uk



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Jeff Dorgay, Tone Audio Magazine, January 2013



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Paul Rigby, Hi Fi World, March 2013



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World Radio History

"methods and structures of the record business have always interested me"



Paul Rigby

The myriad methods and structures of the record business have always interested me. Mainly because the configurations themselves have a bearing on the type and quality of music that reaches our ears. Most of the public sees the artists, hears about something called a 'Record Label' and then imagines a sort of sausage machine where the whole lot is mixed up and spews forth to produce a record or download. It's not quite like that. The production company is one example of the music industry's more complicating factors.

So what is the difference between a production company and a record label? Music expert and consultant for Ace Records, Ady Croasdell, has recently been doing research on one such outfit from the sixties, Pied Piper. So I thought that he would be the ideal person to ask.

"Production companies have never been as famous as record labels but they have been just as important. A production company will make music and then will try to sell that music to other labels rather than that production company running its own label. Originally, the company I've been looking at, Pied Piper, had its own Giant label until it managed to get a big deal with RCA and Kapp (now owned by Universal) and Giant was dropped. The production company wouldn't necessarily even have its own studio, it would license that too".

So maybe we should also ask, 'What is a production company?' Pied Piper's case can serve as a general template. It was two men: Shelley Haims (whose expertise was A&R, marketing, sales & promotion) and Jack Ashford (songwriter and musician, who was more famous

as one of Motown's Funk Brothers, playing on many of the label's hit singles). The songs themselves would have largely been written via Haims & Ashford or friends of the duo.

A production company normally has a wealth of connections at its disposal and would have found its own talent too. In fact, you can think of a production company as a sort of fulcrum, bringing all of the strands of making a record together in one place and offering the finished package to a big record label to issue.

The great thing about production companies is that they are small enough to move with the times and nimble enough to jump genres, if the opportunity suits them. It's tougher for record companies to do this because they move akin to the super tanker which requires lots of time, money and notice to do just about anything.

While we are talking about Pied Piper (which began in late 1965... and died in 1967), let's use them as an example of this. As Croasdell says himself, "Haims initially released a couple of rubbish country records, then decided to switch to R&B when Jack Ashford joined the company. The company only lasted for two years and it wasn't responsible for your typical 'mega-hits' although it did feature a number of quality works such as The Hesitations' No.2 hit in the USA with a version of 'Born Free'."

Pied Piper put out only around thirty singles and three albums but the time that it was active saw it handle a range of artists. The music itself was high quality, Northern soul fans have found that out over the recent years but it's taken thirty years for the general public to realise the same. The problem was RCA.

"RCA wasn't set up for black

R&B," explained Croasdell, "It was very much a middle of the road, white pop market company and it didn't have the rapport with the black stores where these records would have sold properly. RCA was dabbling in something that it didn't understand".

The productions themselves were lush and professional and that's where Pied Piper spent its money. So it had no resources to correct RCA's failings. Pied Piper, as a company, sank largely because of this.

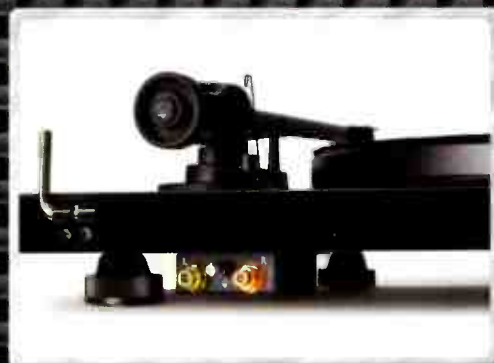
You can find more about Pied Piper via 'Pied Piper Presents A New Concept In Detroit Soul' via Ace (acerecords.co.uk) but – and this is an interesting addendum – only because collectors in the USA managed to track down an aged and none too healthy Shelly Haims (who later played a big part in the career of Creedence Clearwater Revival, incidentally). Haims was about to book a skip to throw away his precious master tapes when the collector contacted him and then talked to Ace afterward, "We found some brilliant unissued recordings that we had never heard plus rare alternative versions" said Croasdell.

One nice coda to this story relates to Haims' partner, Jack Ashford. Many veteran individuals from the music industry, people like Ashford for example, are not rich, never made their bundle and were largely in the business for the love of it. Croasdell was in contact with Ashford and noticed that Ashford had a mint original of a single by Eddie Parker, called 'I'm Gone' – a super rare 45. Croasdell offered to sell it for him and did so, on Raresoulman's famous auction site (www.raresoulman.co.uk) for a whopping £8,288! That put a smile on Ashford's face! ●

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"I also find it aurally refreshing to hear music through such a wide range of kit"



Tony Bolton

As the days draw out and we look forward (optimistically) to warmer weather and sunny days I have been rolling up my sleeves and trying to give the house and the hi-fi systems a spring clean. Regular readers will be aware of my two systems that feature in this magazine every month. Because of this job, they are taken apart and reinstated on a regular basis as equipment for review passes through the house. They therefore require little in the way of dusting and polishing, since this is done every time a visiting component arrives or departs.

However, there are two further systems in the house that I haven't mentioned before. These live in the dining room and my bedroom respectively, and are less subject to the constant component changes that occur with the main set-ups. Both have been built up over the years and are pitched at two different ends of the market.

The dining room system has changed slowly over the last 15 years. It started off as a 'classic' system, consisting of a Goldring Lenco GL75 running into a Rogers Ravensbourne amplifier and the matching tuner. Speaker duties were initially carried out by a pair of Wharfedale Lintons that I rescued from our local recycling centre for the princely sum of £3. An ancient Sony CDP -M69 supplied the digital source.

I connected it all up using Van den Hul The Bridge speaker cable and The Name interconnects. As time has gone on this has gradually changed. The Rogers amp gradually started to go off tune somewhat, and was retired pending surgery some years ago when a Denon PMA255 took its place in the early part of the century.

Soon after that NHT SB2

loudspeakers, that cost around £200 new, replaced the Lintons, and the system became more of a contemporary budget set up than a classic one.

Recently the Denon has been replaced with a Rotel RA-04 integrated that doesn't have the power of the Denon, but has possibly a rather more musical nature, and since it mainly functions playing background music through dinner, high volume is rarely required. This being 'Bolton Towers', the most regularly used audio source in the dining room is my 1954 Ferguson 322RG radiogram, whose Garrard RC75 autochanger has done sterling service through numerous dinner parties, working its way through stacks of jazz 78s. It has been mildly hotrodded with a 32 thou' truncated conical stylus, made for me by The Cartridgeman (www.thecartridgeman.co.uk), and the captive mains lead was replaced with an IEC socket, which has allowed me to experiment with plugging in modern mains wiring. The effects on the sound are transformative, and it is by far the most sensitive bit of equipment in the house when demonstrating the differences between these leads.

The current set up that resides in my bedroom consists of an Icon Audio Stereo 40 (Mk. I) that uses EL34s. This is fed by my Quad FM3 tuner and a Denon CDR 1500 twin-deck CD player and recorder. All of this is relayed through the Piega Premium I loudspeakers and the whole set up is wired with Chord and Atlas interconnects and Atlas speaker cables.

I have had a bit of a love/hate relationship with the Premium Is, until, that is, I hooked them up to the Stereo 40, working in triode mode. Then their tight bass and uber smooth but well defined treble from ribbon tweeters has proved

irresistible. Although this system is generally used for late night listening, it can play surprisingly loud for the claimed 17W output of the amplifier when used as a triode unit.

Since I am generally not in the room during the day, this is where I do most of the running in of components. Phonostages are fed with a signal from the CD player through a KAB PreCon LP. This little unit is wired in between the CD player and the phonostage and drops the signal level to a point that is suitable for phonostages. I take advantage of the twin decks of the CDR 1500 and have one loaded with a classical compilation, and the other the IsoTek Full System Enhancer disc or the Atlas Cables Burn In and Demagnetising Disc. The player is set to alternate the discs on repeat.

I use the same principle (minus the KAB PreCon LP) to run in any other component. This ensures that everything that I am reviewing has got the same mileage on the clock before being moved into either of the main systems, where serious listening commences.

So there you have it; the fairly diverse range of hi-fi systems that populate my musical life. I rather like having four quite disparate setups in the place. Each has its strengths and weaknesses, and it is rare that I review a piece of equipment that doesn't have some sort of synergy with one of these systems.

I also find it aurally refreshing to hear music through such a wide range of kit. It can be very easy to dwell in a sonic ivory tower in this job, and I like being able to 'ground' myself with the dining room system. It sounds very pleasant and does exactly what it says on the box, and it means that I can then go and listen to umpteen thousand pounds worth of hi-end kit in the front room system with a refreshed perspective. ●

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"if steam came out of the cables I would not be one little bit surprised!"



Noel Keywood

A few weeks ago my internet died. This has happened before. The routine is to lean out of the window and look for the digger that cut the cable. If no digger or road squad is visible, busy excavating another hole in the pavement, road or even my front path, then it is time to take a walk around the neighbourhood to spot a BT Transit van and purloin its driver to find out what is wrong. I've done this in the past and very successful it was too. I've had some fascinating explanations about the woes of the local network.

I should of course lookup the latest engineering works in my area on the internet rather than take to the street, but when your internet has just died this isn't so easy. What I did do in the end, in desperation, was phone Virgin Media to find out what the problem was. "Oh we've just put an end to the service" a cheerful chappy told me. Huh? Is this 2013 or 1913, I wondered. No internet? What is going on?

Of course, it was all my fault. I had forgotten, perhaps not really understood in the first place, about a peculiar approaching situation. Virgin Media had written to tell me and the rest of North West London that BT were unwilling to renew the lease of their cable network, so the service would end. And end it did! The screen went dead and that was it.

The cables are still there, but nothing is going down them. Needless to say, this struck me as peculiar – and we were not told by Virgin what would happen next. That hardly surprised me because ever since the first cable was laid and they tried to get steam down it, Westminster's cable service has been a physical shambles and a political hot potato. The infrastructure behind early analogue optical cables

installed in the 1980s and used for transmitting LaserVision (no less!) had to be torn out and new cabinets installed, jammed full of new digital amplifiers and transmitters, as well as cooling fans. First NTL operated the service and their engineering support was excellent. But as a sales operation I suspect they were wanting, so in came Virgin. All of a sudden there was no one to contact, unless I took out a bank loan to fund a call to an expensive pay number that put me on hold whilst it played ads to me at my expense.

Westminster was meant to have one of Britain's most advanced services so as not to upset those in power, in the Houses of Parliament and Buckingham Palace. They're all down the road a bit (a lot!) though, in a different world. Where I live, if steam came out of the cables I would not be one little bit surprised!

I needed an internet service. A frantic phone call to BT soon had them selling me BT+wireless+Fon, plus anti-virus protection plus household and pet insurance, etc, etc. I declined much of this and had no idea what Fon was, but desperate to get back on-line I just said yes to everything else and put the phone down.

That left me with a problem – no internet until the new service could be initiated. What to do?

I could piggy back off my local wine bar's free wi-fi, but they change the password regularly and I couldn't quite face creeping in at 10a.m. and sheepishly buying a glass of wine to get the new password. Worse, the owner knows me and would soon realise I was up to something, or suspect that I had become a closet alchy – this wasn't a good idea.

All my neighbours have become network savvy and pass-worded their wi-fi transmitters, so there was no piggy-backing to be had there either.

I could tether my iPhone to the Mac, but as I use the internet heavily this was going to be slow and expensive and a bit anti-social. Downloading high res music files over the mobile phone network isn't the best thing to do.

So I ended up investigating something I am sure I should know about but did not: BTWiFi, BTWi-Fi-with-Fon and BT Openzone, all of which have appeared on my Mac's Airport list, accompanied by enticing unlocked signs. In a hurry I signed up to BTWiFi-with-Fon, paid £15 for 5 days with my credit card and was back on-line quickly and with little trouble.

I was shocked. Not only was I back on-line, there were no cables, no visible infrastructure – and download and upload speeds seemed unchanged. At this point I realised that I have got used to thinking of wi-fi as slow and unreliable and cables as saintly, but times have changed.

What I thought was a Wimax-style wireless connection to the internet comes from sharing my neighbour's wi-fis, as there is no wireless service in Maida Vale, SamKnows (www.samknows.com) says. What a bizarre situation!

I now have ADSL over the telephone line, supplemented by shared wi-fi, like everyone else. It is not appreciably faster than the old fibre optic cable, nor than the Wi-Fi-with-Fon wireless link alone.

Why was the old fibre optic cable network turned off? BT are upgrading it by installing new, high speed BT Infinity glass fibre optical cables, I have learnt, for streaming TV I guess.

This is fine – or is it? I'm worried it won't be long until I go back to the old routine of opening the window to see which digger cut the (new) cable. Losing the internet has been an 'interesting' experience. ●



WORLD CLASSICS

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

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

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



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



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

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.



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.

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



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

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.



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

TECHNICS SL-PI200 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 VRDS-T1 1994 £600
Warm and expansive sound made this a mid price hit. Well built, with a slick mech.



ESOTERIC P0 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.



PINK TRIANGLE**DACAPO 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 £90**

Budget bitstream performer with tweaks aplenty. Positron PSU upgrade makes it smooth, but now past it.

TURNTABLES**ARISTON RDI 1S 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 programming. More of a visual and operational delight than a sonic stunner.

PIONEER PL12D 1973 £36

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 performs 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 century, albeit at a price

**DUAL CS505 1982 £75**

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

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/TD124 rivals.

LINN AXIS 1987 £253

Simplified cut-price version of the Sondek complete with LVX arm. Elegant 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

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

REGA PLANAR 3 1978 £79

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

GARRARD 301/401 1953 £19

Heavy metal - tremendously strong and articulate with only a veiled treble to let it down. In many respects, better than the seventies 'superdecks' that succeeded it.

**ROKSAN XERXES 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 'Biotracer' electronic tonearm. Built like a tank with a clean and tidy sound, albeit lacking involvement. Scarily complicated and with no spares support - buy with caution!

THORENS TD124 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.

**TOWNSHEND 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 threw their 'engineering best practice' book at this one with startling results. Clean, powerful and three-dimensional sound, ultimately limited by the tonearm.

TO NEARMS**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 HR100S 1981 £150

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

**SME 3009 1959 £18**

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

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 esoterica. Detailed, tight, neutral sound but tonally grey sounding in absolute 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.
HADCOCK GH228 1976 £46
 Evergreen unipivot 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 80V 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!



SUGDEN CS1/P51 1976 £130
 Soft sounding early Sugden combo with a plethora of facilities and filters, complete with seventies-tastic DIN socketry. A sweet and endearing performer as you'd expect, but lacking in power and poor load driving ability, so partner carefully.

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 MM/MC phono stage and huge feature count. Extremely reliable, too. Post '93 versions a top used buy.



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

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

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



MUSICAL FIDELITY A1 1985 £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 £40
 Smooth pre/power combo with a sweet and open sound. Not quite up to Leak/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.



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

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



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

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

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

AUDIO RESEARCH 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.

CONRAD JOHNSON MOTIV MC-8 1986 £2,500
 Minimalist FET-based preamplifier from the Yank valve specialists is brilliantly neutral and smooth with a spry, light balance in the mould of Sugden high end stuff. Something of a curio, but worthwhile nonetheless.

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

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

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

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

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



NAIM NAC32.5 1978 £ N/A
The Salisbury company came of age with this, their classic high end pre. Brilliantly fast and incisive sound that's a joy with vinyl but a tad forward for digital.

POWER AMPLIFIERS

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

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



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

LECSON 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, TL/12 PLUS 1949 £28
Early classics that are getting expensive. Overhauling is de rigeur before use, using original parts if possible. Surprisingly crisp and musical sound, that's far more modern than Quad IIs. Deeply impressive when in fine fettle.



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

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

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



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



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.

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

RADFORD STA25 RENAISSANCE 1986 £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 (25WV) and lots of subtlety.



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.

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.



PHONO STAGES

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



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

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

TUNERS

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



CREEK CAS3140 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 NAT03 1993 £595
The warm, atmospheric sound is further proof of Naim's proficiency with tuners.

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
Reputedly the best of the classic Jap analogues, this combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

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

LEAK TROUGHLINE 1956 £25

Series I an interesting ornament but limited to 88-100MHz only. II and III are arguably the best-sounding tuners ever. Adaptation for stereo easy via phono multiplex socket. Fed to a modern outboard decoder they're deliciously lucid with true dimensionality.



QUAD FM4 1983 £240

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



REVOX B760 1975 £520

More of a semi-pro machine than a domestic bit of kit, the Revox offers superlative measured performance although the sound isn't quite as staggering as the numbers. Fine nonetheless, and surely the most durable tuner here?

ROGERS T75 1977 £125

Superb mid-price British audiophile design, complete with understated black fascia. Fine sound in the true Rogers mould – smooth and sweet with fine dimensionality.

SANSUI TU-9900 1976 £300

A flagship Japanese tuner designed to steal sales from the likes of Accuphase and Revox, it boasts superlative RF performance and an extremely smooth and lucid sound, along with very fine build and finish.

SONY ST-5950 1977 £222

One of the first Dolby FM-equipped tuners, a format that came to nought. Still, it was Sony's most expensive tuner to date, and boasted a very good sound quality allied to brilliant ergonomics.

SEQUERRA MODEL I 1973 £1300

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



TECHNICS ST-8080 1976 £180

National Panasonic's specialist hi-fi brand was a big hitter back then, and this is no exception. Superb FM stage makes for a very clean and smooth listen with lots of detail and depth.



ANALOGUE RECORDERS

YAMAHA TC-800GL 1977 £179

Early classic with ski-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.



PIONEER CTF-950 1978 £400

Not up to modern standards sonically, but a great symbol of the cassette deck art nonetheless.

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

DIGITAL RECORDERS

PIONEER

PDR-555RW 1999 £480

For a moment, this was the CD recorder to have. Clean and detailed.

SONY MDS-JE55ES 2000 £900

The best sounding MD deck ever, thanks to awesome build and heroic ATRAC-DSP Type R 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.

LOUDSPEAKERS

ACOUSTIC RESEARCH

ARI85 1978 £125

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

BBC LS3/5A 1972 £88

Extremely low colouration design is amazing in some respects – articulation, stage depth, clarity – and useless in others (both frequency extremes). Came in wide variety of guises from various manufacturers building it under licence. Partner with Rogers AB1 subwoofers for an extra two octaves of bass!

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 overlooked 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 T27 / 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.



TANNOY WESTMINSTER**1985 £4500**

Folded horn monsters 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 HF1300 tweeter meets bespoke Spendor Bextrene mid-bass unit – and the result is a beautifully warm yet well focussed sound. A little bass bloom necessitates careful low-stand 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 serviced they give superb midband performance, although frequency extremes less impressive. Ideally, use in stacked pairs or with subwoofers and supertweeters.

**MAGNEPLANAR SMGA 198X****£800**

Technological loudspeaker with genuinely musical abilities; fast, smooth, open, dry.

KEF R105**1977 £785**

Three way Bextrene-based floorstander (complete with castors!) 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 Comeau-designed standmounters with an amazingly lyrical yet decently refined sound. Good enough to partner with very high end ancillaries, yet great with budget kit too. A classic

QUAD ESL63**1980 £1200**

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

CELESTION SL6**1984 £350**

Smallest two way design complete with aluminium dome tweeter and plastic mid-bass unit set the blueprint for nineteen eighties loudspeakers. Very open and clean sounding, albeit course at high frequencies and limp in the bass. Speakers would never be the same again...

MISSION 752**1995 £495**

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

YAMAHA NS1000**1977 £532**

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

CLASSIC CONTACTS

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

GT AUDIO

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

TECHNICAL AND GENERAL

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

CARTRIDGE MAN

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

QUAD ELECTROACOUSTICS

(Cambs) Quad's service department, able to repair almost all Quad products, from the very first. (Also Audiolab, Mission & Wharfedale).
Tel: 0845 458001 | www.quad-hifi.co.uk

Dr MARTIN BASTIN

(Shropshire) Garrard 301/401 restoration, renovation and service. Special plinths; rumble cures, etc.
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ARKLESS ELECTRONICS

(Northumberland)
Specialist in repairs, restoration and modifications to all amplifiers, valve or solid state, ancient and modern.
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(Paul Greenfield, Leicester)
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www.flashbacksales.co.uk/classique

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LORICRAFT AUDIO

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EXPERT STYLUS COMPANY

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OCTAVE AUDIO WOODWORKING

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

REVOX

(Brian Reeves, Cheshire)
Revox tape recorder spares, service and repair. Accessories also available.
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Anna

Xpression



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.

Cadenza Series



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



WIN NAIM'S SUPERB NAC-N 172 XS PRE AMPLIFIER IN THIS MONTH'S GREAT GIVEAWAY!

Here's your chance to win a superb Naim NAC-N 172XS pre-amplifier we reviewed in the February 2013 issue. Read the review excerpt below and answer the questions.

"It is surprising quite how much Naim have packed into this product – considering its price. I listened to it first through my own system with which I'm familiar, then through the Naim NAP 155 XS power amplifier they supplied. What follows is the sound through my system comprising VAC Auricle Musicblocs (valve) connected to B&W 802D loudspeakers.

Listening to my stock hi-res digital audio collection, starting with

the Rimsky-Korsakov "Dance of the Tumblers" on Chesky, through a USB memory stick inserted at the front of the player, I was immediately struck by the fact that the sound is significantly better than that I get from a Windows laptop, running Windows 7, Foobar with JPlay, and using the Halide Bridge as a SPDIF/USB convertor. The NAC-N 172 XS makes my current setup sound smudged and lacking in resolution. The Naim has a tautness in the bass, a speed of timing which makes the track rock impressively.

Having just found out about Hyperion Record's growing collection of superbly recorded high-res material, I listened to the much under-appreciated Schumann D minor Violin Concerto, beautifully

expounded by soloist Anthony Marwood. The preamp/DAC provides a warm, tonally rich account of the sound, without any nasty digital artefacts that sometimes can be present. Its superior sense of rhythm seems to enjoy the pulsating triplet quavers that pervade the first movement.

Listening to a live concert recording I made of my quartet – the Allegri Quartet in Beethoven's Op18 no6 Quartet 3rd movement, the Naim really captures the heat of the live concert. Tonally the balance isn't bright, it is mellow at the top and unmistakably 'Naim' in the middle, but it reminds me of the digital I heard from the best USB/SPDIF convertors – a taught, rock-solid sound you get with very low jitter".

For a chance to win this great prize, just answer the four easy questions at right. Send your entries on a postcard only, by 8th June 2013 to:

**June 2013 Competition,
Hi-Fi World magazine,
Unit G4, Argo House,
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QUESTIONS

[1] What Naim power amp was used?

- [a] NAP-200
- [b] NAP-250
- [c] NAP-155XS
- [d] NAP-150

[2] What sounded "smudged"?

- [a] record deck
- [b] current setup
- [c] tuner
- [d] headphones

[3] The Naim bass had?

- [a] tautness
- [b] softness
- [c] smoothness
- [d] speed

[4] A rock-solid sound you get with?

- [a] no noise
- [b] digital
- [c] very low jitter
- [d] DIN plugs

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**MARCH 2013 WINNER: CHORD QUTEHD DAC
Mr Paul Faulkner of Watford**

vinyl section

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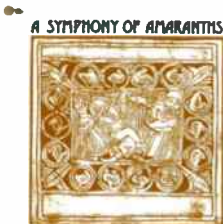
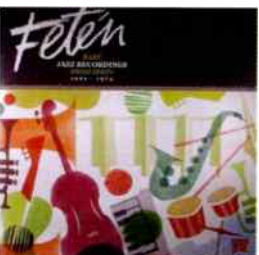
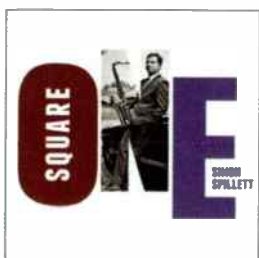
JUNE 2013

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iFi PHONOSTAGE 87
A phono stage for older LPs, enjoyed by Tony Bolton.

GERSHWIN'S PIANO ROLLS 91
Tony Bolton enjoys Gershwin playing - Gershwin!

news



BY NEIL ARDLEY

BLENDING JAZZ

A host of new jazz LPs have been released over various labels. First up is Simon Spillet's 'Square One' ([Gearbox: www.gearboxrecords.com](http://www.gearboxrecords.com)), the English tenor sax player and a Tubby Hayes disciple. This new LP is his third, dynamic yet more mature, LP as leader.

Check out too Duke Ellington's sound track from the film, 'Anatomy Of A Murder' (1959), from Music On Vinyl (www.musiconvinyl.com); it is moody, witty but restricted by the movie itself. Chet Baker's 'She Was Too Good To Me' (1974) was a sort of comeback after five years of inactivity. A fine session including 'Autumn Leaves' and 'Tangerine' and the Roy Ayers' LP 'Virgo Vibes' (1967) was one of his finest as a vibraphonist leader featuring advanced hard bop with free jazz elements.

Fetén: Rare Jazz Recordings From Spain 1961-1974, is a two-LP set from Vampi Soul (www.vampisoul.com) including many rare cuts such as Juan Carlos Calderon, Vldy Bas and the Modern Jazz Sextet.

Finally, Wah Wah (www.wah-wahsupersonic.com) has released the first ever vinyl reissue of Neil Ardley's 1972 release: 'A Symphony Of Amaranths'. Reamstered from the original tapes, it features Stan Tracey and Don Rendell.

THE DAMNED ON 45

Issued by Ace (www.acerecords.co.uk) is the limited edition box set, 'The Chiswick Singles', a 7" square pizza style container featuring seven, 7" singles often with stickers including facsimiles of the original promotional copies including many rarities such as the withdrawn 'White Rabbit' and the promo version of 'Rabid (Over You)'.



SPEAKERS CORNER

New out from the German audiophile outfit, Speakers Corner (www.speakerscornerrecords.com) is 'Burgers' (1972), the third album from Hot Tuna, the Jefferson Airplane spin-off outfit. A combination of rock and folk, this was the band's first studio album.

Also out is 'Beck Bogart Appice' (1973), an odd album that fused Jeff Beck with the rhythm section of Vanilla Fudge (Tom Bogart) and Cactus (Carmine Appice) and smothered the piece with heavy riffs.

George Benson's 'Beyond The Blue Horizon' (1973), a superb small group jazz outing with plenty of bite and featuring Jack DeJohnette.

Also watch out for jazz singer/keyboard player, Les McCann Ltd's 'But Not Really', a rare outing for this LP while Chi Coltrane's self-titled debut (1972) showed a sophisticated Carol King approach – includes the hit single 'Thunder And Lightning'.

BURGERS
HOT TUNA



ROCK MOV AND MORE

A new batch of vinyl has arrived from the prolific Music On Vinyl including a host of classic rock.

Procol Harum's 'Live In Concert' With The Edmonton Symphony Orchestra was almost an afterthought but proved a raging success, the orchestral addition being a particular bonus.

Mick Ronson's superb and quite remarkable debut solo LP, 'Slaughter on 10th Avenue' (1974) sees the great man singing (which ain't bad) and playing that signature guitar (which is bloody marvellous).

Iron Butterfly's 1968 debut album, 'Heavy', established the band's trademark sound, relying on heavy guitar riffs and thundering drums. The sound was all – which made up for the poor songs.

Also look out for hard rockers, Mountain, recording 'Nantucket Sleighride' from 1971: not groundbreaking but it is well worth listening to; Styx's stadium rocker 'Cornerstone' from 1979 includes the hit single, 'Babe' but the rest doesn't live up to past works; Bloodhound Gang's 'One Fierce Beer Coaster' can be describe as smarmy metal rock packed with junk culture retorts and sprinkles of funk. The lyrics are poor though.

More folk-rock, Tim Buckley's wonderful self-titled debut (1966) is both sophisticated, melodically and lyrically. Finally, check out the indie rock of The Gun Club's 'Miami' (1982) which included Blondie's Chris Stein.



SUNDAZED AND CONFUSED

New out from the US-based audiophile outfit is Albert King's 1962 debut, 'The Big Blues', includes backing from Ike Turner plus King's own smoky voice, adaptable guitar style and willing to experiment.

Also look out for blues man, Freddy King's 'Goes Surfin' plus The Throwaway Age's Soundtrack, a Bob Irwin (owner of the Sundazed label) project with a retro feel of surf, drag and SF.

...AND FINALLY

Look out for The Dirty Dozen Brass Band's 'What's Going On' (*Pure Pleasure*; www.purepleasurerecords.com) a superb yet angry indictment to the New Orleans, Hurricane Katrina farrago. Lynrd Skynyrd's 1973 superb 'Pronounced Leh-Nerd Skin-Nerd' (*Mobile Fidelity*; www.mofi.com) has been superbly mastered within a gatefold sleeve while Ian Gillan-era Deep Purple's flawed 'Perfect Stranger' (1984) has been reissued via Wax Cathedral!

Continuing the hard rock is Three Seasons' new release, 'Understand The World' (*Headspin*; www.clearspot.nl), a Swedish outfit with a distinct Deep Purple sound with an oft-heard Floydian ambience.

Moving to beats/jazz and Matthew Herbert's 'Bodily Functions' (*Accidental*; accidentalrecords.bandcamp.com) presented in a die-cut sleeve. Serving advanced electronica, soul/funk grooves and intelligent techno, this album is a fascinating journey in sound.

Two from the mighty Ninja Tune (www.ninjatune.net). 'Lonely At The Top' is Lukid's new LP, a post-trip hop tour de force full of optimism and spacious soundscapes. Zulu Guru from Jesse Boykins III and MeLo-X, meanwhile, offers a melange of hip hop and funk R&B that curls street culture lyrics with exotic musical arrangements.



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i sight

Tony Bolton gets a new view into his record collection with the iPhono multi-EQ phonostage.

In recent years we have got used to the lower case letter 'i' being placed in front of a variety of words, following Apple's iPod. Now we have the iPhono phonostage reviewed here. It's part of a new line of electronics from ifi that uses technology licensed from AMR (Abingdon Music Research). The range includes a DAC, headphone amp, USB power supply and a USB to S/PDIF convertor, as well as the phonostage.

The new iPhono is unusual in offering a choice of the main microgroove era equalisations – Columbia, Decca, RIAA – that existed until around 1980, when the RIAA curve finally made it into pretty much universal usage.

Although RIAA was officially adopted in 1955, Decca, for instance, continued using their frrr curve for a number of years. The only way to be certain of an older record's correct equalisation is to try the three main settings and see which sounds best.

The iPhono comes in an attractive and compact alloy case with the input sockets for both Moving Magnet and

Moving Coil cartridges at one end, and the output sockets mounted at the other end, alongside the power socket. This is fed from a wall-wart type transformer plug.

Beside the output sockets is a three position toggle switch that selects one of three equalisations.

Underneath are three banks of DIP switches that can be used to select three capacitive loadings (pF) settings for MM cartridges and four impedance loadings for MCs. A small screwdriver is thoughtfully provided with which to operate the tiny switches.

bi-polar devices, J-Fets and Advanced Discrete components". Power consumption is claimed to be no greater than 4W.

After giving the iPhono my usual 48 hour running in period I plugged it into the upstairs system in place of the resident Luxman E200 phonostage. Bearing in mind that I was dropping the component price by a factor of about six times in doing this, I was pleasantly surprised at the relatively small drop in sound quality. I found quite substantial bass, allied to a very open midband that invited me to listen into the mix.

"I found quite a substantial bass sound allied to a very open midband that invited me to listen into the mix."

A third bank of DIP switches provide an enhanced RIAA setting and an IEC subsonic filter.

Inside, amplification is provided by what is called a Class A TubeState circuit that comprises of a "tri-brid of

I started off with the toggle switch in the RIAA position when playing one of my oldest LPs, Karl Munchinger and the Stuttgart Chamber Orchestra playing the Bach Brandenburg Concertos. This is one of the January



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 Audio Research 8200 Integrated, Pre and Power, ex demo
 Chord Prima, Mezzo 140, CPA3000, SPH1050, ex demo
 Onkyo AV Amplifiers, various ex demo

NAD CS15, 545 565 CD and C446 Media Player ex demo
 AMR CD777 ex demo
 Roksan Kandy K2 & Caspian M2 CD Players, ex demo
 NAIM DAC, CD5XS, CDX2, NDX, ex demo
 TEAC Distinction CD1000 & CD3000 ex demo
 Audiolab MDAC, 8200CD and CDQ ex demo
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 Chord Blu, Qute HD and QBD76HD ex demo
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 Sonos, various pieces, ex demo

Kudos C2, ex demo
 Focal Elektra range, ex demo
 Monitor Audio GX, RX and Platinum ranges ex demo
 Wharfedale Diamond 10 range, ex demo
 Usher Audio S520, X718 & Be718 ex demo
 Magneplanar MG3.6, ex demo
 Q Acoustics, various ex demo
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The three banks of DIP switches control the loading and sensitivity for the cartridges and provide extra refinements to the three main EQ curves which are selected via a toggle switch on the front panel.



1950 release of the first LPs into the UK by Decca. It has survived the years well, sounding quite fresh with only very minor surface noise intrusion, which would have been muted if there had been a mono/stereo switch fitted (although there's little room for one).

I changed the EQ to the Decca (ffrr) setting and was rewarded with a small but noticeable improvement in the balance of the sound. The higher frequencies gained a little definition and the midrange seemed a bit more expansive, which in turn helped to flesh-out the shape of some of the lower notes.

I moved onto an American 'six-eye' Columbia pressing of Noel Coward live at the Desert Inn in Las Vegas. Moving the toggle switch to the Columbia setting rebalanced the sound to give a better presentation of the orchestra and the response of the audience to some of Coward's fruitier lyrics.

The same improvement in detailing applied when I played 'Inside' on the Epic label, again using the Columbia setting. The sound of the echoes of voice and flute circling around the dome of the Taj Mahal became separated from each other and allowed me to picture the movement of the sounds far more clearly than I could when using the RIAA setting.

I finished listening with a late night chill-out favourite of mine, 'Blue Lines' by Massive Attack. This 1991 disc sounded, as it should do, at its best using the RIAA setting. The bass was quite fulsome for such a modestly

priced solid state phono stage and the music flowed in a very effortless manner that, again, belied the price of the electronics.

I am very impressed with the iPhono. As an RIAA phono stage it offers a level of performance that I have rarely heard at this price point. Although the sound lacks the really deep textures and shapes that a valve unit would offer, I can quite see why

the designers have used the term TubeState for the amplification. It offers a smoothness and depth that few competitors at even double the price can achieve.

When the flexibility of the differing EQs, and their beneficial effects on a lot of pre-1980 records are factored in, then this has to be something of a bargain at £350, and as such is unequivocally recommended.

MEASURED PERFORMANCE

This small stage comes with a very wide range of gain, equalisation and loading options, all selected by DIP switches whose markings are clear when you understand them. Trying to figure them out initially is challenging, there are so many options and some selections require knowledge.

Standard RIAA equalisation is available and measurement showed it was accurate, although MC rolls off below 20Hz, whilst MM rolls off below 4Hz. Switching in eRIAA (enhanced) raises upper treble a tad, supposedly to account for cutting losses. As most cartridges peak up in the treble this isn't commonly required, and the lift was small. Switching in IEC inserts a warp filter but the bass roll off, that starts

below 100Hz, subjectively lightens bass so much it is rarely used. A front panel switch also selects Columbia and Decca equalisation curves, earlier alternatives to RIAA.

Gain for Moving Magnet cartridges was x100 (40dB) or x200 with the +6dB option switched in. Normally, x200 would be best but because output overload occurs at a low 4V the lower gain figure is needed for high output cartridges like Ortofon's 2M series, able to deliver 30mV output.

Gain values for MC were similarly on the low side at x800 and x1600, but sufficient to cover all but the lowest output models.

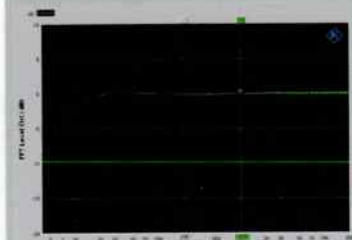
Noise (equivalent input noise, IEC A weighted) was a little high, measuring 0.64µV for MM and 0.18µV for MC, the latter being around +6dB hisser than the quietest stages around. So only high output MCs should be used; this is not a stage for low output MCs. The MM noise figure is acceptable because MM cartridges generate more noise than this, so they set phono preamp noise level, not the first transistor.

The iPhono works well in all areas, although it isn't the quietest stage going and is not for super high quality MCs. Its Columbia and Decca early equalisations suggest it is aimed at vinyl record collectors. **NK**

FREQUENCY RESPONSE, MM



FREQUENCY RESPONSE, MC



Disc	
Frequency response	10Hz-20kHz
Separation	68dB
Noise (ein, MM/MC)	0.6µV / 0.2µV
Distortion	0.02%
Gain	x100, x200, x880, x1600
Overload	4V out

SYSTEM USED:

Linn Sondek/ Hadcock 242
Cryo/ Clearaudio Concept
MC.
Townshend Allegri pre-amp
2 x Quad 303 power amps.
Kelly KT3 loudspeakers.

MUSIC USED:

Bach. 'Brandenburg Concertos No.1 in F Major, No.5 in D Major.' Karl Munchinger conducting the Stuttgart Chamber Orchestra. Decca Records Ltd. LXT 2540. 1950.

Noel Coward. '... At Las Vegas'. Columbia Records. ML 5063. 1955.

Paul Horn. 'Inside'. Epic Records. BXN 26466. 1968.

Massive Attack 'Blue Lines'. Wild Bunch Records. WBRP 1. 1991.

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VERDICT

Multi EQ phono stage from British manufacturer that punches well above its weight.

FOR

- Open sound.
- Six EQ curves.
- Musical nature

AGAINST

- Poor switchgear layout.
- No mono/stereo switch

www.ifi-audio.co.uk



The rear of the iPhono houses the separate inputs for MM and MC cartridges. An extension lead is provided that connects to the central earthing point and eliminates any risk of the earth touching the plugs.

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George Gershwin 'Rhapsody In Blue'

Tony Bolton listens to two versions of a piano roll of 'Rhapsody In Blue' played by its composer, George Gershwin.

Last month I discussed the piano rolls made by Percy Grainger of the Grieg Piano Concerto and mentioned the vast industry that fed the popularity of this music format. The demand for skilled pianists to cut the rolls was massive and one of these artists was a young George Gershwin who began recording rolls of other people's music from the age of 15. By his mid 20s he was a successful composer and pianist, working with the Paul Whiteman Orchestra,

Columbia Masterworks 76509 contains the piano roll accompanied by the Columbia Jazz Band. This is the original orchestration, first heard at the 1924 concert at the Aeolian Hall.



the most successful orchestra in the USA at the time.

In 1924 he was commissioned by Whiteman to write a concert work to be performed at the Aeolian Hall. The concert was entitled 'An Experiment In Modern Music' and took place on 12th February 1924 with Whiteman conducting his orchestra and Gershwin at the piano. It was written in a period of three weeks and orchestrated by Ferdinand Grofe who was later to achieve fame as the composer of the 1931 'Grand Canyon Suite'.

'Rhapsody in Blue' was originally performed with a 24 piece jazz band, but has become better known through the 1942 arrangement for full orchestra again arranged by Grofe. Gershwin made two recordings of the piece. One acoustically in 1924 (Victor 55225) and a second in 1927 using the new electrical recording process. This was released in the USA on Victor 35822, and in the UK on His Master's Voice C1395. Both of these recordings are seriously truncated, running for 8:59 and 9:01 respectively (the two versions on LP that I am discussing here play for 13:11 and 13:09). The 1927 recording was actually conducted by Nathaniel Shilkret following an argument



This record (Ember GVC 27) contains a recording of the solo piano roll.

between Gershwin and Whiteman, although Whiteman is credited on the record. I have a copy of this and it is interesting to listen to, but is let down by a rather cluttered sound quality.

The only full length version of the piece with the composer playing is available on a pair of Duo Art piano rolls which he cut for the Aeolian Company in 1925. On this he adds a piano fill-in for the orchestral accompaniment, which may have required a second pass of the recording to allow Gershwin to fill in the gaps where the complexity of the scoring required more notes to be played than two hands could manage.



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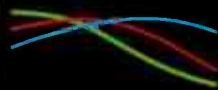
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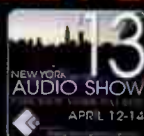


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A recording of this, performed on a Duo Art Steinway pianola is available on Ember Records GVC 27. It is fascinating to listen to, with the famous opening glissando that is usually taken by a clarinet, being played on a piano. The style is very intense, with a real exuberance to the playing. The pacing seems, at times, to be taken at a breakneck speed, and it is a compliment to the

"the pacing seems, at times, to be taken at a breakneck speed"

1976 to record a performance of 'Rhapsody In Blue' in its original form with Michael Tilson Thomas conducting the Columbia Jazz Band accompanying Gershwin's piano roll. (Columbia Masterworks 76509.) Part of the preparation for this entailed going through the rolls hole (note) by hole and blocking up the additional backing made by Gershwin so that only his solo piano was left. A Duo-Art grand piano was used for the recording.

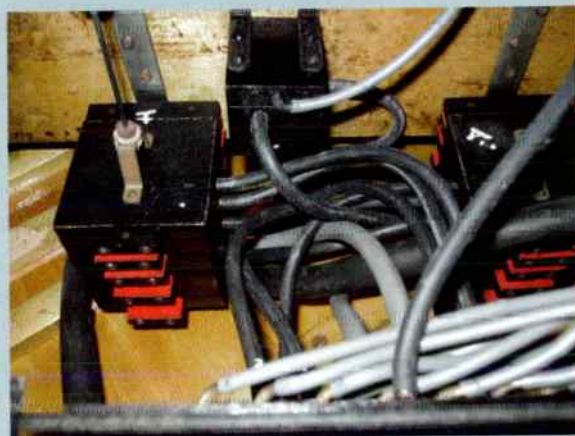
The speed of the performance seems enhanced by the presence of the orchestra. In fact there are times when they seem to be racing away with the piece, until the piano joins in, and it becomes obvious from the speed of the playing that the orchestra is in fact moving at the allotted pace. The usage of instrumentation also varies quite drastically in places from the full orchestral version that we are used to hearing, giving it a punchier and very vivid presentation.

Comparing the piano roll recording with the 1927 shellac example reveals a similar speed and intensity to the playing that seems to corroborate the validity of the two pianola derived records. Both of these are worth searching out, each offering a different flavour of such a well known piece of music, yet both stemming from the same source material.

I like the piano solo version for its directness, the strictness of the tempo and the rhythmic drive, and enjoy the Tilson Thomas recreation of the original concert scoring for the same reasons but with the added emotional impact that the instrumentation provides.

These performances are also available on CD: the Tilson Thomas recording is released as 'Rhapsody In Blue: Etc.' CBS Masterworks 42240, and the solo piano roll performance can be obtained on 'Gershwin Plays Gershwin', released by Naxos Nostalgia 8.120510.

Early pianolas were relatively crude machines that applied an equal force to all of the notes actuated by the mechanism. Although a recognizable tune was played, there was little ability to create a realistic performance that displayed the variations in intensity that a human player would produce.

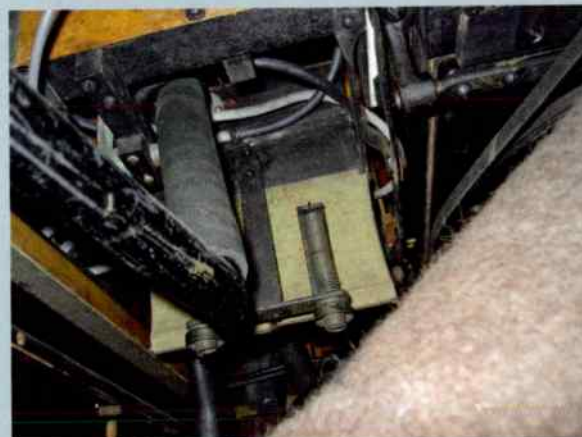


The accordion pneumatic which supplies the airflow to the Expression Regulator. (Photograph courtesy of Paul Morris. www.paulmorrismusic.co.uk)

The Duo-Art system of recording piano rolls was introduced in March 1914 in response to the products of Welte-Mignon and the American Piano Company (Ampico). All three systems used a mechanism to actuate controls that varied the intensity of the playing to give a more realistic performance of the music.

The Duo-Art system was capable of recording (punching) up to 3,600 perforation rows per minute, giving an accuracy of 1/60th of a second. Dynamics were also controlled by the roll, meaning that the user could sit down at an Aeolian machine and have a fairly accurate facsimile of the original performance replayed to them just by operating the pedals to drive the mechanism.

For further information on piano rolls and Player Pianos please visit www.paulmorrismusic.co.uk.



The Duo-Art Expression Regulator mechanism. (Photograph courtesy of Paul Morris. www.paulmorrismusic.co.uk)



The B-side of this record contains four examples of piano rolls cut by Gershwin between 1916 and 1925.



performing skills of the composer that it sounds comprehensible.

The original jazz band scoring resides in the American Library of Congress. The National Symphony Orchestra obtained the score for a performance of this arrangement after having a music copyist make separate parts for the individual players. These stayed in the Orchestra's library and were obtained by Columbia records in

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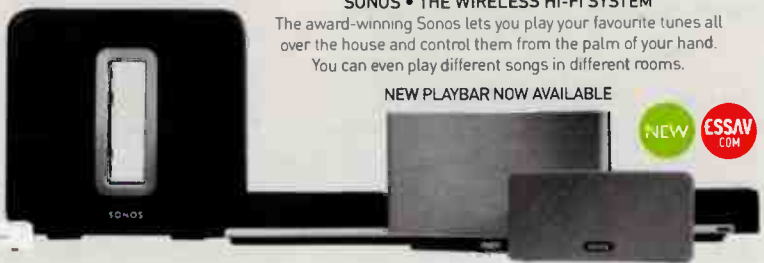
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World Radio History

Sony Elcaset

Martin Pipe revisits the 'big' decade of the 1970s and renews his acquaintance with the high-performance analogue tape format that time forgot.



In addition to Sony's top-of-the-line EL-7 shown here were the EL-5 and portable EL-D8, 'both two-headers'. A 'budget' piano-key EL-D4 was sold in the US; Elcaset hardware was also sold by Teac and Technics, although JVC's never made it to market.

The 1970s. Big hair, big muscle cars, big sideboards, big strikes, big UK budget-deficits, big prog-rock and a big defeat for the Americans in Vietnam.

It was also a big time for hi-fi, especially if you bought Japanese. Enormous speakers with twelve-inch woofers, heavy direct-drive turntables and massive amplifiers boasting high outputs and every conceivable gadget. Most Japanese manufacturers were happy to build cassette decks around the established Philips format that started life in a dictating machine, and indeed Nakamichi's maverick engineering took it to new heights.

But one such firm also thought big when it came to cassettes. Although Sony built cassette decks, it decided to do its own thing and

in 1976 introduced Elcaset – a new format based around a larger cassette containing a greater quantity of tape.

This wasn't used to increase running times; although Elcaset offers cassette-like running times (typically the 45 minutes per side of a C90), they're run at 9.5cm/s – twice the speed of the Philips format, and identical to the slower 'quality' speed offered by most of that era's reel-to-reel domestic tape recorders. In another nod to Sony's marriage of reel-to-reel performance to cassette convenience, Elcaset's four tracks (two for each side) are recorded onto quarter-inch tape, twice the width of the stuff you would find in a normal cassette. The higher speed and wider tracks gave Elcaset an extraordinary performance by mid-

1970s cassette standards, in terms of frequency response, signal-to-noise ratio, dynamic range and freedom from 'dropouts'.

That's not all. Elcaset employed a new kind of transport system. The Philips design restricts the size and positioning of the all-important tape heads, and under some circumstances the cassette body can itself impair performance. Elcaset gets around these problems by 'snatching' tape from the cassette with pinch rollers, located on opposite sides of the transport, and wrapping it around a larger-than-usual tape path designed with stability in mind.

In the most popular of the Elcaset models, Sony's stunning-looking EL-7, there are three ferrite tape heads and a series of guides spread out between two capstans

and the aforementioned pinch rollers that come into contact with them. This 'closed-loop dual-capstan' approach ensures intimate tape-to-head contact and lower wow and flutter – already good, thanks to the higher speed.

Behind the EL-7's two capstans are a pair of large flywheels, driven from a large motor via a flat belt.

Although this capstan motor is only active when needed, a servo system always ensures that it's quickly brought to the correct speed; not running it continuously ensures a longer life. And these beasts were built to last. The EL-7 weighs nearly 14kg, making it one of the heaviest cassette machines ever built. That bulk also includes some useful features. The two spools of the logic-controlled transport are each driven by their own motor, for reliability and fast winding. Dolby noise reduction (with user-calibration) is built in, although some types of music don't need it.

Mikes – with switchable attenuator – can be balanced and mixed with a line input, and overall recording levels set with a 'master' control. Around the latter is a rotating 'marker' that reminds you of a previous setting. A switchable multiplex filter (which stops any residual 38kHz or 19kHz signals on your tuner's output from 'beating' with the recorder's bias oscillator and generating an audible 'whine') ensures clean recordings from FM radio – as tapers of 'In Concert' or Radio 3's classical fare would have appreciated.

Best of all, the EL-7's three-head configuration enables you to monitor the recording currently in progress;

those heads are optimised for their roles, ensuring the best possible performance.

Few other manufacturers signed up to Elcaset; Sony's Eric Kingdon confirmed that only Teac and Technics produced hardware. JVC's machine never even made it beyond the prototype stage. Similarly, tape wasn't exactly thick on the ground. There were two varieties, accommodated by the deck's separate bias and equalisation switches – 'blue' Type I (ferric) and 'red' Type II (ferrichrome). Few if any chrome ('Type III') versions ever made it to market – and, beyond demo tapes, no pre-recorded material was ever released on Elcaset.

Most of the blank cassettes sold were made by Sony's media division. All had a resettable record-protection lug, a Dolby-mode tab and even cutouts to identify the type of tape contained within. However, the latter two weren't harnessed by Sony's machines. Neither was another interesting feature. The Elcaset specification allowed for 'cue tracks' between the two pairs that carried audio. These could have been used for slide synchronisation or quick 'track finding'. Before a new Elcaset generation capable of supporting these innovations could be released, though, Sony pulled the plug – and the other manufacturers followed suit.

Here in the UK, 1976 was marked by a sweltering summer; Elcaset, alas, didn't set the tape world on fire. Good though it was, Elcaset was just too expensive. At that time, an EL-7 cost around £550 – over



Two pinch-rollers (with conic 'caps') wrap the tape around the EL-7's three heads during record/play-back



As we see here, the Elcaset is considerably larger than a normal Philips cassette

£2,500 today. Quality 'tapers' stuck with familiar reel-to-reels like the Revox A77, which was considerably cheaper. It should also be borne in mind that cassette technology – both hardware and tape formulations – was improving at a staggering rate during the 1970s, to the extent that the reel-to-reel performance gap was fast-closing. And these new cassette decks, which adhered to an established standard with all of its compatibility implications, were cheaper and more widely available.

This brochure, extolling Elcaset's virtues, was issued by Sony to American hi-fi dealers

The Sony EL-7 Stereo ELCASET Deck

A new quality tape format from Sony that provides superior recording, combined with the convenience of easy loading and automatic control.

SONY ELCASET

This is the Sony EL-7 Stereo ELCASET Deck

The EL-7 Stereo ELCASET Deck features a dual-capsule tape path. One set of the capstans and two pinch rollers, one set on each side of the head assembly. This results constant tape tension across the heads, consistent wow and flutter, and makes head-to-tape contact virtually permanent.

THREE MOTORS

The capstan drive motor (DC servo controlled) makes that necessary accurate speed control possible. The tape motor and the motor which controls the tape transport are each driven by their own motor, for reliability and fast winding.

THREE TOP QUALITY HEADS

The EL-7 also features Sony Ferric and Ferric Oxide heads. The latter incorporates phase induction, ferric oxide and requires edge coating characteristics between both small diameter and large heads for better tape monitoring during record.

LOGIC TRANSPORT SWITCHING

The transport is operated by half-trackwidth switches activating logic controlled subtracks. This system enables the EL-7 to be switched from fast-forward to record, from record to play, from play to fast-reverse to stop, without having to cut and the tape stops on reaching the stop button between function changes. The tape control also has a built-in pause button which changes the transport from automatic stop and play to manual stop and play. Also, because the switching is all electronic, the EL-7 is fully immune also with the optional Sony SR-35 Remote Control Unit.

DOLBY NOISE REDUCTION

The Sony EL-7 also features 'Dolby' Noise Reduction. In addition to the standard Dolby B noise-reduction system the EL-7 contains the optional Dolby C noise-reduction circuit to enable superior recording of Unipolar FM broadcasts. There is also a built-in ATR (Automatic Track Reverse) system for recording stereo broadcasts in an audio-visual presentation. It should be noted, with an appropriate recorder, to record other stereo or monophonic systems in a double system master package format. CR-8 control is used for the storage of digital information in a variable speed control system now being developed which would enable you to select specific cuts for playback.

MEMORY TAPE COUNTER

A memory loaded tape counter enables the EL-7 to store automatically programmed time and playback after recording from a specific spot on the tape. The technique may be activated by a press to enable the recording of material with set intervals in advance.

OTHER FEATURES OF THE SONY EL-7 INCLUDE:

- 2-pinch tape head system
- 1-pinch tape head system
- Phase-locked timing
- Phase-locked timing
- Source: Tape monitor switch
- AC-coupled 1.25W (Stereo) & 3.00W (Mono) amplifier
- Phase-inverting

This is the ELCASET!

A NEW FORMAT

The Elcaset tape is much like the tapes at 375 inches per second. When out of the deck the tape is protected within the Elcaset shell from dust, abrasion and crushing. When inserted into the Elcaset deck an automatic loading mechanism, similar to that found in the Sony Betamax Videocassette Deck, threads the tape between the capstans and pinch rollers and across the heads. Because of the Sony tape's increased performance of the cassette leading-edge tape system, the prevention of tape deck damage, the prevention of the tape from stretching and the prevention of tape breakage are provided.

The Elcaset is compatible between stereo and mono. The Elcaset uses the same head construction as the compact cassette, with left and right channels adjacent. There is no deterioration of sound quality when a stereo Elcaset is played on a mono Elcaset deck.

The Elcaset has provision for control track recording. In addition to the scale-related left and right there is a third recording track provided for on each side of the Elcaset. This track, known as the control track, may be used for any number of additional information functions. For example, it could be used for recording date-change cues in an audio-visual presentation. It could be used, with an appropriate recorder, to record other stereo or monophonic systems in a double system master package format. CR-8 control is used for the storage of digital information in a variable speed control system now being developed which would enable you to select specific cuts for playback.

Because it is a separate track, the control track does not affect the main recording.

THE ELCASET ALSO HAS THESE ADVANTAGES:

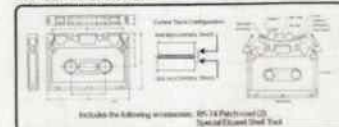
The Elcaset has built-in features which are without doubt the closest to that of the Elcaset Deck. There are also a number of signal holes in the Elcaset case which automatically adjust the Sony Elcaset Deck to the type of tape being used. (Blue and Red). There is also a variable adjusted sliding tab on the Elcaset to prevent accidental erasure of recorded material.

SPECIFICATIONS OF SONY ELCASET TAPE

	TYPE I (Blue)	TYPE II (Red)
Substrate	Acetate/Polyester	Acetate/Polyester
Color of Tape	Blue	Red
Width of Tape	6.3 mm.	6.3 mm.
Length of Tape	175 m.	175 m.
Thickness of Tape	18 µm.	18 µm.
Recording Strength	2.5 µV	2.5 µV
Capstan Groove	330 Crested	330 Crested
Maximum Speed		
Replay: Play Density	120 dB	120 dB
Stop Control	120 dB	120 dB
Stability	±0.5%	±0.5%
Variation of Density	±0.5%	±0.5%
Signal to Noise Ratio	62.5 dB	62.5 dB
Distortion	0.1%	0.1%

*Deviation from the standard type of TYPE I.

ELCASET DIMENSIONS



SPECIFICATIONS:

Recording System: 4-track, 4-channel
 Frequency Response: 20 Hz to 20,000 Hz
 S/N Ratio: 62.5 dB (Type I), 62.5 dB (Type II)
 Power Requirement: AC 220V, 50 Hz
 Dimensions: 175 mm (W) x 175 mm (H) x 175 mm (D)
 Weight: 14 kg
 Serial Number: SR-35
 Part Number: SR-35 (Type I), SR-35 (Type II)
 Type: SR-35 (Type I), SR-35 (Type II)
 Date: 1976

ELCASET Look for the mark on all products manufactured under the ELCASET trademark.



SIMPLY THE BEST HI-FI SHOP IN THE WORLD



For the past four decades

KJ West One has built up an enviable reputation as the leading purveyor of high-end audio products. You are invited to visit our newly refurbished Central London showroom to enjoy the world's finest sound and visual reproduction systems, represented by major international brands.

Devialet
Quad
Magico
Steinway Lyngdorf
Metronome Technologie
Harbeth
Copland
SME

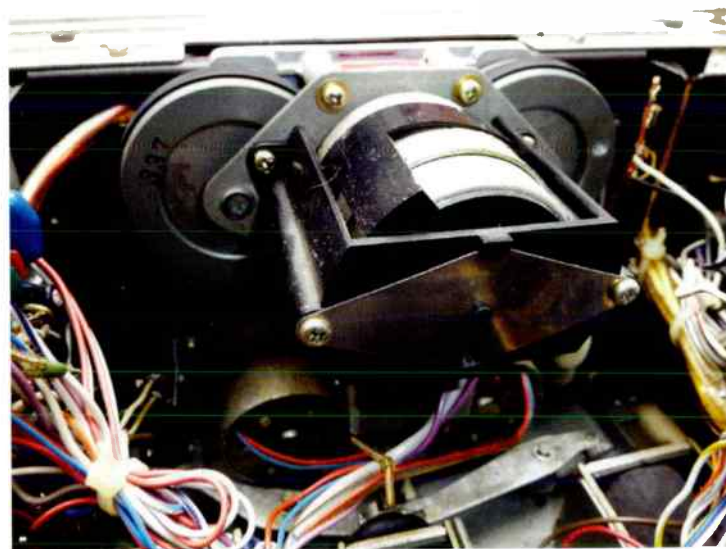
Sonus Faber
Linn
Audio Research
Clear Audio
Martin Logan
Pathos
Dan D'Agostino
Wilson Audio

Krell
Imerge
Focal
Jadis
Continuum
Unison Research





Internally, the EL-7 is a sophisticated beast. No wonder it's so heavy...



The EL-7's closed-loop dual-capstan transport is belt-driven from a large servo motor

By the end of the decade, Elcaset had disappeared. A Finnish firm bought Sony's remaining stocks, and disposed of them cheaply.

My interest in Elcaset was sparked when I came across a couple of used tapes at an amateur radio rally for 50p each. An Internet search engine revealed basic details about the format. The track layout is completely-different to quarter-track reel-to-reel, and so you can't just remove the tape and wind it onto a spool for playback on a conventional tape deck at 9.5 cm/s. Yet my Elcaset curiosity prevailed, UK eBay was then comparatively-new, and I was able to find an EL-7 in fair condition (with a handful of tapes) for around £100. This machine worked straight out of its original carton, and I discovered that my rally tapes contained excellent recordings of mid-1970s prog-rock vinyl – pretty good, considering they were probably made over two decades earlier!

Subsequently, boxes of 'new-old stock' Sony ferric tapes (surprisingly cheap!) were found via the auction site.

Elcaset is completely-different – and yet so similar – to the Philips cassette in functional terms. After winding the slack – although the hubs incorporate ratchets to minimise the – is loaded into the machine. The end with the exposed tape visible (as with conventional cassettes, they must always be returned to their boxes when not in use!) should face upwards. You can now forward or rewind your tape if needed, operations that are fast thanks to the EL-7's three-motor design. Pressing 'play' wraps the tape around the heads and guides (which are hidden behind a plate just above the cassette holder) and wakes up the capstan motor. It's all quick, thanks to responsive electromechanics. One of the alignment-posts in the cassette-well incorporates a lamp, the

illumination of which shines through the tape to a sensor. Normally, oxide blocks the light but transparent 'leader' at the beginning lets it through. Voila! A foolproof auto-stop system.

The same loading process applies, naturally, during recording. Levels are set via a pair of large VU meters (without peak LEDs), and it's possible to record at a surprisingly-high level before saturation distortion sets in.

With the three-head EL-7, you can compare your recording with the source, courtesy of its tape-monitor switch. And it's incredible how little difference there is. A high degree of phase integrity, made possible by that precision-engineered tape path, ensures that the soundstage remains rock-solid. So too is the bass response, while the extended frequency response does justice to all forms of music. Sustained piano and synth melodies demonstrate the format's inherently-low wow and flutter. A direct comparison with some source material may reveal a slight increase in top-end roughness. But you need to listen carefully!

Elcaset's sound quality trounces cassette decks of the period – and, for that matter, contemporary quarter-track reel-to-reels working at 9.5cm/s. It's optimised for recording at this speed, and the media that was available.

An 'oddball' format it may be, but if you come across an Elcaset (with tapes!) it's well worth a try. You can pay anything between £100 and £400 for a machine nowadays, depending on condition and model. Machines and media crop up on eBay, and have been spotted at the Tonbridge Audiojumble too.

Although Elcaset is reliable, servicing is essential. Capstan drive-belts might need renewing after nearly 40 years; it would also be worthwhile replacing electrolytic capacitors, especially power-supply ones.

Heads and motors may be built to last, but the machine relies on a custom system-control chip that was only used in the EL-5/EL-7 and a rare cassette deck (the TC229SD) of the same period. If this goes south, there's little chance of finding a replacement. Some service manuals tell you what's going on in the chip, but the EL-7's (cheers, Hi-Fi Engine!) doesn't; making an 'equivalent circuit' is going to be difficult. Another caveat – some tapes shed their oxide, while others (notably Type II) don't.

Lets talk Hi-Fi!

Listening to Music – the Benefits

There have been many studies carried out over the years that have shown remarkable benefits for mankind through listening to music. It is an activity that is intrinsic to all cultures and is one of the few that involves using the whole brain. Listening to music is now often used for various therapeutic purposes because it is believed to improve memory and intelligence, improve physical development and coordination, reduce stress and blood pressure, and even reduce levels of pain. However, music can also be irritating if it's too loud or distorted or if it distracts from other activities we are involved in. Most of the studies have been carried out using a reasonably good quality of musical reproduction. Quite remarkably, many people today and probably majority of teens and late teens, are listening to a considerably lower quality level of music than their peers back in the 1970's. Back then a basic hi-fi system, often consisting of just a turntable, amplifier and a pair of speakers, was a 'must have'. Students going off to university would make it a priority to set themselves up with a decent hi-fi system - and the quality was, in retrospect, surprisingly good.



Quality vs Quantity

How different it is today where advances in technology have driven the desire for convenience and quantity at the considerable expense of quality.

For many young people especially, the iPod, MP3 player or mobile telephone, connected to a pair of in-ear headphones, is their primary source of listening to music. The problem with this is that low-grade reproduced music is not going to deliver any significant beneficial outcomes for the listener. Probably the opposite will be true.

Low-grade music in this context is the result of two main factors, a) the delivery system (the hardware) and b) the source material (the 'music'). Although the amplification section of the mobile device is a technological wonder, it's not hi-fi! Nor are in-ear headphones. They can't hold a candle to the stereo-typical system from the 1970's. As far as the source material is concerned, it's being over-generous to call it music if it's a typical MP3 or AAC (the iTunes default format) download. These are both highly compressed formats with the most popular download speed of 128 kbps being about one-eleventh the size of a full resolution CD track (1411 kbps), so the quality is inevitably far inferior. Information is irretrievably lost and the full dynamic range is lacking. Using an iPod while jogging does not really raise a quality issue but playing low-resolution tracks through, for example, an iPod docking station that feeds into a decent hi-fi system, is a disaster area.

It is very poor quality made louder and this even affects the type of music listened to. For example, most classical recordings downloaded as an MP3 or AAC file are a complete waste of time because there is so much information missing, all the complexities of the music are lost, and the recordings are reduced to just the essence of a tune.

Future of Recorded Music

If convenience has trumped quality for many people, we must ask what the future prospects are of maintaining high quality music recordings. Fortunately audiophiles, or hi-fi connoisseurs, or perhaps most accurately described, music lovers, continue to drive the demand for quality because there are some wonderful hi-end systems available and being sold today. Another important reason for hope within the mass-market is that there is no longer any over-riding reason for MP3 and AAC to have such a following. These formats were designed to overcome very slow download speeds pre-broadband and expensive memory capacity. These are not significant factors for most people now. Even iPods, if loaded with full resolution tracks, can deliver acceptable results through a good system. The trade-off is a smaller selection of stored music. Full resolution audio streaming, as well as CD quality downloads, are already available and will become the norm as the wider public becomes aware of the tremendous quality benefit.

Audiophiles and Hi-Fi Connoisseurs

Hi-fi connoisseurs and audiophiles are very important to the music industry.

By their nature, they are generally avid music lovers who enhance their enjoyment through listening to music at its very best quality level, which means playing great recordings through hi-end hi-fi to achieve the most outstanding results. Without them, the main driver for quality would probably be removed from the music industry.

Specialist Dealers

Specialist hi-fi retailers also come into the above category because it's their interest that has driven them into their particular business. These specialist retailers also perform another very important function because, without them, hi-fi manufacturers would have to rely on the internet and hi-fi magazine reviewers to try and assess the relative merits of different brands for potential customers – a notoriously unreliable decision making process. Specialist hi-fi retailers are constantly being offered new products for assessment and potential marketing and, as it is also their hobby as well as their livelihood, they are naturally interested in achieving the best performance and seeking out the best outstanding combinations. More than that though is their relationship with audiophiles and hi-fi connoisseurs for, if they are to stay in business, they must satisfy the most discerning customers in the industry. The reality is that audiophiles and specialist hi-fi retailers (and the ones listed on this page represent the UK's finest) are essential to each other.

Specialist dealers know how to choose the products that combine as a superb system and how to get the best out of it by expert installation in the home.

They also appreciate how exciting and involving music can be and how it can deliver a powerful emotional experience.

If there's a price premium over an internet purchase by choosing a specialist dealer, it's probably a small one, but it's unquestionably worth the difference.



STAR QUALITIES

VALUE FOR MONEY	★★★★★
SERVICE	★★★★★
FACILITIES	★★★★★
VERDICT	★★★★★



World Radio History

Listed below is our selection of THE BEST HI-FI DEALERS IN THE UK

They have been chosen because they are known to do an excellent job in guiding customers towards hi-fi that will give years of musical enjoyment and total satisfaction.

SOUTH

Ashford, Kent
SOUNDCRAFT HI-FI
 40 High Street.
 t: 01233 624441
www.soundcraft-hifi.com

Chelmsford
RAYLEIGH HI-FI SOUND & VISION
 216 Moulsham Street.
 t: 01245 265245
www.rayleighhifi.com

Kingston-upon-Thames
INFIDELITY
 9 High Street,
 Hampton Wick.
 t: 020 8943 3530
www.infidelity.co.uk

Maidenhead
AUDIO VENUE
 38 Queen Street.
 t: 01628 633995
www.audiovenue.com

Norwich
MARTINS HI-FI
 85-91 Ber Street.
 t: 01603 627134
www.martinhifi.co.uk

Rayleigh
RAYLEIGH HI-FI
 44a High Street.
 t: 01268 779762
www.rayleighhifi.com

Southend-on-Sea
RAYLEIGH HI-FI SOUND & VISION
 132/4 London Road.
 t: 01702 435255
www.rayleighhifi.com

LONDON

Ealing
AUDIO VENUE
 27 Bond Street.
 t: 020 8567 8703
www.audiovenue.com

N1
GRAHAMS HI-FI
 190a New North Road.
 t: 020 7226 5500
www.grahams.co.uk

SW11
ORANGES & LEMONS
 61/63 Webbs Road.
 t: 020 7924 2043
www.oandlhifi.co.uk

SOUTH WEST

Bath
AUDIENCE
 14 Broad Street.
 t: 01225 333310
www.audience.org.uk

Exeter

GULLIFORD HI-FI
 97 Sidwell Street.
 t: 01392 491194
www.gullifordhifi.co.uk

MIDLANDS

Banbury
OVERTURE
 3 Church Lane.
 t: 01295 272158
www.overture.co.uk

Birmingham

MUSIC MATTERS
 363 Hagley Road,
 Edgbaston.
 t: 0121 429 2811
www.musicmatters.co.uk

Coventry

FRANK HARVEY
 163 Spon Street.
 t: 024 7652 5200
www.frankharvey.co.uk

Leicester

CYMBIOSIS
 6 Hotel Street.
 t: 0116 262 3754
www.cymbiosis.com

Nottingham

CASTLE SOUND & VISION
 48/50 Maid Marian Way.
 t: 0115 9584404
www.castlesoundvision.com

NORTH

Cheadle
THE AUDIO WORKS
 14 Stockport Road.
 t: 0161 428 7887
www.theaudioworks.co.uk

Chester

ACOUSTICA
 17 Hoole Road.
 t: 01244 344227
www.acoustica.co.uk

Hull

THE AUDIO ROOM
 Savile Street, Hull
 t: 01482 891375
www.theaudiroom.co.uk

York

SOUND ORGANISATION
 2 Gillygate,
 t: 01904 627108
www.soundorg.co.uk

These specialist dealers have been selected because they are known to do an excellent job in guiding customers towards hi-fi that will give years of musical enjoyment and total satisfaction.



Cables section

You love 'em or hate 'em. Cables raise some people's hackles, but Hi-Fi World readers tell us repeatedly cables improve their sound and are a great upgrade. So here we are with Loudspeaker cables, interconnects and mains cables, as well as accessories such as connecting blocks, in a dedicated section. If you hate 'em - don't look. But if you love 'em you now know where the goodies are.

We will look at affordable products across a single manufacturer's range. This month True Colour Industries feature.

SPEAKER CABLES

TCI BOOMSLANG/TCI KING COBRA

107

INTERCONNECT CABLES

TCI HABU/TCI COBRA II

108

POWER CABLES

TCI BABY CONSTRICTOR/TCI KING CONSTRICTOR 109

SPEAKER CABLES

TCI BOOMSLANG



These speaker cables utilise aerospace grade silver plated copper alloys, plus PTFE, FEP, Kapton and Superthane insulators.

SOUND QUALITY

Spinning Anita O'Day's 'You're The Top', and compared to the high

quality, Tellurium Q Blue cables, the Boomslang might have lacked a touch of ultimate control during upper mid peaks but, then again, the Boomslang offered an impressive bass response that added a touch of velvet to the lower regions of the O'Day vocal. Midrange was open and airy with plenty of space and shimmer around the treble-

infused cymbals.

On 'Wretched', an overall sense of calm and relaxation surrounded the track. A slightly unnerving upper mid shout made a brief appearance but there was plenty of welcome clarity and space in and around a choral soundstage that was broad and expansive.

Via Camel, the analogue signal smoothed the odd upper mid shout giving an uniformly even and detailed performance within this region, producing a welcome balance with a tight and punchy bass. Extra detail was in abundance and rhythm guitars exhibited new life as did secondary percussion.

CONCLUSION

One of the best budget speaker cables currently on the market, the Boomslang does feature its own personality traits which mean that a demo is recommended.

TRUE COLOUR INDUSTRIES BOOMSLANG SPEAKER CABLE
£88 FOR 4M



VERDICT

Providing a distinct clarity and open and airy nature to the midrange, the Boomslang is a top quality budget speaker cable.

FOR

-tight bass
-clarity
-midrange detail

AGAINST

-shouty mids

TCI

+44 (0) 28 9267 3024
www.tcicables.com

SPEAKER CABLES

TCI KING COBRA



This cable utilises a mixture of aerospace and military grade materials such as SP-special copper alloy and silver-plated oxygen-free special copper.

SOUND QUALITY

Beginning with the vinyl album from

Camel, 'Nude', this disc exhibited bass heft and mass, with plenty of punch. It never swamped exuberant midrange which was smooth, full of textural detail and yet held its own in a soundstage with firm stereo images.

On the O'Day track, brass was notable for its instrumental

separation while the hidden piano behind O'Day's musical delivery made a rare appearance. The treble was also bathed in space and air. Bass, meanwhile, was rounded and characterful. There was never a sense of effort in the lower frequency regions but the weight and heft and the potential for power was ever present.

For the Handel track, a continued sense of calm and ease allowed the choral arrangement to sway and flow like tall grass while wind instruments moved gracefully in and around the chorus and complimentary harmonies highlighted the detailed midrange performance.

CONCLUSION

A combination of bass mass and power plus sensitivity, delicacy and a wealth of detail in and around the midrange frequencies make the King Cobra a speaker cable to be reckoned with.

TRUE COLOUR INDUSTRIES KING COBRA SPEAKER CABLE
£580 FOR 4M



VERDICT

Offering top quality sound over all frequencies, the King Cobra is a force in speaker cables and is worth attention.

FOR

- bass
- animated midrange
- lucidity

AGAINST

- nothing

TCI

+44 (0) 28 9267 3024
www.tcicables.com

INTERCONNECT CABLES TCI HABU

TRUE COLOUR
INDUSTRIES HABU
INTERCONNECT
LEAD
£30 FOR 1M



VERDICT

The Habu provides perceptive and clear-cut midrange performance combined with a low frequency musicality.

FOR

- musicality
- well defined soundstage
- precise mids

AGAINST

- bright
- bass

TCI

+44 (0) 28 9267 3024
www.tcicables.com



Presented as the company's introductory interconnect cable, it offers a PVC outer jacket with PE insulation, 24k gold plated RCA connectors and oxygen free copper conductors.

SOUND QUALITY

Starting with CD and Anita O'Day's

'You're The Top', the Habu sits within a basic design. The lack of richness and depth of more expensive models was revealed but there was still much to admire here. Bass was well tracked, for example, while upper mids, despite being rather bright, were incisive with a precise feeling about them. Lower frequencies were lightweight but

open and musical.

The Dunedin Player's interpretation of Handel's 'Wretched' offered a soundstage that was admirably spacious, allowing plenty of air into the performance.

Bass wasn't strong but the choral presentation was accurate and commendably detailed for the price.

Onto vinyl and the Camel album, 'Nude'. Here, playback saw the low frequencies largely favour upper bass, but the low frequencies on offer were musical and toe-tapping in their presentation. Midrange performance was good, providing a clean, open playback that provided all of the most essential information.

CONCLUSION

The Habu provides a major leap in performance over the horrible bell-wire that often appears within off-the-shelf budget hi-fi.

INTERCONNECT CABLES TCI COBRA II

TRUE COLOUR
INDUSTRIES
COBRA II
INTERCONNECT
LEAD
£300 FOR 1M



VERDICT

The Cobra II interconnects performed well in bass terms but also provided good focus and accuracy to the midrange.

FOR

- bass
- crisp presentation
- midrange precision

AGAINST

- uncontrolled mids

TCI

+44 (0) 28 9267 3024
www.tcicables.com



This cable uses a SP-OFC silver plated, aerospace-grade, alloy conductor with a PTFE, aerospace-grade Kapton tape plus a high density, double braided PC-OFC screen. The design utilises True-Plug RCAs.

SOUND QUALITY

Starting with vinyl and Camel's

'Nude', the output was strong in terms of bass. The Cobras, powered their way through this rock recording. The pile driving nature of the cables added wallop to the foundation of the music.

Midrange was rather strident in its approach but, on this analogue track, never intrusive: synth runs exhibited an admirable textural quality.

The Anita O'Day song was grounded by strong and confident double bass that provided a solid foundation. O'Day could be a little shouty during vocal peaks but also offered an incisive and perceptive approach which added focus to the delivery of this rather wordy lyric.

Compared to the Black Rhodium Tempo cables, the Cobras were rather unbalanced in their tonal qualities during the Handel track but they offered numerous highlights such as a satisfying vocal separation, a broad, if not epic, soundstage plus a general calm with complex arrangements.

CONCLUSION

Low frequencies were the highlight of this cable; the Cobra II should appeal greatly to rock fans.

POWER CABLES TCI BABY CONSTRICTOR



The company's entry-level power lead, termed by the company as a RFI filtering mains cable, features eight cores of PTFE-insulated silver-plated copper. A braided construction has been included for further filtering while insulation is provided by Polyolefin.

SOUND QUALITY

Starting with my Densen B475 CD player and spinning Anita O'Day's 'You're the Top' more information streamed through, when compared to a basic power cable, increasing volume for the same gain, while the lower frequencies featured a greater level of control. Double bass sounded rounded

and characterful, for example.

Upper mids, although a little forward in their presentation, were crisp and clean while treble was open and expressive.

Onto Handel's 'Wretched' from the Dunedin Consort & Players. Although the upper mids could be a tad shouty, this choral sequence retained a clean presentation over an impressively broad soundstage. The vocal separation of this complex arrangement was also good.

With Camel's vinyl version of 'Nude', greater emphasis was placed on the soundstage which stretched further left and right. Added weight and character to the bass offered drive to the track while the lead vocal featured new clarity.

CONCLUSION

Excellent low frequency response plus good overall frequency control reflect well on a recommended entry-level cable.

TRUE COLOUR INDUSTRIES BABY CONSTRICTOR POWER LEAD £90 FOR 1M



VERDICT

An ideal upgrade from a basic cable, the Baby Constrictor offers a clean sound with a broad soundstage

FOR

- soundstage
- bass
- clarity

AGAINST

- lifting mids

TCI
+44 (0) 28 9267 3024
www.tcicables.com

POWER CABLES TCI KING CONSTRICTOR



Using the same split-braid construction found in the company's top-of-the-range Boa Constrictor, the cable includes a Rhodium-plated IEC plug with sixteen PTFE insulated silver plated copper conductors.

SOUND QUALITY

Beginning with vinyl and Camel, the King offered a smooth presentation. The lead vocal had a relaxed demeanour and sat within a deep soundstage. Instruments exhibited good integration within the soundstage while secondary percussion was detailed within the upper midrange.

Onto CD and Anita O'Day, using a Black Rhodium Cratos as a reference, the King didn't quite have the tonal balance of the Cratos, in fact the O'Day vocal and certain brass crescendos did peak a little too brightly, but treble shined and shimmered while the bass was weighty and crisp in its delivery.

Instrumental separation was good enough to reveal a hidden piano that sat behind the lead vocal.

Playing the Dunedin Players, a more mature sound was heard when compared to the Baby Constrictor. In fact, the King delved further into the mix, excavating more emotion in the choral presentation while the King found time to play more with space and silence to add a relaxing air to the vocal group.

CONCLUSION

Instrumental detail is successfully presented within a well-structured soundstage.

TRUE COLOUR INDUSTRIES KING CONSTRICTOR POWER LEAD £300 FOR 1M



VERDICT

The King Constrictor provides a mature standard of play and should be on any list.

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WANTED THORENS I24 or preferably 224 turntable and any interesting valve amps from 40's to 70's. Still looking for the elusive single Radford Auditorium speaker. Will travel, cash waiting. 0117 946 7188 slkw@btinetnet.com

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ALLEGRO PLATINUM 3 way floorstanding speakers professionally built kit by Wilmslow Audio. £1950 new, £750. For details www.wilmslow-audio.co.uk. For demo Tel: 07905 348 812 (Watford)

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RUSS ANDREWS yellow mains cable 2m length £40 also yellow 6 way extension with 4m cable super clamp spike filter £90 buy both for £125 items mint condition cheaper if collected. Tel: Mike 01902 884694

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LYNGDORF DPA-1 digital pre-amp, balanced and single ended i/o ATC SCM 50 ASL active stand mount speakers offers please ring Leeds on 01132297524 for info anytime.

WANTED: SPARE Wand for Audio Technica AT1100 tonearm. Tel: Toni 07971 953 628

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FOR SALE: Art Audio dual mono VPS pre amp. Chrome fascia, remote volume and BlackWidow mains lead. Very good condition. Boxed. £1145 o.n.o. Ph 07811297 322.

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TRANSPARENT AUDIO Interconnects Balanced MusicLink Plus 1 metre pair: £200. Transparent Audio Interconnects MusicLink Super 1 metre pair : £400. Tellurium Q : Graphite Interconnects (Balanced Pair) : £300. MIT AVT MA Phono Interconnects with adjustable impedance switch 1 meter pair : £300. Atlas Mavros balanced interconnects 0.75 metres : £200. TCI Cobra SE phono interconnect 0.75 meter pair : £100. All new condition. Email Pete at peter.holliday@steria.co.uk. Tel : 07801917291

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WANTED, WOULD anyone have a Kef Kube Equalizer to go with my Kef 105/3 Reference loudspeakers? If you have one you no longer use please ring Dave on 0191-4171669.

NAD M5 CD .SACD player for sale. excellent condition with packing, leads, manual, £500 ring Swindon 01793541240

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HI-FI WORLD Magazines including issues 1, 2, 3, 4, 6 & 7, plus many more up to the present. £3.00 each plus P&P. Contact 01242 518991 or tim.deeks@sky.com

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CARDAS QUADLINK speaker cable 5m pair spades both ends £245 (£650) Quadlink jumper/links spades both ends £25. Russ Andrews KCAG interconnects 0.5m pair £245 (£489) Contact John on 01202 515474 or e-mail johnlangley17@talktalk.net

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NEXT MONTH – JULY 2013 ISSUE

Quad's novel 'current dumping' amplifier circuit makes a return in the new QMP monoblock power amplifiers that appeared recently at Bristol's Sound & Vision Show, 2013. With massive power and the ability to drive the world's most difficult loudspeakers – electrostatics – they may well be a great new amplifier. Find out next month in our July issue.

Here are some of the products we hope to bring you in the fab JULY 2013 issue –



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ICON MB30SE MONOBLOCK POWER AMPLIFI
ACOUSTIC ENERGY REFERENCE 2 LOUDSPEA
WILSON BENESCH FULL CIRCLE TURNTA
ASTELL & KERN AK-120 PORTABLE PLA
INSPIRE HI-FI BLACK MAGIC TURNTA
ANGLE AUDIO PHONOST
VPI SCOUT 1.1. TURNTA
MUNICH HIGH-END SH
LINN KANDID CARTRII
KEF LS50 LOUDSPEA
PROJECT PHONOBO
AUDIOLAB M-

We either have, or are about to receive these products, but cannot guarantee they will appear, commonly due to a need to re-schedule or failure under test.

**PICK UP THE JULY 2013 ISSUE OF HI-FI WORLD ON SALE 31ST MAY 2013, OR
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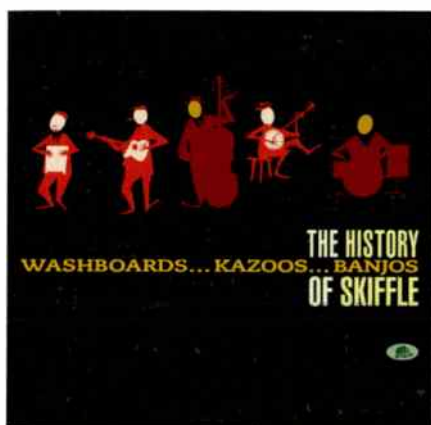
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AUGUST 2013 ISSUE - 4TH JUNE
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THE HISTORY OF SKIFFLE

**BEAR FAMILY
2013**



"a bohemian term, fitting people who lived a certain lifestyle"

Punk changed everything. It brought music down from the stars and handed it to ordinary people. It gave a true DIY ethic to music production that allowed new ideas to flourish and entire sub-genres to form and blossom. You think I'm talking about punk from the late seventies don't you? I'm not. I'm talking about the punk principle that arose during the early fifties: it was called Skiffle.

Skiffle was important. In fact, along with rock'n'roll influences, Skiffle begat beat music. From beat sprang game-changing outfits such as The Beatles that helped to forge the cultural renaissance during the sixties. In fact, artists such as Jimmy Page, Eric Clapton, The Beatles, The Who and The Kinks were all directly influenced by the genre, for example.

To celebrate this wholly significant musical genre, Bear Family (www.bear-family.com) has released 'The History Of Skiffle', a box set of classic Skiffle music featuring a superb, hard-back book plus a range of acts onto six CDs. From Ken Colyer (with 'Down By The Riverside' and 'Midnight Special') to Lonnie Donegan ('Cumberland Gap' and 'Rock Island Line'), Johnny Duncan's 'Last Train To San Fernando', Chas McDevitt's 'Freight Train' and The Vipers 'Don't You Rock Me Daddy-O' plus European outfits such as the Roban's Skiffle Group and the Mozam Skiffle Group and a range of previously unreleased tracks.

For this Classic Cuts, I could have taken the clichéd position and focused on a Lonnie Donegan album but, although Donegan was the king of Skiffle, he wasn't Skiffle. The genre encompassed much more but is still small enough to be considered as a focused, relatively niche, entity, hence a Classic Cuts devoted to a genre instead of an artist. Unlike pop, rock or soul, Skiffle is a splintered kaleidoscope of small, yet intense, colours that are best seen in the round.

Skiffle goes back to the early spasm bands of the early 20th Century and the later Depression era. 'Spasm' referred to bands who couldn't afford proper instruments and used 'found' items instead: items that were not created for such tasks such as combs, tea chests, broom handles, washboards and the like. UK trad jazz groups discovered this music in the USA, tweaked and played it during their trad jazz gigs.

Ulf Krueger, a Skiffle and beat musician himself who backed Lonnie Donegan on many occasions and produced two albums with him in the early seventies (under the 'Lonnie Donegan meets Leimann' moniker), was the compiler of the box set.

"Skiffle began during the early fifties in England, that spread later to the continent. Centring on the black experience, it drew upon the hardships of life. It was a very serious thing for jazz legend, Ken Colyer and Donegan, in the beginning. Skiffle appeared by accident. Colyer created it from a mixture styles: blues, jazz, gospel and more, playing them in a simple way because of the simple arrangements. Bill Colyer, the brother of Ken, was the first to coin the word 'Skiffle' in the UK. It was a bohemian term, fitting people who lived a certain lifestyle."

Listening to this box set, you can hear Colyer, who was a purist, injecting jazz into Skiffle but also trying to imitate the blues stylists. Because it's impossible to do that successfully (unless you were there and lived that life) it was injected with a definite English twist. The inclusion of the washboard was almost symbolic, a nod to the Depression but it also recreated the sounds of Colyer's favourite songs. Lonnie Donegan played with Colyer in Chris Barber's band on the early Skiffle tracks. During his own, later, tracks on this set, you can hear Donegan's evolutionary style, twisting Skiffle to incorporate rock-a-billy and a particular British music-hall slant.

Donegan energised young people. Like the punk scene of the seventies, most of the Skiffle songs were based on three chords while instruments were basic. More to the point, everyone could join in (you couldn't say the same about the contemporary rock'n'roll scene, most rock'n'roll outfits were packed with professional musicians). For Skiffle, "Not all of them were very good," said Krueger, "but other youngsters were more interested in bands of their age such as The Vipers (produced by George Martin and seen in this box set too) instead of the older, more professional musicians, such as Colyer and Chris Barber". It's almost, but not quite, like the pub rock/punk band comparison of the mid- to late-seventies.

The source music for the box set was largely drawn from Krueger's collection, 'It comes from my heart', he said. **PR**

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'NOTHING SHORT OF AMAZING'

HI-FI WORLD

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