COMPETITION
WIN A QUAD VENA INTEGRATED AMPLIFIER WORTH £599!
(UK ONLY)

FOCAL KANTA Nº2
loudspeakers

6 PAGES OF LETTERS - THE BEST WINS A PAIR OF
TANNOY MERCURY 7.2 LOUDSPEAKERS! (UK ONLY)
We go to great lengths (and precise tolerances) to produce our class-leading cables. From solder and grubscrews upwards, everything is rigorously examined.

At the higher end of things, we build strictly to order. Every Signature, Sarum T and ChordMusic product is tested visually, electronically and audibly before being signed-off by senior staff.

All this care and attention helps maintain our international reputation for realistically priced audiophile interconnects and speaker cables - featuring our unique Super ARAY conductor technology and advanced (Taylon®) shielding materials, backed-up with over 30 years of innovation and experience.

Designed and built in England by music lovers since 1985. Enjoyed by music lovers all over the world.

Demonstration cables available from all good Chord Company retailers. Find your nearest at: www.chord.co.uk

"It’s rare that something truly different comes along in the world of loud-speaker cables – but Chord’s new Sarum T is just that."
Chord Sarum T Speaker Cable
Hi-Fi World Dec 2017

"the difference will be immediately evident, such is the transparency of the interconnects and loudspeaker leads."
Chord Signature Range
Hi-Fi World Dec 2015
LARGE LOUDSPEAKERS – in the past dubbed “broom cupboards”. And that's pretty much what some of them were; I speak from experience, having lived with Leak 2075s and 2090s. Intrusive and even ugly such loudspeakers may be — that's their only drawback. Surprisingly, the bigger a loudspeaker gets the less power it needs to go loud. Just a few Watts of power through a 'broom cupboard' of yore was enough to shake a house. Hundreds of Watts as we're given today are not needed. That makes broom cupboards environmentally friendly! Better still they gave a sound with real muscle behind it, room shaking lows being part of the picture.

Big is good then – but of course it isn't to most people's eyes. It means less available floor space and an eyesore in the lounge. Hardly surprising then that stylists have come up with no end of shapes and finishes to overcome this problem. Focal have brought French flair to their new Kanta N°2 loudspeaker that we review on p11 in this issue. It too needs just a few Watts to go very loud, in the tradition of "a good big 'un".

So why do today's hi-fi amplifiers all boast at least 100 Watts output? It's not as if a lot of us are able to play loud without disturbing the local neighbourhood, which in my case provokes a visit by the council's noise squad. That's what reader Aaron Proctor asks too – see Letters p32. He uses just 1.26mW (thousandths of a Watt). Believe it or not, 5 Watts would do for most of us – as he suggests. Much of the size, weight and expense of modern amplifiers is determined solely by a perceived need for high power – most of it unused. Going low power solves everything – smaller electricity bills, cleaner conscience (!), less technological intrusion and potentially better sound quality.

Run silent, run deep. That's what Cambridge Audio's Duo phono stage does. It's silent – no hiss – yet deep in its portrayal of music from LP, subtly mining information others cannot. Find out more on p87.

Loud and silent talk of dynamic range – and real life experience. We look at both extremes in this issue. I hope you enjoy it.

Noel Keywood
Editor
Focal’s new curvaceous Kanta Nº2 loudspeakers make a big impression on Jon Myles.

Slim yet potent – Germany’s entry-level Audio Physic floorstanders produce a refined sound, says Jon Myles.

Rotel’s latest amplifier and CD combination, tested out by Noel Keywood.

Noel Keywood tries out Audio Technica’s latest over-ear headphones.

Binaural sound proves a revelation on Sennheiser’s new Ambeo headset. Martin Pipe explains all.

Seriously good loudspeaker cables from Italy’s Hi-Diamond. Jon Myles plugs them in and enjoys.
FEATURES
41 AUDIO JUMBLE
Martin Pipe hunts out the bargains at the latest Audiojumble, Tonbridge, Kent.

SOUNDBITES
75 FiiO L28 COAXIAL CABLE FIIO RC/MMCX
Two ways to improve the sound from your mobile player.

OLDE WORLDE
59 SONY D22 DISCMAN
Sony's classic D22 Discman gets a thorough review from Martin Pipe.

VINYL
84 NEWS
All the latest and greatest vinyl releases for you, from the pen of Paul Rigby.

87 CAMBRIDGE AUDIO DUO PHONOSTAGE
A classy phonostage from Cambridge Audio proves a bargain, says Noel Keywood.

93 AUDIOPHILE BOOK REVIEW – PASSION FOR VINYL II
Paul Rigby on a new book that explains why vinyl is still the medium of choice for music lovers around the world.

REGULARS
7 NEWS
Words from the world...

17 COMPETITION
Your chance to win a Quad Vena amplifier worth £599.

32 MAIL
Six pages of your views, wonderful as always...

44 WORLD STANDARDS
Updated guide to the latest and greatest hi-fi hardware on sale.

54 SUBSCRIPTIONS
Ensure your copy every month and save money too!

62 AUDIOPHILE CD
Paul Rigby rounds up the latest audiophile CD releases

65,67,71,73 OPINION
The team get to grips with matters music, hi-fi and life!

76 WORLD CLASSICS
Brilliant designs that have stood the test of time...

90 DIAL-A-DEALER
A comprehensive guide to UK hi-fi retailers

95 CLASSIFIEDS
Second hand bargains.

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

97 ADVERTISERS’ INDEX

98 CLASSIC CUTS
Paul Rigby looks back at Brinsley Scwharz’s classic Nervous On The Road album.
“...you have managed to surpass them [Silver Diamonds] in a truly grand way.”

Tellurium Q® Statement

What has been achieved is a coherent sonic profile and performance across the whole Statement range and that is why we say this is the Tellurium Q® Statement.

telluriumq.com    facebook.com/telluriumq.com    +44 (0)1458 251 997
OPPO NO MORE

Oppo has revealed it is to stop production of its award-winning universal disc players as well as its planar magnetic headphones.

In a surprise announcement the company said it will be shuttering down its Oppo Digital division – meaning the likes of the highly-regarded Oppo UDP-203 and UDP-205 will no longer be available once current stocks are sold.

However, the company said it will still honour warranties and repairs for existing users as well as providing software updates – although this will be done via a third-party provider who has yet to be confirmed.

It is believed the China-based brand wants to concentrate resources on its lucrative mobile ‘phone division which contributes to most of its profits.

Nigel Rich, Managing Director of Oppo Digital UK, said, “We can be very proud of our achievements over the past few years. Along with market leading products, we have provided first-rate customer service and support from our offices here in Norwich. I am very proud of our staff and very sad that we will now be closing our doors for good. I would like to take this opportunity to thank our European distributors, retailers and, of course most importantly, the people that have purchased Oppo products in Europe. We will continue to support products in and out of warranty and we have made provisions to continue this high level of service.”

Cambridge Audio – who’s CXUHD player shares technology from Oppo – issued a statement saying existing customers will still be served by firmware updates when required. But how long Oppo continues to offer updates remains to be seen.

NEW NAIM STREAMERS

Hi-Fi World travelled to Naim’s Salisbury HQ recently to listen to the company’s latest range of streaming devices.

The three-strong line-up consists of the range-topping ND 555 at £12,999 together with the NDX 2 (£4999) and the entry-level ND5 XS2 costing £1999.

Naim has spent four years developing the units, building them from the ground up to provide the best streaming platform available yet from the company.

All of them include embedded Tidal, Spotify Connect and Chromecast compatibility up to 24bit/192kHz, as well as UPnP at 32bit/384kHz and DSD 128, plus aptX Bluetooth. There’s also Apple Airplay and Roon built-in.

As ever with Naim great attention to detail has been paid to the power supplies, the ND 555 boasting no less than 13 of the company’s proprietary DR voltage regulators to feed the DACs, clocks and output stages.

Initial listening in Naim’s demonstration room was overwhelmingly positive with the NDX 2 sounding exceptionally sweet for its price.

We hope to bring you a review soon but in the meantime log-on to www.naimaudio.com for more details.

PURE TECHNOLOGY

Italy’s Audio Analogue has unveiled a new phono stage featuring a number of interesting features. Its AApphono is fully configurable for both MM and MC cartridges including gain and loading for MC cartridges but also the less common MM input capacitance and resistance.

At the same time, the AApphono is simple to use. There’s no need to power off, cool down and delve under the hood. Simply press an easily accessible button to make your adjustments, which will be saved when the unit is switched off or even disconnected.

Three separate toroidal transformers form the heart of the power supply, and hence the heart of the phono stage: one for each of the stereo channels (left and right) and, to keep the audio signal as pure as possible, a third one supplies the control circuitry.

The amplification is split between two separate gain stages with a subsonic filter placed between them, such that any low frequency oscillation is prevented from reaching and saturating or overloading the final gain stage. Following the second gain stage, a special DC-blocking circuit ensures that no potentially harmful direct current reaches your amplifier, effectively providing a level of protection more typically associated with separate power cleaning units.

Priced at £1599 it is available now. For further details point your browser at UK distributor www.decentaudio.com.

email: news@hi-fiworld.co.uk
CAMBRIDGE EDGE
Cambridge Audio is celebrating its 50th anniversary with a new range of components.

The Edge series comprises of an Edge A integrated amplifier (£4500), Edge NQ streamer (£3500) and Edge W power amplifier (£2500).

The company says it asked its engineers to develop the best-sounding components possible with cost no object.

Cambridge Audio's managing director Stuart George said “We removed all limitations during development of Edge – anything goes so long as it’s in pursuit of the best system we’ve ever made. The results speak for themselves.”

Given Cambridge Audio’s track record in terms of producing outstanding value for money components we look forward to reviewing the new range soon.

TURNTABLE SALES
Soundbars are in – turntables are out, or so it would seem.

New figures from industry research company GfK show turntable sales were down by almost 5% in 2017 compared to the previous year despite a number of new models hitting the market. Could the vinyl revival have reached its peak? Probably not.

Sales of soundbars, however, surged – they now take up an astonishing 95% of the home cinema market.

NOKIA DITCHES JACK
Mobile ‘phone giant Nokia has followed other manufacturers in ditching the headphone jack on its latest flagship Nokia 8 Sirocco model.

Buyers will need to employ the USB-C adapter bundled in the box or go wireless to use the phone as their music player.

Apart from that the model – which is expected to sell for around £700 SIM free - features a stainless steel frame, a 5.5 inch screen and the Android operating system.

STUDIO SOUND
Monitor Audio’s latest standmounts are undoubtedly striking looking. The £1000 per pair Studios feature technology derived from Monitor’s flagship Platinum II series with twin 4-inch mid/bass drivers and a proprietary MPD (Micro Pleated Diaphragm) tweeter.

Twin slot ports at the rear (one top, one bottom) are said to provide a smooth airflow.

Find out more at www.monitoraudio.com.

RUARK MRX
Ruark has unveiled its first networked, wireless, multi-room loudspeaker in the shape of the MRX.

Priced at £400 it also boasts aptX Bluetooth, a USB socket and 3.5mm optical and analogue input as well as Spotify, Deezer and Tidal compatibility built in.

There’s also a free dedicated control app for iOS and Android devices. For more details log-on to www.ruarkaudio.com.
NEW SPENDORS

Legendary British loudspeaker maker Spendor has added a new floorstander to its entry-level A Line range.

The A7 joins the A1 standmount and other floorstanders the A2 and A4 and is priced at £2995. It features Spendor’s latest EP77 polymer cones which provide a smooth, balanced mid-range. They are available in black ash, natural oak and dark walnut finishes with more details to be found at www.spendoraudio.com.

POWER CHORD

The Chord Company has expanded its range of Shawline cables with a new power lead featuring its proprietary Aray technology.

The Shawline power cable retails at £200 for a 1 metre length and features 3 x 14 AWG high-purity multi-strand copper conductors in a parallel layout, with a dual-layer floating shield to protect it from RF interference.

The cable is available fitted with high-quality 10 or 16-amp IEC plugs, precision-engineered by a specialist company to The Chord Company’s specification. Euro/Schuko, Australian and USA mains plugs are available to order. Standard lengths include 1m, 1.5m and 2m. Custom lengths and terminations are also available. More information is available at www.chord.co.uk.

FESTIVAL OF SOUND

The Indulgence Hi-Fi Show is returning to West London this year – except under a different name.

The show has now been rebranded as the Festival Of Sound and will take place at the Novotel London West hotel in Hammersmith between September 28th-30th.

Exhibitors already signed up include KEF, Chord Electronics, Dali, Arcam, AKG and Naim. Organisers are also promising a selection of live music acts as well as special areas for headphones and portable audio.

Hi-Fi World will also be there to answer your questions. To book tickets go to www.indulgenceshow.com.

NEW IPAD

Apple has launched a new iPad. It’s specifically aimed at the education market but at £319 could well tempt other users too.

The 9.7-inch device boasts an 8 megapixel camera, up to 10 hours battery life plus an A10 Fusion chip which Apple claims is 40 per cent faster than the iPad it replaces.

It also supports Apple’s Pencil device which was first introduced with the iPad Pro – although this is a separate purchase and does not come bundled. Go to www.apple.com for more information.
Light years ahead...
Supercharge your music with the world’s most advanced digital technology

Brilliantly portable, Mojo is a compact headphone amplifier and digital audio convertor (DAC) with 500x the processing power and 30x the output power of your smartphone. Use at home or on the move and now add wireless music streaming with Poly.

*sold separately

BEGIN YOUR JOURNEY.

discover more: chordmojo.com
Focal Vision

Focal’s new Kanta N°2 loudspeakers feature an unusual mix of flax main drivers with a beryllium tweeter. Jon Myles sits back and enjoys the sound.

French loudspeaker giant Focal has a long history of innovation since its initial foundation back in 1979. It was only the second company – after Yamaha – to use a beryllium tweeter in its home hi-fi products. More recently it introduced new main drivers consisting of flax fibres (France being the main producer of flax) encased by two thin layers of glass fibre.

Put the two together and what do you get? Focal’s latest floorstander the £6999 Kanta N°2, the first of what, presumably, will be an expanding range.

Some loudspeakers look decidedly ordinary, others make you sit back and admire. Put the Focal Kanta N°2 into the latter category. Unboxing them I couldn’t help but be impressed by their unique design. The front of the ‘speaker is made from a single curved piece of high-density polymer with rounded edges to minimise diffraction. This is joined to a heavily-braced plywood rear section with an elegant glass top that gives the ‘speakers an air of luxury. The curvature is designed to time-align the drivers for a smoother sound.
The 2M Series, named after the abbreviation of Moving Magnet (MM) technology, is an affordable range of pick-up cartridges with first-class audio design principles throughout. Featuring Ortofon’s trademarked split-pole pin technology for a flat frequency response, all 2M cartridges have a high output for easy integration into any turntable system.

Designed in conjunction with celebrated design house Møller-Jensen Innovation Design, the 2M Series body represents the shape of a diamond, whose contours gracefully trace the grooves on a record’s surface.

Red Cartridges
A hugely popular all-purpose cartridge with a Tipped Elliptical stylus that delivers an open, dynamic sound with a slight touch of warmth.

Blue Cartridges
An affordable step up in the range, which adds greater dynamics, resolution and detailed sound thanks to the Nude Elliptical stylus.

Bronze Cartridges
Featuring a superior body, the Bronze picks up even the highest frequency information for a rich, detailed and deep soundstage, and can be further upgraded with ease.

Black Cartridges
The musician’s choice and flagship of the range, the 2M Black features a Nude Shibata stylus which guarantees a true-to-life sound performance.
There's also an array of colours to be had for that front panel. Our review sample came in Gauloise Blue but there's also Solar Yellow and Carrara White on offer, as well as different options for the finish of the rear cabinet.

A heavy out-rigger style metal alloy plinth attaches to the bottom of the cabinet for stability, fitted with screw-down knurled nuts for easy levelling. Also included are magnetically-attached grilles for the mid-range and bass drivers although I (as ever) left these off for listening purposes.

As to those drivers, flax and beryllium is a combination which, as far as I know, has never been tried before in a domestic product. But, as Focal controls the entire design and manufacturing process from its base in Saint Etiennne, you can be assured the Kantas have gone through some rigorous testing. Indeed, the company says these loudspeakers spent three years in development from the initial concept to the final product.

They are a three-way design with two 165mm bass/mid drivers above and below the tweeter in a classic D’Appolito arrangement, augmented by a bass unit below to improve power handling and lower bass distortion by increasing cone area and reducing cone travel.

The tweeter uses Focal’s 1AL (Infinite Acoustic Loading) and IHL (Infinite Horn Loading) techniques to absorb rear radiation while also saving space within the cabinet. Beryllium has many advantages, being extremely light and very stiff. However it is difficult to work with, having high toxicity during manufacture. For this reason Focal has its own dedicated chamber with specially-trained staff to produce its inverted dome model.

Two reflex ports – one at the front and one at the rear – add to bass extension (see Measured Performance for full details).

Dimensions-wise these are relatively slim loudspeakers, measuring 1118mm x 321mm x 477mm (H/W/D). Focal recommend they can be used in rooms measuring up to 750 sq ft – but say they work best in smaller spaces of around 350 sq ft.

**SOUND QUALITY**

Initially the Kantas took a while to come on song, sounding a little boxy and muddled at first. However, after a thorough run-in they started to shine.

The front of the cabinet features a specially-moulded high density polymer fascia which is curved to time-align the four drivers. It certainly gives the Focals a distinctive look and works well.

The first thing to note is that they will go loud – as in very loud – from just a few watts of power, making them ideal for valve amplifiers.

Pressing our trusty Icon Audio Stereo 305E single-ended Class A amplifier into service in triode mode just a small turn of the volume control brought out a powerful, well-balanced rendition of New Order’s ‘Bizarre Love Triangle’.

Bass was firm and controlled having a pleasingly propulsive character that reminded me of the clean sound of Spendor’s excellent D7s.

Up top the beryllium tweeter has excellent detail. With Bjork’s ‘Human Behaviour’ (24/96) the vocals were stunningly realistic with no edge or harshness to them. Underneath the bouncing timpani riff had a fulsome quality with excellent body to it.

Any doubts about how well the combination of flax cones and beryllium could integrate was quickly dispelled with a run-through of Mahler’s Symphony No2 by the San Francisco Symphony under the direction of Michael Tilson Thomas. Here the orchestra was projected full into the room with striking power but on the quieter, vocal passages there was a delicacy at work that sent shivers down my spine.

There was wonderful synergy between the drive units; I had no sense of listening to four different units. Instead the music came over as a seamless whole, flowing freely and unimpeded.

Upping the ante a little with my favourite bass-heavy track of James Blake’s ‘Limit To Your Love’ revealed the Kantas don’t plumb the sub-sonic depths. This song really does have some room-shaking bass but the Focals do not have the size of drivers to bring out to flesh out the bottom octaves.

That said, the scale of the piece was still well-portrayed and unless you’ve heard it on larger and, invariably, more expensive loudspeakers the lack of sub-sonics would be of little consequence as the Focals captured the essence of the music with a thoroughly realistic presentation. As with the Bjork recording, Blake’s keening vocals were deliciously reproduced, having just the right amount of delicacy.

And, while there may not be ultimate low bass, the advantage is that these floorstanders never sound slow or boomy. Instead they present music with a verve. Putting on Nils Lofgren’s classic ‘Keith Don’t Go’ the zing in his fretwork was evident.

---

**Focal’s in-house designed and manufactured beryllium tweeter gives extended high frequencies but without any undue harshness.**
Two amplifiers in one!
The TRIODE valve is over 100 years old, regarded by many as the ultimate in sonic perfection. Vintage designs such as the 300B and 845 are still popular today. However amplifiers using directly heated vintage valves have the drawbacks of generally lower power and higher production cost. The modern KT150 valve is very versatile and when used as a triode in our MB90 amplifiers has a very usable 60 Watts output, three times more than the 300B. This way you can have the best of both worlds at a very reasonable price point!

Our MB90 MK Illm has an “Ultralinear” output of 115 Watts but its real magic is revealed when you switch to “TRIODE” on the front of the amplifier. Under these conditions the KT150 becomes very linear revealing a rich, warm presentation still with plenty of power for all but the most demanding situations. Customer feedback tells us that 80% of owners use “Triode” mode almost exclusively with “Ultralinear” used when high power is required.

The MB90 also features 4 and 8 Ohm matching and high and low sensitivity so designed to work with “Passive” and “Active” pre-amplifiers or direct from our PS1 and PS3 phono stages. Tolerant of “difficult load” speakers including ESLs. The MB90 MK Illm will work well with any speaker of about 80dB or more even in large rooms. The “easy bias” meter enables simple checking that the KT150 is always at optimum performance, the meter also gives an indication of the output power. Useful when you may need to know if you are likely approach the maximum available power.

Buy direct from us or from one of our carefully selected dealers in the UK or distributors world wide.
The rear of the Kanta No2s has a large reflex port above the single pair of loudspeaker binding posts.

Positioning is also easy. Give them a little room ahead of a rear wall because of that rear-firing port and they’ll sound fine. They’re also not too fussy about toe-in. I tried them pointing straight down the room and also angled in to the listening position. Their basic character didn’t change in either position although I preferred the former option as the treble seemed more natural.

What impressed most, though, was just how well these speakers worked with all forms of music. The live jazz of Ornette Coleman and his band on ‘Sound Grammar’ had the atmosphere of a concert hall, The Clash’s ‘Live At Shea Stadium’ revealed the different acoustics of an outdoor venue while on The Beatles’ ‘Sgt Pepper’s Lonely Hearts Club Band’ the various overdubs and studio techniques were evident.

This sense of precision brought the best out of Kraftwerk’s ‘Minimum-Maximum’ live opus where the different ambiences of the various venues – Warsaw, Moscow, Berlin, London etc. – could be clearly defined. But, while there were subtly different shades and toning to the electronic soundscapes, never once did the Kantas lose their rhythmic pulse.

One other feature worth noting is that they are rather forgiving of harsh recordings. Much as I like Oasis I’ve frequently found the guitars on the debut album ‘Definitely Maybe’ can sound distinctly searing through some loudspeakers – especially those with metal cones and domes.

With the Kanta No2s, however, there was more of a warmth to the sound, taking away some of the edge yet without detracting from the energy of the recording.

In fact, the more I listened to the Focals the more impressed I became. Swapping out the Icon Audio amplifier for a powerhouse McIntosh MC152 showed they are capable of highlighting the differences between amps. With Nick Cave’s ‘The Kindness of Strangers’ from his Murder Ballads CD the sound via the McIntosh was more clinical and insightful – the Icon Audio had a richer, more enveloping sound.

Neither could be classed as right or wrong but just different, meaning these ‘speakers will highlight just what your amplifier is doing. And that, in the final analysis, is just what you should expect of a loudspeaker.

CONCLUSION

Focal’s Kanta No2s are smooth, detailed and suited to all genres of music. Other loudspeakers at this price may sound initially more exciting but the Focals reward long-term listening.

MEASURED PERFORMANCE

Focal’s Kanta No2 places bass/midrange units above and below the tweeter in a classic D’Appolito arrangement that gave even results over a good vertical range. Our third-octave frequency response analysis shows a flat result across the audio band, when measured on-axis; there’s a slight roll off off-axis. The Kantas can be pointed straight down a room, or directly at listeners.

FREQUENCY RESPONSE

Green - driver output
Red - port output

IMPEDEANCE

maintaining an accurate tonal balance. The central tweeter runs strongly up to 20kHz with no drop in output. There’s a small lift above 10kHz so upper treble is well maintained. A flat midband will make for a forward and detailed sound.

Output across the lower midband and bass is smooth and accurate down to 60Hz – with no bass accentuation. However, the two large ports both act to increase bass power around 40Hz and the cabinet reaches down to 30Hz before output drops away quickly, as always with ported loudspeakers. Low bass will be powerful, but deep subsonics are absent. As Focal say, the Kantas best suit medium size rooms – I’d suggest up to 20ft long approximately.

The impedance curve confirms port tuning peaks at 40Hz; bass will be lively rather than strongly damped.

Sensitivity was high at 90dB sound pressure level (SPL) from one nominal Watt (2.8V) of input. Amplifiers around 40 Watts will deliver very high volume and down to 10 Watts will suffice. The Kanta No2s will sound smooth, even and detailed. Bass will be firm and powerful with a lively quality. Little power is needed to go loud. NIK
NOW INCLUDING THE NEW OREA RANGE, ISOACOUSTICS OFFER A COMPLETE LINE OF PROVEN ISOLATION PRODUCTS FOR ALL SPEAKERS AND COMPONENTS

Distributed exclusively in the UK and Ireland by SCV | www.scvdistribution.co.uk | 03301 222500
"At its heart the Vena is a 45 Watt per channel integrated amplifier but its connectivity options go farther than any previous equipment from Quad at the price point.

It has two analogue inputs, two optical and one co-axial digital input and both Type A and B USB sockets. The former allows the connection and charging of Apple iPods, iPads and iPhones while the latter facilitates connection to your computer based music collection.

In addition music can be streamed from computers and portable devices via Bluetooth with aptX codec support.

Completing the feature set are optical and co-axial digital outputs and stereo analogue outputs for connecting to an off-board power amplifier.

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 2018 to:

June 2018 Competition, Hi-Fi World magazine, Studio 204, Buspace Studio, Conlan Street, Notting Hill, London W10 SAP

COMPETITION

WIN QUAD’S SUPERB VENA AMPLIFIER WORTH £599 IN THIS MONTH’S GREAT GIVEAWAY!

HERE'S YOUR CHANCE TO WIN THE SUPERB VENA AMPLIFIER. READ THE REVIEW EXCERPT BELOW AND ANSWER THE QUESTIONS.

RULES AND CONDITIONS OF ENTRY
- ONLY ONE ENTRY PER HOUSEHOLD
- MULTIPLE ENTRIES WILL BE AUTOMATICALLY DISQUALIFIED
- PURCHASE OF THE MAGAZINE IS NOT A PRE-CONDITION OF ENTRY
- NO CORRESPONDENCE WILL BE ENTERED INTO
- THE EDITOR’S DECISION IS FINAL
- NO EMPLOYEES OF AUDIO WEB PUBLISHING LIMITED, OR OF ANY COMPANIES ASSOCIATED WITH THE PRODUCTION OR DISTRIBUTION OF THE PRIZES, MAY ENTER

QUESTIONS
1) What is the power output?
   [a] 100 Watts
   [b] 45 Watts
   [c] 4 horse power
   [d] 8 BTU

2) What USB inputs are fitted?
   [a] Type A and B
   [b] Type C
   [c] Type X
   [d] none

3) Music can be streamed by -
   [a] VHF/FM
   [b] long wave
   [c] Bluetooth
   [d] short wave

4) The case is made from -
   [a] steel
   [b] plastic
   [c] wood
   [d] aluminium

Entries will be accepted on a postcard only

March 2018 winners: Dual MTR-75 turntable
Duncan Maclean of Aberdeen, Mr J Maylin of Solihull
REVEALING EVERY DETAIL

Spendor D-Line loudspeakers reveal every nuance of the performance with absolute clarity, precision and realism. With their transparent, superbly natural sound and extraordinary resolution, they create an airy, spacious soundscape, then invite you in to explore, uncovering new depths, textures and definition in your music.

MADE FOR MUSIC. DESIGNED FOR YOU.
Audio Technica are aiming high with their new ATH ADX5000 headphones — they cost £1990! It puts them well above most else in terms of cost.

The ADX5000s are a tech fest, boasting a 58mm drive unit with tungsten coated diaphragm integrated into a baffle. A light and strong magnesium frame carries this unit in open-back configuration. The benefit is a clear and open sound lacking reflections from a rear chamber, the drawback being less bass and more sound radiated out of the ‘phones to perhaps annoy others — not so good on the commute then.

At this price I was initially taken aback that the lovelies had no branding adornment — you know, Beats, or Sony or Sennheiser et al. There isn’t even a model number — I searched with a magnifying glass! Then I realised that at £2k best not to in public places. It also adds some mystique perhaps, like those cars with ID removed.

Our scales measured weight as 272 gms without the cable — light. They fitted me easily since the 65mm internal diameter of the foam ear pieces is larger than most (55mm or less) and left my lugholes (pinna) some space. Clamp pressure was light, making for comfort: I found these ‘phones easy to fit and live with; they have less bulk than most. The cable is long at 326 cms (11.7ft)
The new 800 Series Diamond didn’t get better by chance. It got better by change. 868 changes to be precise.

Bowers & Wilkins

bowers-wilkins.com
"These ‘phones are information machines: you get to hear everything"

- too long for use on the move.
  Each earpiece has an input socket, allowing for fully balanced connection, but the only lead supplied came with miniature MMCX connectors, rather than the common 2.5mm two-pole jack. They are sturdier than such jacks – their advantage – but finding an alternative or replacement lead for the one supplied there is less choice. A normal unbalanced lead with 1/4in (6.3m) jack plug (three pole) termination is supplied.

SOUND QUALITY
The overview here is a light, open and clear sound that is intensively detailed. These ‘phones are information machines; you get to hear everything. I used them with an Audiolab M-DAC+ (Optimum Transient XD filter) fed from a Mac running Sierra and playing from Audacity, as well as from an Astell&Kern AK120 portable player.

Stevie Nicks solo vocal in Silver Spring (24/96) was sparkling clear; transferring back to Oppo PM1s or Philips Fidelio X1s seemingly wrapped her up in cotton wool. The difference was big and stark. However, the other ‘phones gave more bass, if of a fulsome nature. With Rock tracks this was a consistent property: the ADX5000s sounded tight and insightful but they’re short of bass depth and weight by general standards – especially by Beats standards.

Everything came to life with the ADX5000s, as if a whole pile of muck had been miraculously banished across the mid-band and treble highlighted at the top end, making the smallest cymbal taps shimmer. However, there’s emphasis in the upper mid-range, highlighting digital coarseness – and also a slightly metallic quality. A struck piano chord in Steve Winwood’s One More Day (0.33secs in) jumped out, where other ‘phones brought out timbral detail and complexity in a less forced manner.

With Benjamin Grosvenor playing Chopin’s Nocturne No 5 (24/96) piano was hard lit – and I admit to being uncertain whether this was correct or not. It was case of alternatives. Measurement revealed raised output around 4kHz.

Playing through a wide repertoire of test tracks that I’m familiar with, the ADX5000s always impressed with their revelation, but they achieve this partially through high frequency emphasis that adds a sheen. They try just a little too hard to impress I felt.

CONCLUSION
Undoubtedly the ATH-ADX5000 headphones shade most else with their insight and detail but this took precedence over an easy, natural tonality. At the price though you must listen yourself, against competitors like Audeze’s superb open-backed planar magnetic LCD-3 for example. These ATs have a very specific sound, but they are impressive - that’s for sure.
Virtually ready to use out of the box as tracking force, anti-skate force, cartridge overhang and arm height are all preset from the factory for maximum performance.

(Included: MT2 Turntable, High output Moving Coil cartridge, Tonearm and clear contoured dust cover)
NEW

MT2
McIntosh Precision Turntable

Other Precision Turntables in the McIntosh Family

- **Maxwell Audio Visual Ltd**
  London
  020 3384 6968
  www.maxwellav.com

- **Nintronic**
  Welwyn Garden City
  01707 320788
  www.nintronic.co.uk

- **Robert Taussig**
  London
  020 7487 3455
  www.roberttaussig.co.uk

- **Sound Academy**
  Walsall, West Midlands
  01922 493499
  www.soundacademy.co.uk

- **Soundstage AV**
  Barnet
  020 8440 9509
  www.soundstage.uk.com

- **McIntosh MT5**
- **McIntosh MT10**
The new Jamo Studio 8 series has been reimagined to live seamlessly in modern, premium environments.

Contemporary material and finish choices - such as wood grain accents, matte vinyl finishes and magnetic woven linen grilles - accentuate the clean minimalist lines of this European design.

Sonically, the Studio 8 series employs 1" soft dome tweeters and WaveGuide technology for a dynamic, powerful sound performance. The stylish, alumnised polyfibre woofers deliver deep, accurate bass from a small footprint thanks in-part to the clever use of reflex ports.

The Jamo Studio 8 series starts from just £155.00.
Take two

Rotel recently launched a classic pairing of RA-1572 amplifier and RCD-1572 CD player. Noel Keywood listens in.

The name Rotel conjures up images of their eye-catching 1970s receivers, with brightly-lit green VHF/FM tune window and meters, satin black fascia and wooden sleeve – I’m thinking of the RX-802 I once owned. You got fine sound and arresting visuals, all at a sensible price: Rotel equalled value.

The Rotel amplifier and CD player combo I’m reviewing here I hoped would offer up the same, good sound quality allied to a friendly price tag, which here is £1395 for the RA-1572 amplifier and £845 for the RCD-1572 CD player – substantial, but there’s a lot on offer, if not the bright green displays of yore.

Weighing in at 13kgs (29lbs) the RA-1572 amplifier is no small package, due mainly to the large toroidal mains transformer of its beefy linear power supply. It’s needed since the amplifier delivers power figures above most else: a claimed 120 Watts and we measured 150 Watts (8 Ohms), plus a whopping 222 Watts into 4 Ohms – it can handle just about any situation, from insensitive loudspeakers to large rooms and deliver massive volume. This is from an analogue Class A/B output stage – no Class D modules or switch-mode power supply here – it’s a trad. design, but one that’s very...
The amplifier's remote control has CD transport buttons but they don't work with the RCD-1572.

A massive toroidal mains transformer accounts for much of the amplifier's weight. Large heatsinks at left and right keep the output transistors cool. Small-signal sealed relays provide switching.

well developed, free of crossover crosstalk.

In spite of all this, the unit is reasonably compact, measuring 431mm (17in) wide, 358mm (14 1/8in) deep and 144mm (5 5/8in) high. It has a nicely finished brushed alloy fascia into which Rotel has been engraved. The rear casework follows standard pattern though, being a folded sheet steel cover over a similarly folded sheet steel chassis.

There's much more under the hood, since the RA-1572 is a 'digital' amplifier fitted with an AKM AK4495-SEQ digital-to-analogue converter (DAC). AKM's product data describes this as a 'premium' DAC but it's bettered by others in their Verita range - so not a top DAC, as measurement confirmed.

Digital inputs (S/PDIF) accept the output from CD players or transports, or portable Digital Audio Players (DAPs) and such like. The optical input accepts 192kHz sample rate so an Astell&Kern player's optical output is compatible - not always the case with digital optical inputs even now.

There's a USB input for computer audio that comes set to USB Class 1 audio with a 96kHz sample rate limit; I was surprised to see our MacBook Pro running Sierra register this limit. Class 2 audio, which requires a supplied driver for PCs but not Macs, is a manually selected option allowing 384kHz sample rate. This done, the AKM signalled back its acceptance of 768kHz sample rate from the Mac. The PC driver can deliver DoP (DSD over USB) from a PC; Macs are unable to deliver DoP.

There's also Bluetooth wireless.

with aptX and a network connection that allows a basic iOS control app to be used. Yes, iOS so you need an Apple device. A remote control unit is supplied and there's provision for an external remote control unit for use in another room, or if the amp is built into a cabinet, but it's an extra. This remote control bizarrely has CD transport buttons that did not work with the partnering CD player.

There are three unbalanced (RCA phono socket) analogue Line inputs and also one pair of balanced (XLR socket) Line inputs, plus Preamp out and two subwoofer outputs. An MM phono stage has been included, so a turntable can be connected. Two pairs of sturdy gold-plated loudspeaker sockets are fitted, accepting bare wires, 4mm banana plugs or spades, with front panel switching between them, or both can be turned off when listening to headphones that can be plugged into a 1/4in (6.3mm) front panel socket.

Also on the front panel is a USB socket to accept playback from Apple products (iPhone, iPad etc) via their Lightning-USB A lead. Note that this socket does not read mass storage devices, like Flash drives or external disc drives.

In all then, quite a line-up of facilities. As a result the inside of the amplifier is a busy place, as our picture shows. There's even an ARM processor in there. A dot matrix display gives access to many functions in a settings menu but filters – analogue or digital – are absent, as is

"The introductory bass line sounded firm, deep and tuneful from an Ortofon 2M Black MM cartridge"
a warp filter for the turntable input. You do however get well tailored tone controls.

The RCD-1572 CD player accompanying our amplifier is top of their '15' range, Rotel say. It uses a Wolfson WM8740 digital-to-analogue converter (DAC) and has its own remote control unit. Their iOS app also controls it, but only via Rotel's RA/RC models — including the RA-1572 amplifier — via a control cable link. The remote control differs from that of the amplifier, so you need both, unless a control link is used.

This is a straightforward player with no frills, meaning no filter options, no SACD and not even an optical digital output. The rear panel carries analogue balanced XLR output sockets, unbalanced phono sockets and a digital (S/PDIF) phono socket output (co-axial). Which to use when connecting to the RA-1572 amplifier? Rotel show all three in their instructions; I prefer digital since it cuts out many analogue stages, but in this case I preferred the analogue XLR connection that was just marginally better — meaning the

Wolfson DAC was a tad superior to the AKM. I prefer an optical digital cable to avoid the earth currents (that I have seen upset some DACs) but no such option here, which is a pity.

The player weights 6.7kgs (14.8 lbs) and is 431mm (17 in) wide like the amplifier, but it's shallower at 320mm and 104mm (4 in) high. Like its partner, build quality and finish are good, if conventional with a folded steel cover over a folded steel chassis. The front panel controls are short-action push buttons and the fluorescent matrix display shows track and time.

**SOUND QUALITY**

I partnered this combo with our Martin Logan Electromotion ESL-X hybrid electrostatic loudspeakers connected with Chord Signature Reference cables but brought other units into play. As always, the system gave an easy and unchallenging presentation that took me back a bit to 'good CD of old'. It was smooth, lacking bite, but also a tad hazy and unengaging, leaving me feeling a little detached as a listener. CD can sound better than this.

I thought hi-res digital from my Astell&Kern AK120 portable connected through a short optical digital cable to the amplifier would give useful improvement — but not so. Although the delicious irony of playing Otis Redding's 'Dock of the Bay' from 1963 in 24/192 over optical was met by success, sound quality was fair — but again unchallenging.

Moving on to other 24-bit hi-res material from Fleetwood Mac to David Bowie changed little. I swapped from digital connection that utilises the internal AKM DAC to analogue via XLR that brings the Wolfson DAC of the CD player into action but there was little change. This left me a little baffled.

Firing up our Oppo UDP-205D universal player connected via its balanced XLR analogue outputs to eliminate Rotel's digital sections and focus on the amplifier alone brought a complete change: suddenly the RA-1572 sounded clean, clear and composed. It had a solid sounding lower midband and firm, powerful bass, whilst treble came across as pure and sweet. So fed from one of today's best DACs, an ESS Sabre 32 Pro 9028 that sits within the Oppo, Rotel's RA-1572 delivered a very nice result, competitive with all around it at the price point.

Playing the AK120 through the Oppo and into the Rotel brought hi-res files to life — and this was the clincher. The amplifier's internal DAC (and associated circuitry that perhaps was a party to this issue) was unimpressive — and the RCD-1572 CD player proved similarly unimpressive.

With LP — that avoids digital processing of course — tracks like Kate Bush singing 'King of the Mountain' from Aerial the introductory bass line sounded firm,
Bringing true hi-fi into your home

Klipsch Reference Premiere loudspeakers broadcast the finest musical reproduction and cinematic sound thanks to their Cerametallic™ woofers and Hybrid Tractrix® Horn. They can fill your room with theatre-quality sound with minimal effort - immersing you in the ultimate listening experience. Klipsch guarantees a complete hemisphere of rich, detailed sound and at the greatest value possible. Your music and movies will never sound the same again.
deep and tuneful from an Ortofon 2M Black cartridge, mounted in an SME309 arm on a Timestep Technics Evo SL-1210 Mk2 turntable: it was obvious in the mix and easy to follow. A wide soundstage and low hiss and hum contributed, but as you might expect there wasn’t the stage depth and fluidity of higher quality phonostages such as our Icon Audio PSJ that is my sonic reference.

An Apple iPad connected into the front USB A socket worked without problem and so did Bluetooth; the BT input has to be selected before it becomes active and visible to a Bluetooth transmitting device. But then there’s no key-exchange faffing around and my iPhone just played, including DSD files from an Onkyo HiFi player that sounded pretty good, even if they were likely a 44 kHz sample rate PCM version for iOS and Bluetooth aptX compatibility.

CONCLUSION
The RA-1572 is a complex package with a wide array of digital and analogue inputs. The basic analogue amplifier is classically solid and powerful in its sound with great bass quality – rhythmic yet tight – an open midband and clean treble, all nicely in order; a top quality Oppo BDP-205D universal player connected via XLR demonstrated this.

Unfortunately, the digital section of the amplifier didn’t match current expectations at the price and nor did the RCD-1572 CD player. Both were tidy enough and inoffensive but digital today can sound better.

MEASURED PERFORMANCE

**ROTEL RA-1572**
The RA-1572 produced 150 Watts into 8 Ohms and 222 Watts into 4 Ohms under measurement, going very loud with insensitive loudspeakers and/or big rooms.

Distortion levels were minimal at all frequencies and power outputs, just 0.005% in the midband and 0.02% at 1 Watt, 10kHz where crossover distortion can measure ten times more, so this is a very low distortion design.

Frequency response of the amplifier was both flat and wide, stretching from 7Hz to 100kHz within -1dB limits. Input sensitivity was average, 300mV at the Line inputs (CD, Aux etc) and 500mV at the balanced XLR inputs. This will match most external sources, bar a few low gain external phono stages.

The MM phono stage was accurately equalised to meet the RIAA curve, measuring flat from 7Hz to 20kHz, but there is no warp filtering to reduce low frequency gain so loudspeaker cone flaps will occur with warped LPs. Amongst all the selectable options such a filter would have been useful. Sensitivity was high at 2mV allowing high output moving coils to be used, and overlap just sufficient at 30mV.

Dynamic range via the optical and electrical S/PDIF digital inputs was unexceptional at 114dB. Distortion measured 0.04% with 24bit and 0.22% with CD, both good results. Digital (S/PDIF) and USB frequency response reached a high 83kHz upper limit, when set to Class 2.

The RA-1572 amplifier offers high power and low distortion; the MM phono stage and digital sections work well but are unexceptional by current standards.

**Power (8 Ohms)**

- 150W
- Frequency response (-1dB)
- 7Hz-100kHz
- Distortion (10kHz
- 0.02%
- Sensitivity
- 0.3V
- Noise
- -98dB
- Damping factor

**FREQUENCY RESPONSE**

**DISTORTION**

**ROTEL RCD-1572**
Frequency response of the Rotel RCD-1572 CD player measured flat from 10Hz to 21kHz our analysis shows.

From the balanced XLR output distortion measured 0.0008% at peak level (0dB) and 0.27% at -60dB, the latter being a little above the 0.22% that’s common nowadays. Not a big difference it would seem but it was the reason why BAJ dynamic range came in at 98dB where 102dB has been common for some years now, the 4dB shortfall putting this player behind rivals.

The unbalanced phono socket outputs gave a similar result. Output levels were conventional, 4.5V from XLR and 2.2V from the phono sockets.

The RCD-1572 measured well but was a tad behind what is possible in critical dynamic range and distortion values. NK

- Frequency response (-1dB)
- 10Hz-21kHz
- Distortion (-60dB)
- 0.27%
- Output (XLR/phonos)
- 4.5V / 2.2V
- Noise
- -98dB

**FREQUENCY RESPONSE**

**DISTORTION**

**ROTEL RA-1572 £1395**

EXCELLENT - extremely capable

VERDICT
Fine sounding amplifier with lots of inputs, but digital sound could be better.

FOR
- amp sound quality
- power
- facilities

AGAINST
- mediocre digital sound (PCM)
- no warp/digital filters
- no MC phono option

**ROTEL RCD-1572 £845**

GOOD - worth auditioning

VERDICT
Near, easy to use CD player with balanced outputs, but behind the pack in sound quality.

FOR
- balanced analogue outputs
- easy to use

AGAINST
- mediocre sound quality
- no volume control
- no digital filter options
- no optical output

Rotel Europe
+44 (0) 1903 221 710
www.rotel.com/en-gb
LETTERS & EMAILS

Mail

Visit our website at www.hi-fiworld.co.uk or send your emails to letters@hi-fiworld.co.uk. Letter of the month wins a pair of Tannoy Mercury 7.2 loudspeakers.


Tannoy Mercury 7.2 loudspeakers
www.tannoy.com

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

A pair of Tannoy Mercury 7.2 loudspeakers are on their way to KEITH ROE, Letter of the Month winner in our May 2018 issue.

Letter of the Month

GO FOR A REFERENCE 75

I took your advice a couple of years ago when I was thinking of upgrading to a Devialet Expert 200 amplifier or Chord DAVE DAC to improve my system’s sound, the Devialet to replace my Musical Fidelity Nu-Vista 300 power amplifier and Music First Audio Classic V2 pre-amplifier.

A home demo of the Devialet Expert 220 Pro showed a loss of musicality to my ears over what I already have, so I went with the Chord DAVE – and haven’t regretted it. I have subsequently added the Chord Blu MkIII upsampling transport to my system which has raised the musicality to a higher level still.

My current system is Sonus Faber Electa Amator IIs, reinforced with Sonus Faber Gravis 81 subwoofer, driven by the Chord DAVE/Blu MkIII front end, powered by my venerable Musical Fidelity Nu-Vista 300 power amplifiers;

I had the Nu-Vistas fine tuned 7 years ago, and they have been faultless and musical since day one.

I demoed your highly rated McIntosh MC1.52, albeit at a dealer but with the Chord DAVE, and I heard no improvement over my Nu-Vista 300.

Audio Research Reference 75 valve power amplifier. “Do you think it would be a good match for my system” asks David, “playing 70s, Jazz/Funk and Soul”.

I have the opportunity to trade in my Nu-Vista against a 2nd hand Audio Research Reference 75SE or new Audio Research V180 with the V180 £500 more expensive. I’m aware that the Reference 75SE is the better amplifier, even got that directly from Audio Research, however the fuse protection, auto-bias, and tube flexibility of the V180 does appeal. With your experience of the Reference 75SE do you think it would be a good match for my system, 70s, jazz/Funk and Soul, but above all rhythmic and musical?

Regards,
David.

Hi David. You will get more slam from the Reference 75SE, since it uses KT150 output pairs (ensure the one you are considering has these tubes and not something else). Fixed bias also gives a slightly drier and more punchy sound. The V180’s auto-bias and single pair of KT150s will give a slightly easier delivery. However, as you are talking about moving from solid-state (output stage) to valves I suggest you get another demo, since the sonic differences are considerable.

Having said that, Audio Research
amplifiers consistently have a fast and punchy delivery way beyond that of solid-state; it’s unlikely you’ll be disappointed.

I suspect a Reference 75 with KT150s will best suit You may want to know how many hours are on the second-hand Reference 75 tubes by the way, and look at replacement costs, but they’re not high (£300 or so for quad matched pairs) relative to the cost of the amp.

With regard to our McIntosh MC152 reference power amplifier, readers demand to know what we choose to use when reviewing — understandably so — but a review amplifier isn’t necessarily “the best”, whatever that is. The McIntosh MC152 has a unique output stage with auto-transformers that delivers just about zero high frequency distortion (because the output transformers delivers volts not amps) it gives a super clean sound as a result. Also, it drives just about all the loudspeakers we hook up to it without difficulty. One of its strengths then, for us, is that it’s a wonderful and reliable workhorse that is consistent in its high-quality sound — but this matters less to those who won’t be changing loudspeakers regularly. The power meters are handy too, ensuring we avoid overload (with insensitive loudspeakers). But our other amplifier is an icon Audio Stereo30 SE valve amp of just 30 Watts — radically different. They’re both fine amplifiers — but in their own way.

A final note: as Audio Research say, the KT150 is an impressive sounding valve (unlike KT120s and KT90s) — ensure you use them and nothing else. An amplifier must deliver 2A heater current to this valve — a massive 16A to quad-matched pairs. That’s a serious mains transformer. Always ensure an amplifier suits KT150s; earlier Audio Research models did not I believe.

SOUND OF CD

Noel’s review of CDs in April was great and explained a lot. But one question that comes to mind is what effect does the CD player itself have in determining the sound? I have a modest CD collection and use three different CD players in three systems — and each has a very distinct sound.

I use an Arcam FMJ CD33 through WAD300B PP monoblocks driven by an Audio Note M3 pre and it sounds very good.

If I swap the CD player to a Naim CD3 it sounds quite different, more dynamic and great for rock but less so for acoustic jazz & classical.

If I use my main system player, an Audio Note CD 4.1x, through an M6 pre to AN Quest Silver 300B monoblocks, all linked with AN Silver cables, the music sounds quite different again — very like a good 180gm vinyl pressing.

The CD is the same, and I know that you can’t put back data that isn’t there, but I wonder if a good quality CD

at some point the sound does change if the source is always the same then presumably the “change” happens in the DAC... Mmm... I’m not sure if I’m making sense here.

Confused of Warwick...

Greg White.

Hi Greg. You are making perfect sense. Put simply, everything in the recording chain makes a difference and music through our hi-fi systems could sound so much better if it got a better start in life.

In your specific case the Arcam is a fairly conventional design, the Naim as always has their particular house sound and the Audio Note is quite different again, with little anti-alias filtering, a current-to-voltage interface audio transformer (no chips here) and 6DJ8 anode follower valve output stage. Audio Note use the LP (i.e. analogue sound) as a sonic reference and their products veer away furthest from sounding “digital” as a result.

As a final aside, I think I am right in saying that your World Audio Design WAD300B was designed by AudioNote’s designer, Andy Grove who is behind many or most of their products, so there’s a symbiotic link in there! Happy listening NK

EXPENSIVE TAT MAT

Having just recently been scanning last year’s back issues I stumbled on a previously missed article by Paul Rigby (page 67 November 2017) with regard to the pricing of “Old Vinyls” and the rock bottom prices for early examples of Beatles/ Stones and the like being
Kanta inaugurates a new vision of the Premium loudspeaker. Completely dedicated to performance, for the first time it combines a Flax sandwich cone speaker driver with a legendary Beryllium tweeter. It delivers a precise, detailed sound that brims with warmth and musicality. With its incredible style and its broad range of finishes, Kanta delights the eyes as much as the ears...

**Performance meets style**

Visit focal.com to discover more.
the most dog eared copies command outrageous prices in market stalls and even car boot sales. Some vendors locally I know purchase from charity shops or from punters selling off the older generations copies for peanuts.

I have experienced some of these letter transactions "first hand" where family members dispose of discs of their dearly departed for as little as 50p - to £1.00 apiece. Chatting to the vendors themselves whilst browsing, I often find they seem to be unable to comprehend why these items are still on the shelves up to 2+ years after they acquired them (for peanuts).

This is what is probably confusing the sales trends, as the outrageous asking price hereabouts starts at around £15.00 upward. Typically, early but not first issues of the first Rolling Stones Album start at around £30-£40 pounds despite being in almost unplayable condition and in many cases with totally illegible sleeves and original mildew on sleeve liners. Same goes for poorly cared for Beatles/Dylan and similar period material. None of these examples could be considered as mint, let alone of merchantable quality.

I saw a Beatles White album not fit for a doormat at £50.00 and looking closely probably not fit for my medium priced turntable. Please oh please Paul, next time you are at a car boot fair can you persuade some of the vendors in your realm to visit the North West England even if only once a year.

Sad end note: I let most of my LPs go (for little reward) when the "highly" rated CD turned up in the 80's - hailed as the new musical age and would finish vinyl forever!

Keep up the brilliant editorial.

Kindest regards,

N. Porcher,
Oswestry,
Shropshire.

Hello Mr Porcher – and thanks for your letter. There's a distinct difference between asking price of any item and the price a customer is prepared to pay. I too have seen astronomical prices for original vinyl featuring The Beatles, Stones et al. Many non-specialist, fair-weather retailers see a Beatles LP and then pound signs before their eyes. Nowadays, as I stated in my piece, such high prices belong to history. Most true fans already have their (excellent condition) copies and will only pay for special editions including the recent audiophile reissues.

The problem relates to past sales expectations and information contained within popular record buyer's guides quoting high prices for mint condition examples. The uninformed are slaves to such guides: charity shop owners and antique dealers are the main culprits.

One specific example? Fleetwood Mac's ever popular and steadily selling Rumours (original pressing) has actually risen in average price from a once realistic £5 to a healthy £12 from a typically knowledgeable record fair dealer. Yet, I've seen antique dealers asking £30 for it. Crazy. I spoke to a host of professional dealers whose livelihood is governed by roaming the country, buying and selling vinyl of all types. It's their judgement I trust because they are at the coal face, interacting with hardcore music fans as opposed to unfortunate, gullible week-end shoppers. Choose your vinyl vendor carefully! PR

**BALANCED OR REGENERATED**

Thanks for the many product reviews, and general good read which I enjoy every month. This has helped me to make several worthwhile improvements and upgrades over the years. I am always open to further improvements and tweaks, to tease even more from my system.

However, there is one topic that has left me both intrigued, but also confused. Having read several reviews on Balanced Mains Units and now Mains Conditioning: the net effect seems/sounds very similar. These two routes seem very different to resolving mains-based problems, but the results seem to converge, to remove background noise, and to present music closer to how it was originally captured. Sounds like heaven!

I live within the M25, near Rickmansworth, and have never been aware of mains-borne noise, pops/clicks etc, but I can accept the principle of providing my system with a better mains "signal", for it to work better. I use a linear power supply for my Audiolab M-DAC, and can hear a huge improvement over its original switch-mode.

So, do I need to consider both Balanced and Conditioned supply, or start with Balanced? Is there a cost-effective approach? Such units are not cheap, but I seem to remember a previous letter about Airlink Transformers (?), which sounds a more industrial but effective route. I would welcome any feedback to help clarify.

My system is: PrimaLuna Prologue 2, Quadrail Style 8 speakers, Arcam CD23, Audiolab M-DAC +Power supply, that I suspect are a function of voltage regulation. At Hi-FI World offices this is a rock steady (and high) 245V with 3% distortion.

The problem with regenerated supplies is that they're complex, bulky and expensive – even when unable to cope with heavy loads, meaning most power amplifiers cannot be hooked.

The ever popular Rumours album from Fleetwood Mac. "I've seen antique dealers asking £30 for it. Crazy." says Paul Rigby.

Linn LP12 with Linus 1, Project Tubebox (to be upgraded) Tellurium Ultra Black interconnects, and Transparent speaker cables.

Many thanks,

Martin Trevers.

Hi Martin. Using a balanced mains transformer reduces leakage currents – but it doesn't clean them. Using a regenerator doesn't reduce leakage currents but it does clean them.

As you say Airlink are a go-to source for balanced mains transformers for audio systems.

Slowly, however, regenerated mains supplies are appearing and they don't see much reduce ground currents but clean them up by eliminating the extended mains distortion harmonics.

Airlink Conditioning balanced power supply with noise filters. Cost - around £300.
‘If you want the best Wi-Fi speaker...this is it... you have a near-perfect 21st century speaker.’ T3.com

Let the voice of Naim take you inside the music

For you who experience music as a never-ending journey of passion, that needs to be explored, Naim engineer systems of such astonishing texture and detail that you are drawn inside the music - as though you are with the artist as they perform.

Mu-so is our powerful, complete music system, finely tuned by Naim engineers in Wiltshire, England. Built upon an intelligent digital brain, Mu-so commands 450 watts of power through six custom designed speakers, allowing you to bring your music alive.

Go Deeper
up to them, except through filtered (not distortion free) outputs that do only half the job.

We have heard good things about the Power Inspired AG500 regenerated supply [see also the Letter from Phil Haywood in this issue] and we use an Isotek Evo3 Mosaic Genesis as a must for reviewing purposes.

You could run a regenerator from a balanced mains supply, where higher current amplifiers would in effect benefit from the balanced supply direct.

A small final observation. Balanced power supplies give 115V out on each line so are safer in the home. They are commonly used (110V out, centre tapped) on building sites (those big orange boxes) to feed electrical tools 55V per line.

**REGENERATION WORKS**

I was interested to read the letter from Eve Sandston in your May issue as I have recently purchased a mains regenerator. Unfortunately, my budget no longer runs to the four figure sums required to buy such an item from a hi-fi manufacturer. So, after a look around the web, I settled for a product designed predominantly for computer use. The item in question is an AG 500 from Power Inspired it outputs 230V and now powers my entire system, which consists of record deck, phone stage, CD transport and DAC and valve amp.

Unlike your other correspondent, the difference in my system is clear. The soundstage is wider and instrumental separation much better. The sound has become much smoother and more lifelike. All this for just £275! I would suggest that any other readers contemplating mains regeneration should start with something modestly priced before spending big bucks. So, how about a review of the AG500, or something similar? I would love to know how it measured!

Regards,

**Phil Haywood.**

Hi Phil. Yes, I’m onto it (or was) and then let it slip. Power Inspired said “yes” to a review so I hope we’ll have one in for measurement and listening soon. The AG500 is a 500 Watt UPS (uninterruptible power supply) with batteries on-board giving 10 minutes off-line protection for computers; it is not a dedicated audio product but suitable for hi-fi the company say, due to quiet fan running. The distortion spec. is less than 3% where the Isotek Evo 3 we use is less than 0.2% and ours hovers around 0.1% - hence the price difference.

I’m surprised your AG500 supports a valve amplifier as they commonly consume a lot of power. Those interested should find the mains power consumption of each product from the manufacturer’s spec. and total the values, that should not exceed 500 Watts.

Thank you for giving us your experience; it’s always good to hear from others working independently – something readers value. We certainly find our Isotek regenerator works and look forward to measuring and using an AG500.

**MOJO WORKING**

I very much enjoyed Noel’s piece in the April edition on the evolution of digital and the inherent limitations of CD. It seems very like the evolution of digital photography. The first pictures could only be printed at postcard size before losing definition but today’s digital cameras can easily produce posters. And we now have a feature film shot on an iPhone. I do have a question about digital replay I have a MCjo. It’s stunning. I drive it from a MacBook Pro running Audirvana with music held on an external disc drive. But it’s not very portable: disc drive cable MacBook cable and MCjo.

I have pondered a FiiO X5 or AK70 as an alternative source and it does work quite well from an AK70. But here again it seems like overkill as both the FiiO & AK have built in DACs and headphone amps of their own which duplicate the MCjo.

I have been waiting for the Chord Poly to arrive, it being a dedicated streaming source, complete with memory cards, designed for the MCjo. But having read about it, and seen various YouTube videos, I can’t really understand how I would control the music. All the articles suggest it’s easy from a smartphone or tablet, but I can’t really understand how that would work. I have an old smart phone (HTC M1 - ?) which I just use as a phone. It’s an old model and I can’t load music onto it.

So my question is how do I control a Poly if I get one? Is it as easy as the trade press suggests? Or would I be better served by getting an AK70 / AK300 / Fii0 ?

Kind regards,

**Edward Martin.**

Hi Edward. Chord has just released a control app for the Poly called GoFigure. Unfortunately it’s Apple

iOS only at the moment, for an iPhone or iPad. An Android version is under development so that won’t help you right now, but perhaps in the future if you prefer to use a tablet or mobile phone based on the Android operating system.

Therefore, as you like the sound of the Mojo in your system, I’d advise you leave it there and invest in a portable player for when you are travelling. I use a FiIO X5 myself it has a rich, warm sound although the AK70 offers more detail. JM

DOWN TO EARTH
I write in response to Evie Sandstorm’s letter in the May issue, in which she questioned the usefulness of mains supply products.

In his reply, Noel provided a reference to the subject of ‘Ground Loops’. Minimising the effect of ground loops in an audio system is a useful first step in ‘cleaning up’ the a.c. supply. I offer some explanations and suggestions to those readers new to the topic.

‘Ground loops’ can arise when connecting your audio equipment to the mains supply. If each item of equipment provides a path to earth via its mains cable, then plugging in many items will provide multiple paths to earth. These multiple paths to earth constitute the ‘ground loops’.

The mains isolating transformer in each item of equipment leaks small alternating currents to earth. These a.c. leakage currents develop a.c. voltages in the ground loops which produce ‘hum’ in the equipment. In addition, the ground loops act like aerials and pick up high frequency interference.

In the past, this journal and others have suggested actions that readers can take to minimise the effect of ground loops. I claim no originality in regard to listing some of them below.

Avoid plugging your different items of equipment into different wall outlets in the room. You do not want to create huge ground loops!

Provided its maximum current rating is not exceeded, use a single mains extension or distribution block to supply all your items of equipment.

Consider a distribution block that employs ‘star earthing’. This connects all the equipment earths to one common point inside the block.

Consider having an electrician install a dedicated spur from the consumer unit. This will avoid having to connect your system to the potentially ‘noisy’ ring main circuit.

I hope this information provides a ‘down to earth’ take on what can be a complicated subject.

Alan Scott.

Dynavox X4100 mains filter unit. It has four unfiltered outlets and four filtered outlets. Which to use asks John Beverly.

Hi Alan. Thanks for your words of wisdom. I spoke to a “senior” engineer at a show recently and he had never considered how leakage from a mains transformer could affect sound quality. I was taken aback. But as you say the topic can get complicated, which is why I referred to Doug Self’s diagrams and analyses at The Amplifier Institute.

The topic of transformer leakage (of dirty mains currents) is all over the net for anyone interested and militates for the use of low leakage (high cost) mains transformers in hi-fi products. As this item is one of the big expenses in the design budget there’s pressure not to specify internal screens and external screening cases. It’s all down to money and what you can get away with (I’m feeling cynical today!). NK

UNIPIVOT BOUNCE
I have a Hadcock GH228 arm with Decca London cartridge on Linn Sondek LP12. Have read unipivot arms are no-no on suspended decks? What say you? Cheers

Howard Phillips, Hitchin, Herts.

PS Read you review (GH228) from HFN 1978.

Hi Howard. If you are happy and able to catch butterflies with your fingers then no problem. For most of us such dexterity perhaps once existed fleetingly a long time ago! You could say it was a 1970s thing where the young and nimble used such paraphernalia, where today its an app (that doesn’t work because the battery has run down).

The Hadcock had a smooth and easy presentation I recall but I would tend toward a rigid Rega these days, that being light can be mounted on an LP12. Or use a Linn arm. The Decca London is quite lively and needs a rigid platform.

And finally I wasn’t alive in 1978 – or I can’t remember it! NK

FILTER LIMITS
I’ve just bought a Dynavox X4100 mains filter. It has eight power out sockets, four filtered and four direct. I’ve got the usual array of hi-fi equipment: integrated valve amplifier, CD transport & DAC, turntable & phono preamp and a tape deck for when I’m feeling nostalgic. My favourite music is on CD and that’s what I listen to the most. What do you recommend that I plug into the filtered sockets and what into the direct? All the best,

John Beverly.

Hi John. I see no individual current ratings for filtered / unfiltered sockets so must assume either can accept the full current rating of 10A (before a circuit breaker operates). It’s usual to connect low current power consumption sources like CD players, DACs and turntables (etc) into the filtered outlets and high power consumption devices like your tape deck and power amplifier into the unfiltered outlets. However, with a high 10A limit the filtered outlets
Hadcock GH228 unipivot arm – difficult to handle on a bouncy suspended turntable.

can be used for all items since few hi-fi products get near to such a high consumption. NK

BACK TO THE UK

I’m getting ready to move back to UK from the USA (New York) and working out what items of my hi-fi go to UK and which goes to holiday home/storage.

Very tricky re: VPI Prime Signature & Ortofon Quinex Black v Nottingham Analogue Spacedeck & SME 309 & Sumiko BP SE III; Sugden A21SE amplifier + Rega Ana + Rega DAC v Devialet Expert 120 Pro, Martin Logan ESL9 Classic v Sonus Faber Cremona M.

And that is before I think about cables (Hi-Fi Rocks v Mapleshade), cables (Chord v Morrow Audio), let alone power cables etc. Anyway, my wife has already returned to the UK and so, left alone, I spent the last few weekends listening to various combinations – although mostly via vinyl.

In this very interesting and extremely enjoyable time what I have found is that the Sugden works very well with the Martin Logans.

My set up re: current room and placement, is not great here in N.Y. with the Sugden working via a transformer and ‘speakers just dumped in the only position possible. The sound gets a bit boomy at very high volumes but given that I do most of my listening at lower levels I do not see this as an issue once I move back home.

What has really surprised me is how much better the Sugden + Rega phono stage sounds verses the Devialet using internal phono stage and also with the Rega phono stage!

I have also tried with and without Devialet’s loudspeaker tuning system SAM switched on, with both Chord & Morrow Audio cables but every time the Sugden combination wins. Maybe this is system matching but I do feel that this firm’s products need more recognition.

I have spent the last 6+ hours listening on both systems to the Kate Bush album “Before the Dawn”, they are super.

On record players, love both but a bit different. With the Sugden and Martin Logans, the VPI is just wonderful, the Nottingham just seems a bit too laid back, maybe an unfair comparison as the VPI + ADS + Ortofon MC is significantly more expensive.

However, when I move to digital, the Devialet with Apollo CD and Vertexbox NAS is ahead of the Sugden and Rega DAC. What I also note is that the Devialet is happier when driving the Sonus Faber speakers.

What this all goes to show is that system matching is very key and will reiterate that you should consider reviewing systems as against individual components, I understand that this is challenging but do feel that many people would appreciate this.

On a separate note, I use STAX 507 & SRM600 energiser with a MacBook Pro & Dragonfly Red or via A&K, all playing FLAC or Apple Lossless ripped from my CD collection. I find that the headphones creak in one of the ear speakers when I am listening, if I sit perfectly still then fine but if I blink or my jaw moves I get this noise. Is this normal? Can it be sorted?

Kind regards

John Speight

Hi John. We have always admired Sugden amplifiers and did even use one as a reference. It doesn’t surprise me that your Sugden offers such a good sound and works well with Martin Logans, which are a difficult load (1 Ohm at 20kHz). It uses Sugden’s own dynamic Class A output stage, I believe I am right in saying, developed long ago and now well refined. The only sonically convincing alternative would be a valve amplifier such as the small Icon Audio Stereo30 SE (also Class A) I use with Martin Logans. Or perhaps try an Audio Research.

Devialet’s phono stage was a bit of an afterthought I suspect; it initially picked up internal RF on occasion. Jon Myles likes Devialet amplifiers though (in addition to Nautilus). Creaky headphones don’t sound normal to me. I suggest you e-mail the manufacturer.

Don’t leave us all guessing which items went into storage though; that’s cruel. We hope for an update.

NK

Martin Logan Classic ESL9 hybrid electrostatic loudspeakers ‘at home’ in New York. Best driven by a Sugden A21SE (top left) says John Speight.
GutWire Audio Grounding Cables

An extremely effective and simple way to improve the sound of any audio system. A single cable to enable the proper grounding of electronic components.

Simply attach the RCA (or XLR) connector end to any spare input socket on your integrated amplifier or pre-amplifier.
The mains plug end goes into any spare wall socket, or into a mains distributor. This creates the shortest route to ground from the circuit boards and introduces a different ground potential into the system.

It takes moments to hear the sound stage increase in size, both depth and width, that the tonal balance has more weight to it and the sound is more natural, less "hifi". Increased transparency provides more resolution of detail and a sharper focus of images.

Far more effective than passive grounding boxes, wooden or metal, which also require the use of multiple additional cables. No compression of dynamics, or added colouration, which can occur with alternative systems.

An elegant and simple solution; a single cable does it all.

These ground cables only use the earth pin within the mains plug. The live and neutral pins are not used and are safely insulated inside the plug.

Two models available:

Perfect Ground – UK or Schuko plug £399
Ultimate Ground – Schuko plug £650
Ultimate Ground – Furutech UK plug £699

Audition a cable in your own system; full refund if not completely satisfied.

UK exclusive from The Audio Consultants.
A Fair deal

Martin Pipe misses the snow to look for bargains at Britain’s popular Audiojumble, Tonbridge, Kent.

It’s lucky that the Audiojumble was organised for February 18th 2018 – not long before winter snows fell, bringing much of Britain to a standstill. The event was instead blessed by some pleasant weather, luring sizeable numbers of hi-fi enthusiasts and record collectors to Kent, accounting for the claimed ‘best ever’ attendance figures. Two large halls and a side-room of the Angel Leisure Centre – where parking has the unusual benefit of being free – were given over to the Audiojumble. As usual, there can be assembled from the budget classics of yesteryear. Great for newcomers. Those with electronics experience and the ability to wield a soldering iron can do even better. Equipment in need of attention – an amplifier with blown output transistors, or a turntable that doesn’t – can often be found going cheap. A few spare evenings, aided by service information freely-available online, and the acquisition can be brought back to life. For example a decent Sony CD player that needed attention eventually changed hands.

The next Audiojumble takes place on Sunday 7th October 2018 at the Angel Leisure Centre, Tonbridge, Kent TN9 1SF.
See www.audiojumble.co.uk.

were two entry times, a £12 ‘early bird’ ticket that gets you in at 9.30 a.m. for priority on potential bargains and a £6 ‘standard’ 10.30 a.m. entry. At these events, there is something for everyone. A perfectly-good music system, for CD or vinyl, for a mere 50p, while a complete Revox B77 reel-to-reel tape deck in reasonable shape (worth £100s) was overlooked in the side-room for a surprisingly long period of time – despite a mere £50 asking price. The downside! A ‘spares or repair’ sticker. The seller told me that the work in question wouldn’t cost more than £100.

Alternatively, if you’re cash-rich and time-poor some mouth-watering pieces of equipment – including rarities – were on display. But there was more to this show than hi-fi equipment. The music sellers were also a draw – whether you’re after original pressings, remasters of favourite albums struck on 180g vinyl or alternative carriers like CD, cassette or 8-track.

Open reel tape recorders – a format slated for revival – were also much in evidence. In addition to a wide selection of machines were tapes to feed them in a variety of shapes, sizes and track formats. Other attractions included refreshments, demonstrations and club stands: the British Vintage Wireless Society, New Ash Green Hi-Fi Club and West Kent Amateur Radio Society.
An enormous Hitachi SDT-400 music centre circa 1978. It boasts turntable, cassette deck, four-band tuner and must have cost a lot in its day, but at Audiojumble nobody would even spare a quid for it.

A QLS QA550 from China – an unusual solid-state media player intended to replace a CD transport. Using SD cards, it’s optimised for 16-bit/44.1kHz WAV files ‘ripped’ from CDs, having no analogue audio outputs. Instead, its S/PDIF digital output feeds an external DAC. This ‘upgraded’ one, boxed and complete with remote control, was £40.

A Pioneer F-91 FM/AM tuner – 1980s state-of-the-art. Any VHF/FM enthusiast prepared to gamble on it’s continuity may like paying the £150 being asked for this one.

A UK-made Capitol/EMI RS101B circa 1959. One of the first stereo players on the market, the RS101B featured off-board speakers to help the listener achieve a decent image. Turntable is a four-speed Garrard. This lovingly-restored example was supplied with two cartridges – mono and stereo. Your £400 also bought a spare turntable.

Linn’s imposing Isobarik loudspeaker – here PMS variants with external crossovers. £1200 for a pair in good shape. Reasonable value: when discontinued they cost nearly £4,000.

A QLS QA550 from China – an unusual solid-state media player intended to replace a CD transport. Using SD cards, its optimised for 16-bit/44.1kHz WAV files ‘ripped’ from CDs, having no analogue audio outputs. Instead, its S/PDIF digital output feeds an external DAC. This ‘upgraded’ one, boxed and complete with remote control, was £40.

A UK-made Capitol/EMI RS101B circa 1959. One of the first stereo players on the market, the RS101B featured off-board speakers to help the listener achieve a decent image. Turntable is a four-speed Garrard. This lovingly-restored example was supplied with two cartridges – mono and stereo. Your £400 also bought a spare turntable.

Linn’s imposing IsoBarik loudspeaker – here PMS variants with external crossovers. £1200 for a pair in good shape. Reasonable value: when discontinued they cost nearly £4,000.

A Fons CQ30 turntable. It had 78rpm as well as 33rpm and 45rpm. This speed flexibility derives from a servo-controlled DC motor, which Fons specified instead of the more usual synchronous AC type. Like its contemporaries, it was a suspended subchassis design. The one snapped here – equipped with an SME 3009 S2 tonearm – was being offered for £300.
A pair of Quad II valve power amplifiers (15 Watts) – valued classics. These were unrestored and being offered for £700. They need a Quad 22 pre-amplifier however (or home built equivalent).

A Sony TTS-3000 turntable from the late 1960s. This slightly corroded example I bought for a mere tenner. The platter didn’t spin but I got it going. Expect an Olde Worlde soon...

A Krell FAM-7, circa 1988, which they classed as ‘entry level’. Krell gear was never cheap and the £750 asked for this mint specimen (complete with power supply) was reasonable perhaps.

The owner of this complete Revox B77, a fairly standard half-track model with 9.5cm/s and 19cm/s speeds, was letting it go for a mere £50 – one of the biggest bargains of the show! It was sold as ‘spares or repair’, but its heads seemed to have plenty of life in them. One of its flimsy toggle switches had snapped off.

A Krell PAM-7, circa 1988, which they classed as ‘entry level’. Krell gear was never cheap and the £750 asked for this mint specimen (complete with power supply) was reasonable perhaps.

A mint-condition Philips Laservision player where an LP-sized analogue disc was scanned by a Siemens helium-neon laser. £100 would have secured you this museum piece, which will even work with modern flat-panel TVs provided they have analogue video inputs. A pair of phono sockets allow analogue audio to be fed into a hi-fi system.

A Sony TTS-3000 turntable from the late 1960s. This slightly corroded example I bought for a mere tenner. The platter didn’t spin but I got it going. Expect an Olde Worlde soon...

A Krell FAM-7, circa 1988, which they classed as ‘entry level’. Krell gear was never cheap and the £750 asked for this mint specimen (complete with power supply) was reasonable perhaps.

A mint-condition Philips Laservision player where an LP-sized analogue disc was scanned by a Siemens helium-neon laser. £100 would have secured you this museum piece, which will even work with modern flat-panel TVs provided they have analogue video inputs. A pair of phono sockets allow analogue audio to be fed into a hi-fi system.

A pair of Quad II valve power amplifiers (15 Watts) – valued classics. These were unrestored and being offered for £700. They need a Quad 22 pre-amplifier however (or home built equivalent).

A Sony TTS-3000 turntable from the late 1960s. This slightly corroded example I bought for a mere tenner. The platter didn’t spin but I got it going. Expect an Olde Worlde soon...

A Krell FAM-7, circa 1988, which they classed as ‘entry level’. Krell gear was never cheap and the £750 asked for this mint specimen (complete with power supply) was reasonable perhaps.

The owner of this complete Revox B77, a fairly standard half-track model with 9.5cm/s and 19cm/s speeds, was letting it go for a mere £50 – one of the biggest bargains of the show! It was sold as ‘spares or repair’, but its heads seemed to have plenty of life in them. One of its flimsy toggle switches had snapped off.

A mint-condition Philips Laservision player where an LP-sized analogue disc was scanned by a Siemens helium-neon laser. £100 would have secured you this museum piece, which will even work with modern flat-panel TVs provided they have analogue video inputs. A pair of phono sockets allow analogue audio to be fed into a hi-fi system.

A Sony TTS-3000 turntable from the late 1960s. This slightly corroded example I bought for a mere tenner. The platter didn’t spin but I got it going. Expect an Olde Worlde soon...

A Krell FAM-7, circa 1988, which they classed as ‘entry level’. Krell gear was never cheap and the £750 asked for this mint specimen (complete with power supply) was reasonable perhaps.

The owner of this complete Revox B77, a fairly standard half-track model with 9.5cm/s and 19cm/s speeds, was letting it go for a mere £50 – one of the biggest bargains of the show! It was sold as ‘spares or repair’, but its heads seemed to have plenty of life in them. One of its flimsy toggle switches had snapped off.

A mint-condition Philips Laservision player where an LP-sized analogue disc was scanned by a Siemens helium-neon laser. £100 would have secured you this museum piece, which will even work with modern flat-panel TVs provided they have analogue video inputs. A pair of phono sockets allow analogue audio to be fed into a hi-fi system.
WORLD STANDARDS

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

**TURNTABLES**

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVID INGENIUM</td>
<td>£800</td>
<td>Great bass response and upper midrange detail to clarity makes this a must-have at its price point.</td>
</tr>
<tr>
<td>CLEARAUDIO INNOVATION</td>
<td>£6400</td>
<td>Expensive, but offers great results from a finely tuned and beautifully finished belt drive turntable, with servos control from the player to keep a grip on tempo like few others. Can be fitted with a Clearaudio tangential arm, or any conventional design. Awesome.</td>
</tr>
<tr>
<td>INSPIRE MONARCH</td>
<td>£4350</td>
<td>A real find from the ground up Technics Direct Drive, having breathtaking pace and dynamics allied with smoothness, sophistication and purity of tone. A true reference.</td>
</tr>
<tr>
<td>Linn L12SE</td>
<td>£3800</td>
<td>The UK’s most iconic turntable, the legendary Sondek goes from strength to strength. New Keevl sub-chassis and Radial DC motor add precision and grip to one of the world’s most musical disc spinners. Expensive though.</td>
</tr>
<tr>
<td>MICHELL GYRO DEC</td>
<td>£1700</td>
<td>Wonderful styling coupled with great build and finish make this turntable a delight for friends and family. It has an attractive clear acrylic dust cover, and you can mount just about any arm. A current design standard.</td>
</tr>
</tbody>
</table>

**PRO-JECT ESSENTIAL DIGITAL** £300

A budget turntable that excites in a great analogue tonearm, performance, but also has a hi-res digital output. Send 24/16 across your turntable via optical cable to a DAC and get a great audio quality. Or record LP to your laptop.

**REGA RP3** £350

The first of the super-quality Regas, little compromised by price and featuring Rega’s outstanding RS303 tonearm, suitable for MM and MC cartridges. A standard at the price point.

**TIMESTEP EVO** £2100

The famous Technics SL-1210 MKl Direct Drive but with improved plinth, isolation, main bearing and power supply, plus an SME arm (add £1500). ED convenience, rack steady pitch and fab sound at a great price. Our in-house reference.

**REGA RB303** £300

A one piece tapered casting makes this arm’s structure almost unrivaled. Great dynamics and superb imaging, for MM and MC. Reference quality for peanuts.

**SME 309** £1500

A one piece tapered arm finished like a camera and stick to use. Superlative SME quality and sound at affordable price.

**SME V** £3000

Offers rapid fire timing and a sense of precision, plus rock solid dynamics. Top dollar for deep pockets.

**CARTRIDGES**

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIO TECHNICA AT-OC9 MLIII MC</td>
<td>£420</td>
<td>A fine sounding MC with strong bass and superb treble from a great stylus – yet inexpensive.</td>
</tr>
<tr>
<td>AUDIO TECHNICA AT-F311 MC</td>
<td>£150</td>
<td>Great value entry level moving coil with detail and grip you just can’t get from similarly priced moving magnets.</td>
</tr>
<tr>
<td>BENZ MICRO ACE SL MC</td>
<td>£955</td>
<td>Smooth, linear and full-bodied, award-winning, hand-made cartridge from Switzerland.</td>
</tr>
<tr>
<td>BENZ MICRO WOOD SL MC</td>
<td>£945</td>
<td>Highly finished Swiss moving coil that plays music with ribald precision.</td>
</tr>
<tr>
<td>DENON DL-103</td>
<td>£180</td>
<td>A popular and much loved budget MC with big bass, smooth treble and deep sound stage. Fantastic value.</td>
</tr>
</tbody>
</table>
LIYRA TITAN I MC £3,500
Breathtaking speed and dynamics from LP helped by diamond coated, boron rod cantilever.

ORTOFON 2M MONO SE MM £80
A mono cartridge purposed for The Beatles in Mono microgroove LPs. Fitted with a top quality Shibata tip. Fab for the four.

ORTOFON 2M BLACK MM £400
As good as it gets from MM. Fabulous detail and insight from a Shibata stylus. Great bass and excellent tracking.

ORTOFON CADENZA BRONZE MC £1,400
A mid-price MC with a slightly livelier presentation than the super smooth Cadenza Black. High-end sound at mid-price – great value.

ORTOFON CADENZA BLACK MC £1,800
Ultra smooth and dimensional moving coil with bass and punch aplenty. Lovely stylus.

ORTOFON A95 MC £3,750
Fast and extremely detailed, this is an MC cartridge that sets standards.

REGA CARBON MM £35
Budget price for a competent cartridge with a fairly unflappable nature. Ideal for beginners.

GOLDRING 1012GX MM £250
A glorious sounding cartridge with solid bass and strong dynamic punch, plus excellent treble from its Fritz Goger stylus. Fun and affordable.

SHURE M9XSE £80
Big warm sound, but great tracking and bullet proof stylus protection from damper guide. A survivor.

VAN DEN HUL DOT-11 SPECIAL MC £995
Long-established cartridge from Holland with an open and dynamic sound.

PHONO PREAMPS
CAMBRIDGE AUDIO 651P £200
Clean, concise sound from MM and MC cartridges at a very low price. A real bargain.

ICON AUDIO PS3 MKII £2,500
All-valve MM phono stage with MC transformer option, graced by big, spacious and relaxed sound.

LUXMAN EQ-500 PHONOSTAGE £4,995
A fully-exposed phono stage from Japanese manufacturer Luxman that offers comprehensive cartridge matching allied to superlative sound.

LEEMA ACOUSTICS ELEMENTS ULTRA £1,199
Smooth and detailed sound with the ability to accommodate most modern cartridges. Exceptional value for money.

QUAD QC24P £995
MM and MC, bodies of gain, a variable control – and valves! Looks superb and sounds even better: smooth,atmospheric and big bass.

TIMESTEP T-01MC £995
New, minimalist phono stage that sonically punch es well above its weight.

PREAMPLIFIERS
ICON AUDIO LA-4 MKII £1,400
Uses early 6SN7 triodes for liquid sound. Has plenty of gain and a remote control into the bargain.

MF AUDIO CLASSIC SILVER £4,500
One of the best pre-amplifiers we’ve heard at any price, this transformer-coupled marvel does very little wrong. Its powerful, clean and open, yet delicate. Its sound is unmatched at or near the price.

MING DA MD7-SE £1,520
A valve preamplifier with an open, effortless sound and a big soundstage. It has plenty of gain so will accept any source and drive any power amp. A real beauty.

INTEGRATED AMPLIFIERS
ARIA NO PRO845SE £1,499
Pure single-ended valve magic. Low-powered but immediately gorgeous, easy-going yet forcefully dynamic at the same time.

AUDIO RESEARCH VS60 £3,500
Power house sound with enormous pace and punch from traditional US muscle master Audio Research. Breathtaking, but expensive.

CAMBRIDGE AUDIO AZUR 651A £350
Dual-mono construction and meaty toroidal power supply combine to produce a solid and sharp sound with sonic far beyond its price point.

CREEK EVOLUTION 100A £1,500
Superb build and smooth confident sound make this powerful amplifier a benchmark.

CYRUS 80AC £1,480
Trademark shoebox-sized Cyrus integrated now offering 88 Watts per channel, plus DAC. Sounds delivery from a dainty case that fits in anywhere – and it’s Class D!

EXPOSURE 1010 £495
Entry-level integrated from Exposure has excellent upper mid-performance with an almost valve-like sound.

WWW.HI-FIWORLD.CO.UK
JUNE 2018 HI-FI WORLD 45
WORLD STANDARDS

ICON AUDIO STEREO 60 MKII £2,800
Excellent tube integrated with plenty of power and an expansive soundstage, plus KT150 tube option and bias meter for easy adjustment.

NAIM NAIT 5S £925
Naim's latest entry-level integrated amplifier up to its usual standards. A superior supercap-supplied musical sound at entry level.

SUDEN A21SE £2,480
Classic A with fantastic sound quality producing hard, scintillating images, clear detail, and tight bass. Just don't expect disco-like sound levels!

POWER AMPLIFIERS

AUDIO RESEARCH VS75 £7,400
Powerful, fast valve sound that makes everything else look weak at times. Needs careful matching but well worth the effort.

AUDIO RESEARCH VS115 £5,000
Great sound with enormous punch. Rafael Todes said it provided "shock and awe" while retaining incredible smoothness and texture.

ICON AUDIO MB845 MKII £7,600
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.

ICON AUDIO MB11PP £15,000
Big Russian transmitter valves deliver 200W from these massive monoblock amplifiers. Frightening in every sense.

MCINTOSH MC-152 £4,995
Stunningly insightful sound with enormous bass punch from a uniquely designed transistor amp. Amazing audio, a league up, if expensive.

QUAD ELITE DMP MONOBLOCKS £2400 PR
The powerful but refined in a velvety glow. Plenty of power but delivered with an assured and confident nature. Smooth on top and easy on the ear but can rock out when needed.

LOUDSPEAKER FLOORSTANDER

B&W 803 D3 £12,500
B&W's updated statement floorstanders deliver depth and definition with breathtaking clarity and authority, aided by a diamond-coated tweeter. Exceptional - but enormously impressive.

CASTLE AVON V £1,600
A big floorstander at a modest price that suits the average room. Refined ribbon treble and deep bass give it a great delivery.

EMINENT TECHNOLOGY LFT-8B £2,500
Excellent U.S. planar magnetic loudspeaker at bargain price. Utterly superb - a must have.

FOCAL ARRIA 926 £1,400
Simple, clean, neutral sound - easy going but well engineered and affordable.

MARTIN LOGAN SUMMIT X £16,698
Matches Martin Logan's XStat electrostatic panel to a powerful subwoofer to provide extended, powerful bass. Dramatic sonic purity. Awesome - all but unmatched.

MARTIN LOGAN ELEKTROMOTION £2,500
Martin Logan's budget baby XStat hybrid electrostatic fits into any lounge to give electrostatic levels of clarity and imaging.

QUADRA DORMAN VII ANTVS £9,200
Active loudspeaker with tight, powerful bass, perfect accuracy and detailed treble from a ribbon tweeter.

Q ACOUSTICS 2050i £480
A large floorstander at a budget price. Offers high sensitivity and big sound and has very few flaws for the price.

SPENDOR SP100 R2 £6,495
Retro looks but a sound that's hard to match. Spendor's 12" bass unit provides massive low-end grunt with a room-filling sound.

SPENDOR A3 £1,300
Fine little floorstander with a smooth, natural midrange and total balance. Ideal for smaller rooms.

TANNOY DEFERENCE DC10 T1 £6,000
Enormous power with great projection. Glorious sound but too. Need little power to go very loud and have superb finish into the bargain.

TANNOY KENSINGTON £9,950
Big but not overpowering, punchy modern sound from classic cabinetry. Need little power to go very loud and suit a traditional home or castle.

LOUDSPEAKERS STANDMOUNT

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

ACOUSTIC ENERGY AE1 CLASSIC £645
Brilliantly successful remake of an iconic design: not flawless, but surely one of the most musical loudspeakers ever made.
ELAC BS243 £1,000
More transparent and spacious than they’re right to be at this price, these refined mid-price standmounters represent top value.

WHARFEDALE DENTON £580
A beguiling mixture of retro looks with modern, high-technology drive units. The Denton has an easy-going, big-hearted sound with a touch of frat warmth that should appeal to many.

EMINENT TECHNOLOGY LFT-16A £1,200
U.S. planar magnetic bookshelf loudspeaker with unrivalled mid-band and treble. Hear it before all else.

WHARFEDALE DIAMOND 220 £200
Builds on the success of previous Diamond ranges with better bass, more detail and a greater sense of scale.

KEF LS50 £800
Supremely musical mini-monitors which sound much bigger than they look.

MARTIN LOGAN MOTION 35 £1,300
Folded Air Motion tweeter gives a taste of Martin Logans electrostatic sound in a standmount. Different from the standard mini-monitor and all the better for it.

PMC TWENTY.21 £1,575
Transmission line loaded standmount with a big box sound from a compact cabinet. Punches well above its weight.

Q ACoustics 2020i £165
Great little bargain-priced stand-mounts with a friendly, fun yet surprisingly refined sound. Hard to better for a pair of starter loudspeakers.

HEADPHONE AMP LiERS

CREEK OBH11 £150
Designed specifically for low to medium impedance (30 Ohms - 300 Ohms) headphones the little Creek has a marvelously well-judged sound.

CHORD MOJO £399
Crash-loud portable DAC and headphone amp with ability beyond its price. Big, open spacious sound.

EPHPhNY EHP-02 £99
PP3 battery-powered portable gives great sound quality at an almost giveaway price. Happy with the output from an iPod or CD player, this little epiphany is a true bargain.

ICON AUDIO HPA MKII £650
The HPA MKII valve-based headphone amplifier brings the spacious sound of valves to headphones. And it matches ‘em all.

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

MUSIC FIRST PHONE BOX £276
Brings a big stage, plenty of detail and rich, deep colours to the sonic spectrum.

CD PLAYERS

AUDIOLAB 8200CDQ £949
Inspired CD player and DAC with price-performance ratio like no other. Capable of matching designs costing much more.

CANOR CD2+ £3,100
Musically coherent and tuneful valve-driven CD player from Slovakia. Lovely liquid sound.

CAMBRIDGE AUDIO AZUR 651C £410
Snappy modern presentation from this budget CD player. Cracking audiophile entry point for any digital fan

CHORD RED REFERENCE MKII £16,000
A unique and massive engineering exercise that could well be the best CD player available. Chord’s Pulse Array DAC technology produces a match experience like few others. A true reference player.

ESOTERIC K-03 £9,495
Superb high-end silver disc spinner that is beyond criticism. Devoid of its own character but has a flawless presentation.

EXPOSURE 101 £395
Delicate player with fine sense of timing should be an automatic entry on any demo list at this price.
ELECTROCOMPANET EMP-1/S £4,050
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.

OPPO BDP-105D £1200
Universal player and DAC that makes CD and Blu-ray (+DVD) sound deep, spacious and full bodied. Reference quality that's affordable.

REGA APOLLO-R £550
Rega comes up with a fine CD player again. Tremendous detail and an easy, unforced sound at all times. Few belts and whistles but made up for by its superb sonic ability.

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

TUNERS
CAMBRIDGE AUDIO AZUR 651T £299
Value-packed AM/FM/DAB and DAB+ ready tuner. Precise and detailed with excellent resolution of spoken word.

CREEK DESTINY 2 £550
Creek's tuner expertise shines through in the Destiny 2. This AM/FM receiver is wonderfully three-dimensional and smooth.

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

DACs
AUDIOLAB M-DAC £699
Excellent sound from ESS Sabre32 DAC and impressive flexibility with a unique range of filter options make this a stand-out product. Low price is the icing on the cake.

AUDIOLAB Q-DAC £250
Striped-down version of Audiolab’s M-DAC loses some features but retains much of the sound, making it a veritable bargain.

ANTELOPE ZODIAC GOLD/VOLTIKUS £3,095
DAC/preamplifier/supply combination majors on detail but has a remarkable un-digital sound. One of the best at the price.

TEAC UD-501 £1899
Feature-packed DAC with benefit of DSD playback. Superb sound means little to touch it at the price.

RESOUNESSE INVICTA MIRUS £4,499
One of the most highly spec’d DACs available, with a smooth yet entralling presentation. Few approach it.

NETWORK PLAYERS
CHORD DXS100 £7,000
Chord’s proprietary DAC circuit shines in their top-of-the-range streamer. Hear-through clarity with a sound rich in detail, dynamics and soundstage.

CAVEMIDGE AUDIO NP33 £199
Budget offering from Cambridge offers a great introduction to network streaming.

CYRUS STREAM X £1,400
Gorgeous sound quality even from compressed digital music. New control app makes everyday operation a cakewalk.

CONVERT TECHNOLOGIES PLATIO £299.00
A network player with amplifier that does it all, including turn LP to hi-resolution digital, and add cover artwork from the ‘net.

NAIM NOX £2,995
Clean, concise and very detailed sound with Naim’s traditional pace and timing make this one of the best network music players around.

NAIM NDXS £2,175
Great sound quality with traditional Naim heft. A wonderful DAC with full 24/192 handling. Only the display could be better.
NAIM NAC-N172 XS £1,650
A pre-amp/BAC/streamer package provides a
taught, rock-solid presentation with a tonally rich
midband and a superior sense of rhythm.

PRO-JECT STREAM BOX RS £1,095
Unusual valve-based streamer/preamp with
variety of inputs and a lovely liquid sound. Not
the most detailed but compensates with sheer
musical verve.

QUAD PLATINUM DMP £2,500
Combined CD/network player has all the usual
Quad elements but with added zest and detail
that brings life to everything you care to play.

DIGITAL SOURCES
ASTELL&KERN AK100 MKII £569
Portable high-definition digital player with superb
decoding quality. Punchy and fast.

FIO X3 £150
Fabulous value player with nice easy sound
and full range of abilities. Small and light. For
reviewers.

LOTOO PAW GOLD £1,500
Reference quality sound; it's like carrying your
hi-fi in your pocket. Equivalently large too, but
stunning headphone quality.

NAIM HDX £4,405
Interesting one-box network-enabled hard-disk
music system that gives superb sonics together
with impressive ease of use.

NAIM UNILITTE £1,995
A 50W amplifier with traditional Naim hall, a CD
player and vini/film radio, plus network input and
Bluetooth make this a great all-in-one.

PORTABLE SPEAKERS
BAYAN SOUNDBOOK £149.99
Superb design and great sound make for one of
the best portable Bluetooth speakers/radios on
the market. Not the cheapest – but worth every
penny.

RIVER IBA-50 £69
Big, warm sound with plenty of volume and clean
at high levels. Muscular sound compared to many
rivals.

CABLES
BLACK RHODIUM TWIST £71/3M
Twisted to fight off radio frequency, the Black
rhodium speaker cable is easy on the ear with a
fine sense of clarity and focus. A remarkable
performer at the price.

MAINS CABLES R US NO.27 £95
Offers a sprightly pace with a precise nature. Fast
performance, enhance frequencies and beautifully
etched detail.

NOBLE K10 $1,279
INC. FITTING
Custom fit in-ear phones with 10 drivers deliver
a sound that is out of this world. Personal and
perfect.

HEADPHONES
AUDEZE LCD-3 £1,725
A planar magnetic ‘phone that offers monitor
gauge. Strong sound with silky, dark quality that
others struggle to match.

B&W P3 £170
Beautifully presented headphones from the
loudspeaker specialists. Feed them a good qual-
ity source signal and they reward with excellent
sound.

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

TELLEURUM Q BLACK 280/3M
A deep, dark, velvety performer that’s neverthe-
less highly musical, it represents excellent value
as mid-price cables go.

TELEURUM Q SILVER DIAMOND £804/M
An open, natural and transparent sound that is
difficult to beat, from these great loudspeaker
cables.

Sennheiser HD700 £599
Tremendously fast with a strong, focussed, lower-
frequency range and a firm bass punch.

YAMAHA HPH-MT220 £150
Purposeful for index monitoring yet light and
comfortable enough to be used on the move.
Excellent sound quality marred only by a slight
warmth to vocals.
All the *style*, with no compromise on *sound*

Debut III S Audiophile

The Debut III S Audiophile takes the iconic, multi-award winning Debut design and adds advanced features to enhance the look and performance to an all-new standard.

With new features, including the one-piece S-Shape tonearm, Pick-IT 25A cartridge and upgraded turntable feet, the latest addition to the Debut range delivers a very harmonic and warm sound to impress even the most experienced audiophile.
Head-hunting

Martin Pipe is knocked for six by the ‘killer feature’ of Sennheiser’s Apple-specific Ambeo Smart Headset – binaural recording.

Way back in the mists of time (well, 1973), Sennheiser introduced its MKE2002 ‘dummy head’ binaural microphone. Its omnidirectional microphones, mounted on the cups of a stethoscope-like headset, are placed in the dummy ear’s pinnae so that they capture sound as you would hear it – needless to say, binaural recordings must be experienced through headphones. The MKE2002 could work very well, yielding a convincing soundscape that bordered on the three-dimensional. It was alas not particularly cheap (£150 in 1978), being pitched at professional users.

Forty years on, and interest in binaural sound has not waned. Music continues to be released in this format, and manufacturers still produce ‘dummy heads’ – among them smaller-scale devices that can be mounted on the accessory shoe of a camera or camcorder. I have successfully experimented with modified headphones and earphones, in which the inwards-firing transducers have been replaced by microphone capsules aiming outwards.

Sennheiser hasn’t forgotten binaural either, its £260 Ambeo Smart Headset I’m reviewing here comprising headphone/microphone combo. A pair of in-ear ‘phones/microphones are hard-wired to a control unit with a 1.2m cable terminated in an Apple Lightning connector. Yes, a compatible iThing is essential for would-be Ambeo purchasers, although Sennheiser’s Nicole Fresen told me that an Android version is planned for “late 2018.” For now, though, you’ll need an Apple device equipped with a Lightning port and running iOS 10.3 or later (when Apple, according to Ms. Fresen “implemented the option to do stereo recordings”).

You can use the device with, for example, a Lightning-equipped device running earlier iOS 9 – but recording will be in mono only. The basic stereo headphone functionality is still available with these earlier devices.

Ambeo is rather advanced – an active noise-cancelling function is provided. In fact, the Ambeo headset goes one better with something that Sennheiser calls ‘situation awareness’. In addition to its noise-cancellation mode, the Sennheiser technology uses the omnidirectional microphones (which lurk behind the metal grilles of each earpiece) to pick up ambient noise which is mixed with the audio being played. ‘Transparent hearing’, as it’s called, is useful for cyclists who insist on listening when they’re on the move. These modes can be disengaged if not needed – home listening, for example.

It almost goes without saying that Ambeo will act as a ‘hands-free’ headset when you’re on the phone, a central button on the control unit accepting, holding or ending calls. The controller’s various buttons will also adjust volume level, play or pause music and select tracks.

By default, a ‘smart slider’ switches between recording level – either maximum, or reduced (which may be more appropriate for live music). The controller, which is powered by the Apple host, crams in a lot of electronics – microphone preamps, analogue-to-digital converters, digital-
Something not sounding right?  
Maybe we can help.

The long development time of the OCTAVE V16 Single Ended has surely paid off: an uncompromising single-ended Class A integrated amplifier (and headphone amplifier) that delivers ultra-quiet operation highlighted by deep bass, a natural midrange and silky-smooth highs combined with an unsurpassed degree of reliability and longevity.

Octave V16 Single-Ended Integrated Amplifier  
From £7,495

www.eliteaudiouk.com  
info@eliteaudiouk.com  
Unit 10, Comielaw Farm, Anstruther, KY10 2RE  
01334 570 666
to-analogue converters, headphone amplifiers, a Lightning interface and control electronics. Despite the complexity, using Ambeo didn’t seem to impact on battery life.

The Apogee Ambeo app also requires iOS10. It allows the user to customise the device - how the smart slider behaves by default (launching a recording app, for example), changing recording level, selecting whether voice prompts are active or not and setting a graphic equaliser.

To take advantage of binaural recording you need a recording app Camera apps (such as Apple Camera) will automatically record sound from the binaural mikes when Ambeo is plugged in – indeed, Sennheiser sees sound for video as one of the device’s main applications. But you’ll probably feel the need to download an audio-only app too (Apple’s voice memo, if installed, does work). I tried several of these third-party programs and one of the best was Recorder Plus, which is capable of the two-channel recording needed for binaural sound (Sennheiser’s own Apogee Meta Recorder is worth a try too). This easy-to-use app also allows you to upload recordings by e-mail – files too long for e-mail attachment are automatically sent to an iCloud server, and a download link sent to the recipient. Such hassle is inexcusable, thanks to Apple’s insistence on proprietary standards and ‘walled-gardens’ that make getting media into and out of its battery-powered devices such a pain. Pad apps also support lossless file formats and 24-bit recording.

**SOUND QUALITY**

The earphones, which ‘hook’ over the ear, were reasonably comfortable to wear but did have a tendency to slip out on occasions, reducing bass. In terms of sound quality with music the presentation is perhaps a little treble-dominant and can sound harsh onoccasions. Furthermore, sound levels were rather low even at maximum volume and the bass is, even with buds pushed fully home, a tad ‘bubby’ in character. Ambeo’s voice-cancelling and transparent-hearing functions were both effective but their effects had an inexplicable impact on sound quality.

You can undoubtedly buy more musical and gutsier Lightning headphones – but none of them have Ambeo’s binaural microphones. These propel Ambeo into a different league, and I hope that the device encourages global users to take up a new hobby - making ‘sound captures’ for posterity and sharing them via sites like YouTube and SoundCloud. I for one would love to hear ambience clips from famous locations and events around our fast-changing world - a fascinating archive could be built up for future generations to enjoy and Ambeo is ideal for this. Partly because they look like headphones and won’t attract attention, but mostly because the system’s binaural recordings are crystal-clear and packed with detail, albeit rather bereft of the lowest frequencies (minimum wind noise).

The imaging properties were simply superb. It was possible to pinpoint individual sources of sound with uncanny precision. I made recordings of hubbub in tea rooms and pubs, bird-song and even the sounds of boat-rigging and masts whistling in the wind. In all cases I got a real sense of ‘being there’. But there’s a caveat. Although left-to-right sound staging is impeccable, front-to-back and top-to-bottom are harder to perceive. The effect is nevertheless closer to three-dimensional audio than ‘flat’ stereo can provide – although you’re stuck with headphones. Routing my recordings through a very high-resolution playback system (a Chord TToby DAC/headphone amp driving focal Utopia ‘phones) didn’t make much difference in the latter regard, although it did prove the worthiness of the Ambeo’s transducers and electronics.

**CONCLUSION**

They may not be the best-sounding ‘phones that you can buy for Lightning devices, but that’s not to say they can’t give you an engaging listen. In any case, the features provided (hands-free, noise cancellation) compensate adequately. What really steals the show, though, is Ambeo’s binaural recording prowess. This, I hope, will encourage consumers to take a practical interest in sound recording – a hobby that faded away in the 1970s.

**There are several recording apps that you can use with Ambeo, in addition to iOS staples like Voice Memo and Apple Camera. Audacity isn’t yet available for iOS, and so you’re steered towards apps like Sennheiser’s own Apogee Meta Recorder and the Recorder Plus you see here. Programs of this sort support 24-bit stereo/binaural recording, basic editing and uncompressed audio. The wonderfully user-friendly Recorder Plus even makes the uploading of your recordings via e-mail (or, if they’re large, cloud services) a doodle.**

---

**SENNHEISER AMBEO SMART HEADSET £260**

EXCELLENT - extremely capable.

VERDICT

A reasonable pair of headphones, their price justified by a binaural recording facility.

FOR

- Binaural recording
- crisp, clean and detailed
- easy to use

AGAINST

- iOS 10.3 or above
- limited volume
- weak bass

www.sennheiser.com
A subscription to HI-FI WORLD makes the perfect gift for your nearest and dearest.

Save up to 26%

Subscribe today and you will get a special discounted rate giving a saving of 15% to 26% off the cover price. That’s an amazing £3.83 - £3.33 per issue including postage.

So don’t delay, take out a subscription today!

For back issues enquiries please call

01442 820580

Overseas subscriptions if you live outside the UK, please call for our latest prices

+44 (0) 1442 820580

So what are you waiting for? Call now!!!

Subscription hotline 01442 820 580
Lines open Mon-Fri 9.00-5.00 or (weekend answering service available)

For our on-line magazine
Go to www.hi-fiworld.co.uk

Email: hifiworld@webscribe.co.uk
WHY SUBSCRIBE TO HI-FI WORLD?

- 12 issues a year delivered straight to your door.
- Be first to grab a bargain in our "Free Reader Classified Ads" section.
- Run by dedicated hi-fi engineers and enthusiasts.
- Subscribers receive a minimum 10% Discount annually.
- Hi-Fi World has become famous for its informative reviews and radical kit designs.

PLUS! Subscribe by Direct Debit and receive a 16.5% discount on a yearly subscription (UK only).

I would like a years subscription to Hi-Fi World and receive a discount off the cover price (I have read and accept the terms and conditions).

I would like to pay for my 12 issues by:

- 6 monthly Direct Debit: Pay £22.00 every 6 months saving 19% off the yearly subscription rate of £54.00
- Annual Direct Debit: Pay £40.00 every 12 months saving 26% off the yearly subscription rate of £54.00
- Annual cheque/credit card: Pay £46.00 saving 15% off the yearly subscription rate of £54.00

TO SUBSCRIBE

Please fill in this form and send to:

Name and full Postal Address of your Bank/Building Society
To: The Manager
Address
Name(s) of Account Holder(s)
Branch Sort Code
Bank/Building Society Account Number
Reference

Please complete and return the form below.

Instruction to your Bank or Building Society to pay by Direct Debit

Please pay Webscribe Ltd Direct Debits from the account in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with Webscribe Ltd and, if so, details will be passed electronically to my Bank/Building Society.

Signature(s)
Date

The guarantee should be detached and retained by the Payer

The Direct Debit Guarantee
- The Guarantee is offered by all banks and building societies that accept instructions to pay Direct Debits
- If there are any changes to the amount, date or frequency of your Direct Debits, Webscribe Ltd will notify you 10 working days in advance of your account being debited or as otherwise agreed. If you request Webscribe Ltd to cancel a Direct Debit at any time, you must allow 10 working days’ notice. You can cancel a Direct Debit at any time by simply contacting your bank or building society
- If you receive a payment and you do not agree to the amount paid, you must, within 30 days of receiving your statement, contact Webscribe Ltd. Webscribe Ltd will confirm the basis on which the payment was made and, if appropriate, correct the amount

TERMS & CONDITIONS: You will receive 12 issues per year. Minimum subscription term is 12 months. Prices include P&P and are correct at the time of going to press. All prices are quoted in sterling. Offer available for UK subscribers only. For enquiries relating to overseas pricing call + 44 (0) 1442 820 580

Send this form to:
Hi-Fi World, Subscriptions Department Unit 4 College Road, Business Park, College Road North, Aston Clinton HP22 5EZ
“I am under no illusion that it is going to contribute hugely to the creation of my next studio album and can’t wait to hear the results.”
Fish

“If you’re after one do-it-all amp, there are few better alternatives.”
What Hi-Fi? ★★★★★

“If there was ever a product that personifies the modern integrated amplifier, this is it. There’s nothing not to like about this great value mid-price integrated.”
Hi-Fi Choice

Parasound Halo integrated - used and endorsed by Fish

www.fishmusic.scot
www.parasound.co.uk
HiDiamond cables came as a bit of a revelation when I first heard them. The company is an Italian manufacturer which has been specialising in the production of interconnects and loudspeaker cables using their own proprietary techniques for the past 17 years but is only now starting to take a presence in the UK market.

I first tried their £60 entry-level interconnects the Diamond 1s earlier this year (Hi-Fi World March 2018 issue) and was impressed at how open and honest they sounded.

Now we have the Diamond 7s – a set of loudspeaker cables that stand higher up the range. At £990 for a 1.5 metre length they are not exactly cheap.

However the construction is undeniably impressive. There’s a graphite/copper composite inner conductor which is shielded by a thick XLPE braiding.

Attached to these are rhodium-plated connector plugs with a locking mechanism to ensure a tight fit. Overall it means that Diamond 7s are a rather hefty cable – but they are quite manageable in tight spaces and easy to install.

**SOUND QUALITY**

Swapping out my usual speaker cables and inserting the Diamond 7s brought an undeniable difference. These HiDiamonds are very true, very accurate and devoid of any colouration.

Used between an Icon Audio Stereo 305E valve amplifier and the new Kanta N°2 floorstanding loudspeakers (see review this issue) they opened up a large, thrilling soundscape.

With Bruce Springsteen’s ‘Darkness On The Edge Of Town’ the haunting melody was starkly defined with a crystalline clarity to the instruments. Using the same CD for ‘Badlands’ it was clear that these cables don’t impose much of their own character on the sound. Bass pumped forcefully, Clarence Clemons’ saxophone soared while Springsteen’s guitar bit deep.

Instrumentation was also well separated: on Ornette Coleman’s dense, heavy and congested ‘Free Jazz’ everything snapped into focus. I could hear and track plus all the musicians and there was coherence between them all.

On Olivier Messiaen’s ‘Quartet For The End Of Time’ (24/96) the timbral quality came over with outstanding brilliancy.

The clarity of these cables, though, does mean they will highlight any deficiency in partnering equipment. They are ruthlessly revealing and so need top-notch separates to work at their best. They’ll certainly show-up poor recordings or heavily-compressed material.

But, partnered with the right amplifier and loudspeakers, there’s a coherence and openness to their sound that makes them a joy to listen to.

Feed them some high-resolution tracks and the extra sonic information is evident. On Led Zeppelin’s ‘Dazed And Confused’ (24/96) every leading edge of Jimmy Page’s guitar solo leapt out of the speakers with crisp resolution. The decay of the notes also seemed to last a little longer making the whole listening experience extremely lifelike.

**CONCLUSION**

These HiDiamond cables are not exactly cheap but they do deliver in terms of performance. Alongside a revealing amplifier and loudspeakers they are something of a revelation.

HiDiamond 7 Loudspeaker Cables £990 (1.5M)

**VERDICT**

A high-end ‘speaker cable that is truthful and revealing. Capable of getting the best from top grade components.

**FOR**

- clean, crisp performance
- build quality
- open mid-range

**AGAINST**

- not cheap

Elite Audio Distribution
+44 (0)1334 570 666
www.eliteaudiouk.com
DOWNLOAD OUR APP ON APPLE AND ANDROID
DOWNLOAD FROM iTUNES OR GOOGLE PLAY
iPad, iPhone, iPod, Tablets OUT NOW!
Day of the Discman

Martin Pipe recalls the heyday of Sony’s personal CD player.

By the end of the 1980s, Sony’s Walkman personal cassette player had transformed how we listened to music on the move. From early-morning joggers clad in legwarmers to besuited businessmen on the Tube home from work, the sight of ‘open’ type headphones became an essential part of life for many. Another 1980s phenomenon was, of course, the Compact Disc – co-developed by Sony and Philips, then both on a roll when it came to consumer electronics.

Portable cassette players may have become popular but the sound was seldom up to hi-fi standards, unless you were using a Walkman Pro, and tapes were fragile and jammed. Until November 1984, CDs were something you could only experience at home; they were not purposed for portable or car use. But that month Sony launched its D-50 personal compact disc player, and the game changed forever.

The D-50 was an incredible piece of engineering for the time – CD had only been on dealers’ shelves for a couple of years – and to cram the functionality of a full-sized home player into something not much bigger than a stack of four jewel-cases was quite some achievement. It was the first fruit of Sony’s ‘Compact Disc Cost Down Project’, which began eighteen months earlier when a block of wood dictating the physical volume of the product was slapped onto a table somewhere in Osaka by the head of Sony’s audio division.

His engineering team was told “I don’t care how you do it, or whether you decide to put cicadas or grasshoppers in it, but just make this produce sound.” To achieve this goal – a pocketable CD player that would sell in Japan for under 50,000 yen (£330) - the engineers had to develop new LSI (Large Scale Integration) chips, semiconductor-laser optics and motors. Even Sony expected to make a loss initially thanks to the considerable investment involved, but the worldwide success of the D-50 (and its successors) confounded all expectations.

However, not even Sony could work miracles. There was no room inside the D-50 for batteries, meaning that an external power source was essential. Alternatives to the battery pack were a mains unit (allowing the D-50 to be used at home, either with headphones or your hi-fi system) and a car cigarette lighter adaptor.

I don’t alas have a D-50 for you this month; instead, I’ve gone five years forward, having a D-22 Discman. It sold for approximately half the price of the D-50, and it’s clear to see where savings were made – more use of plastics and the level of circuit integration even higher. This enabled Sony to incorporate a battery compartment housing four AA batteries for up to eight hours of playback from alkalines. Also new was ‘Megabass’, which provides two levels of headphone bass-boost.

As well as a standard 3.5mm headphone socket there was a
As a relatively new manufacturer of Audiophile Interconnects, True Signal have been designing various cables for several Hi End Audio Interconnect companies for well over 10 years. This is now the time for us to offer our very own designs.

Every Interconnect we construct uses Low Loss Phase Stable cable that can blend in with any manufacturer of Audiophile equipment. Our Interconnects have been tested and are currently being used on the following manufacturers equipment: Chord Electronics, Mark Levinson, Sugden, McIntosh and even Naim's Statement system.

We use our own designed RCA hollow tip plugs for everything RCA, precision Din connectors for Naim enhancing Interconnects. Swiss Designed XLR connectors and even Rhodium plated 4mm Speaker Plugs.

Add any of these connectors to our hand extruded cables and you are getting the best engineered Audiophile cable possible.

The neutrality and depth of sound reproduced via our Interconnects is very easy to hear. We have numerous clients that were blown away once they listened to our products.

Independent Product awards have started to be published in various Hi Fi publications, and all of them are giving us amazing reviews.

Go on, give us an opportunity to wake up your Audio equipment, and put a smile back on your face.

TRUE SIGNAL AUDIO CABLES
Office Tel: 01582 937465 Mobile: 07540 694535
sales@truesignal.co.uk www.truesignalaudiocables.co.uk

Trade in your CD Player & claim up to £1000 against a new digital Streaming player - offering you easier access to your music and better sound quality

Please call in or visit billyvee.co.uk for full details of this and other great new performance enhancing promotions.

TO ADVERTISE HERE
PLEASE CALL JOANNA HOLMES ON
+44 (0) 7958 602347 OR EMAIL:
joanna@hi-fiworld.co.uk
fixed 'line level' output for a home audio system or a car system with auxiliary input. Another connector was provided for a 'cabled' remote – spending a little more acquired you the luxury of an infra-red receiver and 'wire-free' handset – thereby restoring the main CDP-101 feature that the original D-50 left off. Remote or not, the D-22 is very easy to use.

When I acquired my player second-hand twenty years ago, it came in the original box. My £20 also bought me the optional CPM-HKI 'car mount kit' (also boxed) that Sony sold for use with D-22. It contains the platform to which the player clips, together with the cigarette lighter and cassette adapter.

For those used to personal cassettes the D-22 must have been a sonic revelation to its buyer back in '89. Even today its audio has immediacy and impact, a complete absence of wow, flutter and hiss being the most obvious improvement to somebody used to tape. By today's standards, though, the top-end is rather coarse and blurred. Musical timing and transients aren't handled particularly well, and the subtler details of complex pieces remain buried in the mix. This player is alas rather susceptible to physical mishandling, and under such circumstances sections of the currently-playing track can be skipped. Memory chips, of the capacity needed to provide a usable shock-proof 'buffer' of the data being read from the disc, were very expensive in the late 1980s.

The D-22 can be run for up to eight hours from four AA cells, which are stowed away behind a flap in the disc compartment. Sony's original D-50 didn't have any space for internal batteries. It relied on a clip-on holder.

Headphone drive is surprisingly good, decent volumes of sound being generated through Oppo PM3 phones; initially, I heard occasional distortion with some discs, and this remained even with the volume turned down so I suspect it cannot handle discs recorded to full level (0dBfs). Talking of which, this unit is incompatible with CD-RW media and playback of CD-R discs is somewhat unpredictable. But then again, such media wasn't in circulation as the '80s blending into the '90s. Yes, the D-22 is very much of its time – as that styling attests!

Personal CD players were to be refined in the years that followed the D-50 and D-22. In-cord remotes, compatibility with MP3 files and – thanks to the falling price of memory – 'shock proof' playback were added. Battery times were extended significantly, especially when recharges were used. Later players were sold exclusively for personal use – by that time, CD players were ubiquitous for both home and car.

Few people use personal CD nowadays, most portable music collections having migrated onto a solid-state player or smartphone. Sony no longer manufactures CD personal items, if their absence on its website is anything to go by, although they are still being offered by cheaper brands for as little as £10. So the D-22 – and all that came before it – is today little more than a reflection of how we used to live.

The D-22 used components that were designed specifically for personal CD players, among them the Sony-developed CXD1161M, a 16-bit DAC chip.
The band itself has a bit of a convoluted history and must of it surrounds the constant presence in the band of guitarist, Wayne Moss. It was Moss who began life as part of Brenda Lee's backing band, then he worked with Bob Dylan around the time of 'Blonde on Blonde' only to later join the Escorts during the late 60s. Then he got together with other Dylan associates to form Area 615. It was at this point that Moss formed the band, Barefoot Jerry with Mac Gayden and Kenny Buttrey, guitar and drums respectively. The final piece of this jigsaw was the addition of John Harris on keyboard, who had worked with Hurace Silver.

The band found a record deal in 1971 with Capitol and released 'Southern Delight'. Kenny Malone and Russ Hicks replaced Gayden and Malone, the band shifted to Monument and released both of these albums: 'Watchin' TV' (1975) and 'You Can't Get Off' (1976).

Touting Southern and country rock with a superb array of musicianship, these albums flag up a chameleon quality, as if the group was constantly changing and searching for a style. For example, there's a distinct Little Feat tinge in their often laid back approach to their work especially on 'You Can't Get Off' while, what is interesting on the first track on 'Watchin'...' is the almost Crosby, Stills & Nash pace to their work. There are harmonies, not in the same class, yet the tone of the whole is vaguely similar with an easy flow.

Mastering quality is pretty good here with plenty of air infused into the soundstage to give the music a spacious and free flowing aspect. Slight compression adds focused punch to the bass but the overall presentation is both lively and musical.

Even a sprightly little number like 'Pitanga Pitomba' is sparse and stripped, having an innocence and emptiness that explores air more than tone. You could say that 'Summer Song', from Ayres, is a welcome change of pace, a sort of advertising break away from the mood of the main feature, with its almost playful keyboard romance.

This CD, as it appear with all ECM products, features an admirable level of sound quality for a silver disc. There is a basic sense of empty space here that surrounds each musician but which allows separate reverb tails to trail from each instrument. More than that, it also allows the trio to actually play with the silence and for that silence to become part of the arrangement. A relatively broad and dynamic soundstage encourages you to see the trio as an almost living entity, as they move and flow in tidal fashion, at times.

---

JOHN SURMAN

Invisible Thread

ECM

---

Watchin' TV/You Can't Get Off

Floating World
Nut only is this year the 50th anniversary of the band but also the 40th anniversary of the album 'Heavy Horses'. Presented as a 3CD/2DVD book-type box set this release is known as the 'New Shoes Edition'. In terms of the discography of the band, it fits in between 'Songs From The Wood' (1977) and 'Stormwatch' (1979).

More specifically, the collection includes a stereo remix of the album (supplied by the omnipresent Steven Wilson) with eight added tracks including alternative versions, seven of them are previously unreleased. The other two CDs cover a live convert from May 1978 from Berne. This has been mastered byJakko Jakszyk.

The two DVDs in the pack feature the content of the three CDs in 5.1 DTS, AC3 Dolby digital Surround and hi-res audio – that is, 24bit/96kHz. The second DVD also squeeze in a couple of TV promotional videos and a TV Ad. So, as you can see, this is a packed set, full of goodies.

The original album, the eleventh album release by the band, retained the melodicism of 'Songs From the Wood' but added an extra sense of energy and urgency to the presentation. In sonic terms, this box set is a testament to the improvements that have and continue to appear within ADC units in mastering studios. For a CD, the sound quality offered here is excellent. Yes, the original slight warmth of the 70s master is retained but there is also a superb sense of layering over the soundstage allied with instrumental separation that provides a delicately placed complexity from left to right. Detail – and subtle detail at that – is easily accessible by the ear. Everything from low key guitar strumming to delicate secondary percussion. A top quality set all 'round then.

Emerging from a stint with the Glenn Miller orchestra during the forties, Anthony became a band leader and actor currying the following decade in which he swung his trumpet style to good Harry James-like effect, enjoying a host of hit singles including the Peter Gunn theme (present on this CD compilation) via his stint at Capitol, recording other hits such as Bunny Hop. Rock which spawned an entire dance craze plus the theme to the TV show, Dragnet (again, all on this CD).

Such regular hit work spawned extra curricular activities which included the musical director for the TV show Top Tunes and hosting his own variety show and appearing as himself (who could do it better?) in feature films. That said, he did once play Jimmy Dorsey in The Five Pennies and acted alongside one of the original blonde bombshells, his then-wife and actress, Mamie Van Doren in 1958's 'High School Confidential' and 1959's 'Girls Town'.

Ranging from 1950 to 1961, this twenty-eight track compilation also includes his work on the film, 'The Girl Can't Help It', including rarities plus the complete EP 'Rock 'n' Roll With Ray Anthony' from 1957. The ever reliable Bill Dahl provides recording session information plus rare photos and illustrations.

In terms of sound quality, be aware that much of this content was intended for commercial release. That is, it was meant to sound good on basic audio equipment and the radio which means, to maintain volume and artificially enhance detail, compression has played a significant part in the proceedings. That said, Bear Family has done a remarkable job in maintaining a reasonable sonic balance to prevent listening fatigue, maintaining midrange precision without overt and destructive brightness. An entertaining release.

"Rock Around The Rock Pile"
Bear Family
After testing 15 different lengths of cable we found that 1.7 metre power cable sounds better than any other length.

“I was totally blown away with how they improved these systems in terms of detail, ambience and timing. The improvement was not subtle, more akin to a ‘top flight’ upgrade!”

SH, Bulgaria

“This is the best Black Rhodium cable I’ve heard in the last few years from the outfit and is one of the best power cables you can buy at the price point” theaudiophileman.com

“It’s an excellent cable and amongst the best at its price-point!” Hi-Fi World

“This mains cable is for me one of the best products in the Black Rhodium line up” Hi-Fi Pig

“The Stream is a superb top-of-the-range mains cable with excellent build quality” Hi-Fi Choice

With top of the range quality at middle range prices, upgrade your whole system with Stream.

- More ambience, detail and improved timing.
- Vocalists are heard with more character.
- Instruments are located in more space and depth.

Upgrade the system with 1 x Stream cable

- Height of sound stage becomes larger.
- Notes stop and start, plus everything is more dramatic and involving.

Upgrade the system with 2 x Stream cables

- Huge sound stage, inky black background, increased ambience, clarity, detail, bass control and dynamics.
- Every nuance in every recording revealed with startling realism.

Upgrade the system with 3x Stream cables

Go buy your own Stream NOW at your nearest Black Rhodium Dealer or visit: www.blackrhodium.co.uk
"Oppo likely never found the sales they needed - and the outlook was only going to get worse"

What a shock! Oppo Digital have announced they will cease manufacture of hi-fi products. Since Oppo are (or were) China's second largest mobile phone producer behind Xiaomi - this is more than unexpected. Whilst manufacturing and distribution worldwide will cease, service will be available for around five years. The company has provided no explanation but there's plenty of opinion on the 'net of course - so I'll add my piece later in this column! What to do now - today - to play CD, or hire digital at the quality level Oppo made a market standard!

What Oppo relied upon to gain a cutting edge was use of top quality U.S. (California) designed and built ESS Sabre32 digital-to-analogue convertor (DAC) chips - it's as simple as that. Except that it isn't simple at all at a technical level, nor is it cheap - which I'll come to later when covering the company's demise.

Sonicly, there aren't many DAC chips that get close to the ESS designs, but perhaps I'm wrong! It's been a fairly firm conviction of mine since hearing the original BDP-105D player some years ago: it had insight, an easy smooth nature and a beguiling cuddliness in the sound that I'd never heard from CD. But perhaps I've grown a little uncritical since this introduction to CD as a smooth source and need a re-think. Now is the time to do so.

A wake up call came recently when listening to McIntosh's MCD350 CD/SACD player (May 2018 issue). Although both the CD and SACD sections of Sony's chip that McIntosh use in this player didn't yield class leading figures under measurement, all the same CDs sounded shimmeringly clear in use, so much so I was a bit taken aback. I don't often hear this chip set: it's little used, likely because of cost and because those figures have given it - the CD section in particular - an iffy reputation on the 'net. Perhaps also because Sony's CD/SACD dedicated DAC chip has been used in circuits that don't flatten it, switch-mode power supplies being one potential culprit. McIntosh use a C core mains transformer in a linear supply by way of contrast, likely explaining the player's superb bass.

And here's where I started to have reservations about ESS's Sabre32 series DACs and the surprisingly similar-sounding new Verita series from AKM (Japan) who seem to want to be in on the top end action of the audio chip market. I have been careful to say in reviews that ESS DAC chips are smooth-to-warm, but with great insight - and listening at length to our Oppo UDP-205D against McIntosh's NCD350 highlighted this fact. I sheepishly admit I preferred the McIntosh to our Oppo UDP. 205D reference player - and so did Jon Myles on hearing the two side by side. They were substantially different in presentation but the McIntosh is the player I'd take home, ignoring wonga issues (it's far more expensive).

Oppo's players are still brilliant. You hear far more into CDs and they don't sound harsh either - magic I thought, and still do. AKM's (Asahi Kasei Microdevices) new AK493EQ chip sounds much like ESS's Sabre32 chips so expect to see it becoming more popular as Oppo's influence disappears.

The Sony chip set in McIntosh's MCD350 offered a polar opposite view making the Oppo sound rather shut-in, as if music was issuing forth from a wool lined box. That doesn't sound very complimentary but it's an observation rather than a criticism. CD has sounded so harsh for so long that the Oppos and the ESS Sabre32 DAC chips came as a blessed relief. Yet there are alternatives we're now obliged to consider with Oppo's passing.

Audiolab's M-DAC+ is probably now the best place to get the ESS sound, especially with its excellent filter set.

In contrast Chord Electronics products use their own in-house digital convertor offering a brighter sound - and Texas Instruments are in contention with their PCM-1796 chip. I must not ignore ICs either, for those with deeper pockets. The landscape is changing.

And now to Oppo's demise. Their players were incredibly complex, trying to address a wide market with one unit that did it all, playing video Blu-ray discs and DVDs as well as all audio discs. They also acted as a stand-alone DAC.

ESS Sabre32 DAC chips are hugely expensive items, around $38 a pop last time I looked. Oppo's players cost too little to support such parts, each player using two; I guess they were looking for the numbers.

With the market for video and audio from silver discs in decline as streaming from Netflix and Spotify rises, Oppo likely never found the sales they needed - and the outlook was only going to get worse. That, I suspect, is the reason they pulled the plug.

Normally you sell a company on, because simply terminating it means accepting big losses. It's a shock to me that this hasn't happened, nor was the product line up and/or pricing changed. But president Alan Wu said ominously in 2016 that Oppo the 'phone company would not make other products. He must have found out they were...
North West Audio Show 2018

The very best in Hifi and audio in wonderful surroundings

Free entry, free parking, live music and lots more for all the family

Saturday and Sunday 23-24 June, 2018
De Vere Cranage Estate, Holmes Chapel, Cheshire

www.audioshow.co.uk

NOVAFiDELITY

NOVAFiDELITY X35

Easy to use with features such as:

Support various file formats like DSD(64/128/256), DXD(24Bit/352.8Khz), PCM signal up to 32Bit/384Khz - including 24Bit/192Khz WAV/FLAC and full range hi-res audio file formats.

Breathtaking sound quality delivered by ES9018K2M Sabre® Reference DAC - CD Ripping with professional CD metadata and album cover art provided by Gracenote.

Phono Input (Moving Magnet) for Turntable. Play LP directly and record it - Recording function with hi-res sampling rate 192 KHz.

High Connectivity - Versatile network functions - Major Music Streaming Services (TIDAL, Deezer, Qobuz) and Internet Radio available with a Customized Remote Control App, NOVATRON MusicX for iOS and Android - Provides customized Web Interface (WebUI) for remote control and MusicDB management by PC. Support 'Roon Ready', which is the famous Music Player for Music Lovers.

from only £1,695.00 RRP (no HDD)
"Sonic improvements on CD are still occurring. I’ve heard some amazing CD productions of late"

When a mass market dies, there is a wailing and grating of teeth and general sadness that the end has truly arrived and the product(s) at the centre of that mass market have disappeared for good – or will very soon.

It’s amazing that often this is not the case. If the product at the heart of the mass market for it is a good one, something with genuine value, it will become dormant. Human beings are complex and odd creatures. We will not let go of something that we love and we insist that it remains. Examples! Everything from bicycles to handbags, corsets to tarot cards, plastic model kits to knitting.

Vinyl is our principle example here of course. Vinyl was the only music carrying game in town for decades. The music industry was a waxy physical one and that was that. Then CD entered the fray around 1982 and vinyl was declared dead. CD became the mass market but vinyl didn’t disappear. Its numbers, in production terms, fell off a cliff yes – but it didn’t totally die.

Then CD sales wavered and MP3 took over. Vinyl was still there, sales declining to a steady figure. Low for sure, but the vinyl format remained. Then MP3 died and downloading took over. Yet vinyl remained as an alternative – people would just not let it go and specialist record labels began to appear supporting a growing interest. That is, there were enough people who maintained an interest. Enough to actually keep a range of analogue-centric businesses alive and kicking.

Downloads have been eclipsed by streaming in the mass market, yet vinyl sales are on the up. New pressing plants and pressing machines are appearing for goodness sake. Life has a cyclical aspect and we now remember what we loved about the physicality of vinyl. Vinyl is still not a mass market medium – it likely never will be again. What vinyl is, though, is a successful niche market.

But that’s not all because CD is not ‘dying’ (the media love a dramatic death rattle) but is declining to become a niche market too. This is, sonic improvements on CD are still occurring. I’ve heard some amazing CD productions of late and I’m sure that’s down to improvements in studio kit, the ADC specifically. So, let’s hear it for CD as well.

I love niche markets. These are places where the money bubble has burst and the investment sharks have come and gone. The production people who are left tend to be those who are in the market for wholly emotional reasons. Yes, they need to make a living to survive but that, in itself, makes them happy. The sheer ‘doing’ is often fulfilment enough, in many cases. It transcends work. It becomes a full time hobby.

Another example in our industry is, oddly enough, the record label. The music industry as it was in the seventies is dead. The death of so many large labels confirms that. The mostly small labels who are left run on equally small profits and do so for love of the music and, again, the ‘doing’.

One of those is the Munich-based jazz outfit ECM. Edition of Contemporary Music, as it is properly known, was born in 1969, when the music industry was a powerhouse. Manfred Eicher was the founder and he still runs the show. ECM is an independent and ‘uncommercial’ label, with over 1,000 titles to its credit.

Riches are not the reason for carrying on says Manfred. “Success is the quality of the records and the response to them. If the media are interested and people write to me directly from Indonesia or Vietnam about them, that’s a measurement”.

Hi-fi fans have often shown an interest in the house sound from ECM. Much has been talked about the quality of the recording studio and the microphone positioning and, of course, the musician’s input – but a large part of the reason ECM recordings are of consistently high quality – even on CD – is because there is no artificial reverb, no EQ and no compression. In effect, you have an acoustic space and music. That’s it.

And why am I writing about ECM? Because I’m astonished at its health and continuing output. Another heap of quality works has hit my desk in CD format from Jon Balke’s baroque ‘Swan: Nahou Houm’ which fuses cultures and time to Kit Downes’ ‘Obsidian’ which offers a creative approach to the church organ, to Norma Winstone’s ‘Descansado: Songs for Films’ providing a poetic edge to cinematic and jazz-flavoured lyrics.

“Im definitely someone who can be a catalyst. Who would have thought that the Belonging group, with Keith Jarrett and Jan Garbarek, would be so successful? These things you can never foresee exactly. You can only guess, you can try. So I try.”

Only someone who loves what he does can speak like that. And that’s why I’m attracted to vinyl – and now CD. Both are shock full of people who have a love for the formats and the music they carry. Soulless commercialism has gone but enthusiasm remains – and we all benefit.
The EVO and the new EVOke now you have a choice!
The new EVOke has world beating performance and right now we have the unit reviewed in this issue and a brand new one for sale. Performance figures are comparable with the world’s most expensive turntables and the ability to fit any arm or cartridge mean you can have the EVOke that you want.

The EVO was used by Hi-Fi World to evaluate the Beatles In Mono records and is now used as their reference. The EVO comes fitted with the legendary SME 309 tonearm loved by so many and a cartridge of your choice.

We have worked with direct drive turntables and moving coil cartridges for 35 years. We can supply completely new units with 6 year guarantees, used ones with 5 year guarantees, or we can convert your own.

Miyajima - Benz LPS - Denon DL103 - DL-102 mono - Audio Technica AT33 & OC9
SME Turntables & Tonearms - Oyaide - Furutech - Klipsch - 78rpm - SL1200 Mods
Tax free best prices for World wide mail order by Fed Ex

Sound Hi Fi Dartmouth Devon 01803 833366 www.SoundHiFi.com

MrSpeakers • S Verking sound • SIUH 1.0 COM • SYNERGISTIC RESEARCH • OYAIDE • DEKONI • AUDIO • 78rpm • SL1200 MODS

Stereo, Mono & 78 rpm Artisan Noriyuki Miyajima has been making phono cartridges in Japan for more than three decades. Only recently discovered by American and European audiophiles, they have since received rave reviews all over the world and deservedly so.

Every Miyajima cartridge is handcrafted in house by a dedicated full time team of six based in Fukuoka. The cartridge bodies are individually precision-milled from rare and exotic hardwoods including ebony, rosewood and African blackwood (mingo). These dense natural materials lend a vibrant and natural tonality to the sound.

www.electromod.co.uk
“The sound the ANS makes can be truly ethereal and, at times, rather eerie.”

Chicago, Manchester, Detroit; they were the three major cities that first embraced the pioneering sounds of House and Techno and so kicked off the electronic dance music (EDM) revolution.

I still remember hearing Model 500’s ‘No UFOs’ (sic) and marvelling at the electronic sounds ricocheting around the room. That was 1985 and the song still sounds remarkably fresh and new today.

Of course, the increasing sophistication of synthesisers and samplers helped – as did their plummeting costs and the increasing power of desktop and laptop computers. Suddenly, for just a few hundred pounds, teenagers could create electronic music in their bedrooms without recourse to traditional instruments. It was like the punk days again – only this time with synthesisers and sequencers.

But to really understand the history of electronic music in all its forms you need to travel to another city – the Russian capital Moscow where you can visit the Glinka State Central Museum of Musical Culture. There you’ll find the remarkable ANS, one of the first electronic instruments, developed by Russian engineer Yevgeny Murzin from 1937 to 1957.

It’s a big beast – around the size of a family car – but contains some truly clever technology based around sine waves. These are printed onto five glass optical discs, each having 144 individual tracks for a total of 720 microtones spanning 10 octaves.

Modulated light from these discs is then projected onto the back of the synthesisers interface which is a black glass plate coated in non-drying mastic. The user (or musician!) simply draws their finger through the mastic to let in light which shines onto a bank of photocells. These send the signal to twenty amplifiers and bandpass filters, each having its own gain adjust control.

Marks made low on the glass plate generate low tones and ones higher up high tones. The sheets can be prepared in advance and then fed into the machine – the tempo dependent on how fast this is done.

In effect the ANS is actually playing what you draw. Remarkably it’s also fully polyphonic, able to generate all 720 pitches at once if that’s required (one long vertical swipe will achieve this).

The sound the ANS makes can be truly ethereal and, at times, rather eerie. If you want to hear what I mean take a listen to the soundtrack to the classic Soviet science fiction film Solaris, composed by Edward Artemiev with the help of the device. (Incidentally, the ANS was named in homage and dedicated to the composer Alexander Nikolayevich Scriabin – an occultist, theosophist, and early exponent of color-sound theories in composition).

The fact that the ANS still survives today is something of a miracle. Russian inventors were well ahead of their Western counterparts in the development of electronic instruments during the 1920s and 30s. Alongside Murzin there was Leon Theremin who used an eponymously-titled device produced sound by sensing the position of the player’s hands relative to two antennae. It’s still popular today amongst certain musicians as it sounds like nothing else. Take a listen to ‘Ouch Evil Slow Hos’ by jazz drummer Sebastian Rochford and Theremin player Pamela Kurstin to hear the range of sounds it can produce.

But these avant garde inventors fell out of favour during the autocratic rule of Josef Stalin. Many sound art projects were condemned and destroyed and engineers redirected to work on the Soviet Union’s frantic drive for industrialisation. Murzin himself had to work largely in secret during his spare time and often struggled to find parts for his machine and, sometimes, even laboratory space in which to work. That explains why it took so long to go from initial concept to fully-fledged working model.

The ANS itself eventually ended up behind a curtain in a basement of the Moscow State University, hidden away and virtually forgotten until this technological marvel was thankfully rediscovered and moved to its present home where it still delights visitors.

Since then it’s been pressed into service by a number of experimental bands including Cui’s ‘cuIANS’ – a boxed set of experimental drone music performed on the ANS over a three-day recording session.

If you cannot get to Moscow to hear Yevgeny Murzin’s remarkable invention for yourself then you can hear a fuller history of the instrument on BBC Radio’s World Music 50-minute documentary Yevgeny Murzin: Master Of The Synthesiser. It’s still available for download now via the BBC’s iPlayer radio section. Just log-in and search for the programme.

You’ll get a fascinating insight into an electronic instrument that was truly way ahead of its time and one that still holds a real interest today more than 50 years on. Chicago, Manchester and Detroit made electronic music popular but Moscow invented it!

Jon Myles
X5 3rd gen

Android-based, High Resolution Audio Lossless Playback Portable Music Player

- AK4490 X 2
- Quad-core RK3188 processor
- 32G built-in storage
- Up to 512GB storage expansion
- 2.4GHz Wi-Fi
- Qualcomm® aptX™
- Bluetooth 4.0
- 3.5mm + 2.5mm headphone out
- 3.97 in. touchscreen

FiiO Electronics Technology Co., Ltd

FiiO was established in 2007 and it is a high-tech enterprise focusing on researching and developing portable audio products, mainly including Hi-Res music players, portable headphone amplifiers & DAC, and headphones/earphones.

FiiO is experienced in self research and development, and sells FiiO-branded products through sales agents worldwide covering all 5 continents and 65 countries/regions so far. Several products from FiiO have created record sales in their respective product segments and have received countless well-known awards including IF Design Award, Reddot Award, EISA Award, VGP Award, etc.

FiiO places great importance on users’ needs and ceaselessly pursues perfection in product design and manufacturing, to supply users with the best audio products at the best prices.
Some see television as the spawn of the devil. Others see it as a distraction from the serious business of listening to music, tussling for optimum sound quality (panel nowadays!) as other family members enjoy watching it. I mostly use digital television platforms for the radio services they carry, but usually I can find something worth watching. BBC Four, for example, offers plenty of documentary shows (many alas repeated) and excellent music coverage.

A short while ago, it brought back the much-missed Old Grey Whistle Test ‘for one night only’. Original presenter ‘Whispering’ Bob Harris was joined by various luminaries including Gary Numan, Kiki Dee, Dave Stewart, Peter Frampton and Joan Armatrading. Archive was important, but there were also performances from new artists – like Wildwood Kin, whose album I subsequently bought.

Music documentaries are a Friday-night staple, and live music regularly features too. Proms concerts, Eurovision heats and BBC Four Sessions – plus there’s BBC’s Young Musician of the Year. Those of a certain age (myself included!) enjoy 1980s episodes of Top of the Pops (TOTP), most of which haven’t been aired since originally broadcast. Some have been shortened, to excise certain presenters or performers maybe?

TOTP has, the odd ‘special’ apart, been off our airwaves for twelve years. The year it disappeared (2006), the BBC began broadcasting in high-definition. This was the biggest change to TV since going colour in the late 1960s. Today, all BBC TV output is in high-def. It has to be said that even BBC Four’s old TOTP episodes benefited. They may have been made in standard-def, but the codecs that hi-def employs seem to be ‘kinder’ to noisier vintage material (less artefacting, for example).

However, many have noticed that terrestrial HD channels (notably BBC Four and BBC News 24) have gone AWOL. Their unexplained absence followed an on-screen message inviting viewers to retune their “TV or box” if “missing channels” were noted; a phone number (0808 100 0288) was also given. Unfortunately, retuning does not always restore them.

The reason for all this? The UHF TV broadcast band is currently in the process of being reorganised so that its upper end can be sold off to 5G telecoms companies. It’s noteworthy that broadcast spectrum is being sacrificed to make way for broadband – reflecting how many of us consume TV (as well as music) nowadays. Interestingly, the auctioning of other radio spectrum (2.3GHz and 3.4GHz) is already in progress. An Ofcom spokesman told me that “the total value from the principal stage was £1.36bn” – money that will be “paid to HM Treasury”. Next year is UHF’s turn.

In the UK, several digital TV (and/or radio) services are slotted into a DVB-T/T2 ‘multiplex’, carried on a single UHF channel of 8MHz bandwidth. There are 49 such channels, numbered 21-69, which correspond to frequencies between 470MHz and 860MHz. Some multiplexes will move to different channels as part of this ‘juggling’. Hence those ‘retune’ messages.

Take for example Crystal Palace’s TV transmitters, which serve London and the South-East; 6 million or so TV homes, mine included, have been affected by recent changes. One of the Crystal Palace multiplexes (“COM7”) recently moved from UHF channel 33, to channel 35. COM7 carries high-def channels like BBC News HD and 4seven HD, alongside some SD services.

Why doesn’t it return? Years ago the UHF TV band was split into several overlapping ‘groups’. Each region’s TV services was cleverly allocated to a specific group, to prevent transmitters from adjacent regions interfering with each other.

A viewer needed to choose an aerial ‘tuned’ to the appropriate group – in other words, one gave its best results (highest gain, or ‘signal pulling power’) on these channels. Subsequently, ‘wideband’ – also known as ‘Group W’ – aerials were introduced. Lacking the gain of aerials optimised for narrower groups, they were useful for those living in areas where multiple transmitters could be received.

Originally, Crystal Palace viewers needed a Group A aerial. A Group W aerial (or its post-switchover “Group T” equivalent) is now essential for reliable reception. Crystal Palace viewers may need to replace their Group A aerials, if full reception is to be restored.

The good news is that help is at hand, although you only have three months to register your interest via the Freesview Advice Line above. Their technicians will deal with the problem free of charge, if retuning makes no difference. Aerials will be replaced where necessary, and if terrestrial TV is no longer an option then Freesat equipment (satellite and cable aren’t affected) may be installed.

Those losing one or more of the “standard-definition public service SD channels” would, a Freesview spokesman told me, get priority and “an installer appointment within 10 working days”. If only HD channels are missing, longer waits can be expected. Government support for the project, to the tune of £600m, was announced as part of the budget statement in March 2015.

“Those of a certain age enjoy 1980s episodes of Top of the Pops”

Martin Pipe
Audiolab
Aesthetix
Abrahamsen

Tel:

Moon

NAIM

NAIM

NAIM

Luxman

Classe

Cairn

BAT

Luxman

Radio/Recorders

mDHmDHIFI

NAP250,

NAIT

A77,

Electronics

CAP2100

585

Just

659

AM

2000

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call

1199

1199

1199

1199

Call
"We cannot tell without the use of Dr Who’s Tardis and a visit to Tottenham Court Road!"

Dave Tutt

I get quite a few questions about loudspeakers. It’s often a case of “mine are broken as we had a party last night”. Sometimes it’s “I’ve had these for 40 years and they are brilliant but they now make funny noises, can you help?!”

Then there are those who read what the web says about their particular model, telling them how fabulous they are (a massage to the ego), but they don’t understand that paper, foam, fabric and glue all age and fall to pieces. A loudspeaker even 10 years old will not sound the same as it did when new and just run in. If you were, as a loudspeaker, to be subject to the accelerations of 20G - 50G at frequencies between 10Hz and 10kHz you might just start to feel your age pretty quickly!

So if you have – for example - a pair of Wharfedale Meltons, with the bass drivers gone you could of course send them off to have them rebuilt with new cones and suspension and a new voice coil. These ‘speakers are somewhat unique in hi-fi, given that they have 12 inch bass drivers with smooth cones, no decoupling rings to extend the frequency response and an inverted rolled rubber edge suspension with no identical replacement type that will work in these cabinets.

A rebuild might seem a good bet but how much would you pay? Well, I doubt you would see much change from £140 for a pair. Then factor in that they most definitely won’t sound the same as they were after a modern re-build. Given that Meltons are early 1970 models I would ask – is this a sensible thing to do with your cash?

Just want to get them going again! Well, you could find similar drivers on eBay but there is no guarantee if you buy a pair of ‘new’ drivers here what sort of sound you will get – especially if you buy second hand ones that could be worse than those you have removed!

How about some new 12 inch drivers? I recently fitted MCM 55-2973 drivers to Meltons. These are polycone drivers and a generic replacement 12 inch part designed for low power PA rather than hi-fi. As such but they are not exactly great as PA units as they don’t have the power handling. They don’t have a low resonance – 50Hz at best – so you would again assume that infinite baffle enclosures were really not ideal either.

Do these drivers work in the Meltons? Yes, most definitely. They are faster than the originals, less soft and woolly, they have much better bottom end despite the enclosures raising the resonance somewhat.

Low power handling suggests that at high volume compression sets in and it all sounds crowded! No sign of it from what I could hear.

Midrange? Smooth Not as you would expect from a 12 inch driver or for that matter a plastic cone – probably due to them being a bass driver rather than a dedicated small cone bass/midrange driver as used in smaller bookshelf ‘speakers’.

Do the Meltons need any cross over changes with these drivers? None at all. They are a straight forward swap of the originals but have six hole mounting rather than the original four, so you have to have a think about the mounting.

There is little strength to the edges of the baffle but there is plenty of meat to accept four screws into the 12mm ply so the driver can be mounted well from the rear. Front mounting might be better – but then the grills won’t fit. Cost of the drivers is only around £17 inc VAT each, so trying it isn’t going to break the bank.

At low levels these drive units offer a polite and clean sound – and visually match the purple dome tweeter of the Wharfedales very nicely. At higher levels they have better bass than you would expect and could survive a party quite well I think. That may well be a good given that many old ‘speakers ending up at Boot Fairs get pushed into doing things they were never intended to do.

I am sure that from a purely hi-fi standpoint people might think old Meltons are really not up to modern standards but they were good in the 1970s – or at least decent.

Today we expect a more forthright sound than in the ’70s and many of the old surviving loudspeakers are an indication of the soft presentation that you might think was designed in when new. This may not be the case but we cannot tell without the use of Dr Who’s Tardis and a visit to Tottenham Court Road!

The thing is going to tend to blur expectations of old products like Meltons, but actually a cheap modification like this regenerates a failing old pair of boxes quite nicely.

If anything, for a 12 inch driver the enclosure is a little too shallow but without ports in the box there is less of the reflective sound getting out so the bass is rather more controlled than you would expect. I think if you ported them it might just run things.

Restoring old Wharfedale Meltons threw up a host of challenging issues, as always with old kit. But I managed to overcome them and they ended up sounding lovely, if ‘trad’ in the best sense of the word. I now wonder what loudspeaker will be next in my list and what peculiarities I will be faced with in the workshop.😊
Coming Soon

FESTIVAL of SOUND
THE MUSIC & AUDIO SHOW

28-30 September 2018
Novotel London West
Hammersmith
London

www.festivalofsound.co.uk
**FiIo RCC-MMCX1s £19.99**

Cable clutter is becoming an ever more pressing problem for headphone users while out and about - especially with more and more mobile phones cutting out the standard headphone jacks meaning a Bluetooth device is needed to access your music.

But a long lead can be a bit cumbersome if you've got a Bluetooth adaptor pinned to your shirt or jacket. So enter FiIo's RCC-MMCX1s. Admittedly, it's not the snappiest of names but does describe what its purpose is. Basically it's a short – as in 60cm in length – cable capable of being plugged into the likes of FiIo's BTR1 Bluetooth device (see Hi-Fi World review February 2018 issue) and those from other manufacturers.

One end has a standard 3.5mm jack while at the other there are a pair of MMCX connectors – meaning they will fit most of FiIo's own in-ear monitor headphones as well as models from the likes of Shure, Ultimate Ears and Westone.

Priced at a reasonable £19.99 the cable is well-made with a woven construction that is handily free from inducing tangle even when pulled in and out of a pocket on daily commutes.

Sound-wise it doesn't disappoint having a warmish quality that suits Bluetooth well. The main selling point, though, is the length. Connected to the BTR1 it was much more convenient - no long trailing lead having to be wrapped into a pocket or dangling between my knees!

If, like me, you now have a smartphone without a headphone jack and are going down the Bluetooth adaptor route then this could be ideal.

**JM**

[Advanced MP3 Players
www.advancedmp3players.co.uk
+44 (0)343 289 6880]

---

**FiIo L28 Coaxial Cable £19**

Also from FiIo comes the L28 coaxial cable, a high-grade connector designed for sending hi-res files from a player to a dedicated headphone amp/DAC.

Again it is short as this works best with such a combination. Each end has 3.5mm L-shaped plugs for easy insertion. They are also metal-plated to help avoid EMI interference. The cable itself is sturdy but flexible and once inserted between a FiIo Q5 amp/DAC and the company's X5II player stayed resolutely in place - even during some brisk exercising.

Most impressively the cable supports up to 24bit/192kHz audio as well as DSD. Listening to Cowboy Junkies’ 'The Trinity Sessions' provided excellent resolution with the atmosphere of the recording coming over in excellent resolution.

With Blur's 'Song 2' the low-end power of the Q5 really came through - powering my reference Noble K10 in-ears to the peak of their abilities.

Of course, this is down to the qualities of the Q5 and X5II together but the big point about the L28 is that it doesn't throttle their performance - instead simply providing a simple, easy link allowing the two devices to be used together without any undue hassle.

The cable is available for around £19 and if you have a FiIo Q5 and a compatible music player then it's a must-have purchase to get the best out of both of them. **JM**

[Advanced MP3 Players
www.advancedmp3players.co.uk
+44 (0)343 289 6880]
WORLD CLASSICS

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

**TURNTABLES**

**EAT FORTE** 2009 £12,500

Lavishly finished two box, two motor turntable with gorgeous, white 40V tonearm bundled. Exceptionally stable and unfussy performer with a relaxed but highly enjoyable gait.

**FUNK FIRM VENTOR II** 2009 £860

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

**REGA P2** 2008 £380

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

**MCINTOSH MT10** 2008 £8,995

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

**REGA P2-24** 2008 £405

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

**ACOUSTIC SOLID ONE** 2007 £4,050

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

**AVD VOLVERE SEQUEL** 2007 £4,600

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

**MICHELL GYRODEC SE** 2005 £1,115

Design con with superlative build. Sound is beautifully smooth, effortless and exceptionally expansive.

**MARANTZ TT-1551** 2005 £1,299

Cracking all in one deck/arm/cartidge combination, this must surely be the best sound/pack and play package at this price point.

**MICHELL TECNODEC** 2003 £579

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

**MICHELL ORBE** 1995 £2,500

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

**SME MODEL 10A** 1995 £4,700

Exceptionally engineered deck and SME V tonearm combo that's an extremely accomplished performer with classical music.

**LINN AXIS** 1987 £253

Call price version of the Sondek with UX arm. Elegant and decently performing package - later version with Akto tonearm better.

**TECHNICS SL-P1200** 1987 £800

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

**ROKSAN KREYES** 1984 £550

Super tight and clean sound, with excellent transient. Less musical than the Sondek, but more neutral. Saging plinth top plates made this a dubious used buy.

**DUAL CS505** 1982 £75

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

**MICHELL GYRODEC** 1981 £999

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

**TOWNSHEND ROCK** 1979 £1,400

Novel machine has extremely clean and fluid sound. Substantially modified through the years, and capable of superb results today.

**MARANTZ TT1000** 1978 £1,100

A superb seventies high end belt drive with solid and clean sound. Here in Europe, but big in Japan.

**TRIO LO-2** 1978 £600

The best all in one turntable package ever made. Clean, powerful and three dimensional sound, ultimately limited by the tonearm.

**AUC ACQUITRAC 4000** 1976 £300

Stones 1970s direct drive that uses an infra red beam to allow track selection and programming. More of a visual experience than a sonic stunner.

**PIONEER PL-500** 1976 £600

Sturdy and competent motor unit that performs well with a wide range of tonearms. Check carefully before buying due to electronic complexity and use of now obsolete ICs.

**PIONEER PL120** 1973 £36

When V/F was the leading source, this bought new standards of noise performance and stability to the class, plus a low friction S-shaped tonearm. Later PL1120 was off the pace compared to rivals.

**TECHNICS SP10** 1973 £400

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

**LINN SONDEK LP12** 1973 £86

For many, the definitive superdeck, constant mods meant that early ones sound warmer and more lyrical than modern versions. Recent SE mods have brought it into the 21st century, albeit at a price.

**ARISTON RD11S** 1972 £94

Modern evolution of Thorens' original belt drive paradigm. Scotland's original super deck was warm and musical, albeit soft. Software capable of fine results today.

**GOLDring Lenco GL25** 1970 £15.65

Simple, well engineered motor unit with soft, sweet sound and reasonable tonearm. Good spaces and servicing support even today.

**GARRARD 301/401** 1953 £19

Tremendously strong and articulate with only a veiled treble to let it down.

**GARRARD 301/401** 1953 £19

Tremendously strong and articulate with only a veiled treble to let it down.

**SONY PS-B89** 1978 £800

First outing for Sony's impressive 'Bladecore' electronic tonearm. Built like a tank with a clean and tidy sound, a bit lacking movement. Scarily complicated and with no spares support - buy with caution.

**REGA PLANAR 3** 1978 £79

Initially simple but clean and musical performer, complete with Acos derived S shaped tonearm. 1982 saw the arrival of the HS300, which added detail at the expense of warmth. Superb budget buy.
**THORENS TD124** 1959 £ N/A

The turntable for virtually every 1970s "supermodel" - this turntable was the only real competition for Garrard 301. It was sweeter and more lyrical, yet lighter and less impactful in the bass extremes.

**TONEARMS**

**REGA RB251** 2008 £136

Capable way past Its price point, this old 3-pivot mount version of the classic RB250 serves up a fast and detailed sound. A little lean for some tastes, but responds well to reworking and counter-weight modification.

**HELIUS OMEGA** 2008 £1,595

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

**AUDIO ORIGINS PU7** 2007 £1,300

The classic Syntex PU3 updated to spectacular effect. Hard made to order, with any mass, length and colour you care for. Finish and sound truly impressive.

**GRAND PHANTOM** 2006 £3,160

Sonically stunning arm with magnificent bass control and sculpting. Build quality up to SME standards, which is really saying something!

**TRI-PLANAR PRECISION** 2006 £3,800

Immaculate build, excellent design and one of the most naturally musical and vocal sounds around.

**MICHILL TECNAMS A** 2003 £442

Clever reworking of the Rega theme, using blasting, calking and reworking.

**SME 308** 1988 £767

Mid-price SME comes complete with cast-cast aluminum armboard and detachable headshell. Tight, neutral sound with good tonality, but lacks the V's pace and precision.

**NAIM ARD** 1987 £1,425

Charismatic unpivot is poor at frequency extremes but sublime in the midband; truly emotive and insightful.

**SME SERIES V** 1987 £2,390

Vice-like bass with incredible weight, ultra clear midband and treble astound, although some don't like its matter of factness!

**NAIM ARD** 1986 £875

Truly endearing and charismatic performer - wondrously engaging mid-band makes up for softened frequency extremes.

**SME SERIES III** 1979 £113

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

**TECHNICS EPA-501** 1979 £ N/A

Popular partner for late seventies Technics motor units. Nice build and Titanium Nitride tube can't compensate for moving coil.

**LINN ITTOK LVII** 1978 £253

Japanese design for Linn system made for a musical, rhythmic sound with real dynamic response. Fine finish can't compensate for this ultra low mass arm's limited sonic - a good starter arm if you've only got a few quid to spend.

**HADDUCK GK228** 1976 £46

Evergreen unpivot with lovely sweet, fluid sound. Excellent service backup.

**ACOS LUSTRE GST-1** 1975 £46

The archetypal S-shaped seventy arm, good, propulsion and moving sound in its day, but nagged and undynamic now.

**SME 3009** 1959 £18

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

**PHONO STAGES**

**CREEK CIRK-6 SE** 1996 £180

Punchy, rhythmic character with octaves of detail makes this a great budget audiophile classic. Partner with a Goldring G1042 for an unbeatable budget combination.

**MICHILL ISD** 1988 £ N/A

This fortuitous designed black box started the trend for high performance budget phono stages. Chaotic, musical and punchy - if lacking in finesse.

**LINN LINNK** 1984 £149

Nano-designed MC phone stage built to partner the original Naim NA1T - yes, really! Fine sound, although off the pace these days.

**INTEGRATED AMPLIFIERS**

**NAIM NA1T** 2008 £2,290

With the weight of the Supernatant at half the price, this is powerful, articulate and smooth beyond class expectations.

**MUSICAL FIDELITY PRIMO** 2009 £7,900

Seriously expensive, but one listen explains why Wonderfully exuberant sound that can only come from a top quality tube design.

**SUGDEN A21A S2** 2007 £1,469

Crystaline clarity, dizzying speed and forensic detailing. Power limited to radios sensitive speakers.

**CREEK OPH-72** 2008 £250

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

**CAMBRIDGE 840A V2** 2007 £750

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

**SUGDEN IA4** 2007 £3,650

Gaudy amount of Class A power, icy clarity and a breathtakingly fast, musical sound that make this one of the very best super-integrates.

**NUFORCE P-9** 2007 £2,290

Impressive two box preamp with superb resolution and an engaging sound.

**MELODY PURE BLACK 101D** 2007 £3,295

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

**AUDIOLAB 8000S** 2006 £400

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

**MCINTOSH MA6800** 1995 £3,375

Effortlessly sweet, strong and powerful with sensational styling to match.

**DELCET** 1987 £1,980

Fast, dry and with excellent transients, this first DPA integrated is the real deal for eighties obsessives. Ridiculously punchy 60W per channel from a tiny, half-size box. Rad-ca, cool and more than a little strange.

**EXPOSURE VII/VIII** 1985 £625

Seminal pre-power, offering most of what Naim amps did with just that little bit extra smoothness. Lean, punchy and musical.

**AUDIOLAB 8000A** 1985 £495

Smooth integrated with clean MM/MC phone stage and huge feature count, extremely reliable, too. Post '93 versions a top used buy.

**VTL MINIMAL/50W MONOBLOCK** 1985 £1,300

Rugged, professional build and finish allied to a lively and punchy sound (albeit with limited power) make them an excellent used buy.

**MUSICAL FIDELITY A1** 1985 £350

Beginning Class A integrated with exquisite styling. Questionable reliability.

**MISSION CYRUS 2** 1984 £299

Classic 1980s minimalism combines arresting styling with clean, open, lively sound. Further upgradeable with PSX power supply.

**ALPHASON HR1005** 1981 £130

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

**MIST III**
1983  
£300
Madcap eighties minimalism, but a strong and tight performer all the same.

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

**NAD 3020**
1979  
£89
Brilliantly smooth, sweet and punchy at the price and even has a better phone stage than you’d expect. The archetypal budget stereo-amp.

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

**SUGDEN CS/PSI**
1976  
£130
Soft sounding entry Sageden combo with a plethora of facilities and filters. A sweet and endearing performer but lacking in power and poor load drivability.

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

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

**POWER AMPLIFIERS**

**ELECTROCOMPAGNIE NEMO**
2009  
£4,995 (each)
Norwegian power station as a glue to walk, yet impresses with sheer physicality and fleetness of foot. 600W per channel.

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

**QUAD II-80**
2005  
£6,000 per pair
Quad’s best ever power amplifier. Dramatic performer with silky but dark tonality, blistering dynamics, serious power and compelling musical sound.

**QUAD 999**
2001  
£960
Current dumper has a smooth and expansive character with enough wallop to drive most loads. Not the most musical, but superb value all the same.

**NAIM NAP 500**
2000  
£17,900
Flagship amplifier will drive just about any speaker with ease. Factor in the company’s trademark pace, rhythm and timing and it all adds up to one effortlessly musical package.

**MARANTZ MODEL 9**
1967  
£600
Authentic reproduction monoblocks still more than cut the sonic mustard. Highly expensive and highly sought after.

**MICHELL ELECTRO**
1997  
£1,969
Crisp, clean and beautifully controlled with gorgeous styling. Partnered with the £1600 Drca this sounds delicious!

**MUSICAL FIDELITY AX200**
1996  
£1,000
200W of sweet smooth transistor in a grooved tube! Under-rated oddly.

**PIONEER M-73**
1988  
£1,200
Monster dump 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 cheeps and black brushed aluminum completes the experience.

**KRELL KM100 II**
1987  
£5,750
Monoblock version of the giant KSA-100 is one of the seminal late 80s transist/or power amplifiers. Massive won’t spoil a clean and open Class A sound makes this one of the best amplifiers of its type.

**RADFORD STA25 RENAISSANCE**
1986  
£977
This reworking of Radford’s original late sixties design was possessed of a wonderfully rich, old school valve sound with enough power (25W) and lots of subtlety.

**QUAD 405**
1978  
£115
Surprisingly the current model of dumper’s capable design with smooth, effortless power and a decently musical sound. 666 and 707 continue the theme with greater detail and incision.

**LEK EN ELECTRONICS TPA 560 AMPLIFIERS**
1973  
£110
Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain.

**LEKON AP1**
1973  
£250
Madcap cylindrical styling allied to its ‘tower of power’ pretensions, but it wasn’t. Poor build, but decently clean sounding when working.

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

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

**LEAK STEREO 60**
1956  
£31
Leak’s biggest valve power amp offers 30Watts per channel and more low end welly than the smaller Stereo 20. Despite concerns over reliability rarely value means high price.

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

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

**PRE AMPLIFIERS**

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

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

**CONRAD JOHNSON MOTIV MC-8**
1986  
£2,500
Minimalist FET-based preampifier is brilliantly neutral and smooth with a spry, light balance in the mould of Sageden. Something of a cutover, but worth while nonetheless.

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

**LINN LX-1**
1986  
£499
A brave attempt to bring remote controlled user-friendlyness to hair-shirt audiophiles. Hi-fi. Didn’t quite work, but not bad for under £100.

**NAIM NAC 32.5**
1978  
£250
Classic high end pre. Brilliantly fast and incise sound that’s a joy with vinyl but a tad forward for digital.

**LEISON AC-1**
1973  
£250
Amazing styling courtesy of Allan Rebay’s deft can’t disguise its rather cloudy sound, but a design classic nonetheless.

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

**LEAK POINT ONE STEREO**
1958  
£31
Good for their time, but way off the pace these days. Use of £160 champagne valve for high gain rules out ultra performance. Not the highest-f...
LOUDSPEAKERS

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

YAMAHA NSAVO 1.1 2009 £3,000
Musical, transparent with dynamic pressure and cohesion. Excellent build and finish.

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

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

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

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

PMC OB1 2008 £2,950
Cleverly updated floorstanders give scale and solidity in size and well finished package.

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

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

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

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

ISOPHON CASSAND 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.

QUAD ESL-2955 2005 £5,995
The old 999 with all the bugs taken out, this gives a brilliantly neutral and open sound like only a top electrostatic can; still not a natural rock loudspeaker, though.

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

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

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

USHER 5-520 2006 £1,350
Astonishingly capable budget standmounters that offer detail and dynamics well beyond their price and dimensions.

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

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

Aquanote 1997 £200
Aqua Design's Limited Edition a startlingly imaginative, and very special speaker. One of the most creative designs of the 1990s.

ATHENA 1997 £300
Athena Design's Limited Edition a startlingly imaginative, and very special speaker. One of the most creative designs of the 1990s.

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

TANNYON WESTMINSTER 1985 £4500
Folded horn monitors which sound good if you have the space. Not the last word in business but can drive large rooms and image like few others.

CELESTION SL6 1984 £350
Smallish two way design complete with aluminium dome tweeter and plastic mid-bass unit set the blueprint for nineteen eighties loudspeakers. Very open and clean sounding, albeit course at high frequencies and limp in the bass. Speakers would never be the same again...

HEYBOUR MB 1982 £130
Peter O'Crawley-designed standmounters with an amazing lyrical but very refined sound. Good enough to partner with very high end anodised, yet still with superb kit list too. A classic.

QUAD ESL 57 1980 £1200
An update of the ESL57, with stiffer cabinets. Until the 999, the best of the Quad electrostatics.

MISSION 770 1980 £375
Back in the day, it was an innovative product and one of the first of the poly/vinyl designs: warm, smooth and powerful sound.

ACOUSTIC RESEARCH AR18S 1978 £125
Bank designed, British built loudspeaker became a budget staple for many rock fans, thanks to the great speed from the paper drivers, although it's very round given the dimensions.

YAMAHA NS1000 1977 £532
High tech Beryllium mid/bass and tweeter domes and brashfit 12" woofers in massive sealed mirror image cases equals stunning transients, speed and width allied to superb transparency and ultra low distortion. Partner carefully!

JR 149 1977 £120
Cylindrical speaker was ignored for decades but now back in fashion based on classic KEF T27/2 B110 combo as seen in the BBC LS3/5a. Doesn't play loud, needs a powerful transistor amplifier, but has clarity and imaging.

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

www.hi-fiworld.co.uk
**CLASSICS**

<table>
<thead>
<tr>
<th><strong>SPENDOR BC1</strong></th>
<th>1976</th>
<th>£240</th>
</tr>
</thead>
<tbody>
<tr>
<td>Celestion HF300 tweeter meets bespoke Spendor Bextend mid-bass unit. The result is a beautifully warm yet focussed sound. A little bass bloom necessitates careful low-stand mounting.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>IMF TLS80</strong></th>
<th>1976</th>
<th>£550</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm and powerful 1970s behemoth with transmission loading and a mixture of Kef and Celestion drive units. Impressively physical wideband sound but rhythms not a forte.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>HH ELECTRONICS TPA-500 AMPLIFIERS</strong></th>
<th>1973</th>
<th>£110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain. Not exactly stylish, however.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>BBC LS2/3A</strong></th>
<th>1972</th>
<th>£88</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 guns from various manufactures building it under licence.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>LEAK SANDWICH</strong></th>
<th>1961</th>
<th>£39</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm sounding infinite baffle that, with a reasonably powerful amplifier can sound quite satisfying.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>QUAD ESL57</strong></th>
<th>1956</th>
<th>£45</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 cars or with subwoofers and superspeakers.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SYSTEMS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MERIDIAN SOLOS 2.1</strong></td>
</tr>
<tr>
<td>Creep stylish, bright, colourful touchscreen, plus excellent search facilities. This is one hard disk music system with a difference. Best partnered to Meridian active loudspeakers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>TUNERS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARCAM FMJ T72</strong></td>
</tr>
<tr>
<td>Excellent hybrid FM/DAB+ tuner with a smooth, engaging sound. Factor in its fine build and it’s a super value package.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>NAD 4040</strong></th>
<th>1979</th>
<th>£79</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tremendously smooth and natural sound allied to low prices and good availability make this budget analogue monstrosity.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>MARANTZ ST-8</strong></th>
<th>1978</th>
<th>£353</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marantz’s finest radio moment. Warm, organic sound plus an oscilloscope for checking the signal strength and multipath.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>YAMAHA CT7000</strong></th>
<th>1977</th>
<th>£444</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combines keen ergonomics, high sensibly and an excellent, detailed sound.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ROGERS T75</strong></th>
<th>1977</th>
<th>£125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superb mid price British audiophile design, compete with understated back fascia. Smooth and sweet with fine dimensions.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SANUS T7-9900</strong></th>
<th>1976</th>
<th>£300</th>
</tr>
</thead>
<tbody>
<tr>
<td>A flagship Japanese tuner. It boasts superlative RF performance and an extremely smooth and lucid sound.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>TECHNICS ST-8080</strong></th>
<th>1976</th>
<th>£180</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superb FM stage makes for a clean and smooth listen.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>REVOX B760</strong></th>
<th>1975</th>
<th>£520</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SEUERRA MODEL 1</strong></th>
<th>1973</th>
<th>£1300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possibly the ultimate FM tuner, albeit in terms of technology, size and features dedicated to extracting every ounce of performance from radio, including impressive multi-purpose oscilloscope display.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>LEAK TROUGHLINE</strong></th>
<th>1956</th>
<th>£25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series an interesting ornament but limited to 88-100MHz only. It is arguably the best sounding tuners ever. Attraction for those using via phone multiflex socket. Deliciously lucid with true dimensionality.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
HEADPHONE AMPLIFIERS

Graham Slee Novo 2009 £255
Dynamic headphone amplifier with a great sense of timing. Crisp, clear treble and warm mid-range gives an involving sound.

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

CD PLAYER/RECORDERS

MUSICAL FIDELITY TRIVISTA 2002 £4000
When playing SACDs, the sweetest, most laid back, lyrical digital disc spinner we’ve heard. CD school stereo, pure DSD design. CD sound is up in the £1000 class. Tool future classic.

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

SONY MUS-J555ES 2000 £800
The best sounding mid deck ever, thanks to awe some build and heroic ATHAC USP’Type H coding.

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

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

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

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

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

NAIM CD5 1990 £N/A
Classic Phillips 16-bit chipset with serious attention to power supplies earns glare-inducing sonic.

MARANTZ CD7 1983 £700
A riot of gold brassed aluminium and LEDs, this distinctive machine screamed every last ounce from its 16x4 DAC. Super musical.

MUSICAL FIDELITY CD700ES 1987 £980
Superbly built turntable with £1500 finish. Very musical although not as refined as modern bitsream year. No digital output.

YAMAHA CD-1 1983 £340
Nicer built 16x2 machine with a very sharp and detailed sound, sometimes too much so. Excellent engineering, unlike almost every other real of the time.

YAMAHA CD-101 1982 £83
The first Japanese CD player was powerful and involving. Brilliant transport more than compensated for 16x2 DAC, and you even got remote control!

YAMAHA TC 809GL 1977 £179
Early classic with silk-slip styling. Modelling sound by modern standards, but cool nonetheless.

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

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

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

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

CABLES

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

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

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

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

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

AIAW XD-609 1988 £600
Awa’s Nakbeater didn’t, but it wasn’t half bad nonetheless. Massive spec even included a 16x4 DAC.

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

SONY W4D-6GC 1985 £290
Single capacitor transport on a par with a Swiss watch, single rect/replay head better than most Naks. Result sublime.

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

ANALOGUE RECORDERs

YAMAHA CDX-606 1986 £600
Yamaha’s Nakbeater didn’t, but it wasn’t half bad nonetheless. Massive spec even included a 16x4 DAC.

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

SONY W4D-6GC 1985 £290
Single capacitor transport on a par with a Swiss watch, single rect/replay head better than most Naks. Result sublime.

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

CD700ES 1987 £980
Superbly built turntable with a very sharp and detailed sound, sometimes too much so. Excellent engineering, unlike almost every other real of the time.
Take 5

The new Classic 5 floorstanders from German brand Audio Physic are a potent performer, says Jon Myles.

A ny hi-fi company worth its salt has to have a marketing slogan nowadays. For Naim it’s ‘Go Deeper’, with Quad ‘The closest approach to the original sound’ while Chord Electronics go with ‘Pure Audio’.

In the case of German manufacturer Audio Physic the tag-line of choice is ‘No loss of fine detail’. Not the most demonstrative of marketing slogans, perhaps, but actually it says a lot about how the company builds its loudspeakers and the qualities they aim for.

These are not flashy hit-you-in-the-face speakers but ones that steer towards a more sophisticated sound - achieved through custom-made drivers housed in sturdy, excellently-crafted cabinets.

The new entry-level Classic 5 floorstander is a case in point. Standing just over 3 feet tall they are relatively slim at just 170mm (6.7 inches) wide with a depth of 231mm (9.1 inches). An oversized plinth adds excellent stability and gives them a purposeful look when in situ.

It’s a traditional two-way, rear reflex-ported design utilising a woven glass fibre mid/bass driver with a fixed phase plug to reduce compression effects. Above this sits a silk dome tweeter housed in a shallow horn-like mounting to aid dispersion and extend the sweet spot. On the rear is a single pair of speaker binding posts below the small(ish) reflex port.

Audio Physic say particular attention has been paid to the crossover - the designers eschewing the usual printed circuit boards for a freely-wired design with high-grade components such as film capacitors.

Price? A reasonable £1598 with finishes available in black ash, cherry, walnut and (the now seemingly de rigueur) white semi-gloss.

All told, it’s a good-looking loudspeaker whose compact dimension means it can be fitted into relatively small rooms with ease.

SOUND QUALITY

Siting the Audio Physics pointing straight down the room and connected to a McIntosh MC152 power amplifier, fed CD and high-resolution tracks from an
Oppa UDP-205 universal disc player/ DAC, these loudspeakers gave a good impression from the start.

Audio Physic has a reputation for producing a large, well-layered soundstage and so it proved. On ‘Stockport to Memphis’, Barb Jungr’s silky vocals were anchored firmly between the ‘speakers, having some height and depth. Her distinct vocal phrasing was effortlessly portrayed, improvisation and change of tone within it coming over especially well. Some ‘speakers can make Jungr sound a little mechanical but not these - they captured all her emotion and vocal dexterity in a natural way.

Behind this the backing band was especially well tericed - every instrument occupying its correct space, replete with detail and nuance to the playing. The Classic 5s were able to bring out little embellishments in the piano and guitar parts that gave the impression of a band playing live (which is how the album is supposed to sound).

With Tommy Smith’s ‘Dialogue Of The Insects’ the tweeter revealed itself as exceptionally refined and wide ranging. Moving my listening position from left to right, Smith’s saxophone stayed resolutely in place with no significant shifting of the image. It was only when I angled the ‘speakers in towards the listening seat that I could hear a little brightness to the treble. Not that it was unpleasant but certainly displaying more emphasis compared to the midband.

Moving on to Led Zeppelin’s ‘Custard’. The Audio Physics retained their ability to separate the instrumental parts. Robert Plant’s wailing harmonica wasn’t subsumed into the mix but stood out distinct from the pounding drums of John Bonham and Jimmy Page’s searing guitar work.

This track did, though, show the ‘speakers are best used close to a wall to get the best bass response. Out into the room they sounded accurate but lean. Moved back there was extra power to the track with a little loss of detail. They also punched the sound out further into the room used this way.

I couldn’t help but feel, though, that they lacked a little thrust in terms of tempo on rock music. Subjectively, they are not the fastest of loudspeakers sounding rather polite at times - so the Jam’s ‘A Town Called Malice’ didn’t grab me as it should with its forceful pace. The bass line underpinning this track didn’t have the natural bounce and vibrancy expected. It was tuneful but dry - although some listeners may well prefer this presentation. Switching from the McIntosh to a Naim Supernait 2 integrated helped here to my ears - the Naim doesn’t have the power of the McIntosh but it sounds pacey and this suited the Audio Physics ideally. The combination of the innate musicality of a Naim amplifier and the ability of the Classic 5s to relay the signal in an open, honest way was an ideal match.

That’s an indication of the ability of these loudspeakers. They are capable of revealing the characteristics of whatever amplifier they are matched with - meaning it might take some experimentation to achieve your ideal combination but once done they will reward with a richly enjoyable listening experience.

CONCLUSION
There is a nice balance to these new Audio Physic floorstanders. They have tremendous resolution and are adept at creating a detailed, open soundstage which allows various instruments to be tracked easily.

Take some time to match them with an amplifier which suits your tastes and they’ll deliver a refined and thoroughly impressive performance.

The Audio Physic has a rear-firing reflex port at the top, a single pair of loudspeaker binding posts plus a large plinth for stability.

MEASURED PERFORMANCE
Our third-octave frequency response analysis of the Classic 5 shows a flat characteristic across the audio band, when measured 15 degrees off-axis, so the loudspeaker should be pointed straight down a room, not at listeners. The small tweeter works from 2.5kHz up to 20kHz but it peaks by +3dB above 10kHz so upper treble is well maintained. Take this into account with the smooth midband and detail will be good, but

FREQUENCY RESPONSE
Green - driver output
Red - port output

There’ll be no warmth and upper treble ‘obvious’ with bright recordings. Below 400Hz the lower midband does not rise to add body to the sound, instead running smoothly down to 50Hz. This will give a very even character but it best suits a position close to a rear wall, firing down a small-to-medium room (16ft max) to avoid sound leaking. All the same, the ‘speaker reaches down to 40Hz so goes low; it does not produce subsonics.

The impedance curve shows the port is tuned to 40Hz and has a broad acoustic damping effect on the bass unit. Bass will not be as ‘bouncy’ as that of narrow tuned ports. The Classic 5 will better play a bass line however.

Sensitivity was average for a floor stander, measuring 86dB sound pressure level (SPL) from one nominal Watt (2.8V) of input - that’s loudish. Amplifiers around 60 Watts minimum best suit. Impedance measured 6 Ohms overall.

The Classic 5 will sound detailed and bright in hue, with a lean sound balance, yet with smooth and even bass under good control. It is purposed to be sited close to a rear wall in small to medium rooms, where it will give a clean and open sound. NK

REVIEW

AUDIO PHYSIC
CLASSIC 5 £1598

EXCELLENT - extremely capable.

VERDICT
Superbly detailed yet with a big, powerful sound for their size when positioned correctly. Best near to a rear wall.

FOR
- level of detail
- soundstage
- compact
- tuneful bass

AGAINST
- need careful amplifier matching
- can sound a little polite

Elite Audio Distribution
+44 (0)1334 370 866
www.eliteaudiouk.com
VINYL NEWS

vinyl section

contents

JUNE 2018  www.hi-fiworld.co.uk

CAMBRIDGE AUDIO DUO 87
A new MM/MC phono stage from Cambridge Audio, reviewed by Noel Keywood.

AUDIOPHILE BOOK 93
Paul Rigby enjoys Passion For Vinyl Part II.

news

MUSIC ON VINYL
A gamut of new releases from Music on Vinyl (www.musiconvinyl.com) includes ‘Hot Shots of Reggae’ (1970), a first vinyl reissue from the Leslie Kong vaults, including cuts from The Maytals and Ken Boothe.

There’s no Herbie Hancock this time but this LP from The Headhunters, ‘Straight From The Gate’ (1978) is under-rated and worthy of a listen, mixing funk, R&B and jazz.

Joe Jackson’s ‘Live 1980/86’ double album originally released in 1988, celebrates it’s 30th Anniversary – and is taken from a variety of venues.

The melodic rock of Vertical Horizon and 1999’s RCA debut, ‘Everything You Want’ was a bit too polished and slick against their earlier indie efforts. Still, plenty of catchy hooks here.

Korn’s ‘The Path of Tolerance’ (2011) hits vinyl for the first time, coloured too. A change into dubstep and electronica that somehow works and retains their personality throughout.

Amen’s ‘Amen’ (1999) was the band’s excellent debut outing of punk metal. Aggressive and in your face both in terms of the music and lyrical content.

Finally, changing the pace somewhat, Gerry and the Pacemakers’ ‘Best Of...’ initially appeared in 1965 (not 1977 as it says on the rear sleeve) with all the familiar songs. Essential for the fans.

SEVENS AND TWELVES
From Third Man Records (thirdmanrecords.com) and in the ‘Live At...’ series is metal punk drone merchants, Earth. He ain’t heavy, he’s my...hang on, actually, he is.

Also available in the series is the three-piece, Boris. A Japanese experimental rock outfit with lots of noise, extreme guitars, energy and some more energy.

Also look out for a host of 7” singles from Fells, Green Hornes, Rocket 455, Soledad, Whirlwind Heat and The Dirtys along with three Sun label reissues from Earl Peterson, Carl Perkins and Johnny Powers.
SPEAKERS CORNER

Three new releases (www.speakerscornerrecords.com).

The first is Charles Mingus’ ‘Pithecanthropus Erectus’ (1956), his major release as a leader and composer, stretching the entire notion of jazz into tonal arrangements.

LaVern Baker’s ‘Sings Bessie Smith’ (1958) is a splendid release from this R&B singer. Surprisingly so. With a jazz backing group the rich style soup allows Baker to sing Smith in her own effective manner.

Finally, Albert King’s ‘Born Under A Bad Sign’ (1967) is his wonderful Stax cut, a host of singles strung into a LP and oh, so influential. Clapton built his early career on the guy.

MIXED-UP ROCK

Gomez’s debut, ‘Bring it On’ (Virgin), the 1998 Mercury Prize winner (and a worthy one, it has to be said) of blues rock has been remastered at Abbey Road over two discs and coloured vinyl.

Air Formation’s ‘Near Miss’ (AC30; store.clubac30.com) is not the shoegaze some have it. More power/minor chord rock, reminiscent of late nineties Radiohead, early Coldplay and, on that subject, Embrace’s ‘Gravity’. Lovely stuff.

Kyle Crafts’s ‘Full Circle Nightmare’ (Sub Pop; www.subpop.com) being in Patti Smith post punk fashion but there’s too many beer-mug-waving-singalongs to impress.

‘This is Eggland’ (www.thelovelyeggs.co.uk) Is The Lovely Eggs’ noise pop/rock that resemble a bit of Bis or Riot Grrl rock in terms of its aggressive, sometimes childlike, stripped-rock delivery. Direct and meaty.

From Black Moth is ‘Anatomical Venus’ (Spinefarm; www.spinfarmrecords.com) with a female-fronted vocal offering doom and a bit of prog/goth. Power, primitive energy but also hooks. A great combo.

...AND FINALLY

New from Kim Wilde – yes, she’s back – is ‘Here Come the Aliens’ (Wildflower; www.kimwilde.com) with a pop rock extravaganza, hook laden, dancey groovy thing. Upbeat and fun.

The Hanging Stars’ ‘Songs For Somewhere Else’ (Crimson Crow; thehangingstars.bandcamp.com) do psyche/ folk with a bit of country thrown in but the combination is fascinatingly twangy Byrds.

Lowtide’s ‘Southern Mind’ (Creative Victoria; lowtideembourne.bandcamp.com) has a flying Saucer track, Cocteau Twins, Jesus and Mary Chain feel to it. Sweeping, epic guitar soundscapes provide a tonal treat.

Kacy & Clayton’s ‘The Siren Song’ (newwestrecords.com) are a folk duo with a slightly swampy, Americana feel, reflecting on a seventies and all the better for it.

Monterey’s ‘Performer’ (Chapter Music; chaptermusic.com) provides synth pop and psyche with a Korgis/Grand National and ELO presentation and lots of classic melody structures.


Charlie Barnes’ ‘Oceanography’ (Sony) is polishecl, sincere, he sings well, quality backing, well structured songs. And bland. And derivative. And no.

Thundercat’s ‘Drunk’ is a remix of ‘Drunk’ via DJ Candlestick and OG Ron C of Houston DJ collective, The Chopstars on purple vinyl. Slowed and chopped.

Finally, Jono McCleery’s ‘Seeds of a Dandelion’ (Counter, jonomcleery.com) An LP of covers from the likes of Billie Holiday to Beyoncé. The man has a beautiful voice and he does a splendid job with these familiar songs.
POWER, DETAIL AND EXPRESSION

Naim’s NAP 500 & 500 PS - ready when you are.
Listen at Peter Tyson Newcastle.

Peter Tyson
Installing the finest in home entertainment since 1966

If you want to hear this system for yourself, call us on: 0191 285 7179,
Email: sampetyt@peteryson.co.uk. Visit our beautiful new HiFi showroom:
6 Kingston Court, Kingston Park, Newcastle Upon Tyne, NE3 2FP
Duo delight

Cambridge Audio’s new Duo phono stage is a bargain at just £250, says Noel Keywood.

Cambridge Audio cruise things like analogue phono stages, that are a technological pimple in the wider electronic landscape presented by digital. And that’s obvious with the little Duo, price just £250. For this you get a small box that connects between turntable and amplifier (because that’s what they do) so as to play LPs. Yet it’s sophisticated inside, perfectly manicured to do the job properly where most are not.

Physically, there’s very little to the Duo. It is a small, lightweight and unassuming grey box. The volume control – here comes a gripe – affects only the headphone output, which I think is an opportunity lost: gain from input to line output is fixed, and gain via the headphone output too low to drive most power amplifiers direct.

So this little unit is best partnered with a normal integrated amplifier with reasonably sensitive input (200mV or so). It isn’t purposed to run power amplifiers direct, something I like to do as it makes for a pure and simple system.

I’m uncertain why the Duo has a headphone output, since most integrated amplifiers have one in any case. Is it because headphones are so popular nowadays that (young) people don’t bother with amplifiers and loudspeakers – as in my house where my son thinks his World Audio Design K588I amplifier and Revolver loudspeakers are wonderful, but never turns them on because
Technical Support Specialist

We have a new role in our Technical & Marketing Services Department for an individual who has a passionate interest in all things hi-fi. The role requires advising trade and public customers on their next hi-fi purchase both in person and over the phone, maintaining our showroom and demo rooms, assisting in the preparation of shows and maintaining our demonstration stock.

Salary: Confirmed on application

Both roles are based at our office in Didcot, Oxfordshire and have significant potential for future growth and development. Successful applicants will need to have completed some form of higher education or specialised training relevant to the role. A full UK driving license is essential, as is a good telephone manner.

Network Audio Specialist

Due to recent expansion into the ever-developing world of multi-room and digital audio solutions, we have a new role in our Technical & Marketing Services Department for a network audio specialist. The role will suit an individual who has an understanding of the hi-fi industry, with a particular focus on digital media. Past work experience in networked audio solutions is preferred but not essential.

Salary: Confirmed on application

For more information:
www.henleyaudio.co.uk
+44(0)1235 511 166
info@henleyaudio.co.uk

TO ADVERTISE HERE
PLEASE CALL JOANNA HOLMES ON
+44 (0) 7958 602347
OR EMAIL:
joanna@hi-fiworld.co.uk
A better quality one is surely necessary if the audience is to have the same experience as it had in the days when there was no amplifier. Thumps, thumps, thumps, inside the ear buds to which he has become biologically attached!

The Duo is aimed at such an audience I suspect.

This little phonostage has a dedicated moving coil (MC) input, offering higher quality than MM. Since inexpensive ear buds became popular with iPods and a good proportion of that audience seems to have decided it is worth paying more for better quality over-ear headphones, perhaps as the LP returns moving coil cartridges will also become popular; after all good ones now cost £500 – much the same as decent headphones.

When switching from MM to MC a light-action press button actuates relays internally, giving a slight delay and complete absence of switching cracks or thumps, even with the high gain of MC selected and volume turned up.

Internally then, the Duo is more sophisticated than it appears – and also more sophisticated than most rivals, especially at the price. There are no cheap DIP switches underneath and there was also no hum. Best to be aware however that measurement and use revealed it has low gain, meaning low output MCs are not best suited, since volume will have to be turned up very high. However, at the same time this is a super-quiet preamp so even with volume right up there’s almost no hiss or hum.

Also on the rear panel is an unusual addition – a balance control. Cartridges can suffer slight channel imbalance, this control allows it to be nulled out.

Neat internal construction reveals the quality of the Cambridge Audio Duo phonostage. At a price of £250 it puts many other rivals to shame.

"With rock music the Duo sounded fulsome and both deep and broad in its soundstage"

The Duo was first connected to a Creek Evolution 30A amplifier to see how its low gain would influence usage – and all worked well enough I had to turn volume up but there was seemingly plenty of grunt available. The sound struck me as mellow.

For more critical assessment and expecting a less mellow presentation I moved on to our McIntosh MC152 reference power amplifier with a Music First Audio passive magnetic preamplifier (6dB gain) that acted as a transparent volume control ahead of it.

Loudspeakers with both amplifiers were Martin Logan ESL-X hybrid electrostatics and cables Chord Signature Reference. All components were fed by an Isotek Evo3 Mosaic Genesis re-generated power supply to eliminate mains influence.

With the 2M Black I was again struck by the mild treble of this phonostage that our Creek had revealed. But it also sounded smooth, clear and tidy.

I measured the Duo fed from the 2M Black to ensure its response wasn’t being affected by input capacitance, but all was well. Slightly unsettled by results from our 2M Black, which is perhaps growing old gently, I fitted a new Audio Technica AT-760SLH to the SME309 arm and this was both crystal clear and forceful up top – so the Duo hides nothing, it just lacks harshness. With the more tonally accurate 750SH stylus the Duo sounded right.

Our Cadenza Bronze MC also came across as easy going but at the same time the Duo provided a silky open sound stage with plenty of depth, fully revealing the qualities of the Bronze, where budget phono stages commonly mask its abilities.

As LPs span one after the other I came to realise that the Duo is a sophisticate. It is stony silent with MC – more so than is common – and I can tell someone at Cambridge has studied this issue and selected a super-quiet chip.

It’s also dynamically quiet: with volume turned a fair way up, when I dropped needle into groove on a Decca re-master (180g) from Pro-Ject of Mozart Symphonies there was little surface noise: ticks and pops being almost absent.

The Wiener Philharmoniker came over as full bodied, strings smooth-to-silky and the sound
Dial A Dealer Directory

divine audio
AnalogueWorks
Creek Audio
Croft Acoustics
Graham Audio
Jelco Tonearms
Neat Acoustics
Omega Loudspeakers
Rogue Audio
Supra Cables
www.divineaudio.co.uk
01536 762211
tim@divineaudio.co.uk

9 High Street, Hampton Wick,
Kingston upon Thames, Surrey KT1 4DA
Open: Tuesday - Saturday 10am - 6pm
0208 943 3530

Infidelity
MUSIC & CINEMA SYSTEMS

SEE AND HEAR THE VERY BEST
CEDIA MEMBER

The Right Note
Music in the Home
BATH

Vivid Audio AVM
Spendor Dynamique
Black Rhodium Hi-Fi Racks
Acoustic Signature Devialet
01403 713125 | 07950 274224
info@sixaudio.co.uk
www.sixaudio.co.uk
Partridge Green, West Sussex
atascables.com

TO ADVERTISE HERE
PLEASE CALL JOANNA HOLMES ON
+44 (0) 7958 602347
OR EMAIL:
joanna@hi-fiworld.co.uk

directory of Hi-Fi Dealers throughout the UK and Ireland.
stage spacious.

No surprise that after this the slightly sheeny Direct Metal Master from 2L (Norway) of Marianne Thorsen also playing Mozart – Violin Concerto No.4 – had lost its sheen, instead sounding well lit but convincingly balanced and structurally composed in a natural space.

LP was never popular for classical because of ticks and pops, but I hardly heard them from the Duo. It works wonderfully with MC cartridges: think smooth and sophisticated.

With rock music the Duo

‘Although seemingly simple the Duo is in fact technologically sophisticated... with a svelte sound”

sounded fulsome and both deep and broad in its soundstage. It lacked the fast deep bass of the Rotel RA-1572 I review in this issue, but then warp filters are a mixed blessing, but bass was still strong. Mark Knopfler's laconic vocals drifted out of a dark background in ‘Madame Geneva’s’ from the Kill to Get Crimson LP, underpinned by a fulsome bass line. The Duo has good low-end heft and – overall – teased out and displayed the strengths of a moving coil cartridge with impressive ability.

I found I could crank headphone volume up to maximum with Audio Technica’s ATH-ADX5000 headphones and not be deafened. A bit more gain would have been appropriate here but it was not a big issue overall.

**CONCLUSION**

Although seemingly simple the Duo is in fact technologically sophisticated, using logic controlled switching of small-signal relays to give slick thump-free operation. Gain is low so volume needs turning up, but there’s just about no hiss or hum: attention has been paid to this – few rivals at any price compete.

With a svelte sound that ably reveals the qualities of a quality MC cartridge, and also gets the best from high quality MMs, it is the one to go for – especially at the price. I was completely impressed – and I suspect (young) headphone users interested in LP will be too.

---

**MEASURED PERFORMANCE**

Frequency response of the Duo was identical between MM and MC, not always the case because MC sometimes runs out of puff at low frequencies. It has a perfectly flat response (accurate RIAA equalisation) down to 15Hz (-1dB), below which an unusually steep warp filter applies -30dB attenuation at 5Hz – impressive. This eliminates loudspeaker cone flap with warped records.

Gain via the Line outputs with MM (moving magnet) was low at x83, meaning the Duo will give barely 100mV out. Volume will have to be turned right up on partnering amplifiers. The MC (moving coil) input gave x1000 which is again on the low side.

The volume control only influences the front panel 1/4in (6.3mm) headphone socket that delivers 1.7V maximum, before overload. This can be used to drive a power amplifier direct but gain is very low at x55, meaning 1mV in from an MM cartridge will give 55mV out where most power amps need 1000mV for full output.

The Duo is distinguished by very low 0.09\mu V equivalent input noise – better than most MC phono stages on the market. The low MM value means the preamp contributes no noise to that produced by the coil of an MM cartridge.

The Duo could do with more gain but otherwise its warp filtering and super low noise make it stand out. NK

**FREQUENCY RESPONSE**

- Frequency response 15Hz-20kHz
- Gain x83, x1000
- Overload 33mV in, 7mV in / 7V out
- Separation 66dB
- Noise 0.09\mu V e.i.n.

---

**CAMBRIDGE DUO**

£249

OUTSTANDING - amongst the best.

VALUE - keenly priced.

VERDICT

Low cost but high quality MM/MC phono stage that is technologically sophisticated and svelte in its sound. A must have.

FOR
- smooth sound
- super quiet
- balance & headphones

AGAINST
- fixed warp filter
- no level output control
- low gain

Cambridge Audio
- 444020 7940 2200
- cambridgeaudio.com

www.hi-fiworld.co.uk

JUNE 2018 HI-FI WORLD

91
Spin again

The latest in a new series of music-related books. Paul Rigby looks at tomes that go that bit further than the rest.

PASSION FOR VINYL PART II - AN ODE TO ANALOG
Author: Robert Haagsma
Price: £32.50

I looked at Part I of this book back in 2015. Since then, new pressing plants have opened, record shops are opening again and record fairs are becoming popular: once more vinyl sales are on the up.

In this book, DJs, musicians, engineers, designers, shop managers, record label CEOs and collectors like Dscord's Ian MacKay, Norton's Miriam Linna, singer-songwriter Ryley Walker, musician and producer T Bone Burnett, Abbey Road's half-speed maestro Miles Showell, DJs Sven Väth and Ellen Allien, designer John Kash and many others tell about the records that changed their lives, their love for vinyl and the impact its resurgence has had on them.

What does that mean in practice? It means quite a relaxed, easy going read, actually. So each chapter pictures the interviewee in question.

Let's start at the beginning with Merel Parlevliet and Esther Lutgenroth who run a record shop in Amsterdam, Holland. After that you get a brief introduction of just who they are then a question and answer session spanning between two and five pages, replete with images of varying sizes.

The style is relaxed, informative, chatty and informal with a 'pull up a chair and let's shoot the breeze over a coffee' approach which is very appealing and, indeed, is ideal to read in one sitting or, even better, to sip over your own coffee and sticky bun.

In this case, the ladies talked about their background before opening the store, “My father had a huge vinyl collection and he restored old high-end turntables as a hobby after he retired. It has always been his boyhood dream to work in a record store, so I think we both made our fathers very proud...”

And so it goes on with a wide variety of guest speakers. Hi-Fi readers will be interested to hear that Grado CEO John Grado is featured and shows that vinyl is sometimes an adjunct to the general chat, “In the beginning, we made the wooden parts of the headphones ourselves. Once the headphones started to fly out of the door, we couldn’t keep up. A friend of mind started a woodworking company. I’m his only client. [So] whenever I need a few thousand parts...”

Passion for Vinyl Part 2 also shows how analogue recording techniques are making a comeback in the recording and mastering studios. Hence vinyl fans will be interested to read about Thomas and Fern Vernon Bernich who run a New York-based vinyl pressing plant called Brooklyn Phono, “We managed to buy two pressing machines from Erika Records in California and three more that were once used by the Capitol Records pressing plant. By trial and error, I learned everything about water, steam, electricity, hydraulics, material and everything else. There were many challenges.”

A nice addition is the free 7” vinyl EP which is slotted into the front hard cover. Supplied by Norton on its Artone imprint, it features Hasil Adkins, Bloodshot Bill and Ellen Allien on the flip, pressed on white vinyl.

Written by Dutch author Haagsma and with an introduction by Michael Kurtz, co-founder of Record Store Day, this 252 page, case bound, full colour book is published by the Record Industry.

This is a lovely book offering plenty of fascinating material. It’s one to relax with and one to savour. A vinyl fan’s literary indulgence. Available to buy via all record stores but also online through Amazon (www.amazon.co.uk) and Sound Stage Direct (www.soundsstagedirect.com).
WHEN IT COMES TO CABLES...

WE KNOW **WATT** WE’RE DOING!

**MCRU NO. 70**
MAINS POWER LEAD

**FROM £565.00**

**MCRU NO. 74**
EU MAINS POWER LEAD

**FROM £144.00**

**MCRU NO. 75**
MAINS POWER LEAD

**FROM £95.00**

**MCRU NO. 85**
MAINS POWER LEAD

**FROM £234.00**

VISIT MCRU.CO.UK
FOR EVEN MORE CABLES
TERMS AND CONDITIONS: Only one advert per reader. No Trade adverts. This section is strictly for readers selling secondhand hi-fi equipment only. Maximum length per advert is 30 words. Adverts over 30 words will not be accepted. Telephone numbers and E-mail addresses are treated as one word. Model numbers are treated as one word i.e. Quad 303 = two words. Email your advert to: classifieds@hi-fiworld.co.uk or fill in the form on page 97 and post it to Hi-Fi World Free Readers Ads, Studio 204, Buspace Studio, Conlan Street, Notting Hill, London W10 5AF. Sorry, we cannot accept adverts over the telephone. The Publisher reserves the right to judge submissions.

DEAN ALTO speakers, £150. Leak Troughline mono tuner, £70. Audio Note ANV interconnect. Wanted: Audio Innovations 300/400 integrated, Elite Rock, Sonata, Michell Syncro/Mycro turntable. Tel: 0113 255 9475

AUDIOLAB 8000A amp, Arcam CD721, Ruark Sabre, Atacama Equinox three tier stand, Atacama Nexus speaker stands, Atlas and QED leads. Complete system £450. All excellent condition. Tel: 01722 334 694 or 07979 705 644 (Salisbury)

QUAD 44 pre-amp, MC phono, £250. 78 stylus for Ortofon OM Series cartridge, unused, £20. Hi-Fi Choice original small test books. Many editors. £15 each. Tel: 01708 457 691

WANTED: MUSICAL Fidelity A 1000 or F 16. Any reasonable price paid for either. Tel: Den 0789 107 2232

LINN KEILIDH speakers with Kustone stands in rosewood. Good condition. Collection only. Tel: 01772 477 385

STIRLING BROADCAST LS3/5A Limited Edition monitor speakers. 2 years old. Unblemished rosewood veneer. Nearly £400 new. All boxes held. £875. Tel: 01952 728 773 or Email: iggoatz@btinternet.com (Shrewsbury based)

TOM EVANS Groove MC phono amp 0.4mV new 09/12. An exceptional sound really digs into any LP. For the hidden details. £850.00. Cyrus 3 amplifier £150.00. If bought together then £900 00 for both. Contact nigelsach@tiscali.co.uk or Tel mobile: 07913 121771. Items on the Wirral.

WANTED: MARANTZ CD1/DA12. 94 Mk2 wanted, must be in excellent condition, fully functional. Tel: Craig 07900 603 525.

WANTED: QUAD 33 Disc Adapter Board, issue 4 only. Could meet at NVCF 13 May. Tel: 0344 776 445

CELESTION A1 Speakers and matching stands (three bar tweeter). Finished in Cherry £400. Celestion A6a Subwoofer. finished in cherry £400. Primare A31.2 and A30.3 Titanium £1750.00. For the pair 5 channels. All hardly ever used, with original boxes 07581 436356 (SW London)

WANTED WORKING or non working Beomaster 5000 FM tuner. Contact Mike 01788 413790.

SUGDEN AU41 pre & power amps. 112 watts per channel. Collection preferred, Pembrokeshire. £350. Email: tandem@btinternet.com

WANTED OLD Spendor S8 /59 or S8e/59e speakers. Condition is important. Cabinets must be in excellent condition. Detailed pictures please would be appreciated. Email: stemar2@me.com

NEAT MOTIVE 1 Loudspeakers Cherrywood veneer excellent speakers, excellent sound £475. London. 07957384795 (Evan)

PINK TRIANGLE Anniversary turntable, SMEV arm, Ortofon MC20 cartridge. Demo and collection preferred, Pembrokeshire. £1,100. Email: stamend @btinternet.com

TOWNSEND ROCK 7 turntable. Excellent condition. £1700 ovno. Martin Logan Dharma. Fantastic condition. Amazing sound. £2800 ovno. Tel: John 07743364076 or Email: lesburn100 @yahoo.co.uk.

MODWRIGHT INSTRUMENTS SWL 9.0 Signature Edition. Mint condition as new. incl 2 remotes & matched set of tubes £1,150.00 Can demonstrate, call for full details. (Bedfordshire) Email: stuartdarshan67@gmail.com Tel: 07870 912 963

DEAN ALTO speakers, £150. Leak Troughline mono tuner, £70. Audio Note ANV interconnect. Wanted: Audio Innovations 300/400 integrated, Elite Rock, Sonata, Michell Syncro/Mycro turntable. Tel: 0113 255 9475
McINTOSH MC611 MONOBLOCK AMPLIFIERS

There's little like big McIntosh amplifiers. No one uses their novel auto-transformers output arrangement – and no one gets close to their low levels of distortion as a result, nor their ability to match any loudspeaker. The new MC611 monoblock has all these things plus massive power – yes, you guessed it – 600 Watts. Don't miss our review in the next issue.

Also, we hope to bring you –
AURALIC POLARIS WIRELESS STREAMING AMPLIFIER
MYTECH LIBERTY DAC/HEADPHONE AMP
GUTWIRE ULTIMATE GROUND SPEAKER CABLE
ATLAS EQUATOR INTEGRA INTERCONNECT
ATOLL CD300 SIGNATURE CD PLAYER
ATOLL IN200 SIGNATURE AMPLIFIER
Fiio FH1/F9/F9 PRO EARBUDS
TITAN AUDIO STYX MAINS CABLE
B&W 686 S2 SPEAKERS
WORLD AUDIO WDPRE4 PREAMP
...and much more.

This is a selection of what we hope to bring you, not a complete list. We regret that due to a wide range of issues, we cannot guarantee that all products listed above will appear.
FREE READER CLASSIFIED ADS ORDER FORM

TERMS AND CONDITIONS: Only one advert per reader. Maximum length per advert is 30 words. Adverts over 30 words will not be accepted. No Trade Adverts. This section is strictly for readers selling secondhand hi-fi equipment only. Telephone numbers and E-mail addresses are treated as one word. Model numbers are treated as one word i.e. Quad 303 = two words. Sorry, we cannot accept adverts over the telephone. The Publisher reserves the right to judge submissions.

You can email your advert to us at: classifieds@hi-fiworld.co.uk or write or type your advertisement copy in block capitals with one word per box and post it to us at:

Hi-Fi World Free Readers Ads, Studio 204, Buspace Studio, Conlan Street, London W10 5AP

We cannot accept adverts over the telephone

Name: ____________________________
Address: __________________________
Post Code: ________________________
Daytime Tel: ________________________

FREE READER CLASSIFIED ADVERTS COPY DEADLINES
AUGUST 2018 - 5TH JUNE
SEPTEMBER 2018 - 4TH JULY

www.hi-fiworld.co.uk

JUNE 2018 HI-FI WORLD 97
The fact that the band also rolled up late and also blind drunk just sealed their fate.
“Can you please develop a phono stage?”

We listen to our customers

The perfect partner for v40...or other amplifiers

With moving coil and moving magnet options, the new PH1 phono stage provides a sound upgrade for turntable and amplifier systems where a pre-amplifier is required.
“All in all it was a sonorous and sophisticated sound that swept over me in a wave.”
- John Myles - Hifi-World Magazine

“A major step forward in amplifier performance”
- Robert Deutsch - Stereophile Magazine

WHEN HISTORY AND HEART COLLIDE

“The DiaLogue Premium HP sound is so captivating in my system that I can’t seem to resist. You win PrimaLuna!”
- Paul Mah - Dagogo

“A PrimaLuna is not just a flirtation, it is an investment in pleasure”
- Rene Van Es - The Ear Magazine