

# HI-FI WORLD

MAY 2013

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**EXCLUSIVE!**  
**NHARFEDALE DIAMOND 122**  
loudspeakers



**EXCLUSIVE!**  
**YAMAHA CD-N500**  
network CD player



**EXCLUSIVE!**  
**FUNK FIRM LITTLE**  
**SUPER DECK**  
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**COMPETITION**  
**WIN ARCAM FMJ A19**  
**AMPLIFIER WORTH £650!**  
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**SPENDOR**  
**SP100 R2**  
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MEASUREMENT



ARCAM FMJ A19 AMPLIFIER  
 TELLURIUM Q ATOM AMPLIFIERS **EXCLUSIVE!**  
 MING DA MC-PHONO 2006 AMPLIFIER **EXCLUSIVE!**  
 GRIEG PIANO CONCERTO PIANO ROLLS FEATURE

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

World Radio History



# icon Audio



## Thinking of a valve amplifier?

(But not sure what to choose!)

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World Radio History



# welcome

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## verdicts

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



In the West there's long been an interest in old products, if a fringe one kept alive typically by car enthusiasts trundling through the British countryside on a lovely summer's day in a flip-top Triumph Herald. Nice, but yesterday.

In the Far East, there's firm belief that products of the past were just better, designed and built with passion and dedication. Nice, and better than today!

So just look at how it once was in this month's issue when you gaze upon Spendor's SP100 R2 loudspeaker (p12). Yep! There's no pandering to domestic aesthetics here; this product is unlikely to feature in an issue of Beautiful Home or be seen in the background of a James Bond movie. But it does attract buyers in the Far East who associate such loudspeakers with good, old fashioned values. The Spendors find an eager market overseas. Perhaps they will in the UK too.

Staying on the subject of loudspeakers, but this time in a reverse situation – we review Wharfedale Diamonds (p32) manufactured in the Far East and sold in the UK.

OK, it isn't quite that simple. What we don't see is that the UK gets a small proportion of the factory's output; most of it goes to SWT (Sino Wharfedale Trading) and gets distributed to dealers throughout China. That's a lot of Wharfedales. But the new Diamond 122 we review this month is a great budget design both Chinese and Brits will love I believe.

And finally, don't miss the fascinating story of pianist Percy Grainger (p94), whose performances were captured on piano rolls. I have his recording of Grieg's 'Piano Concerto' on a 2L Blu-ray and it is extraordinary, a wonderfully lively and animated piece played at blistering pace, with precision and passion. Tony Bolton reveals how Percy Grainger's 1920's performance made it into today's world.

I hope you enjoy this issue of Hi-Fi World, in all its eclectic glory. High fidelity is a fascinating subject, as you will find within our pages.

**Noel Keywood, Editor.**

## testing (see [www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk) for full explanations of all our tests)

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

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

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

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



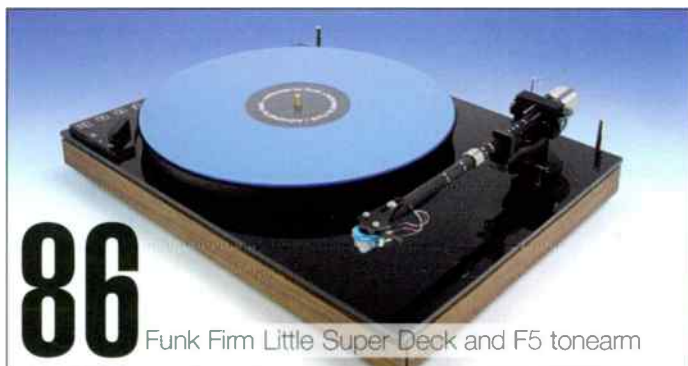
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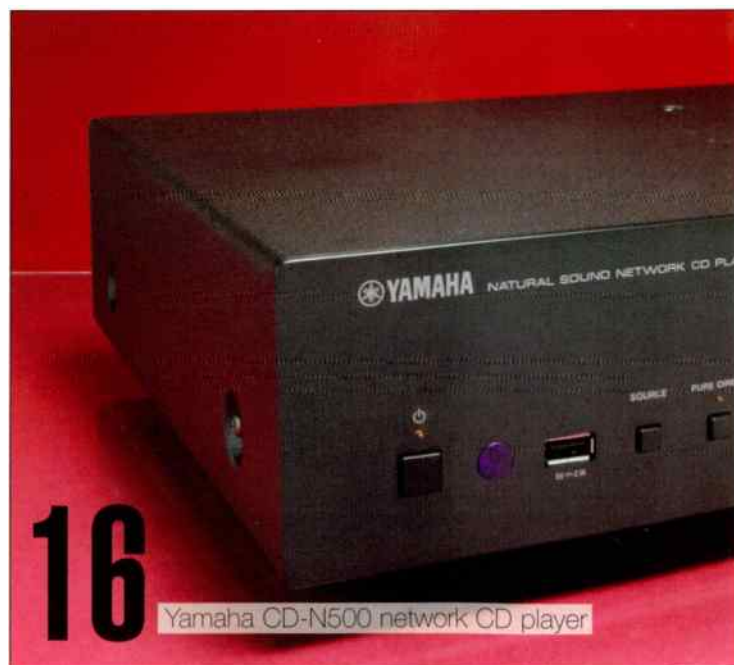
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Q700 - Hi-Fi Choice Magazine - March 2012



**WHAT HI-FI?**  
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# news



## CD9 WITH TUBES

The Audio Research Reference CD8 has been a popular product in the market for four years but now will be replaced by the REF CD9 CD-DAC, high-resolution CD player (with a Philips PRO2R transport) plus DAC. Featuring four digital inputs: asynchronous USB 2.0HS, AES/EBU, RCA and Toslink, all inputs handle 24bit/192kHz resolution.

The REF CD9 utilises quad 24-bit DACs running in mono mode, with dual-master oscillators: one for 44.1/88.2/176.4 sample rates, the other for 48/96/192kHz. Sample rate conversion for the Audio Research box is selectable for all inputs, allowing playback in native resolution or via upsampling, including

compact disc and the USB input. Additionally, there is a selectable digital filter, with either fast or slow roll-off. The analogue section is valve-based, with four 6H30 dual-triodes and there is valve power-supply regulation featuring 6550VE and 6H30 valves. It comes with a metal remote. Price is £11,995. For more information, click on [www.absolutesounds.com](http://www.absolutesounds.com) or phone 020 8971 3909.

## NUFORCE IS BACK!

...and toting a host of new products at the recent Bristol show including the Reference 18 monoblock Class D amplifiers (£6,895 for a pair), which builds upon the Ref 9V3SE. Offering 100W, the chassis is made from anodized brushed aluminium to reduce resonance. It's a relatively large beast for NuForce, spanning 432x381x50mm

and weighing in at 7.25kg.

The P20 pre-amplifier (£6,500) features a sculptured chassis with discrete power supplies. Spanning similar dimensions and weight to the Reference 18, the P20 is available in black and white.

Onto a smaller scale and the DAC-100 (£947) that supports USB (in asynchronous mode) and S/PDIF that also features a Class-A headphone amplifier. Handling 24bit/192kHz and a 32bit volume control the remote includes volume, inputs, mute and stand-by.

The UDH-100 (£560) is a USB-only DAC with a Class-A headphone amplifier, a precision volume control and 24bit/192kHz support without any upsampling.

The DDA-100 (£475) is an integrated amplifier that connects to the digital output of your favourite device. Outputs include a coaxial, USB (up to 96kHz) and two opticals (up to 176.4kHz). Pushing out 50W of power, it is available in black or white.

Finally, the HAP-100 (£473) is a preamp and headphone amplifier combo that takes a lot of technology from the P-20 preamp. Featuring four stereo RCA inputs, a RCA stereo output and a full size headphone socket, the unit also arrives with a remote. Click on [www.nuforce-europe.com](http://www.nuforce-europe.com) for more information.



## WORLD RADIO

Geneva has released the World Radio providing both FM and DAB/DAB+ radio stations and, through a built-in Bluetooth receiver, streamed Internet radio and music libraries from any Bluetooth-enabled smartphone, tablet or laptop. Further audio sources can be connected via a 3.5mm line input. Price is £269.

Click on [uk.genevalab.ch](http://uk.genevalab.ch) for more information.

## BAR ONE

Sonos has revealed the PLAYBAR, in glorious capital letters, providing a TV sound facility to the established hifi audio system. Packing nine individually amplified speakers, PLAYBAR connects to the TV with a single optical cable. You can control the volume or mute with a regular TV remote or with one of the free Sonos Controller Apps for iPhone, iPad, Android, Mac or PC. Price is £599.

Click on [sonos.com](http://sonos.com) or ring 0808 234 6596 for more information.





## PIONEER MINI-SYSTEM

The X-P01 is a two-channel system with Class D amplification, available in black or silver. The system is made up of two audiophile components: the SX-P01 stereo receiver and PD-P01 CD player that are complemented by the S-P01 bookshelf speakers. A 32bit/192kHz D/A converter is used on the CD player along with a separate shield structure to reduce noise and distortion. Both stereo components feature an aluminium front panel with a pair of glossy black speakers.

The SX-P01 stereo receiver delivers 75W of power and is fitted with two digital inputs (optical/coaxial) plus two analogue inputs and speaker terminals, a subwoofer pre-out, a headphone out and an FM tuner with RDS. A Source Direct Mode switches off all unused circuitry for improved sound.

The PD-P01 CD player supports MP3, WMA and WAV and adds full support for iPhone, iPod and iPad mini via its front USB port.

The S-P01, 2-way bass reflex bookshelf speakers use a 12cm glass fibre cone

woofer and 25mm soft dome tweeter. All can be controlled by the included remote.

The X-P01 DAB-K/S System (with speakers) is priced at £550, the XC-P01 DAB-K/S (without speakers) costs £400 while the S-P01 LR speakers fetch £150. For more information visit [www.pioneer.co.uk](http://www.pioneer.co.uk)

## BRYSTON DAC

Bryston has introduced the BDA-2 DAC using fully discrete Class-A proprietary Bryston analogue circuits, two independent (analogue and digital) linear power supplies and dual 32bit AKM DAC chips. The BDA-2 also utilises a new asynchronous USB input capable of 24bit/192kHz resolution plus COAX, OPTICAL, AES-EBU and BNC connections. For audio outputs, the BDA-2 offers both balanced XLR as well as unbalanced RCA stereo connectors on the rear panel. The DAC is also RS-232 software upgradeable. Price is £2,500.

Contact [www.bryston.co.uk](http://www.bryston.co.uk) or call 0870 4441044.



## BAYAN STREAMPORT

The Bayan StreamPort Universal enables you to stream music, podcasts and Internet radio from any Bluetooth A2DP-compatible device (including many Apple, Android & Windows players) to your existing sound system (including Hi-Fi, docks and soundbars), integrating NFC auto-pairing and Secure Simple Pairing technology.

The system features a 3.5mm input, Smart Bluetooth 4.0 and the aptX codec for higher quality sound output. Available in black and white, it is priced at £60. Click on [www.bayanaudio.com](http://www.bayanaudio.com) or call 0844 8801010 for more information.

## RDIO APP UPDATE



Rdio, the digital music service that offers on-demand access to over eighteen million songs has announced an update to its iOS app. New features include the Long Press: hold your finger down on any track to share it, sync it, add to playlist or collection or select the option to play later and Badges: new badges on the lower right corner of album art now indicate which music you've added to your collection (green) or synced to your mobile device (orange). Click on [www.rdio.com](http://www.rdio.com) for more information.

## SPOTTED!

Concerned about possible accusations of being a 'White Van Man' at the Bristol Sound & Vision Show, Laurence Armstrong, boss of Henley Designs, decided to take matters into his own hands...



## TRAVELIN' SPEAKERS

X-MI, manufacturer of the travel speaker, the X-mini II Capsule has announced the addition of two new models. The X-mini UNO and the X-mini MAX have been upgraded with a ceramic tweeter and improved battery life of up to twenty and eighteen hours respectively. The X-mini UNO retails at £40 and X-mini MAX at £50. Click on [www.dadaudio.co.uk](http://www.dadaudio.co.uk) for more information.





## McINTOSH DAC

The new D100 DAC/preamp is a remote-controlled device offering five digital inputs (two coaxial, two optical and one USB) with both variable and fixed volume audio outputs. Featuring the same classic visuals, controls and handcrafted black-glass front panels as all the other McIntosh components, the D100 arrives in a compact, 10cm-tall chassis. Including an eight-channel, 32-bit/192kHz D/A converter, used in stereo Quad Balanced mode, it also features a built-in headphone amplifier plus both balanced and unbalanced outputs. Price is £2,995. Call 01202 911886 or click on [www.jordanacoustics.co.uk](http://www.jordanacoustics.co.uk) for more information.



## JUST JANSZEN

Direct from the USA, the JansZen zA2.1 speaker is based upon electrostatic technology but not the dipole variant, which means that the rear of this speaker should be placed near to a wall — not a third of the way from it, as one normally expects. Different room configurations can be handled by the rear panel controls.

Woofers are integrated within the design to extend low frequencies via an aluminium unit that includes aluminium cones, phase plugs and baskets that are featured within a sealed enclosure. The company, which claims to have originated the electrostatic speaker, has been in operation since 1954. Price is \$7,495.

Click on [www.janszenloudspeaker.com](http://www.janszenloudspeaker.com) or call 001 614 448 1811 for more information.



## HAVING A PARTY

Gear4's StreetParty 5 dock for both iPhone 5, iPod touch (fifth generation) and iPod nano (seventh generation) supports the Lightning interface. Powered by either mains or battery, it is pocket-sized (at 140x241x36mm) and offers a foldaway design. Price is £50.

Click on [www.GEAR4.com/StreetParty5](http://www.GEAR4.com/StreetParty5) or call 01494 435 530.

## TRUE COLOURS

Showing at the Sound & Vision hi-fi show in Bristol during February, True Colour Industries (TCI) has released a whole host of new cables. The Asp (£25/metre) is an entry-level interconnect offering premium grade OFC conductors with moulded, gold-plated RCA plugs.

The Habu (£30/metre) utilises nitrogen-inject polyethylene insulation and a zinc alloy shell to reject magnetic distortion around a split-pin, gold-plated RCA plug.

Next is the Mamba (£200/metre), which has taken three years of development before coming to market. It features a pseudo-balanced construction with a True-Plug, gold-plated split pin RCA, aerospace quality SP-OFC, silver-plated copper conductor and twin screens for improved RF rejection.

The Boomslang (£3.50/metre) is an entry-level speaker cable that features an OFC core along with a PVC insulation jacket and a low profile.

The Ribbon (£3.50/metre) is a flat bi-wire design offering LC-OFC and linear crystal oxygen free conductors with a sheathed, flame retardant insulated outer jacket. The Temple Constrictor (£200/metre) is a power cable featuring sixteen cores of PTFE insulated silver plated copper with an included copper earth wire and a braided construction for RF distortion filtering plus Polyolefin outer insulation.

Finally, the Lore Optical Toslink (£25/metre) includes a medical-graded polymer optic core and a protective braid over a PVC jacket and 24k gold plated connectors. Call 028 9267 3024 or click on [www.tccables.com](http://www.tccables.com) for more information.



## YOU'RE CORNERED!

One of the more unusual speakers present at the Bristol Sound & Vision show was an audiophile speaker that is designed to fit into corners. Cornered Audio (no, we're not surprised, either), from Denmark is offering the new C5 that features a patented triangular cabinet. Most speaker manufacturers steer clear of the corners of rooms because they normally produce unhealthy sound properties but Cornered's design increases sensitivity, says the company, increasing output and giving a 'bigger' sound. Their speakers obviously save space too and cable runs are more discreet.

Made from extruded aluminium with internal bracing and a solid MDF front-plate, the 2-way speaker arrives with a 25mm silk dome tweeter and a 127mm woofer supported by a second, passive, woofer. Price is from £600.

Click on [www.karma-av.co.uk](http://www.karma-av.co.uk) or call 01423 358846 for more information.



## ROOM FILLING BOX

Also at Bristol was Canton exhibiting the Musicbox M, a dock and a sound bar rolled into one, featuring a Bluetooth interface, an integrated RDS tuner, analogue and digital inputs and a 300W power supply. Including an illuminated touch control panel and a virtual surround sound a dimmable display, the price is £649.

Contact 0208 358 9593 or [digitalhome@unlimited.com](mailto:digitalhome@unlimited.com)



## DALI GO ACTIVE

Shown as an early prototype at the recent Bristol show, Dali's Kubik Free (£700) is an active speaker that features Bluetooth 3.0 plus the high quality apt-X sonic codec and an optical connector for use with CD or TV streaming. An included USB, RCA and 3.5mm jack completes the connections array.

Initially offered as a mono box, you can also upgrade to a stereo pair by adding a Dali Kubik Free Xtra passive speaker (£300) to act as a slave.

The active unit features a 2-way design with a 127mm wood fibre cone and a 25mm soft dome tweeter plus 100W of peak power.

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



## NEW REL SUB

Newly released at the Bristol show was REL's Special Edition of the R-528, a high output version called the R-528SE with a carbon fibre driver from the G-1, known as the Gibraltar 12". You also get the 500W Nextgen Class D amplifier from the R-528, that sub's cabinet and bracing plus a high nickel content chrome plating over aluminium feet and badging. Weighing in at a meaty 26.3kg and spanning a respectable 394x445x436mm, the sub is available in gloss black piano lacquer or gloss white piano lacquer as a special order. Price is £1,800. Click [www.rel.net](http://www.rel.net) or phone 01656 768777 for more information.



## ANTELOPE DAC

Seen at the Bristol Sound & Vision Hi-Fi show during February was Antelope's Zodiac series of DACs.

The Zodiac features proprietary 64bit Acoustically Focused Clocking (AFC) and Oven Controlled Clocking to sample at 192kHz, two S/PDIFs, two optical inputs, balanced and unbalanced analogue outputs and USB (through a custom chip and native drivers).

The Zodiac+ (£1,995) adds dejittered and relocked digital audio outputs, balanced analogue outputs, precision trim pots and a mono summing function.

The Zodiac Gold (£2,595) adds further features such as a separate mute for headphones, a stepped relay volume attenuator, switchable headphone amp impedance and a machined aluminium remote.

Finally, look out for the Voltikus (£765, £2,495 with the Zodiac + and with the Zodiac Gold for £3,095), a separate power supply for the Zodiac range, which visually matches the Zodiac and includes a large, custom-wound, electrostatically shielded toroidal transformer and three cascaded power regulators.

Click on [www.antelopeaudio.com](http://www.antelopeaudio.com) or phone 0203 002 7275 for more information.




## SPOTTED

Tracked down to turntable veteran, Michell's bathroom (!), at the Bristol Sound & Vision show we managed to grab a sneaky peak at their brand new, moving coil cartridge which the company is about to launch into the UK in collaboration with a well known, European cartridge manufacturer.

Named the Michell Cusis (£1,065), it arrives with a 0.4mv output, carbon-loaded acrylic machined body, solid Boron 0.28mm diameter cantilever, mirror polished diamond stylus, a 20 degree vertical tracking angle and weight of 11g. Expect a summer release.

Click on [www.michell-engineering.co.uk](http://www.michell-engineering.co.uk) or call 0208 953 0771 for more information.





Dark Side of the  
Moon LP cover

# A Classic Sunday

Noel Keywood spends Sunday night listening to Dark Side of the Moon – at a factory!



EMI's factory manager recalls the days of vinyl to the audience, whilst DJ Colleen Murphy waits to spin Dark Side of the Moon.

I've just spent Sunday night at a factory. Not any old factory though, and not because I have taken a job as a night watchman! It was The Old Vinyl Factory in Hayes, Middlesex (once EMI Hayes) and the reason was an event I found fascinating, even puzzling. Classic Album Sundays ([www.classicalbumsundays.com](http://www.classicalbumsundays.com)), founded and run by North London DJ, Colleen Murphy, spin a classic LP on Sunday to an invited audience, giving them a chance to hear original performances from their original source. Sunday 17th March she played the Pink Floyd's 'Dark Side of the Moon' to an audience of 60 people, on a system assembled by Absolute Sounds. The event started at 6pm and ended at 9pm – it was an interesting way to spend Sunday evening.

First copies of the album were pressed at EMI's Hayes factory in March 1973 – so long ago that generations of listeners have never heard it played from the original source LP, but from CD or as a compressed download. As interest in the LP builds, this is a novel and interesting way for many to spend Sunday evening.

Playing Dark Side of the Moon on LP also gave people who have never heard the vinyl a chance to

hear it through a super high-end hi-fi system. I tend to forget that a lot of people nowadays don't own a turntable, so what faced the audience here was massively different to anything they had likely experienced before.

Most of the audience were young enough not to have bought the album when first released. For them the LP is likely an interesting historical artefact rather than a high quality music source fit for a modern digital world. They attended to hear the music in original form I suspect, rather than to specifically experience the LP's superb replay quality. That came as a surprise – and a bonus.

All seats had been sold weeks beforehand, for what was always likely to be a cold, wet March evening when, I presumed, most people would be sitting in front of the TV. It was cold and wet on the night, just as expected. And Hayes is not the easiest place to reach either. An industrial area tucked away on the western outskirts of London, it has just one railway station, so a lot of visitors were forced to drive, but that was no deterrent it appeared.

Absolute Sounds had acoustically treated the large but square listening room, using bass corner traps and centre stage diffusers. At the far end

sat a pair of Magico S5 loudspeakers, driven by Constellation amplifiers. A Koetsu moving coil cartridge in a 12in Ikeda arm were mounted on an EAT Forte S turntable, and this was sitting atop sheets of glass on a rigid rack to avoid feedback. It sounded superb and was a great demonstration of just what can be achieved, surprising a lot of the audience who hadn't heard a high-end system such as this, and did not know such results could be achieved from LP.

It was an interesting Sunday night at a factory. Vinyl is enjoying a revival that has a dimension to it quite apart from either its commercial viability as a product, or as an audiophile medium. It now represents a musical past people are eager to experience in full and this event from Classic Album Sundays was an impressive demonstration of how to do it.

## ABSOLUTE SOUNDS SUPPLIED -

EAT Forte turntable, Ikeda 12-inch tonearm and Koetsu Urushi Sky Blue cartridge. Constellation Audio Virgo pre-amplifier  
Constellation Audio Centaur Mono monoblocks and Magico S5 loudspeakers. Transparent Audio cables (various)  
Artesania-audio Esoteric equipment support.  
Cost - around £135,000

## CONTACT:

[www.absolutesounds.com](http://www.absolutesounds.com)  
[www.classicalbumsundays.com](http://www.classicalbumsundays.com)



Colleen Murphy spins albums before the main event.



The audience visit the factory's museum.



*The SP100R2s  
12 inch woofers  
promise  
prodigious bass.*

**Spendor's updated Classic SP100R2 is big and bold – and also makes a beautiful sound according to Jon Myles.**

# Bass classic

**T**ake one look at Spendor's SP100R2 and you may think it's been beamed in from the 1970s. Not for this model the current vogue for flat front baffles popu-

lated by a vertical array of physically challenged drive units. Instead this is a big, bulky cabinet which is almost the size of a small fridge and features a recessed front baffle carrying big, purposeful drive units.

Those looks are no accident – the SP100R can trace its lineage all the way back to 1973. Its direct descendants include the well-regarded BC3, S100, S100P and SP100. But while the looks might

seem resolutely traditional the engineering is bang up to date owing much to lessons learned in the development of Spendor's rather more svelte models.

It is the largest of Spendor's re-engineered Classic range and as such features much of the company's latest design and sound quality improvements. Nominally, it's a standmount – one of the biggest you'll ever come across!

First off that 70x37x43cm (HWD) veneered cabinet. Unlike most rivals Spendor uses a thin wall construction which is heavily damped rather than the ultra-rigid technique used by most other manufacturers (see box-out).

Take off the baffles and it's soon clear why the cabinet is so big. Taking pride of place is an in-house produced Bextrene woofer clocking in at 30cm – a full 12 inches. When you consider most other speakers at this price will have bass units of around half that size it certainly makes a statement.

Allied to this are a new 18cm ep38 polymer cone mid-range and 22mm tweeter. All the drivers are new or improved and the cabinet construction has also been revised using a combination of advanced computer measuring techniques and extensive listening tests. The crossover has also been upgraded while high-grade silver-plated cables have been employed for the internal wiring.

Twin reflex ports complete the front baffle while round the back are a pair of high-quality gold-plated bi-wire speaker posts.

Minimum impedance is quoted at 5.5 Ohms with an 89dB sensitivity, suggesting these should be relatively easy to drive with any decent amplifier. The review samples also came in a new dark walnut finish which is an alternative to the standard cherry finish as a special order.

Spendor also supplied a sturdy pair of stands which raise the tweeter to seated ear height, which was a must to get the SPR100 sounding right; just bear in mind it takes two people to get the speakers into place.

They also need space, working best well away from side walls and placed a reasonable distance out into the room, although the front-firing reflex ports give a degree of flexibility here.

Once in place there's no doubt

it's an imposing package in which form undeniably follows function. You can tell the Spendor's are engineered to do a job and do it well. That 12in bass unit and hefty cabinet suggests this is a speaker designed to give plentiful bass and room-filling sound while Spendor's heritage automatically brings the promise of a smooth mid-range. So, all the ingredients are there – but do they deliver?

## SOUND QUALITY

The short answer is yes. Massively. First of all, there's no doubt about it – when it comes to reproducing

"supremely musical, deeply satisfying listen which allows music to flow as intended"

good, clean bass there's little to match a well-engineered 12 inch woofer. While smaller, multiple drive units can do a good job they just don't have the overall heft offered by one larger cone. Spendor claims an in-room response down to 35Hz and that seems about right.

Play anything with some low energy and you are met by a weight and depth that few other speakers can match. It's a quality that gives orchestral music the feeling of scale and authority you'd expect to hear in a concert hall while rock music has real grunt and drive.

What that bass quality does as well is provide a solid platform for the upper frequencies to work. Mids seem sweeter and the highs float better as the SP100Rs are providing a much fuller range of sound. It's a beguiling effect and one that can bring new insights into even frequently-played pieces.

Take Kraftwerk's 'Minimum-Maximum' for example. It's a legendary well-recorded album but through some other speakers you'd be hard-pressed to know it's live, bar the audience applause.

Not so with the Spendor's. Suddenly the ambience of the concert halls is palpable – to the extent that you can tell different tracks were laid down in different

locations. You are simply getting closer to the music in its atmosphere.

Try Valery Gergiev and the Kirov Orchestra's recording of 'The Rite Of Spring' and the crescendos are simply stunning in their intensity. And as for Led Zeppelin's 'When The Levy Breaks' – well, John Bonham's drums sounded truly visceral.

But don't run away with the idea the Spendor's are all about power. They don't pound you into submission with swathes of uncontrolled low-frequency sound but rather order all the elements into a musical whole. Above that bass

unit the midrange is crisp, clean and detailed while the tweeter is similarly sweet and open. They may not have the bite of some metal-domed units but they never sounded too mellow



**Each cabinet features high-quality bi-wireable speaker posts.**

or syrupy and nor do they lose any of the musical information.

Play anything with a pronounced top end and you'll soon know about it although they won't draw more attention to it than is needed. And anything with a well-recorded mid-range comes across with aplomb.

Eleanor McEvoy's 'Out There'

# Tellurium Q®

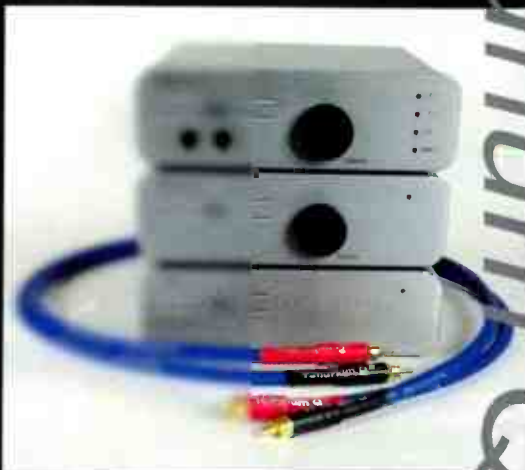
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Tellurium Q  
Tellurium Q



**A new tweeter and revised mid-range feature throughout the updated classic range**

album sounded deliciously fleet-footed and spry – with yet again that extra bass extension only adding to the overall definition of the music.

That's helped by the fact that the drive units are also extremely well integrated. There's never any sense that you are listening to three different units. Instead they blend seamlessly into each other.

Image placement was good too. Despite their size music is projected away from the boxes with excellent width and depth. Music flows into the room and stays firmly placed in space and time.

Another plus point to the Spondors is they were also happy working with a wide variety of amplifiers. Some potential 350 Watts of Chord power courtesy of its new SPM 1200Mkill power amplifier certainly had the room shaking (as well as the neighbours' fists!) but they were equally happy with a Naim SuperNait or a 50 Watt Arcam FMJ A19 (see review this issue). Yes, you could tell the difference between the three amplifiers but all could drive these monsters. I'd also hazard a guess that some beefy Icon Audio valve amplifiers would match too.

## CONCLUSION

Any basic design that's been around as long as the Spondor SP100R has to have something going for it. And listen to this update and you'll realise just what that is. They are a supremely musical, deeply satisfying listen that allow music to flow as intended and are effortlessly musical.

That 12 inch bass unit allows them to breath scale and authority into the most demanding music while the midrange and highs are gloriously

## SPENDOR MANAGING DIRECTOR PHILIP SWIFT SAYS:

"The challenge was to incorporate new technology without changing the basic attributes of the loudspeaker. So what we have with the SP100R2 is a loudspeaker which stays true to the original but improves on it in certain key areas. We have a new tweeter, revised midrange, re-engineered crossover and the cabinet construction has been improved. That cabinet construction has been a crucial element in Spondor designs since the company's formation in 1971.

Unlike most other designs which aim for an ultra-rigid cabinet, Spondor uses a thin-wall construction which is then damped at critical areas to control rather than totally eliminate resonances.

The secret is knowing how the cabinet reacts to the music. We know all cabinets will move to some extent and also store energy. So we construct them with this in mind but ensure any movement is in sympathy with the music. In the Classic this helps ensure a warm sound but avoids the smearing you can get. It works very well and certainly everyone who has heard the SP100R2 has been extremely enthusiastic about the sound".

sweet and open.

There are loudspeakers that will give you more leading-edge definition (think ribbon tweeters) or drive units crafted from more exotic materials but whether they'll give you the sense of ease and overall musical integrity that the Spondors deliver is open to question.

You can also easily find speakers which are undeniably a lot more domestically-friendly than the SP100Rs. But that's really missing the point. These units are designed to do a job and it's one they do

astonishingly well.

Obviously, at this price range you're not exactly short of impressive loudspeakers to choose from. But it is hard to think of any that could better the Spondors for sheer musical enjoyment and grin-inducing sonics.

If you've got the room (and they do need plenty of space to sound at their best) and have a yen to really hear what's in your music collection in all its glory then you really owe it to yourself to give them a listen. You won't be disappointed.

## MEASURED PERFORMANCE

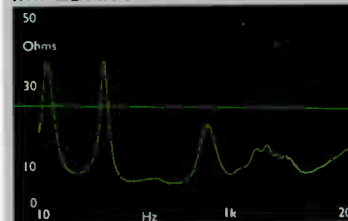
The big 12 inch bass unit of the SP100 R2 gets forward response right down to 40Hz (-6dB), unlike smaller drivers. The ports impose broad acoustic damping, our impedance trace shows, supplementing output from 80Hz down to 20Hz. Port output was -5dB lower than that from the drive unit, at 80Hz, where most ports are +6dB up in SPL terms, so the ports have less influence, but the SP100 R2 has strong output below 100Hz, goes low and is well damped in the bass. It may be overpowering in smaller rooms, but it should suit larger lounges at least 18ft long.

### FREQUENCY RESPONSE

**Green - driver output**  
**Red - port output**



### IMPEDANCE



Frequency response was broadly flat and even across the audio band our pink noise analysis shows, so basic tonal accuracy is good. A slight treble lift will ensure there is no dullness, but treble is smooth and peak free - always a good sign.

The Spondor is relatively flat from 2kHz up to 20kHz and compares well with the best, although a peculiar peak at 1kHz in all our responses and a phase rotation in the port here suggests an internal resonance of some sort. The result is to bring the midrange up a bit, adding a little artificial presence.

Our 200ms decay analysis shows coloration around this cabinet resonance at 1kHz, but otherwise the SP100 R2 exhibits low coloration from its drive units and even the bass unit is well controlled and not too 'hot' in our decay map, nor are there big box overhangs.

Impedance was high, measuring 10 Ohms with pink noise, largely because a 7 Ohm DCR bass unit has been used; it is common to use 4 Ohm units nowadays. Sensitivity was still high, measuring 89dB from one nominal watt (2.8V) of input, so the SP100 R2 still goes loud from little power and 40 Watts should suffice.

The SP100 R2 is fundamentally accurate and will have powerful bass that should be of good quality. There is a midband cabinet effect that also may add character. NK

## SPENDOR CLASSIC SP100R2 £6,495



### VERDICT

Oodles of bass, room-filling sound and a delicious midband add up to a thoroughly musical experience. 1970s appearance, but a sound fully up-to-date.

### FOR

- bass
- driver integration
- easy to drive

### AGAINST

- looks may not appeal to all
- need a big room.

Spondor  
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www.spondoraudio.com

# On-line Player

An internet connected CD player? Noel Keywood checks out the logic behind Yamaha's CD-N500.

**W**hy does it seem odd to connect a CD player to the internet, I ask myself? Boxes of cogs and wheels seem out of place in the world of downloads. But it makes perfect sense and the CD-N500 is an interesting alternative to other network players like the Cambridge Audio StreamMagic 6 I use that lack CD. As an all-in-one source, the Yamaha plays CD, music on a memory stick, music from a computer over a network and internet radio. It will also play music from iPhone or iPad over its wired USB link via an Apple connector lead. There is a controller App too, more of which later. All it lacks is Blu-ray/DVD replay - and a phono stage!

Connection is simple, as there are few options. There is an ethernet RJ45 socket for network connection of course, and analogue outputs via phono sockets only; balanced XLR outputs are not fitted. There are S/PDIF digital audio outputs too, in

electrical and optical form.

The CD-N500 lacks the style of Yamaha's more expensive products and whilst build quality is good, it is undistinguished. However, this is a £500 player, cheaper than the sturdier £700 StreamMagic 6, so the price is competitive. Our sample was black, with white lettering that wasn't easily legible in low lighting but the remote control was silver and I suspect a silver player may be easier to read and match the remote too.

The remote uses a small, spindly typeface and uniformly shaped, coloured and positioned buttons that were difficult to use in low lighting. Samsung remotes on their modern TVs are an example of practical design, using large legends, coloured, shaped and sized buttons set in clear groups. Yamaha's numeric keypad wasn't even set apart from function buttons, by way of contrast. I got the feeling this was a generic design with little thought put into it.

Thankfully, the single line display panel on the player was sharp and

clear, making it reasonably easy to read at a distance. A single line display is never going to be the best way to step through a memory file-tree, but I found the Yamaha legible at a distance and the usual Home and Return functions made jumping back to the root (Home) or stepping back one level (Return) an easy way to navigate the contents of a USB stick or computer music folder. This is a problem for all network players of course: trying to read track info and what have you across a room from a settee 12ft away is never going to be easy.

After plugging in the network cable the player told me 'not connected' when in fact its own communications LEDs on the ethernet socket and the local router feeding it told me it was connected and seen by the network. My BT network hub also saw it without difficulty, but as 'CL-B6E27' - not the most helpful identification code! Switching off the EyeConnect UPnP server on







**The CD tray and disc clamp dominate the internal space, showing just how bulky optical disc mechanisms really are. To the right lie numerous digital signal processing chips, and to the left the power supply.**

my Mac (dual boot: Snow Leopard and Lion) pulled in the Yamaha as 'CD-N500' and immediately the Yamaha saw the Mac's music files. I mention this to illustrate network funnies; EyeConnect usually identifies network devices without being turned off then back on (most network devices poll their ports regularly) but in this case did not. And the Yamaha did not initially see my Mac until the UPnP server was running, when it should do so.

Firing up a MacBook Pro laptop using Lion, connected via wi-fi, again saw no recognition until EyeConnect was switched off then on. Re-booting to Windows 7 on Bootcamp brought up the Yamaha immediately, again as 'CD-N500', and the Yamaha saw the MacBook and played files from it, including a 24/192 of the Trondheim Soloists 'Divertimenti' that, with a Bit-rate spec of 9.21Mbps was unprocessed and running at full rate. Similarly, 24/96 files running at 4Mbps played. However, I do not know whether the Mac was re-negotiating bit rate for the wi-fi link. I mention all this to confirm all worked well, and the Yamaha can play music from Mac or PC, over wired or wireless links, without difficulty. A wi-fi link into a router, then out over ethernet isn't the best way to transmit music though, especially



when your neighbours possess more transmitters than the BBC.

I prefer to load files to an RF shielded, high speed memory key and play them from there. Putting my LaCie Whizkey into the Yamaha's front USB port saw the CD-N500

"the lack of veiling within 24bit was apparent with Marta Gomez singing 'Lucia', her image standing clear and firm centre stage"

list its content immediately and off we went with the Trondheim Soloists 24/192 WAV of 'Divertimenti' test file; a FLAC version was also played. Yamaha list WAV and FLAC only as playable at maximum resolution of 24/192. MP3, WMA, AAC and ALAC are spec'd to 48k/16bit, well below the quality and data rate of WAV (9.2Mbps) and FLAC. Ogg Vorbis test files would not play.

The CD player plays CDs and the CD layer of SACDs, but not the DSD layer as you might expect. It does not play Blu-ray, DVD or DVD-A. You can find Yamaha's listings in the Owners Manual downloadable from their UK website: Google 'Yamaha CD-N500 UK' to get there.

And now to the App. This was problematic. Downloaded to my iPhone it would only display a non-working Demo, which was confusing

in itself. The CD-N500 seemed to be identified, but it wasn't – it looked real but nothing worked! Poking around the iPhone App menus revealed IP address input for the CD-N500. I had to retrieve this from my BT hub/router (which dishes out the IP address to the device) input it through a keypad display and suddenly the CD-N500 appeared and the App worked.

The App is impressive when it works but this level of network knowledge and involvement is excessive; everyday users aren't going to be discovering their network settings and inputting them.

Being wi-fi (not Bluetooth) the App will work anywhere within range and through walls, so sitting here writing this I can pull out my phone and fire up the CD-N500 in a room some distance away and hear the music drift down the hall. But setup needs to be easier and if that is impossible, because the comms link is so complicated, then the user menus need to be more intelligible, as does the website and handbook which say precious little about all this. The App needs better presentation; currently

it appears a work in progress.

Internet radio is available too and worked well within the limitations of a one-line display. Radio data on artist or track info was unavailable, as was track spec data like data rate.

Once up and running all worked well, and the difficulties I encountered were minor, except for the App, which was challenging if my experience was typical.

## SOUND QUALITY

The Yamaha made a good job of playing high resolution music files from my Whizkey. It has a dry balance and this served to make plucked bass sound clean and controlled in 'Misery' from Dave's True Story. The lack of veiling within 24bit was apparent with Marta Gomez singing 'Lucia', her image standing clear and firm centre stage between the panels of the Martin Logan Electromotion loudspeakers. In this song and others I was aware of smooth treble that



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[World Radio History](http://www.worldradiohistory.com)



*In spite of its complexity, the CD-N500 has a relatively simple, uncluttered rear panel with analogue and digital outputs at left, and ethernet RJ45 network socket at centre, complete with amber and green activity LEDs.*

was almost reticent and a tad less air and space than Naim, Chord or Cyrus achieve with their USB players (at far greater cost of course). Yet violins of the Minnesota Orchestra were well defined and easy on the ear, orchestral crescendos were big and the whole sound stage firm and well composed.

Considering this is a player of wide ability at an affordable price I was impressed by playback of high resolution files from the USB Whiskey. I could hear and appreciate the benefits of high resolution digital and, apart from a few heart stopping moments when it told me 'no content' on the key and I feared accidental erasure, the CD-N500 was simple and enjoyable, doing a good job through its internal DAC and analogue outputs. There was little discernible difference between its analogue output or the Marantz SR8002 receiver DACs that come into play when listening to the CD-N500's digital output (optical). Pure Direct shuts off the digital output (but not the analogue output) so selecting it makes the CD-N500 fall silent if this output is in use.

With CD I got very similar results to high resolution files, if lacking their detailing, quieter background and more svelte nature. Spinning The Eagles 'Busy Being Fabulous' put a little more bite in the sound and a tad more bass heft too, against equivalent rips on the Whiskey, but differences were slight and the CD player offered the same sort of well manicured sound that I heard from USB.

I played files from iPhone through its USB connection/charging lead (multi-way connector) straight into the CD-N500 and all worked well. There is no Bluetooth receiver so if you want this an external unit like the QED uPlay reviewed in this issue will be needed.

There was no difficulty with streaming over ethernet either and controlling the player through the

App had its uses. Using a computer as a music player feeding an ethernet link isn't hi-fi heaven where I live but I guess it is convenient for those who play compressed music from libraries like iTunes.

## CONCLUSION

It isn't the prettiest Yamaha product available, because this company has produced some beautifully styled and finished products in the past. However, the modest CD-N500 does a lot for the price and it works well

all round. It is clean and concise in sound quality and handles top spec. digital files, as well as CD, internet radio and has network player functionality. You need to be network savvy to get the control App working but I suspect it is not fully developed.

Incorporating CD into a network player eliminates a separate player and its connecting leads. Yamaha's logic of combining the two makes perfect sense, the CD-N500 showed me. As digital music players go this is a good one at heart and very good value.

## MEASURED PERFORMANCE

Frequency response of the CD player measured flat out to 21kHz as expected; there were no high frequency filter matching aberrations to alter treble balance, so the CD-N500 is tonally accurate.

Linearity with CD was good, if not class leading, distortion at -60dB measuring 0.24% against 0.18% best possible figure. As a result EIAJ Dynamic Range was an unexceptional 100dB, where 102dB is possible. So this is a good player, if not top bracket.

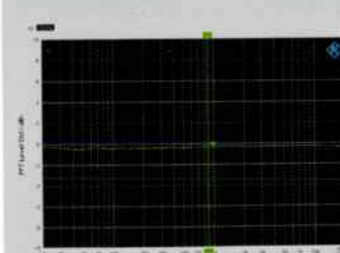
The USB input plays up to 24/192

FLAC and handled our 24/96 WAV test files without difficulty. Linearity was good, distortion at -60dB measuring 0.15% but this was noise, not uncommon with USB receivers; there were no distortion or quantisation products. So although 0.04% or so distortion, possible with 24bit resolution, was not achieved the Yamaha still looked good under test and will convey the benefit of 24bit files via USB. Frequency response with 96k sample rate was flat to 45kHz our analysis shows so the player offers the full benefit of higher sample rates, via its digital inputs.

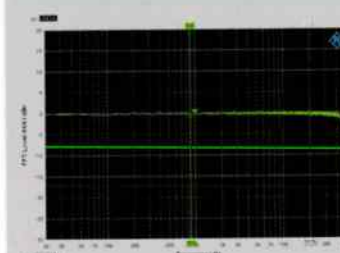
Jitter from the digital S/PDIF output was a little higher than the best, with signal correlated jitter of a -60dB tone measuring 80pS (30pS is common). Uncorrelated jitter and phase noise was low however, and low frequency clock wander also kept well in check at 40pS.

The Yamaha CD-N500 offers good results from both CD and high resolution digital audio, exploiting the latter well. It is well engineered all round without significant measured weaknesses. **NK**

### FREQUENCY RESPONSE CD



### FREQUENCY RESPONSE USB



Frequency response (-1dB)	
CD	2Hz-21kHz
Distortion (CD)	%
0dB	0.003
-60dB	0.26
Separation (1kHz)	108dB
Noise (IEC A)	-99dB
Dynamic range	100dB
Output	2V

## YAMAHA CD-N500 £499.95



### VERDICT

A simple, inexpensive network player able to play highest resolution 24/192 digital music files from USB key with fine results. It can also play CD, music on the computer and internet radio. The App could be better.

### FOR

- easy to use
- good sound from hi-res files
- clear display

### AGAINST

- difficult App setup
- remote control
- styling

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VERDICT ●●●●●

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



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



# CANOR TP134 TUBE AMPLIFIER

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# WIN WIN AN ARCAM A19 AMPLIFIER WORTH £650 IN THIS MONTH'S GREAT GIVEAWAY!

**H**ere's your chance to win an Arcam FMJ A19 amplifier worth £650. Read about it here and answer the questions, at right on this page.

"Arcam have turned their attention back to the separates market with the launch of a new amplifier. The A19 is the entry level integrated in Arcam's FMJ range, priced at £650.

Popular wisdom has it that the FMJ moniker denotes Full Metal Jacket – a reference to the range's substantial and well-damped steel and aluminium casework. Whether that's true or not, the A19 is certainly a well turned-out piece of equipment. Internally Arcam has employed a new

design with high-quality components, a low-noise power supply and a headphone stage that it claims is the equal of a standalone unit costing £150.

Round the back are six line-level inputs for CD, streamers, tuners etc, a pre-out for adding a power amp and – unusual nowadays – the A19 also boasts a moving magnet phono stage.

Each input has an individual source button on the front panel while the dimmable display is easy to read. Completing the package is a basic but functional remote.

While there are no digital inputs, the amplifier does boast a second internal power supply which can be used to drive products from Arcam's

own rSeries of digital converters such as the rDac and rPac.

All in all, it's a neat, well-built package which combines ease of use with clean, functional lines.

Connecting the Arcam to a pair of £6,500 Spondor SP100R2s (see review this issue) may seem a mismatch in price terms but it helped to reveal the A19's quality. Arcam conservatively rate the A19 at 50 Watts per channel but our measurements showed it easily beat that, pushing out 60 Watts into 8 Ohms and 90 Watts into 4 Ohms. And it shows. It's immediately obvious the FMJ has a big, clean and very open sound".

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 May 2013 to:

**May 2013 Competition,  
Hi-Fi World magazine,  
Unit G4, Argo House,  
Kilburn Park Road,  
London NW6 5LF**

[www.arcam.co.uk](http://www.arcam.co.uk)

## QUESTIONS

**[1] What does FMJ stand for?**

- [a] faded mouldy jeans
- [b] faulty mono jack
- [c] fab modern jazz
- [d] full metal jacket

**[2] How many line level inputs exist?**

- [a] two
- [b] five
- [c] none
- [d] six

**[3] The phono stage is?**

- [a] moving magnet
- [b] ceramic
- [c] optical
- [d] moving coil

**[4] The casework is made of?**

- [a] jelly beans
- [b] bronze
- [c] steel and aluminium
- [d] wood

*May 2013 Competition*  
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- NO CORRESPONDENCE WILL BE ENTERED INTO
- THE EDITOR'S DECISION IS FINAL
- NO EMPLOYEES OF AUDIO PUBLISHING LIMITED, OR OF ANY COMPANIES ASSOCIATED WITH THE PRODUCTION OR DISTRIBUTION OF THE PRIZES, MAY ENTER

**entries will be accepted on a postcard only**

**FEBRUARY 2013 WINNER: WHARFEDALE DENTON 80TH ANNIVERSARY LOUDSPEAKERS  
Mr Graham Walsh of Batley West Yorkshire**

# mail



## LETTER OF THE MONTH PRIZE



KEF Q100 LOUDSPEAKERS

Visit our website at [www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk) or send your emails to [letters@hi-fiworld.co.uk](mailto:letters@hi-fiworld.co.uk). Letter of the month wins a pair of KEF Q100 loudspeakers.

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

For more advice see Letters from earlier issues at [www.hi-fiworld.co.uk/letters](http://www.hi-fiworld.co.uk/letters)

A pair of KEF Q100 loudspeakers are on their way to **GEORGE HULME**, Letter of the Month winner in our APRIL 2013 issue.

## Letter of the Month

### HMV

My local branch of HMV – Oxford – does not appear on the list of HMV closures, but something pretty radical will have to happen before I'm able to part with much cash there. Like you, I have no interest in the merchandise, games and gadgets, only music.

But for me, the trouble with HMV is that it's piled disproportionately high with reissues and back catalogue (oh dear...does that also describe Hi-Fi World's vinyl reviews...?)

I'm no youngster, but I am looking for new releases of new music. It is rare that I can find what I want in HMV, on either CD or vinyl. There is a half-hearted acknowledgement of renewed interest in the latter, served by a couple of dozen LPs at best, many of them... you guessed...reissues.

I can't help but wonder how many times HMV expects the record-buying public that remains wants to buy the same things again and again.

I am lucky that Oxford has a great independent record shop too. Unlike HMV, it's a walk and bus ride to get to, not in the city centre, but well worth the effort. Truck Store (<http://truckmusicstore.co.uk/>) will pre-order new releases, and the staff try very hard to stock and recommend titles they feel their customers will like. There are free promotional gigs from live bands on a tiny, cramped stage (I saw Ides of Gemini from Los Angeles there one



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### WHAT'S GOING ON?

Curiosity Shop & Fear Of Music

There's a couple of exciting music-related theatre productions coming up that we're helping to promote, and that we thoroughly recommend you head down to.

The First in 'Curiosity Shop' imaginatively transposed to the present day, Dickens' story of love, human frailty and downright wickedness has a fabulous cast of characters, from bank leeper Sally Brass to wine boy rapper Dickie 'Sawdust' Playfully staged, featuring a soundtrack that takes in hits from Elton Preedy to Professor Green and from David Bowie to Duran Duran, Curiosity Shop shows England to be as much a cultural curiosity shop as it was in Dickens' day. The run is from Tue 19 to Sat 23 March at Oxford Playhouse and as a special offer for Truck Store customers you can buy tickets from us for

After 9th, 5pm  
Regiment

Mar 20th, 6pm  
4th Band

Mar 26th, 6pm  
Clad Valley

Mar 27th, 6pm  
Jub Powers & The Wit

Apr 1st, 6pm  
Hills Lay

Apr 4th, 6.15pm  
Ellen Jewell

Apr 20th  
RECORD STORE DAY  
Open from 10am. See inside for more

May 3th  
The Company

TICKETS ON SALE

An independent record shop in Oxford, Truck Store, stage promotional gigs and will order new releases on LP, says Graham Gough.

evening last summer) and coffee.

Sadly, HMV has had little to offer for a very long time. Those of us still lucky enough to have an independent record shop need to use it like never before.

Keep up the good work.

Graham Gough

Thanks for your views Graham, which reflect those of others I've seen. HMV became large, diffuse and unfocussed it would appear, as customers see it. By contrast your local record store appears to have focus – and commitment.

For my part I would stroll away from HMV Oxford Street casually wondering whether they should fill their front-of-house displays with colourful LPs, a few 'record players' and band posters to play up the glamour of the format and the glamour of its heyday. Then I'd think "no, that's your interest, not that of others" and scold myself for it.

Now I see in Oxford Street's biggest new store, of cruise liner style and proportions, a large new concession called Urban Outfitters (I am meant to know about them, but I don't!) has a mock LP store in its entrance, no less. The LP has now become a fashion statement and cool, it seems.

It's the music on it that matters and gives it value, but the two are inextricably linked, as countless TV programmes on The Beatles, The Kinks, Queen, Mark Knopfler et al remind us, almost nightly. What a shame that HMV never really understood this or exploited it.

Promoting new bands and featuring their albums, as well as making good re-issues available (yes, I buy them!) is a far more creative approach. I just hope it is profitable for them too, because returns for LP were high when we sold them at Hi-Fi World and processing the returns disproportionately high against the profit on them. **NK**

### RECORDING WITH AUDACITY

I read with interest your article about using PC hardware to record and manipulate audio. Thanks for taking a step to acknowledge the power and flexibility that contemporary computer hardware brings to audio management and manipulation.

However, I must raise a grumble about your comments on input and output hardware. Since 2004 there has been a standard for multichannel audio in PCs. Intel created the Azalia project to improve on the AC97 standard and to permit routing and mixing of more than one pair of audio channels in hardware on a PC.

Intel HD Audio[1] is the standard that came out of that project, and its fruit of manipulating two channels at 32-bit/192kHz resolution or 8 channels at 32-bit/96kHz has really widened out the capabilities of PC Hardware. It has become a standard part of home desktop and laptop computers, and every Mac on Intel CPUs is capable of handling high-definition audio.

The crunch comes when your



**Asus Sonar DGX card offers 'good noise floor isolation and high signal-to-noise sensitivity' and great specs (below) says Ken Harpur-Lewis.**

article suggests buying the best that your readers can afford. There's no reference to the need to buy a card with good noise floor isolation – so that signals from other parts of the computer don't cause interference to the audio signal via the ground lines – or that current chips can provide extremely high levels of SNR (signal-to-noise ratio).

Due to the race to include features and improve computer chip performance, the capabilities of even low-end chips have good noise floor isolation and high signal-to-noise sensitivity. An example is the ASUS Xonar DGX card which is only 23[2] and has a sibling for older computers available for 22[3]. Reviews take the stated specification for the chips, and test it, showing exceptional noise floor and THD[4]. (Clock jitter is pretty-much forgotten when the audio processing chip is operating at a few hundred

megahertz and managing sample rates at best a few hundred kilohertz – three orders of magnitude lower).

I understand that you publish a hi-fi magazine and home computing is not obviously a part of that, so I repeat my thanks that you stepped into a new arena. My home setup is the product of being a CD kid, that almost all the music I own came on 44.1kHz/16-bit

Audio Performance	Output Signal-to-Noise Ratio (A-Weighted) (Front-out) : 105 dB Input Signal-to-Noise Ratio (A-Weighted) : 103 dB Output THD+H at 1kHz (Front-out) : <math>+0.0025\%</math> @ 80 dB Input THD+H at 1kHz : <math>+0.0022\%</math> @ 80 dB Frequency Response 1-3dB, 20Hz-20kHz (Front) : 10 Hz to 48 kHz Output/Input Full-Scale Voltage :
Bus Compatibility	PCI Express
Chipset	Audio Processor : C-Media CM8738 High-Definition Sound Processor (4ch, 96kHz/24bit)
Sample Rate and Resolution	Analog Playback Sample Rate and Resolution : 44.1k/48k/96kHz @ 16bit/24bit Analog Recording Sample Rate and Resolution : 44.1k/48k/96kHz @ 16bit/24bit S/PDIF Digital Output : 44.1k/48k/96kHz @ 16bit/24bit
I/O Ports	Analog Output Jack : 3 x 3.5mm RCA jack Analog Input Jack : 1 x 3.5mm RCA jack 1 x Digital S/PDIF Output 1 x Front-Panel Header Other low-level analog input (for CD-RW Tuner) : 4-pin header on the card
Special Features	Smart Volume Normalizer™ 3D™ Virtual Speaker Driver Major Voice™ Karaoke Functions FlexBass™ 10-Band Equalizer



**If you don't have one of these, then you are probably measuring the wrong thing, says Noel. It is a Rohde & Schwarz UPV audio analyser with 24/192 digital generator and an analyser able to measure true noise levels.**

digital stereo discs, and so they have migrated to backups in my home computer network, emerging from DAC-Amp-Speaker setups around my home on demand. This calls for some home networking, but the boon of small, silent computers which have high sample rate and high bit rate compatibility on a very low noise floor has liberated my enjoyment of the music I own. Wishing you all a Happy New Year,  
**Ken Harpur-Lewis**

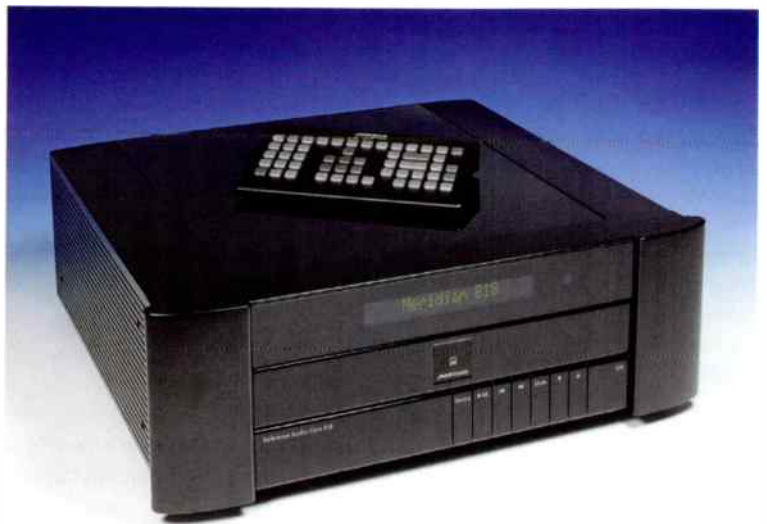
notes: [1]: [http://en.wikipedia.org/wiki/Intel\\_HD\\_Audio](http://en.wikipedia.org/wiki/Intel_HD_Audio) [2]: <http://www.overclockers.co.uk/showproduct.php?prodid=SC-015-AS&groupid=701&catid=11&subcat=> [3]: <http://www.overclockers.co.uk/showproduct.php?prodid=SC-011-AS&groupid=701&catid=11&subcat=> [4]: <http://techreport.com/review/23358/asus-budget-xonar-dgx-and-dsx-sound-cards-reviewed>

Thanks for your views Ken. But there are issues here!

You state modern computer cards have an exceptionally low noise floor and low distortion (THD), in spite of working in an electrically noisy environment, but I view this with some scepticism. Firstly, budget digital signal processing chips used in low cost computer peripherals, such as USB receivers, DACs, sample rate converters etc commonly use cheap'n'dirty methods to do their work. Our measurements show, for example, high noise and raised distortion where sample rate is not a multiple of clock rate (e.g. a 96kHz sample rate signal being processed by a system using a 44.1kHz CD clock), and noise from the digital domain that falls through into the analogue domain (dither illustrates this phenomenon). And then there is the issue of 24bit files being truncated to 16bit for the sake of compatibility: they play, but with 16bit quality. This may be acceptable as consumer audio goes, meaning tablets, iPods, PCs etc, but it has never been fully accepted as high fidelity to audiophiles.

Cheap chips found in cost-cut PC peripherals do not deliver top audio quality. At best it is satisfactory for the purpose intended. Our measurements reveal these issues, but you need a Rohde & Schwarz UPV to run such tests and few possess this instrument.

Noise measurement? The easy way is to run a silent file, invoking digital muting. Noise drops to nothing (-120dB or so). But this does not represent real life situation; we don't



**A Meridian 818 preamplifier produces almost negligible levels of distortion with 24bit resolution audio files – just 0.02%. Budget audio players typically offer a performance seven times worse.**

listen to silent files! In our tests we run a 24bit, 1kHz, -60dB test tone and notch it out to measure noise, lifting muting. This will typically yield a -92dB – 110dB noise floor. So measuring noise in a digital system isn't straightforward, a no-noise result is uncommon, because it is what a simple test comes up with.

So I somehow doubt the veracity of reviews on computer cards showing they offer a flawless performance. Here's an example: our 24bit, -60dB test files produce 0.15% distortion on budget product, but through a Meridian or Naim product 0.02% distortion – seven times less distortion. That's the difference between budget and audiophile.

Go to Letters, June 2012 on our website, and page 6 (Digital Cables) to read more about sending music via ethernet. Cables add jitter, termination reflections and RF noise. Not a good idea. At home I use a LaCie Whiskey and sneakernet, because it offers a smoother, richer sound. But then I am surrounded by my neighbour's wi-fi transmitters and mobile phones, to which my ethernet cable acts as a great aerial.

That jitter reduces to inconsequentiality through downsampling depends upon its percentage in the first place. Jitter, radio-frequency pickup and noise are pervasive influences not so easily eradicated in any electrical engineering idiom, in spite of overly optimistic claims made by engineers over the ages. Today they still plague us; I was told recently these factors are a big issue in modern jets, where data and communications networks are critical

items potentially compromised by such degradation. Don't be too quick to assume the CD you hear over ethernet is perfect, and jitter non-existent!

Try to audition a modern high resolution player running a 24bit file if you can, to hear how the world is moving ahead from CD and its rather mechanical presentation, unloved by so many – especially those brought up on analogue.

Even the music industry is declaring they have seen the light: there is a headlong rush back to old analogue sources, and a greater awareness of the need to record new material through the latest high resolution analogue-to-digital



**The player of tomorrow, an Astell&Kern AK100 plays 24/192 digital files through headphones or the hi-fi. Sound quality is audibly superior to that of current portables.**



convertors. The limitations of 16bit and CD are clearly audible against 24bit.

Today's digital standards are a lot higher than those of even a few years ago. That's why recent, high quality post-CD digital recordings or old pre-CD analogue recordings generally rest easier on the ear than anything made during the dark age of audio that the computer business still clings to.

This situation will change soon when Apple release a high resolution iPod that plays 24/96 Mastering Quality recordings made available through iTunes. Then the PC business will enter the arena of high fidelity in a headlong rush. Well, it will try! **NK**

### CLEANING RECORDS

If any readers have been following the Michael Feinstein series "The Great American Song Book" on Sky Arts TV they will know that he frequently visits persons that have put together large collections of music on a variety of media such as 78s, 45s, LPs, films and tape. The object is usually just to preserve the music from these sources, often the only ones available. Mostly, the music is being transferred to media such as CD or DVD. In the case of the records, the condition is often poor and the discs need to be cleaned to enable good quality transfers to be made.

Looking at the cleaning methods recommended to Feinstein by the American collectors, I am appalled. Various cleaning fluids are suggested including Windolene which contains vinegar (acetic acid) and that will attack the surface of both shellac and vinyl.

Still worse is a method that was demonstrated which I have come across a few times. That is to flood the surface of the disc with water or a cleaning fluid while playing the record. Not only may the liquid attack the record surface but it will disturb the dirt in the grooves to make a fine mud that will then attach itself to the stylus and grind away the groove wall. But, possibly more important is that the liquid will get up into the cartridge body and cause damage there.

Records should only be cleaned with water and a few drops of washing-up liquid or with a proprietary record cleaning fluid. After cleaning, the record should be rinsed in de-ionised or distilled water and brushed along the grooves with a soft brush. It then should be allowed to dry completely before it is played. There are commercial record cleaner kits that facilitate this process.

One of the problems in restoring records concerns the repair of the



**"Windolene contains vinegar (acetic acid) and that will attack the surface of both shellac and vinyl!" warns George Hulme. Don't use it on your records!**

sleeves of American LPs. Such sleeves are constructed of two sheets of card held together by a front paper sheet that is glued to the front card then wrapped on to the back card. Because many LPs did not have paper or polythene inner sleeves, the sharp edge of the record slices through the paper joining the two cards. There is a temptation repair the slit with ordinary self-adhesive tape (e.g. Scotch or Sellotape). The result is that within a short time, the adhesive perishes and turns brown while the tape peels away. Once this happens, the brown residue cannot be removed without extensive damage to the sleeve. The tape to use is the archival variety such as "Magic" or other so-called permanent tape.

Sincerely  
**George Hulme**  
**Old Basing,**  
**Hants**

### OMNI-DIRECTIONAL LOUSPEAKERS

After a long history enjoying hi-fi sound reproduction, starting with a Mullard 3-3 kit from Henrys Radio in the Edgware Rd. and a king's ransom in upgrades, at retirement I decided to purchase a sensible and reliable system to last. This consists of a Sony ES 777 CD player, the matching tuner purchased new, the

matching amplifier purchased used from Haden Boardman and the matching loudspeakers from the notice board at Sainsburys.

However in a moment of madness during a visit to the Warwick vintage radio collectors fair John Howes had on offer the most beautiful pair of Rosewood Omni-Directional loudspeakers by Larson who I understand was responsible for other similar systems.

Driving home I kicked myself for being mad, or at least stupid, to start chasing my tail again. Arriving home my wife was most impressed and declared they are nice. Pause to sit in chair and let this message sink in. This was a first!

I removes six m.m. of accumulated dust from the upwards firing tweeters then rewired and re-capacitred the inside, and polished up the outside. I am informed that the cost of the veneer today would be very high.

Then listening began. After several hours the loudspeakers began to settle in and the room was filled with a very good sound – no, correction, a superb sound filled the room. People who visit all comment on the sound.

I admit they do not suit rock music but anything else is excellent.

My questions. Why do omni-directional loudspeakers receive so-so reviews. If you sit in a concert hall you do not have a hot seat. Why have I spent a fortune over the years trying to heat the singers tonsils rattle or the resin falling off the violinists bow. As you can read I am converted. As the Larsons where made in 1974 I think it was a long and costly journey.

Regards,  
**Pat Rickwood.**

Hi Pat. Omni-directional loudspeakers fire sound all-around the room, so more sound energy is bounced off walls and ceiling (and even the floor if uncarpeted) than with conventional loudspeakers. Sound returning from acoustically reflective surfaces is very uneven though, as well as randomly time delayed, so what you get is uncontrolled and room dependent. How much of the room you hear depends upon your closeness to the loudspeakers: sit close and you hear more of the loudspeaker than the room reflections; sit at a distance and it is the other way around. Due to this, omnis are less specifically accurate or revealing as a directional loudspeaker that sends its message to your ears with less room influence. You rightly identify this as a concert hall experience: big, spacious

and unchallenging in that you don't hear "singer's tonsils rattle". But not everyone wants this; the market for Rock dominates and in this world images of instruments and singers placed artificially on an imaginary sound stage are the accepted norm. That's why omnis are not so popular with loudspeaker designers, or listeners. But they do give a relaxed and spacious sound, enjoyable in its own way. **NK**

### MUSICAL SYNERGY

*This Christmas I persuaded my nearest and dearest to buy me vinyl rather than CDs if at all possible. Luckily I was given three LPs.*

*What I heard when I played them made me think and has prompted this letter, but more of that later. Before I married back in 1972 I did not own a single record, the nearest I got to vinyl was when my brother, who had a Saturday job in a local record shop, would occasionally bring home a few singles to play over the weekend along with a Dansette record player borrowed from the shop.*

*Later I heard records on my girlfriend's (now my wife of forty years) brother's music centre. I vowed that when I had a place of my own a proper hi-fi would be high on the list of essentials. To that end in 1973 we bought our first hi-fi system from Leicester Hi-Fi. It consisted of a Sansui turntable and amplifier and a pair of largish LMB standmount speakers.*

*For some reason, probably because we couldn't afford them, we didn't buy stands and so the LMBs stood on the floor. The bass was so prominent that the plates on the dresser used to shake when I played music loud. Not ideal but it was a start.*

*Over the next 39 years my upgrading of turntables has taken a fairly smooth upward path, through a middle of the range Sony direct drive, the inevitable Rega to a Clearaudio Champion 2 and finally to my fantastic Roksan TMS 3. The LMBs were replaced by a pair of Tangent TMI1s bought from a guy named Derek Wittington who was just starting out in business. At that time he had a room at the top of the same building where the LNBs were made in Loughborough. The TMI1s were also standmounts but even bigger than the LMBs but this time we bought the stands, with castors, and all was well.*

*Again the speaker upgrade path was smooth and has culminated in the Tannoy DC8Ts that I enjoy now. I have to say that the amplifier upgrades were not always so satisfactory or necessary;*



**The complex and very expensive MBL 101 radialstrahler, a fantastic omni-directional loudspeaker.**

*there were a few sideways moves. In the 80s I bought an Armstrong integrated. In many ways it was a great amp, it sounded good and was finished in a lovely wood casing but used to blow fuses for fun.*

*Anyway, I have finished up with a Naim pre/power and a Quad twenty four P phono amp. And so that's my system forty years later.*

*The very first record I bought was*

*a recording of Rossini's William Tell Overture but my tastes have widened considerably over the years and I enjoy music from every genre and I own several thousand LPs and CDs, I think that I have developed my musical tastes by taking chances. By that I mean that probably fifty percent of the music that I buy I have discovered in a Guardian review or similar and have bought it unheard.*

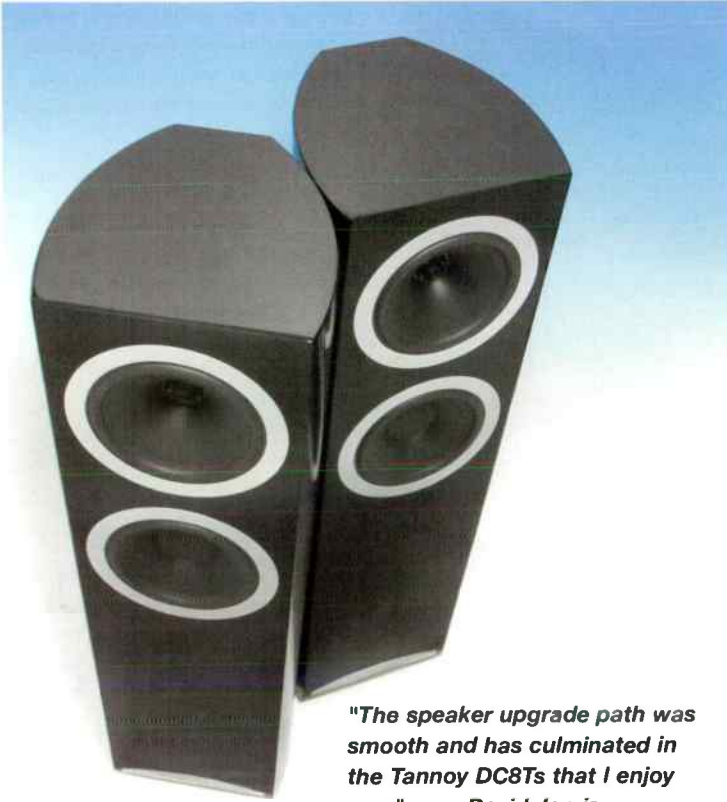
*Sometimes I'm a bit disappointed – but only rarely. In my opinion too many people only buy music types that they already like and never extend their range.*

*I used to listen to the great John Peel on the radio. Some nights he played total dross but I hung in there because I knew that eventually a new gem would eventually come along (my gem was someone else's dross of course). Also in the mid-seventies there was a programme on Radio 3 on a Sunday evening that was presented by the music critic on The Telegraph. He used to play new LP releases from every musical genre, classical, jazz, rock, pop, folk, the lot in fact. I picked up some classics in that way. Some bands I heard then I've not heard of since!*

*I also remember once going to the very same Derek Wittington (who sold me the Tangents) to buy some vinyl. At this time he had a very successful business called Sound Advice. It was the typical specialist Linn/Naim dealership of the time. Derek is a music lover first, hi-fi salesman second. He took my wife and me into his best listening room where he demonstrated his top kit to prospective buyers and just played music to us for an hour. He knew full well that at that time we weren't in the market for the equipment we were using so at*



**The Larson had a single downward firing bass/midrange unit and an upward firing treble unit. It was omni-directional and "a superb sound filled the room" from them says Pat Rickwood.**



**"The speaker upgrade path was smooth and has culminated in the Tannoy DC8Ts that I enjoy now" says David Jarvis.**

best he might sell us an LP, and that's just what happened: we bought an imported copy of Joni Mitchell's Chalk Mark in the Sand.

So I have my LPs and CDs and a very nice system on which to play them.

Just before Christmas, as I have some recordings on both formats, I decided that I would play both simultaneously and switch between the two and listen critically for differences. I was shocked to find that I didn't hear much difference at all. (CD playback through Cyrus transport/PXR and Musical Fidelity TriVista DAC). I don't believe that I have particularly acute listening abilities but I was still very surprised.

So why am I such a vinyl nut? The fact remains that when I listen for pleasure I'm much more likely to listen for longer when playing vinyl than when I play CDs, so here must be some subliminal thing that comes over with vinyl that CD doesn't offer. And so to my Christmas LPs.

The first was a blast from the past, The Ramones first LP release; the second was a current release from Taffy called Caramel Sunset.

The last and the one that prompted this letter was Harold Melvin and the Blue Notes's recording of Wake Up Everybody recorded in 1975 and re-released by MOV. I own quite a bit of 70s soul but I can't say that it comes near the top of my favourites list and so I was particularly surprised that when I played this album I was totally

blown away. The synergy was all there. Great music made by Harold and his pals played though a system carefully put together over forty years and yet another superbly mastered and pressed LP from MOV. Musical bliss.

**David Jarvis  
Leicester**

I've just returned from a meeting with our distributor, Seymour (they take in mags from the printers and send them around to newsagents in the UK and around the world) and our representative there told me, almost sheepishly, that he thought LP had "more depth" than CD, even through his JVC system. He is a musician too so had an ear for such things. So whilst he played CD and an iPod, like most, he still felt LP was more attractive. This is an appeal that seems universal, one you share with so many others. Just beware of the Ramones first album: it destroys loudspeakers cones – and brain cells too! But it is fun. **NK**

### QUAD ESL-57 SPACE

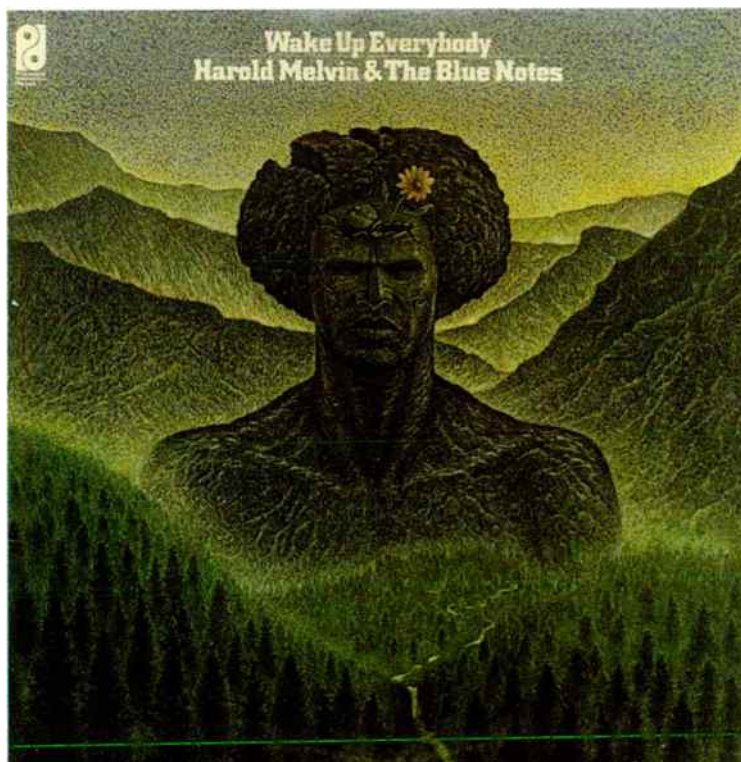
*In your opinion what is the minimum amount of space that is needed at the rear of a Quad ESL-57 for it to perform correctly and also how much power is required to drive it to reasonable levels?*

*I am assuming that when they were first produced they would have been run using amps like Quad II or something from the Leak range such as Leak*

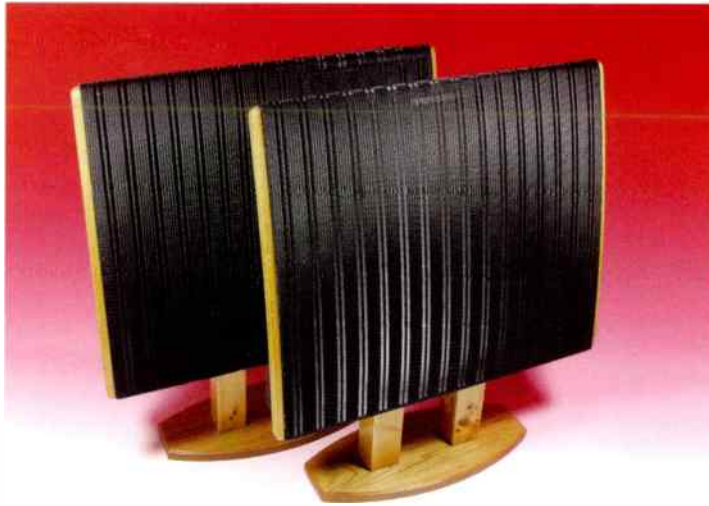
*Stereo 20 or 12.1 or 10.1. Will these still work or are they now considered too low powered?*

Regards  
**William Ford**

From my own experience with ESL-57s and 63s, and from what I have



**Harold Melvin and the Blue Notes's album Wake Up Everybody, re-released by Music On Vinyl (MOV) and superbly mastered and pressed, says David Jarvis.**



*The Quad ESL-57 is an open-backed dipole and needs space behind it – but how much asks William Ford?*



*The Quad II-40 is a modern day variant of the Quad II. Using KT88 power valves in push-pull it delivers 40 Watts and is perfect for Quad ESL-57s.*

heard of other systems, I would say around 6ft minimum. Looking at this more academically, a gap of 7ft to a rear wall will return the rear wave in-phase at 80Hz and the ESL-57 reaches down into the bass region little further, so my observations and experiences tally with what might be expected from theory, at least in simple outline (the modal behaviour of a room is complex). This is also enough distance to 'lose' higher frequencies, although rear absorption of some sort, like a colourful rug as a wall hanging, helps in this role and looks more suitable in the home than an acoustic panel (see [www.studio-spares.com](http://www.studio-spares.com), Acoustics section).

Around 40 Watts is required from an amplifier for reasonable levels, without over driving the panels, and this is one reason why Quad produced the II-40 amplifier. There are of course plenty of 40 Watt valve amplifiers around nowadays because one pair of

KT88s or EL34s power valves in push-pull produce 35-40 Watts. The Quad II and Leak amps will work but they are a little under-powered. Also, the Quad II has small output transformers and little bass push (Peter Walker told me this was deliberate, to protect the ESL-57s) so they would not be my choice. Go to [www.onethingaudio.net](http://www.onethingaudio.net) for more on

ESL-63s if you are thinking of buying a pair, and to our review of their renovation at [www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk), Loudspeakers, for more information.

**NK**

### CASSETTE DECK SERVICE

*There is no address for John Lander (February edition, p 31) but if he or any other reader in the North Hampshire area needs service on cassette decks or other hi-fi equipment then I can suggest an excellent repair service. It is Ian Davies Electronics Services in Basingstoke. His workshop telephone number is 01256 421923 or mobile 07786636593. His website is [hifi-repair-specialist.co.uk](http://hifi-repair-specialist.co.uk). I have found Mr Davies to be knowledgeable and efficient. As an example, I was given a Nakamichi cassette deck that was said to be "faulty". Mr Davies soon found the cause of the problem and returned a fully serviced perfectly working machine at modest cost.*

*Sincerely*

**George Hulme  
Old Basing,  
Hampshire**

Thanks George. You are a mine of information! I suspect that will be useful to many readers with tape collections and an ageing cassette deck on their hands. **NK**

### GREAT SERVICE

*As a surprise for Christmas my wife ordered me a hi-fi rack from Slateage who are located at Fence, Lancashire and being of bespoke dimensions she ordered it in November so that it would be ready in time for the festive period. It was ready for collection on the Thursday before Christmas and my wife collected it in person from Slateage with a view to setting it up before I arrived home from work. On arrival at the Slateage works unit she was met by John and Mathew who had not only gone to the trouble of setting the rack up to ensure everything*



*If you need to get a cassette deck repaired use Davies Electronic Services in Basingstoke, says George Hulme.*

# Letters On-Line!

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

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

## World Mail June 2011 Issue

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

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

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

...or the reply pane at the bottom of the page.  
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Post Preview

The screenshot shows the HI-FI WORLD website interface. At the top, the logo 'HI-FI WORLD' is prominent. Below it, there's a 'Magazine issue date' section with a list of issues from September 2011 back to March 2010. A 'Display' dropdown menu is set to 'All'. To the right, there's a search bar and a 'COMPETITION PRIZE' banner for the August 2011 issue. Below the banner are advertisements for 'SEVENOAKS' and 'audio T'. At the bottom, there's a 'Contact' section and a 'SEE THE AWARD WINNING BS243 HERE' banner for 'FIAT'.

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



**"The Slateage rack is beautifully constructed, looks great" says Dave Hewitt.**

was correct and ensure my wife was happy with the finished product, but also took great care to load the rack into my wife's car and ensured it was safely packed for transportation home, with the parting words "any problems, just ring".

Due to the racks weight my wife sensibly decided to wait until i got home from work when the two of us could assist each other with the construct, which apart from the weight proved to be a straight forward affair. Unfortunately having put it together we discovered that in calculating the measurements my dear wife had not taken into account the thickness of the legs, an understandable error, as the legs are much thicker than your average hi-fi rack legs normally are and which meant that none of my hi-fi could be slotted into place, a disaster you may think!

No, one phone call to Slateage next morning to enquire whether anything could be done was met with a positive response and fifteen minutes later i received a return call from John with an invitation to bring it back that very same day, this the last Friday before Christmas by the way, so that the modifications could be made. My presumption that I would have to leave the rack for collection until after the Christmas break was swiftly corrected and i was informed that the mods would be carried out that Friday afternoon so that i could take it home for Christmas. I dropped the rack off at Slateage about 1.30pm and it was ready for collection, all work completed by 4 pm, it was back home

and set up by tea time!

The rack is beautifully constructed, looks great [see attached image] and really isolates my hi-fi equipment brilliantly from foot-fall vibration. And after extended listening over the Christmas holidays – what else can one do when the weather has been so bad – my conclusions are that my system sounds sweeter and more natural sounding. In addition the attention to detail and the after sales service provided by John and his team at Slateage is second to none and we can not recommend them highly enough.

**Dave Hewitt**

### REEL PROBLEM

Good evening Mr. Boardman. I read with interest your article on Revox reel to reel machines. I purchased a second hand one for £500 in Birmingham 20 years ago when I lived in the U.K. a B77. I never got it working properly and as I have retired last Friday, I am adamant that I get it sorted!

My problem is that as I now live in Dublin, Ireland, I cannot find anyone to service it. Are you aware of anyone in Ireland or Northern Ireland who would be able to attend to this?

I asked Cloney Audio a few years back but the person that they referred me to could not help. I would appreciate your guidance. Many thanks in advance, Yours sincerely,  
**Gordon Birch**  
**Dublin**  
**Ireland**

Dear Gordon. Many thanks for your kind message. Congratulations on your retirement. Sadly, other than a few installation engineers, I know of nobody in your neck of the woods. In the UK, the specialist is a chap called Brian Reeves; his web site is <http://www.revox.freeuk.com>. His address is 184 Finney Lane Cheadle Cheshire SK8 3PU United Kingdom Tel. 0161 499 2349.

Rather than try and ship the machine, he is not far from Manchester Airport, so maybe a budget flight from Dublin direct (well two!) might be the best option for transporting the unit.

With kindest regards,

**HB**

Hi Gordon. I must admit that I can't find any companies capable of servicing Revox equipment in the Irish Republic or in Northern Ireland either (although that's not to say there aren't any). If you're prepared to ship the machine to England, though, I have found a couple of companies that specialise in this sort of thing:

<http://www.revox.freeuk.com/>  
<http://www.taperecorder.co.uk/servicing.htm>

I'm not sure what electronics experience you have. And what are your machine's fault symptoms? It might be an 'easy one' to fix, if you're lucky!

I have rebuilt Revox A77s and B77s in my time – they're great machines to work with – but the service information for the B77 Mk 1 and Mk2 (what version do you have?) is freely available from:  
[ftp://ftp.studer.ch/Public/Products/Revox/Revox\\_B77/](ftp://ftp.studer.ch/Public/Products/Revox/Revox_B77/)

The <http://www.vintage-radio.net/> forum also deals with tape recorder troubleshooting and repairs and Revox machines crop up regularly. Hope this has been of help. Best regards

**MP**

### ACTIVE ANSWER

I was convinced that the way forward with all my hi-fi purchases was going to be under the heading of Head Room and Clean Signal Path. Up until a year ago this mantra had resulted in the power amp being a very highly modified Musical Fidelity A370. Improvements included two PSUs each with 1500va transformers and 80,000µF of capacitance in a bypass format each side. The main boards essentially had twice the number of output devices (18



**How can Gordon Birch get a Revox B77 open reel recorder fixed in Dublin? Fly it to Manchester, say our experts, or DIY.**

p/ch) which deliver twice the current and twice the heat! So all in all, loads of head room on a Tim de Paravicini designed circuit.

After trying all sorts of loudspeakers over the years I ended with KEF 207s. The rest of the equipment is built around the belief in a clean signal path all the way, so Michell Orb turntable, SME IV arm (re-wired with Audio Note silver litz), Avondale Phono stage with four separate PSUs, two on each channel, and a Koetsu cartridge. Pre amp is an Audio Synthesis Passion all hooked up with Cardas Golden Reference interconnects.

So a clean signal path with loads of head room and full range speakers hanging off the end and, what's more, not bad reproduction of real music. So back to my point as raised by Dean Marshall in the October 12 issue. I had just finished my cinema room in the front of the house and needed some speakers to complete the audio side of things. I did not want yet another rack of audio real-estate, I just wanted good sound. The answer, speakers with amplification inside them, no rack, no speaker cables, no amps sat in the corner of the room warming the place up, perfect!

From a well-known internet auction site I picked up a set of ATC 100as. The first thing I did when I got them home was simply plug them, and I ran my iPod through them just to have a listen. The pod is loaded with good sized files of my favourite sounds, so I switched on and away they went. My first reaction was 'wow, how good does that sound'. Massive, open, detailed, out in the room, effortless, calm, relaxing, tone full, image almost the size of the room.

In disbelief I moved them onto the main system, making the big MF amps

redundant, not to mention the KEFs. I gain a huge step forward due to the improved signal quality that is running into them. So what is the difference?

Easy! I am now listening to music, real music in my room. My foot is tapping involuntarily to virtually every upbeat track that I play. Guests come round for dinner, these are people who have no interest in audio and they say of Jack Johnson, *In between Dreams* (180g) "wow that sounds good; it sounds like he is there singing for us". And a good friend who has some interest in audio remarked they really nail the mid-range.

Why is active almost scorned by the hi-fi community? A class A amplifier for each and every drive unit, no power draining passive crossover with tolerances that are constantly changing with temperature creating distortion, no phasing issues between the drive units removing the need for crude time aligning in the enclosure design, dynamics and control that are not even dreamt about by passive systems and bass that is not big and mushy and boomy but clean, tight and defined. I now hear bass guitar strings, not just a mixed up fuzzy impression of what a guitar should never sound like.

There's no harshness in the treble because of the removal of distortion. Let's be honest most studios, live performances and artists record and perform their art using active equipment. It then ends up with us, the music lovers, and the majority of us try and reproduce it with passive systems. Why?

My final observations are perhaps the most remarkable: my partner who has suffered no end of audio equipment in her living room would agree with almost every review of the ATCs they

are big, square and frankly ugly however she is happy to have them in her room because we listen to music not that audio she has had forced on her for years.

So why does the hi-fi community push us down the road of a nice reproduction of an impression of the real recording, using a fundamentally flawed approach, when the reproduction process can be designed to reproduce real high fidelity sound as laid down by the artist?

**Martin Harvey**

ATC loudspeakers are popular with studios, because they go loud and have a revealing midrange dome that images well. However, studios also use PMCs, B&Ws and Tannoys, to name a few other popular brands; there's always room for alternatives. Although active, ATCs are still conventional dynamic loudspeakers, with most of their characteristics. Active drive has benefits, but it does not solve every problem; you are still listening to conventional drive units in a box.

Active loudspeakers are also expensive, bulky and impose a particular, inflexible solution upon a



**Active ATC100a loudspeakers "reproduce real high fidelity sound" says Martin Harvey.**

user. This is fine for those who don't want to get involved in matching products to suit their tastes: B&O, Meridian, Panasonic and many others offer solutions. However, at ATC's price level a potential buyer is likely to be more choosy, and want to keep items separate.

It's good that you find ATC 100as realistic and are enjoying them.

**NK**



# Slot racer

Wharfedale race ahead with the new Diamond 100 series, giving the Diamond 122 a slot port for better bass. Jon Myles listens to a small gem.

**W**harfedale's Diamond series has long been one of the established benchmarks for affordable hi-fi loudspeakers. First launched in 1982 the range has been consistently updated ever since and remained a best-seller throughout the years.

The latest iteration is the comprehensive 100 series, comprising

two standmounts, four floorstanders and two centre speakers for surround-sound duties.

On review here is the larger of the standmounts – the 122 model which measures 354 x 196 x 295mm (HWD) with an internal volume of 10.3 litres and costs just £280.

It's a striking-looking two-way speaker with an elegantly sculpted front baffle to minimise diffraction effects, on which sits a 165mm

woven Kevlar mid/bass unit allied to a 25mm soft dome tweeter. There's no large front grille – just two curved plastic covers which fit snugly over the main drive units. Those units have been developed from Wharfedale's high-end Jade range with the woofer incorporating semi-elliptical break-up areas said to smooth out the driver's overall response.

The tweeter employs an advanced ferrite magnet system



and the dome is surrounded by a waveguide to help dispersion. Combining the drivers is a crossover developed using Wharfedale's own speaker design software which allows simulation of driver performance, cabinet construction and room placement which the company says ensures maximum on and off-axis performance over the widest possible listening area.

But where the new Diamonds significantly differ from earlier versions is the use of a new downward-firing slot-loaded port. It's a technique borrowed from some floorstanders; the port fires downward and then exits at the base of the speaker cabinet through a slot created by the plinth. Wharfedale explain this equalises the air pressure to mimic that inside the cabinet, allowing a smoother transition between the pressure variation in the speaker and the low frequency sound developed in the room. The new arrangement extends bass down to 40Hz.

Round the back are a pair of speaker terminals which enable bi-wiring – more of which later. Minimum impedance is quoted as 4.2 Ohms with a sensitivity of 87dB and recommended amplifier handling of 25-120 Watts.

There's no doubt the Diamonds look elegant out of their boxes – with that baffle and subtle silver finishing around the speaker drivers making them stand apart from most of their rivals in terms of visual appeal.

## SOUND QUALITY

Set up on sturdy Atacama stands, toed in slightly and connected to Arcam's impressive new FMJ A19 amplifier the Diamonds immediately displayed a wide, expansive sound stage. A slice of vintage electronica from, appropriately, Electronic showed that slot-loaded port gives this new model a very different character to previous Diamonds. Bass seemed better defined and slightly deeper than on similar-sized speakers with a fuller, more rounded character. There's a real sense that the 122 is punching slightly above its weight in the lower registers. Bass lines and drums were well controlled encouraging me to push the volume just that little bit harder. Tom Waits' gruff delivery on 'Swordfishtrombones' showed the lower mid-range has a beefy quality which conveys a pleasing sense of



### *The Wharfedales benefit from bi-wiring*

authority. The overall response also seemed smooth and well-controlled as music moved through the frequency range.

Smaller loudspeakers often struggle with large orchestral works but the 122s put in a sterling performance on Fanfare For The Common Man. That good bass performance helps convey the size and scale of the piece with a pleasing slam to the bass drum when required without ever tipping over into an uncontrolled boom.

Although Wharfedale have

"if the other models in the new range are as good then Wharfedale has another best-selling range on its hands"

obviously engineered them to produce better-than-average bass for the cabinet size they've paid great attention to the overall frequency range and musical coherency. They are clear enough to show the difference between the 24/96 re-mastered Pixies catalogue and the original versions – clearly highlighting the greater sense of air and space around the instruments on the hi-res versions.

Stereo separation and projection were also excellent. Those curved baffles help the music float free of the speakers with a surprising amount of height and depth. Close your eyes and you could be listening to a much larger transducer.

Of course, the Diamonds are never going to convey the scale of a

large floorstander; turn the volume up too far and you can hear the drivers and cabinets begin to struggle slightly.

There's also a some overhang with really deep bass. Playing Chemical Brothers at decent levels I got the feeling the lower registers were lagging slightly behind the rest of the music. But keep these loudspeakers within their limits in a reasonably-sized room and they really do turn in a sparkling performance.

Live recordings also come across with plenty of atmosphere. John Coltrane's classic 'One Up, One Down: Live At The Half Note' displays all the ambience of a smoky jazz club – even to the extent of the clinking of glasses, coughing and general background noise on the quieter passages.

Replace that with something punchier such as New Order's 'Bizarre Love Triangle' and the Wharfedales switch gear seamlessly, rolling out the incessant synth line with verve. Yes, you can trip them up with excessive volume but generally you really won't want to because they sound good and loud enough before you hit that level.

A high level of detail brought subtle timing clues in more complex mixes to the fore. Ornette Coleman's 'Free Jazz' experimental foray is one

of the hardest recordings for a small speaker to get to grips with – being the sound of two different jazz bands playing simultaneously through the right and left channels. It can sound hideous on the wrong equipment but the Wharfedales managed to separate the various strands with enough definition to make tracking the various strands worthwhile. OK, this music is not everyone's cup of tea but the 122's ability to handle it showed their quality.

And neither do they let the sound down on simpler acoustic music. Sinead O'Connor's Sean-Nos Nua is handled with all the delicacy it deserves. Acoustic guitars were suitably full-bodied with a pleasant roundness and timbre while violin sounded natural. It was never a chore

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to pick-out exactly what instrument is playing with the Wharfedales: they manage to retain the essential resonance of each one. Obviously, you can get better with bigger, more expensive loudspeakers but remember the 122s are less than £300 and at that price what they do is quite an achievement.

Even piano – a notorious test for speakers in this price range – comes over as natural and fairly full-bodied instead of a plink-plonky simulacrum of the original sound. Keith Jarrett's 'Koln Concert' sounded just as good through the Wharfedales as some speakers costing almost twice as much. Even his trademark grunts and groans were present and correct!

As befits any decent loudspeaker it's also worth paying close attention to set-up. Being a Naim user in everyday life I usually eschew bi-wiring. Running two sets of loudspeaker cables to the Arcam amplifier, the Wharfedales responded positively. This set-up tightened up the sound and brought the drivers under better control. Definition improved with a cleaner, sharper high end that enhanced clarity. So much so, in fact, that the speakers benefitted from repositioning I found, improving the sound staging.

It's not a deal-breaker but if you want to get the very best from the Wharfedales then bi-wiring would definitely seem the way to go – and they are certainly good enough to warrant it.

**CONCLUSION**

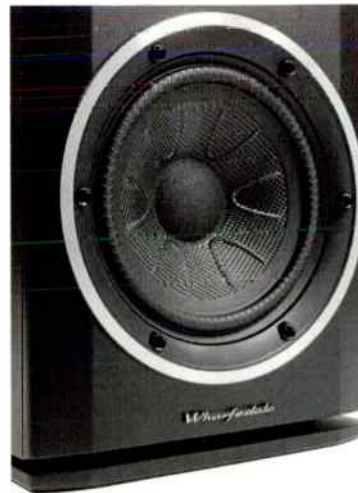
Wharfedale have done a fine job with the Diamond 122s. The trickle-down technology from the company's more up-market Jade range has obviously paid dividends. Bass was plentiful, went low and sounded realistic for their size, allowing them to convey music with a realistic sense of scale.

Treble was detailed without ever

sounding coarse or unrefined.

As a package the new Diamond 122s sound balanced and have a sense of realism that makes music sound just as it should. Pair them with a decent mid-priced amplifier and they can deliver results out of all proportion to their size and price.

I suspect this new Diamond will find its way into systems around the UK, just as the last one did. It packs in a lot of engineering at a low, low price.



*The Diamond 122s feature drive units derived from the more expensive Jade series*

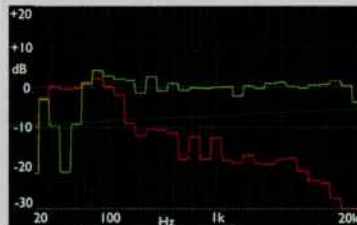
**MEASURED PERFORMANCE**

The new Wharfedale Diamond 122 is quite different to earlier Diamonds. It has an unusual slot port in its base, meaning there is a downward firing port and a panel below it spaced to form a slot that resists air flow, adding acoustic resistance. An idea borrowed from floor standers that fired downward onto the floor (e.g. Castle Howard) this loading technique offers better bass damping than an open port, as both our port response analysis and the corresponding impedance curve show. It suggests bass from the port will be better controlled and more tuneful, if less 'bouncy' and one note.

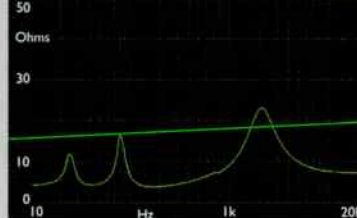
However, the cabinet does have a strong internal bass resonance at 80Hz that produces considerable overhang, a decay analysis shows, as well as a bass peak in the frequency response, so the Diamond 122 will have prominent upper bass, and because the port goes low some deep bass too. It's a different blend of properties from earlier Diamonds and unusual by current norms.

**FREQUENCY RESPONSE**

*Green - driver output  
Red - port output*



**IMPEDANCE**



Frequency response above the bass region measured flat across the audio band, with no crossover suckout at 3kHz, so tonally these loudspeakers are accurate. The absence of peaks and dips in our response analysis, and its unusual flatness, suggest low coloration. While bass is lifted, treble does not rise at all, so the balance will be a smooth one, with plenty of low end punch. The Diamond 122 will probably sound silkier up top and less aggressive than budget rivals.

Our 200mS decay analysis showed low coloration over most of the audio band and an even decay pattern. However, the 122 is very hot in the bass region on our decay map, where considerable bass power put into the cabinet comes out as delayed energy, leaving a distinct time-domain smear. How this will sound in practice can only be judged by listening, but the 122 produces big bass in a small cabinet and pays a price, measurement shows.

Our published impedance curve shows a 4 Ohm bass unit has been used to gain best voltage sensitivity with transistor amplifiers. A sensitivity of 86.5dB was recorded and this is good for a small cabinet; amplifiers of 60 Watts or so will produce high volume.

The slot port successfully imposes broad acoustic damping on the bass unit, leaving small residual peaks and a relatively even and un-reactive bass load, always a good characteristic. The midband crossover 'peak' is also un-reactive (low slopes) so little energy will be transferred back to the amplifier.

The Wharfedale Diamond 122 has been designed to deliver powerful bass from a small cabinet, an inevitable side effect being some bass overhang. Otherwise, it is smooth and accurate under measurement, performing well all round – impressive considering its price.

**NK**



**WHARFEDALE  
DIAMOND 122  
STANDMOUNT  
LOUDSPEAKER  
£280**



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### MAINS CABLES R US, SILVER-PLATED AUDIOPHILE MAINS BLOCK £125

Manufactured in Germany, this 4-gang mains power block features silver-plated internal rails, wired with two metres of OFC shielded cable with an active Faraday cage. Each conductor is 2.5mm thick and terminated with a silver-plated MK plug with a Bussmann, 13 amp fuse. MCRU appear to use a standard chassis for this block because the on/off switch and light have been disabled to improve performance. Tinned copper braiding has also been connected to the earth plug pin and trimmed back at the mains block end, forming a ground loop system to, says the company, trap mains noise and keep it at the

plug end away from the equipment.

Spinning the CPR (Crosby Pevar Raymond) and 'Live At The Wiltern' CD via my Densen B-475 and comparing the

MCRU with a bog-standard power socket, the MCRU block forced a dramatic becalming and focusing effect on the soundstage. Because this track is rich with vocal harmonisation, the standard power block fused the voices into a collective. The MCRU managed to blend the vocals yet still provide individual vocal information.

The muddy sound was now gone and a more neutral presentation replaced it, allowing large amounts of detail to become audible, including steely guitar, a more vibrant piano and secondary percussion which was alive and vigorous in its approach.

Treble also became more of a player in the track, adding delicate touches that extended the tonal range of the track while, at the opposite end of the spectrum, the

bass was now tighter and better defined.

I then drafted in a low cost CES-5R-LL reference power block from Crystal Audio which is known to add control and focus to the soundstage plus a measure of dynamic extension. Spinning Lee Morgan's 'Tom Cat' jazz CD and changing from the Crystal Audio to the MCRU, the piano's bass notes offered a newly portentous, almost growling bottom end that was bathed in a deep, organic reverb. Also, a previously noticeable clinical edge to the trumpet was now gone to reveal a balanced, fresh and wholly cleaner output. Sax, meanwhile was now detailed and textural, providing an openly organic sound that spoke of a blend between man and instrument.

The MCRU provides excellent value for money. In the few seconds that it takes to change a plug, you receive a real boost to the overall quality of your sound that belies its price. A quick yet effective upgrade.

**PR**

[Contact: 07908 056978  
[www.mains-cables-r-us.co.uk](http://www.mains-cables-r-us.co.uk)]

# SOUNDBITES

### EPIPHANY ATRATUS AUDIOPHILE MAINS CABLE £45 FOR 1M

Epiphany's new power cable is a fairly simple affair, being made from heavy gauge copper conductors with a 100% coverage shield and terminated using high quality gold plated connectors. Longer cable lengths can be ordered from the website.

Initially, I plugged a bog standard power cable into the back of my Densen B-475 CD player and ran the jazz tones of Lee Morgan's 'Tom Cat'. Initial sound tests revealed a rather clinical edge to the brass. The more I listened, the more the bass sounded a little constricted and the piano claustrophobic. Inserting the Epiphany the bass tones of the piano introduction showed dramatic improvement, sounding under control for the first time, while the treble notes of the fine cymbal work showed the reverb to drift.

A slightly forward edge was still resident on the brass crescendos but this was more than offset by the soundstage extension that pushed

out left and right. Generally speaking, the upper midrange was now alive and light on its feet providing bags of detail.

To see how far the Epiphany could go, I played a rather nasty trick and plugged in the more expensive Black Rhodium Libra (£100) to see how close (or otherwise) the Epiphany would get. By rights, the Libra should have blown the Atratus to the four winds. Back went the jazz disc.

The Epiphany performed surprisingly well. It might not have had same heft of the piano bass notes but the ominous strikes still infused the music while the upper mids provided admirable extension. The Libra might have had slightly more open treble but the Epiphany was no slouch, offering the ear a commendable lightness of touch.

Turning to 'One For Every Moment' via CPR, the Epiphany sounded even better with these soft rock tones. The well controlled lower frequencies added a sense of gravitas to the harmonic vocali-

sations while the broad soundstage provided a wealth of room that gave each performer and instrumentalist enough space for the ear to appreciate each and every instrument and voice. There was never a sense of overcrowding, blurring or blending in the presentation.

The Epiphany Atratus might be low in price but don't be fooled, it provides great value for money. While especially recommended to rock fans, the Atratus provides a general improvement over all frequencies when compared to the basic power cable. **PR**

[Contact: [epiphany-acoustics.co.uk](http://epiphany-acoustics.co.uk)]



# WORLD STANDARDS

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

## TURNTABLES

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

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

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

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

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



**MICHELL GYRODEC SE 2005** £1,138  
Design icon with superlative build and finish. Sound is beautifully smooth, effortless and exceptionally expansive. No longer peerless at the price, but still a brilliant platform.

**MARANTZ TT-1551** 2005 £1,299  
Cracking all in one deck/arm/cartridge combination, this must surely be the best sounding 'plug and play' package at this price point.

**ROKSAN RADIUS 5.2** 2011 £1,450  
Although getting expensive, the latest Radius is a highly grown up package with a flowing yet engaging nature; a fine package.



**AVID DIVA II SP** 2010 £2,000  
New twin belt drive and power supply make this a more commanding performer, although there's a substantial price hike. Speed, dynamics and detail are hard to beat anywhere near the price.

**INSPIRE ECLIPSE SEV2 12** 2010 £2,349

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

**NOTTINGHAM ANALOGUE HYPERSPACE** 2010 £2,390  
Deliciously spacious, lyrical and beguiling sounding turntable, but lacks ultimate grip.

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

**DR FEICKERT WOODPECKER 2010** £3,445

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



**LINN LP12SE** 2010 £3,510  
Surely hi-fi's most iconic turntable, the legendary Sondek goes from strength to strength. New Keel subchassis and Radikal DC motor add precision and grip to one of the world's most musical disc spinners. Expensive, though.

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

**FLETCHER AUDIO OMEGA .5** 2010 £3,699  
Charming high end turntable that's a fitting testament to the late Tom Fletcher.

**PALMER 3** 2010 £3,750  
Eccentric hand built high end turntable with a pleasingly smooth, sweet and lucid sound.



**E.A.T. FORTE S EVO 12** 2010 £4,750

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

**ACOUSTIC SOLID ONE** 2007 £4,050

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

**SME MODEL 10A** 1995 £4,556

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

**AVID VOLVERE SEQUEL** 2007 £4,600

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

**BRINKMANN BARDO** 2010 £5,845

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



**McINTOSH MT10** 2008 £8,995

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

**EAT FORTE** 2009 £12,500

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

## TO NEARMS

**REGA RB251** 2009 £136

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

**MICHELL TECNOARM A** 2003 £442

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

**ORIGIN LIVE**

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

**HADCOCK GH-242 EXPORT**

2010 £770  
Consummately musical, lyrical sounding tonearm, but needs the right turntable. Excellent value.

**SME 309**

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

**FUNK FIRM FXR II**

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

**AUDIO ORIGAMI PU7**

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

**NAIM ARO**

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

**HELIUS OMEGA**

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

**SME SERIES IV**

1988 £1,620  
Offers nine tenths of the SMEV's magic at just over half price. Exquisitely built and finished, and a design classic. Faces stiff competition these days, but lovely nevertheless.

**SME 312S**

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

**GRAHAM PHANTOM**

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

**TRI-PLANAR**

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

**SME SERIES V**

1987 £2,389  
Vice-like bass with incredible weight, ultra clear midband and treble astound, although some don't like its matter of factness!

**LINN EKOS SE**

2010 £3,700  
Subtle mods over the years, including revised bearings and the recent new wiring has kept it a serious contender in the superarm stakes. Has a commanding musicality all of its own.

**OL ENTERPRISE 3C**

2010 £4,500  
Few if any pivoted arms come close to this arm's combination of liquid musicality and forensic grip.

**CARTRIDGES**

**AUDIO TECHNICA AT-95E** 1984 £25

Great starter cartridge that's detailed and musical beyond its price. Superglue the stylus in for better sound!

**AUDIO TECHNICA AT-F3/III** 2010 £189

Great value entry level moving coil with detail and grip you just can't get from similarly priced moving magnets.

**ORTOFON 2M RED/BLUE**

2007 £60/£120  
Modern, high resolution budget moving magnets that are always an engaging listen.

**GOLDRING G1042**

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

**ORTOFON VIVO BLUE2011**

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

**DENON DL103R**

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

**DYNAVECTOR DVI10X52003**

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

**ORTOFON 2M BLACK**

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

**DYNAVECTOR DV20X-H2003**

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

**AUDIO TECHNICA AT-OC9MLIII**

2010 £399  
New stylus and cantilever breathe life into this feisty, punchy and detailed performer.

**ORTOFON RONDO BRONZE**

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

**LYRA DORIAN**

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

**BENZ MICRO GLIDER L2**

2008 £650  
Crisp, clean and detailed MC; particularly impressive at both ends of the frequency spectrum

**ZYX R-100H**

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

**TRANSFIGURATION AXIA**

2007 £890  
Musically adept and highly resolute cartridge with impressive tracking abilities. Top end life means careful matching required, however.

**BENZ MICRO WOOD SL**

2010 £945  
Highly finessed Swiss moving coil that plays music with riflebolt precision.

**ORTOFON CADENZA BLUE**

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

**ORTOFON CADENZA BRONZE**

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

**ORTOFON CADENZA BLACK**

2010 £1,650  
Ultra incisive, transparent and dimensional moving coil with grip and punch aplenty.

**ORTOFON MC WINDFELD**

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

**KOETSU RED K SIGNATURE**

2007 £2,399  
The new K Signature adds a hefty dose of insight and finesse to the already impressive Red and the results are fabulous.



## DIGITAL SOURCES

**MUSICAL FIDELITY V-DAC** £170  
Clear, concise, low distortion sound belies giveaway price. Superlative value for money.

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

**ARCAM rDAC** 2010 £300  
Cracking budget DAC sporting a fulsome and musical sound with gorgeous build and styling.

**MUSICAL FIDELITY M1 DAC** 2010 £400  
Surprisingly sophisticated upsampling DAC with oodles of detail and air, but bass isn't quite as powerful as it could be.

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



**CAMBRIDGE AZUR 840C** 2006 £800  
Well built CD player with a silky, yet detailed sound and a whole host of useful facilities. Excellent value for money.

**NAIM CD5I** 2008 £895  
Naim's new italic 'i' variant improves even further on the original mid-price classic, offering super tight, grippy and musical sound.

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

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

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

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

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



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

**DENON DCD2010AE** 2010 £1,700  
Powerful, open sound allied to a rich tonality and satisfying subtlety make this an excellent mid-price buy.

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

**MERIDIAN G08.2** 2011 £2,400  
Everyman's modern high end CD player, the stylish, well made Meridian has an extremely enjoyable yet refined and accurate sound.

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



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

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

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



**ACCUSTIC ARTS CDP1MK2** 2007 £3,985  
Styling not to everyone's taste but build quality is impeccable and the performance is stunningly musical.

**ESOTERIC X-05** 2010 £4,495  
Superlative 'affordable high end' CD/SACD spinner with excellent build, massive detail and great poise.

**WEISS DAC202** 2010 £4,600  
Brilliantly open and insightful sounding DAC with a range of useful features.

**ELECTROCOMPANIET EMP-1/S** 2011 £4,650  
Epic in scale, lavish in tone and exuberant in its musicality, this is a memorable SACD spinner. Quirky in operation and modest in finish, though.

**NAIM CDX2-XPS2** 2003 £4,950  
A fine high end machine, but add an XPS2 and it becomes one of the most charismatically engaging 16bit machines we've ever heard. Plays music with such passion!

**NAIM CDS3** 2003 £7,050  
The most polished Naim CD to date; tremendously capable and musical, but lacks the Rottweiler quality of the cheaper CDX2-XPS2.

**dCS DEBUSSY** 2011 £7,500  
Compact, stylish DAC bringing the gloriously smooth, svelte, spacious sound of dCS to a wider audience.

**ACCUSTIC ARTS DRIVE I MK2/TUBE DAC 2** 2007 £7,980  
Superbly built high end CD transport and DAC combo that shows just what the format can be capable of. Very tangible, musical sound with wonderful dynamics and glistening harmonics. Only curious styling and clunky build detract from its brilliance!

**DCS PAGANINI DAC** £9,599  
Digital rarely sounds better; dCS's bespoke Ring DAC makes for power, punch and insight on an epic scale. Add clock and upsampler for an even more profound experience.



**NAIM CD555/555PS** 2006 £14,000  
Very probably the best CD player yet made - certainly the most expensive; a digital tour de force.



## NETWORK

**NAIM HDX** 2009 £4,405  
Interesting one-box network enabled hard disk music system gives superb sonics together with impressive ease of use.

**LINN KLIMAX DS** 2007 £9,600  
Landmark network music player, offering brilliant sonics at up to 24/96 resolution from hard disk/NAS. Expensive, but you can hear why...

## PHONO STAGES

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

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

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

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



**ICON AUDIO PSI.2 2007 £599**

Excellent valve phono stage with good range of facilities and fine imaging abilities.

**A.N.T. AUDIO KORA 3T LTD 2010 £995**

Exceptionally musical and natural sounding all discrete transistor phono stage, with highly lucid, valve-like presentation.

**AVID PULSUS 2010 £1,100**

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

**QUAD QC24P 2007 £1,200**

Dynamic performer that can be used on its own as a complete phono-level preamp.

**ICON AUDIO PS3 2008 £1,500**

Super sounding valve phono preamplifier, with an expansive, engaging and organic nature that makes vinyl sheer joy!

**SUTHERLAND 20/20 2010 £1,999**

Well engineered, smooth sounding solid-state phono stage with a charm of its own.

**EMILLE ALLURE 2010 £2,495**

Just as the name suggests, this is a lovely way to play LP with an exceptionally open and lucid sound.

**AVID PULSARE 2010 £3,800**

This superbly built, well specified phono stage has a powerful and authoritative sound that bristles with detail and energy.

**WHEST PS.30 RDT SE2011 £4,500**

The least solid-state sounding Whest we've heard, this builds on the family strengths of precision and grip but adds a welcome poise and fluidity.

**NAT AUDIO SIGNATURE 2011 £5,633**

Sophisticated sounding, unusually engineered MM and MC phono stage, but faces stiff competition at this lofty price.

**AMPLIFIERS****ICON AUDIO STEREO 40/III 2010 £1,200**

Excellent starter tube integrated, with plenty of detail and an expansively musical sound.

**NAIM NAIT 5i 2007 £725**

The italic 'i' version remains one of the most musically competent and dynamically engaging integrations at the price.

**AUDIOLAB 8000S 2006 £400**

In another life, this sold for three times the price, making it a stand-out bargain now. Very clean, powerful and tidy sound but not the world's most beguiling.

**CAMBRIDGE 840A V2 2007 £750**

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

**SUGDEN MYSTRO 2010 £1,225**

Sugden's first Class AB integrated in a long time surprises; rollickingly good fun, it loses surprisingly little in smoothness to its Class AB siblings.

**NAIM NAIT XS 2009 £1,250**

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

**CREEK DESTINY 2 2010 £1,445**

Beautifully voiced integrated amplifier with a distinctly seductive, tube like sound. A solid-state superstar!

**SUGDEN A21A S2 2008 £1,469**

Crystalline clarity, dizzying speed and forensic detailing makes this seminal design the most musical at the price, but power limited so needs sensitive speakers.

**CYRUS 8XPd 2010 £1,500**

A quality integrated that suits all genres of music providing insight and clarity in a compact but flexible package.

**ANATEK A50R 2007 £1,600**

Simple integrated amplifier with super bass grip and effortless dynamics.

**VINCENT SA-236MK 2010 £1,749**

Big, powerful and expansive sounding hybrid transistor amplifier, with a lively, musical nature.

**NAIM SUPERNAIT 2007 £2,475**

Integrated *tour de force* from Naim that combines impressive functionality and connectivity with super sound.

**AUDIO RESEARCH VS160 2009 £3,298**

Load of tube power allied to a strong bass and smooth open midband makes this a grin-inducing listen.

**LEEMA TUCANA II 2010 £3,495**

Polished high end integrated amp that combines power, detail and genuine musicality with a good range of facilities.

**SUGDEN IA4 2007 £3,650**

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

**QUAD II CLASSIC 2010 £4,500**

Beautiful retro styled integrated amplifier with a subtle, supple sound - although needs matching to speakers that are easy loads.

**QUAD II CLASSIC INTEGRATED 2010 £4,500**

Thoroughly modern music maker with classic style and great pedigree, this amp sings with gentle music but is no headbanger!

**SIM AUDIO MOON 6001 2010 £5,750**

Sturdy build, useful facilities and a wonderfully relaxed, seamless and even-handed sound will win this many friends.

**MUSICAL FIDELITY AMS351 2010 £6,000**

One of the best high end integrations we've come across, this combines hear-through transparency with musical get-up-and-go.

**DARTZEEL CTH-8550 2010 £16,500**

Charismatic and quirky high end solid-state integrated amplifier with superb sound and a charming visage.

**HEADPHONE AMPLIFIERS****FIDELITY AUDIO HPA 100 2011 £350**

Great little headphone amplifier with a lively yet refined and open sound.

**MUSICAL FIDELITY X-CAN V8 2008 £350**

Open and explicitly detailed sound plus serious bass wallop and the ability to drive anything to very high levels makes this a great partner for most mid-to-high end headphones.

**PREAMPLIFIERS****MING DA MD7-SE 2012 £1520.00**

A valve preamplifier with an open, effortless sound and big sound stage. It has plenty of gain so will accept any source and drive any power amp. A tuneful beauty.

**CREEK OBH-22 2008 £350**

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

**ICON AUDIO LA-4 2011 £800**

Uses early 6SN7 triodes for liquid sound, has plenty of gain and remote control.

**DPA CA-1 2010 £2,650**

Excellent solid-state preamp with a meticulously detailed and propulsive sound, but a deep velvety tonality.

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

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

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

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

**SENNEISER HD800 2010 £1,000**

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



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

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

**INTERCONNECTS**

**TELLURIUM Q BLACK 2010 £276/3m**

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



**TECHLINK WIRES XS 2007 £20**

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

**WIREWORLD OASIS 5 2003 £99/M**

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

**CHORD COMPANY CHAMELEON 2 £90/M**

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



**DNM RESON 2002 £40/M**

Neutral and transparent - a steal!

**VDH ULTIMATE THE FIRST 2004 £260/0.6M**

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



**TCI CONSTRICTOR 13A-6 BLOCK 2003 £120**

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

**MISSING LINK CRYO REFERENCE 2008 £375**

Currently our favourite 'affordable high end' interconnects, with a deliciously smooth, open and subtle sound without a hint of edge or grain. Superb value, inasmuch as it's as good as some designs at three times the price.

**TUNERS**

**DENON TU-1500AE 2006 £120**

Excellent entry level analogue tuner; slick sonics and fine feature count make it a bargain.

**CAMBRIDGE AUDIO 640T 2005 £250**

Sweet sounding digital/analogue hybrid with fine build and finish at the price.

**ARCAM FMJ T32 2009 £550**

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

**CREEK CLASSIC TUNER 2006 £550**

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

**MICROMEGA FM-10 2010 £750**

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

**MYRYAD MXT-2000 2005 £800**

Sumptuous sound and excellent build is all most will ever need in a tuner; superb.

**MAGNUM DYNALAB MD-90T 2010 £1,295**

Exceptionally able, but commensurately priced, audiophile tuner that cannot fail to charm.

**MAGNUM DYNALAB MD-100T 2006 £1,895**

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



**SYSTEMS**

**YAMAHA CRX-M170 2007 £200**

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

**TEAC DR-H300DAB 2008 £329**

Nicely built and styled mini with fine performance on all sources that even plays DVDs!



**NAD C-715DAB 2008 £429**

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

**ARCAM SOLO MINI 2008 £650**

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

**SHANLING MC-30 2007 £650**

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

**PEACHTREE AUDIO IDECCO £1,000**

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

**ARCAM SOLO 2005 £1,249**

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

**LINN CLASSIK MUSIC 2008 £1,250**

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

**NAIM UNITIQUE 2010 £1,350**

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

**MERIDIAN F80 2007 £1,500**

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



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

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

**NAIM UNITI 2009 £1,995**

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

**LINN CLASSIK MOVIE 2007 £2,250**

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



**MERIDIAN SOOLOOS 2.1 2010 £6,990**

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

**MARANTZ 'LEGEND' 2007 £22,000**

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



# A19 entry

**Arcam's new FMJ A19 amplifier is a their latest market-entry product, following illustrious predecessors. Will it become a budget standard, wonders Jon Myles?**

**A**rcam has made its name over the past 40-plus years by producing well-engineered, good sounding equipment at sensible prices.

The Cambridge-based company has enjoyed success with its rSeries of DACs, iPod docks and wireless dongles based on the same philosophy of great performance at realistic prices.

Now Arcam have turned their attention back to the separates market with the launch of a new amplifier. The A19 is the entry level integrated in Arcam's FMJ range, priced at £650.

Popular wisdom has it that the FMJ moniker denotes Full Metal Jacket – a reference to the range's substantial and well-damped steel and aluminium casework. Whether that's true or not, the A19 is certainly a well turned-out piece of equipment. Internally Arcam has employed a new design with high-quality components, a low-noise power supply and a headphone stage that it claims is the

equal of a standalone unit costing £150.

Round the back are six line-level inputs for CD, streamers, tuners etc, a pre-out for adding a power amp and – unusual nowadays – the A19 also boasts a moving magnet phono stage.

Each input has an individual

source button on the front panel while the dimmable display is easy to read. Completing the package is a basic but functional remote.

While there are no digital inputs, the amplifier does boast a second internal power supply which can be used to drive products from Arcam's own rSeries of digital converters



*A hefty toroidal transformer dominates the interior*

# The Carbon Age



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

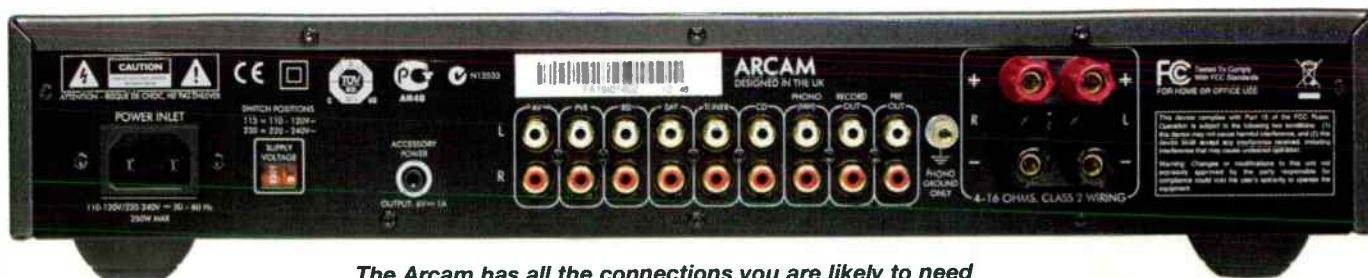


## Debut Carbon

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

Pro-Ject Audio Systems is distributed in the UK by  
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Web : [www.henleydesigns.co.uk](http://www.henleydesigns.co.uk)





The Arcam has all the connections you are likely to need

such as the rDac and rPac.

All in all, it's a neat, well-built package which combines ease of use with clean, functional lines.

**SOUND QUALITY**

Connecting the Arcam to a pair of £6,500 Spondor SP100R2s (see review this issue) may seem a mismatch in price terms but it helped to reveal the A19's quality. Arcam conservatively rate the A19 at 50 Watts per channel but our measurements showed it easily beat that, pushing out 60 Watts into 8 Ohms and 90 Watts into 4 Ohms. And it shows. It's immediately obvious the FMJ has a big, clean and very open sound. The Smiths 'The Queen Is Dead' filled the room with a big deep sound and well-defined highs. Detail was impressive, the Arcam making it easy to pick out the various details in the mix.

Moving over to some mellower material from Jan Garbarek and a pair of Spondor's rather more diminutive A3s, the Arcam's basic character came to the fore. It has a very smooth, relaxing sound with little evidence of any undue brightness. Bass is tuneful and the timing up there with similar priced amplifiers.

Classical music was portrayed well too, the A19 lending weight and authority to the likes of Beethoven while always setting out a wide soundstage. It also had the welcome ability to pick out detail at low volume levels – an area where some higher-powered amplifiers can often fall down.

If there's one criticism, it's the fact that the Arcam could sound a little polite compared to some brighter, more up-front amplifiers. But give it time and it'll grow on you with its confident, assured delivery whereas those seemingly

"it's an extremely well put together design with an expansive sound and excellent levels of detail"

more exciting models can sometimes produce listener fatigue over extended periods.

And if your ancillary equipment is on the brighter side the FMJ could be the ideal partner to achieve the right balance.

**CONCLUSION**

Arcam's reputation for great sounding equipment at realistic prices is well deserved and the FMJ A19 shows why. It's an extremely well put together design with an expansive sound and excellent levels of detail.

Its smooth nature makes extended listening sessions a delight and it has enough power to handle a wide range of loudspeakers.

Add in the ability to pair it with Arcam's rSeries of digital products and an excellent headphone output and it begins to look a bit of a bargain at £650.

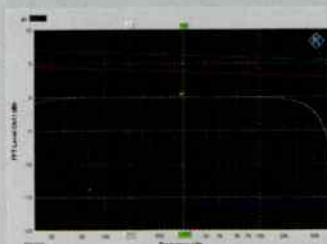
If you're in the market for an amplifier which allies quiet confidence with good build quality and ease of use, then this new entry level Arcam could be just the thing. It deserves to be a budget standard.

**MEASURED PERFORMANCE**

The little A19 delivers 60 Watts into 8 Ohms and 90 Watts into 4 Ohms, so there's plenty of power on hand for reasonably efficient loudspeakers, and 75 Watts for nominally 6 Ohm loudspeakers

as most are specified these days. So it will go loud with most loudspeakers, if not having quite the reserves of some. A damping factor of 38 suggests good control over bass.

**FREQUENCY RESPONSE**



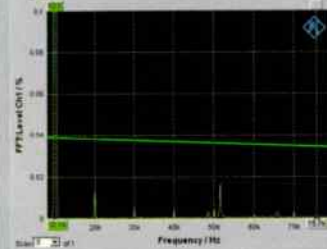
Frequency response was flat and wide, but in classic Arcam fashion it rolls off above 20kHz to ensure the sound stays on the smooth side. Allied to very low distortion even at high frequencies and low power levels, where crossover usually rises, the A19 will sound smooth and clean, with little sign of brightness or sharpness.

**DISTORTION**



Sensitivity was fair at 250mV and noise low at -94dB. Our sample had no phono input fitted; it is an option.

The little A19 has plenty of punch and very low distortion under all conditions, so it will deliver good sound quality. NK



Power	60watts
CD/tuner/aux.	
Frequency response	10Hz-34kHz
Separation	88dB
Noise	-94dB
Distortion	0.02%
Sensitivity	250mV

**ARCAM FMJ A19 £650**



**VERDICT**

Arcam has built another fine amplifier in the FMJ A19. It has a big, wide sound and bags of detail. Add in its wide connectivity options and it is capable of forming the hub of any separates system.

**FOR**

- big, confident sound
- detail
- connectivity

**AGAINST**

- no digital input

Arcam  
+44 (0) 1223 203 200  
www.arcam.co.uk



The A19's basic but functional remote

Steven Edwards - Rohde Schwarz  
 Noel Keywood - Publisher Hi-Fi World  
 Jithu Abrahams - Rohde Schwarz



# Showtime!

The Sound & Vision Show 2013, Bristol, held by Audio T, featured a wide range of new products and was busy as ever. Here's our snapshot.

**T**he annual Sound and Vision Show, held at Bristol's Marriott City Centre hotel by retailer Audio T, proved that the industry is in surprisingly good health, with global brands and small independents alike well represented across all the many floors of the show venue.

Long queues for entry on all three days and often slow progress around the venue because of sheer weight of human traffic, served to confirm the fact that Bristol remains the UK's pre-eminent hi-fi show.

While perhaps 20% of exhibitors showcased audio-visual products, stereo was very much centre stage, with as diverse a spread of products as we've ever seen at Bristol.

From Wilson Benesch's big toys – specifically their new £15,000 Carnival loudspeakers – through to a wonderful demonstration of the articulation that a full rig of Oriton support products and interconnects can provide, every colour in

the hi-fi rainbow was represented, from valve to solid state, throwback idler-drive turntables to digital, conventional box loudspeakers to electrostatics.

While it's impossible to predict what the future holds as far as music formats are concerned, room after room at Bristol demonstrated the same thing – the present is very definitely hi-res digital and 24 bit 192kHz as a minimum.



New £15,000 Wilson Benesch Carnival loudspeakers - wow! These drew a crowd of admirers.



Avid Ingenuim turntable produced a lovely focussed sound with KEF LS50 loudspeakers.



Wharfedale's new Diamond 100 range, great entry level products.



*Tannoy Canterbury SE with a 15in bass unit no less! Trad power.*



*Tannoy Kingdom Royal in Ferrari Red - speedy.*



*Simple Audio were showing off their new wireless HD music streamer.*



*Chord Electronics, showed off their impressive DSX1000 music streamer with QBD based DAC*



*Dynamikks dB 8.2 loudspeaker from Germany, demo'd by Tony Boer of distributor Robytone, Netherlands.*



*Quad's latest update on the all-time classic ESL electrostatics, the 2812 and 2912 models.*



*New Quad QMP current-dumping mono power amplifiers, ideal for driving electrostatics.*

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**MONARCH**  
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**MONARCH** Junior  
DIRECT DRIVE TURNTABLE

**ENIGMA** turntable 

Apollo<sup>RA</sup>  
TURNTABLE

Apollo<sup>RA</sup> Junior

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*MingDa brought a lorry load of valve amplifiers, including one for AV enthusiasts!*



*PMC demo'd the power of their big studio monitors, and blew a few listeners away!*



*Leema Acoustics were tucked away on the top floor where they were making heavenly sounds.*



*McIntosh had a lovely array of illuminated valve products, driving Focal loudspeakers. Piccadilly!*



*Synthesis A40 Virtus valve power amplifiers - 40W using KT66s; digital inputs too, USB & S/PDIF. Fascinating!*



*The John Westlake designed, all-singing Audiolab M-DAC that we hope to review very soon. Looks good.*



*Industry stalwarts, Michell Engineering had one of the busier rooms, doubtless because their lovely decks are a wonder with vinyl.*



*The diminutive Nuforce Class D amplifiers delivered room-filling sounds from elegant cases. Demo'd by distributor Robytone of the Netherlands.*

Noel Keywood, publisher of Hi-Fi World (left) and Richard Stevenson of RSPR jointly present Hi-Fi World's annual awards at the Bristol Sound & Vision Show, 2013.



# Hi-Fi World 2012 Awards Ceremony



Richard Stevenson our host in full swing...

**A**wards for the top products of 2012 are made every year at Bristol's Sound & Vision Show. This year we made a record nineteen awards across a wide variety of categories: loudspeakers, amplifiers valve amplifiers and

much, much more. A full list was originally published in our January 2013 issue. You can see many of the Managing Directors and designers that run these companies collecting their awards here. Being handed to them is our gorgeous glass globe, with an inscription in gold printed on its black

marble base.

With so many award winners this year's ceremony moves along at a quick pace just to get everyone into the picture. But a good time was had by everyone in what is always a lively event, just before the weekend days of the show start.



Conrad Mas, Avid Hi-Fi  
Best Phonostage - Avid Pulsare II



Graham Nalty, Black Rhodium  
Best Loudspeaker Cable - Black Rhodium Twist



Bob Isherwood, Inspire Hi-Fi  
Best Turntable - Inspire Monarch



Geoff Merrigan, TelluriumQ  
Best Power Amp - TelluriumQ Iridium  
Best Power Cable - Blue Power



Eric Kingdon, Sony UK  
Best Blu Ray Player - Sony BDP-S790



**John Franks, Chord Electronics**  
**Best CD Player - Chord Red Reference**



**Pedro Jorge Absolute Sounds**  
**Best Valve Amplifier - Acoustic Research VS115**



**Nick Fuller, Henley Designs**  
**Best Cartridge - Ortofon MC Anna**



**Mark Baker, Origin Live**  
**Best Tonearm - Origin Live Encounter MK3.C**



**Peter Comeau, Wharfedale**  
**Best Bookshelf Speaker - Wharfedale Denton**



**Oliver Freeborn, Epiphany**  
**Best Headphone Amplifier - Epiphany EHP-02**



**Chris Wray, Yamaha**  
**Best AV Reciever - Yamaha RX-A3010**



**Paul Mitchell, Sansui UK**  
**Best Network Player - Sansui WLD+ 201**



**Pete Marcus on behalf of Sennheiser**  
**Best Headphones - Sennheiser HD700**



**Mike Butler, Track Audio**  
**Best Support - Track Audio Precision 600**

**OUR SINCERE THANKS TO -**

- Reichle & Schwarz for sponsoring the event
- Richard Stevenson for hosting the event
- KEF for providing the room
- Rob Follis for taking pictures
- and all the people who attended

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



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

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

To find out why these arms can transform systems in a way that no others can, please read [www.tonearm.co.uk](http://www.tonearm.co.uk)



2012 Tonearm of the Year award - The Absolute Sound Magazine



2012 Tonearm of the Year award

*"The biggest improvement I've made in 25 years of listening to music and lots of exchanges of hi-fi stuff! ....breathtaking, big new level! It's like coming to Nirvana"* OWNER COMMENT- FERDINAND ROEHRIG

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# Time line

**MonoPulse has refreshed its top-of-the-range, time-aligned Model A loudspeaker. Jon Myles pulls out his watch.**



with the 28mm high-frequency units now housed in new isolated carbon fibre casings in place of the previous rolled-steel fixings and set back at a precise distance on top of the unit to give that coherent sound wave. Sturdy outriggers house extendable spiked feet to allow for optimum room and height positioning as well as optimising the action of the downward-firing reflex port. Around the back the classy leather-clad panel sports a pair of bi-wireable speaker posts.

MonoPulse say the changes make no difference to the loudspeaker's sound – but add to the look and feel of product. They've also announced a substantial price reduction – knocking almost £800 off the list price to bring it down to £2,775.

## SOUND QUALITY

The MonoPulses major on three attributes – timing, detail and stereo imaging. Voices are especially well presented with a wide stereo image and an almost holographic feel from the right recordings. Barb Jung's vocals on 'The Men I Love' floated serenely into the room with her distinct intonation and style portrayed admirably. It's a style the speakers seem to particularly thrive on as Sinead O'Connor sounded similarly impressive.

Transients are fast and clean – the MonoPulses giving the leading

**O**n the face of it you wouldn't think there was much connection between loudspeakers and phased-array radar systems. Well, think again – or just have a chat with Allan Hendry.

For it was Allan's work on radar equipment in the aerospace industry that started him thinking about loudspeaker design and how it could be improved. It took him 10 years but he finally came up with his solution – and the MonoPulse brand was born.

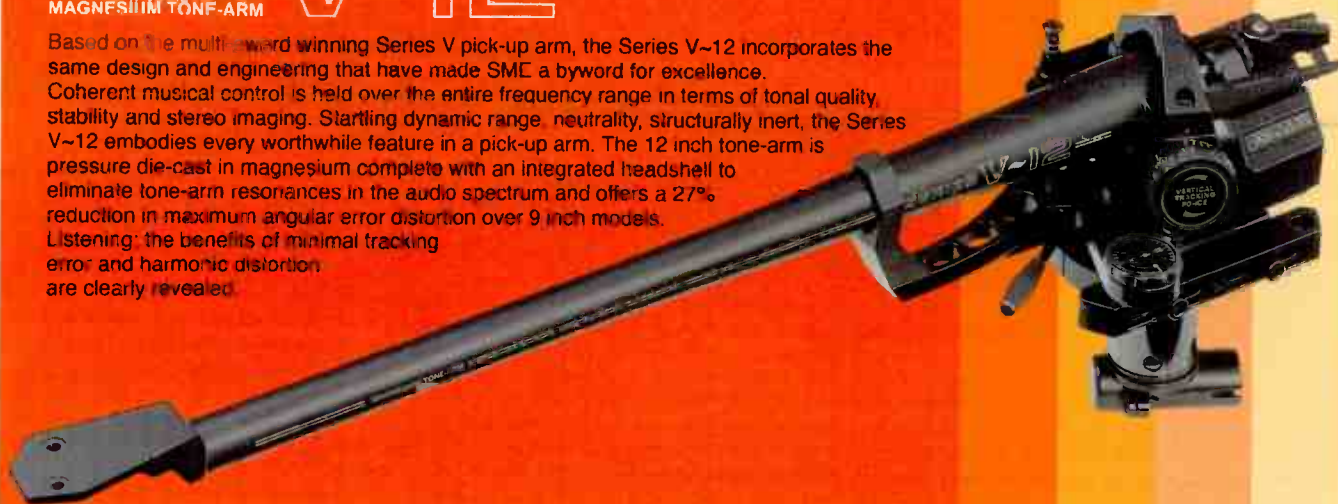
Now, almost a decade on from the launch of its first model MonoPulse has become an

established brand and the revised A model here sits at the top of its range. The design rests on Allan's belief in the importance of ensuring correct phase relationship between the drive units in loudspeaker design. In the MonoPulses this is optimised through the precise positioning of the mid/bass and tweeter drivers and their integration through the crossover network to achieve genuine wavefront time-alignment through the entire audible frequency range.

The result is a distinctive-looking two-way floorstander which is claimed to offer remarkable coherence. The sturdy cloth-covered cabinets come in a range of colours

## SERIES V-12 MAGNESIUM TONE-ARM

Based on the multi-award winning Series V pick-up arm, the Series V-12 incorporates the same design and engineering that have made SME a byword for excellence. Coherent musical control is held over the entire frequency range in terms of tonal quality, stability and stereo imaging. Startling dynamic range, neutrality, structurally inert, the Series V-12 embodies every worthwhile feature in a pick-up arm. The 12 inch tone-arm is pressure die-cast in magnesium complete with an integrated headshell to eliminate tone-arm resonances in the audio spectrum and offers a 27% reduction in maximum angular error distortion over 9 inch models. Listening: the benefits of minimal tracking error and harmonic distortion are clearly revealed.



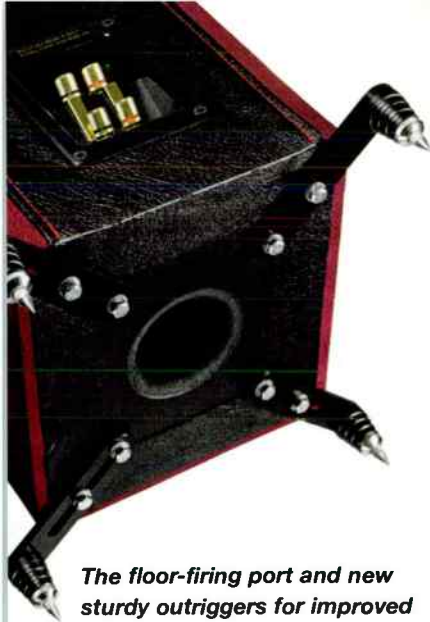
# SME

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**The floor-firing port and new sturdy outriggers for improved stability.**

edge of notes a real zing. It can be a double-edged sword at times, though. While good recordings shine, anything with a bright top end can tip over into undue brightness – Noel Gallagher's guitar on Oasis' 'Definitely Maybe' being a prime example.

Bass, however, goes commendably low with the port adding extra reinforcement to the eight-inch mid/bass unit. Charles Mingus walking bass lines came across well and the MonoPulses never sound stressed or as though they were reaching the extremes of their ability. The only criticism here was a slight degree of boxiness on some recordings – but again it seemed very recording-dependent.

To get to their best they do need a good degree of free space around them – which helps the stereo imaging tremendously as well as giving a greater sense of air and space around the music.

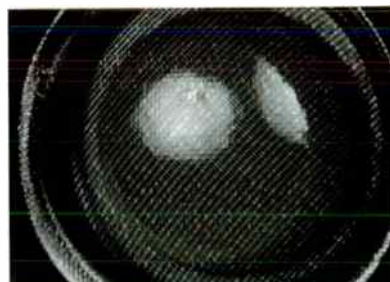
Designer Allan Hendry suggests a good Class A amplifier of at least 20 Watts will get them working at their best and also says they are happy to work farther apart than other similar-sized designs. However in my room that

tended to weaken the stereo imaging – stretching it too far across the gap between the cabinets.

Experimentation with the height adjustable spikes is also hugely recommended. A slight adjustment can really help snap the image into focus and bring out the best in the MonoPulses. When that's done and with the right recordings they can produce an extremely cohesive and well-organised sound.

**CONCLUSION**

The MonoPulses are an unusual-looking design with some good attributes. Get them set-up properly and they produce a fine stereo image with good timing and a definite snap to the higher end.



**The tweeter is now housed in a carbon fibre surround**

They're undoubtedly best suited to well-recorded material and can be rather unforgiving on poorer fare. Their finish could be improved too. Whether they'll suit everyone is open to question – but they have strengths and are worth investigating.

"voices are especially well presented with a wide stereo image and an almost holographic feel from the right recordings"

**MEASURED PERFORMANCE**

The Monopulse Model A is a two way loudspeaker with tweeter staggered behind the bass midrange to align their acoustic centres, giving what was once termed a "linear phase" loudspeaker. Phase matching between the two drive units was good, the response pattern changing little with microphone height, although nowadays loudspeakers from the better equipped manufacturers usually have good phase matching. Output from the tweeter was higher

than that of the bass/midrange unit our analysis shows, a lift of +5dB above 9kHz being enough to make upper treble audibly prominent. The Model A will sound a little sharp as a result.

Further down the band our frequency response analysis is a little bumpy, suggesting some colour or character will be apparent, but the Model A is still reasonably well balanced tonally, all the way down to 60Hz. Lack of bass peaking suggests fairly dry bass balance but good bass damping. The floor port is tuned low to 30Hz and will add some subsonic heft.

The impedance curve is very reactive and shows the port's narrow tuning; this loudspeaker needs some impedance modifying Zobel networks to even things out. Impedance is very high our analysis shows, measuring 13 Ohms with pink noise. This limits voltage sensitivity to 86dB, not especially high for a floorstander. However, 60 Watts or more will be adequate for high volume.

A 200mS decay analysis shows numerous cabinet 'overhangs' below 200Hz so the cabinet may well be audible, perhaps adding some boxiness. There were some higher frequency delayed resonances, associated with two peaks around 5kHz.

The Model A offers reasonable results under measurement, but better is possible and common nowadays. **NK**

**FREQUENCY RESPONSE**

**Green - driver output**  
**Red - port output**



**IMPEDANCE**



**MONOPULSE A**  
**£2,775**



**VERDICT**  
MonoPulse has produced a distinctive-looking and sounding loudspeaker. Careful placement is needed but with the right material they can be rewarding.

**FOR**  
- fine timing  
- good bass extension  
- detail

**AGAINST**  
- need careful placement  
- pronounced top end  
- unforgiving on bad recordings

Monopulse  
+44 7785 558238  
www.monopulse.co.uk





# Into The Blue

**Want to play music on your phone through the hi-fi? Then get a Bluetooth receiver like the QED uPlay Plus, reviewed here by Noel Keywood.**

**T**he idea of being able to collapse onto the settee, pull out the phone and play music through the hi-fi is attractive. Or so I thought. Initially, a 'will they won't they' exchange of security key stand-offs between devices changed my mind: what a hassle!

But Bluetooth has matured and now I find playing music from the phone pleasantly unchallenging. In fact it has become so easy it's quite addictive. QED's unassuming uPlay Plus reviewed here allows you to do just this, stream music to your hi-fi from the phone, tablet or portable player, anything with Bluetooth on-board in fact.

The simple, attractive bit is

the bright, legible coloured screen and graphic control system you get with a phone or tablet. What could be better than having hundreds or thousands of songs in front of you on one simple, hand held device. A phone is small and easy to wield too, although I am starting to wonder whether a screen larger than the iPhone's is the way to go here (hello Samsung). There's no more peering across the lounge late at night trying to interpret small, scrolling text on a malnourished one-line display far, far away.

Bluetooth is a short range, high bandwidth radio link able to carry data, but barely able to carry high quality music. So there are limitations.

The uPlay Plus we reviewed is

a simple little device with hidden internal aerial and on-board DAC delivering an analogue output to phono sockets. There is a single digital audio output too, through an optical TOSLINK socket. Power (5V) comes from a wall wart as you might expect, but it's small, no wider than a 13A plug. The case measures 142mm wide, 120mm deep and 25mm high and is very light at 180g.

You site the uPlay preferably near the system, connect up, power up and then run through a procedure of exchanging security keys with your phone, tablet or whatever. This is a part of Bluetooth that used to drive me quietly mad, but nowadays the technology seems to have settled down a bit: the uPlay paired with my





The rear panel carries analogue outputs, and an optical digital S/PDIF output. The QED has been designed for connection into a typical stereo amplifier, a DAC or a 'digital' amplifier with an on-board DAC.

iPhone straight away, and it remained paired even after power down and disconnection from its power supply, remembering the key. Up to four devices can be paired like this.

There is not enough bandwidth in Bluetooth it seems to support high data rates, so high resolution audio is out. This receiver uses aptX streaming compression to handle 16bit audio at 48kHz maximum

"the analogue side was a bit challenged, sounding a little soft and a tad muddled"

sample rate, compressed 4:1 from 1.4Mbps of CD down to 352kbps. In listening tests I have carried out in the past anything lower than 5:1 compression is difficult to detect and this has been my experience so far with Bluetooth. Portable devices only play up to CD quality at present in any case, so Bluetooth has been proportioned for this quality level, and this is broadly what to expect from Bluetooth streamed music from an iPhone. A wired HDMI link has no such limitation but it means getting wired up on the settee!

**SOUND QUALITY**

The uPlay Plus overloaded above -2dB below full output under measurement, on both digital and analogue outputs. However, I was barely aware of this during use, as it only affects occasional musical peaks. Providing music isn't too dynamically compressed this represents fleeting overload. Otherwise, our measurements showed the uPlay offers typical portable quality through its analogue outputs, and that's what I found. Connected into a Marantz SR8002 receiver through both its analogue and digital outputs it was quite obvious that the analogue side was a bit challenged, sounding a little soft and a tad muddled compared to the digital output (that channels audio through the receiver's internal

DACs of course).

However, I wasn't disappointed; for casual listening it was clean enough not to be worrisome and as my iPhone seems to have become a repository of all sorts of over-compressed music of often-dire quality it wasn't much of an issue. Bass was quite strong from the analogue output and this added some needed and entertaining weight to

the sound.

The digital audio output was altogether more pristine, if a little colder and more mechanical too. All the same, it offered superior quality, showing the internal DAC of the uPlay is barely up to today's hi-fi standards. Either outputs are

preferable to using the headphone jack though, and avoid the need for a lead too.

**CONCLUSION**

The uPlay Plus is a neat little Bluetooth receiver. It isn't perfect, due to overload at -2dB below full output. I enjoyed using it all the same, in an uncritical fashion, although I was using Martin Logan Electromotion loudspeakers and they are brutally revealing electrostatics, so the QED could not easily sin without being detected!

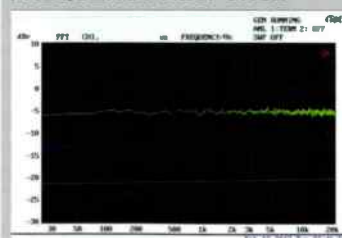
The analogue output was inferior to the digital output, but the latter worked fine.

The uPlay Plus is a good way to enjoy music whilst relaxing on the settee, free from a remote control, wires and buttons. Bluetooth transmission is barely CD quality, but it's still entertaining when you want to listen and not think (!) and the uPlay is good enough to fulfil this role.

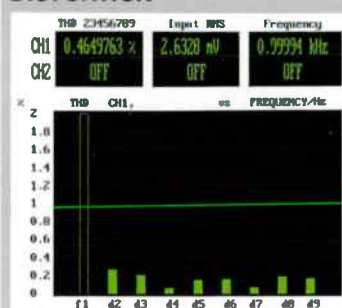
**MEASURED PERFORMANCE**

A full level 0dB signal produced severe overload via the analogue outputs, but below -2dB overload ceased, distortion measuring a low 0.07%. At -6dB (1V output) distortion sank to 0.003% and at

**FREQUENCY RESPONSE**



**DISTORTION**



-60dB 0.45%, mostly noise. These are reasonably good, if unexceptional figures. Frequency response was flat across the audio band. Noise was a little high at -85dB with a -60dB tone notched out, sinking to -118dB at pause, but Bluetooth receivers are noisy.

Overload occurred at full output through the optical output too, so musical peaks will still distort. However, with an external DAC noise measured -92dB and linearity was good (being dependent upon the external DAC, not the uPlay Plus).

Apart from peak overload, the uPlay Plus measured reasonably well. NK

Frequency response (-1dB)	5Hz - 21kHz
Distortion	
0dB	5%
-6dB	0.003%
-60dB	0.45
Separation (1kHz)	68dB
Noise (IEC A)	-85dB
Dynamic range	88dB
Output	2V

**QED UPLAY PLUS**  
£95



**VERDICT**

A neat way to stream music from your phone to the hi-fi, sounding best if the latter has a DAC.

**FOR**

- small size
- ease of use
- digital output

**AGAINST**

- mediocre analogue sound
- peak overload
- styling

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# WORLD CLASSICS

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

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

## DIGITAL

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

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

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

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



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



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

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



## MUSICAL FIDELITY

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

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



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

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



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

**TECHNICS SL-PI200 1987 £800**  
CD version of the Technics SL-1200 turntable. Massively built to withstand the rigours of 'pro' use and laden with facilities - a great eighties icon. Sonically, it's pure fun, with hefty bass that can still show weedy modern players a thing or two!

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

## COMPACT DISC TRANSPORTS

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



**ESOTERIC P0 1997 £8,000**  
The best CD drive bar none; TEAC's Tokyo boys pushed the boat out in style. Brilliantly incisive, ridiculously over engineered.

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

## DACs

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



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



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



**PINK TRIANGLE**

**DACAPO 1993 £ N/A**  
Exquisite; the warmest and most lyrical 16bit digital audio we have ever heard. Clever plug-in digital filter modules really worked!



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

**TURNTABLES**

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

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

**PIONEER PL12D 1973 £36**  
The beginning of the end for the British turntable industry. When vinyl was the leading source, this bought new standards of noise performance and stability to the class, plus a low friction S-shaped tonearm. Later PL112D was off the pace compared to rivals



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

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



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

**GOLDRING LENCO**

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

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

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



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

**TECHNICS SP10 1973 £400**  
Seminal Japanese engineering. Sonics depend on plinths, but a well mounted SP10/11 will give any modern a hard time, especially in respect of bass power and midband accuracy.

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

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



**ROKSAN XERXES 1984 £550**  
Supposedly the first to 'better' the LP12. Super tight and clean sound, with excellent transients. Less musical than the Sondek, but more neutral. Sagging plinth top-plates make them a dubious used buy.

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

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



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

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

**TONEARMS**

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

**AUDIO TECHNICA AT 1120 1978 £75**  
Fine finish can't compensate for this ultra low mass arm's limited sonics - a good starter arm if you've only got a few quid to spend.  
**ALPHASON HR100S 1981 £150**  
First class arm, practically up to present-day standards. Buy carefully, though, as there is no service available now. Totally under priced when new, exceptional.



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

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

**REGA RB300 1983 £88**  
Inspired budget esoterica. Detailed, tight, neutral sound but tonally grey sounding in absolute terms. Responds well to tweaking, and its cheaper RB250 brother better still.



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

**LINN ITTOK LVII 1978 £253**  
Arguably the first 'superarm'; Japanese design to Linn specs made for a muscular, rhythmic sound with real dynamics. Now off the pace, but the final LVIII version worth seeking out.

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



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



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

**INTEGRATED AMPLIFIERS/COMBOS**

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

**ROGERS A75 1978 £220**  
The prototypical Audioblab 8000a - lots of sensible facilities, a goodly power output and nice sound in one box. The later A75II and A100 versions offered improved sonics and were seriously sweet and open to listen to.

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



**SUGDEN CS1/PS1 1976 £130**  
Soft sounding early Sugden combo with a plethora of facilities and filters, complete with seventies-tastic DIN socketry. A sweet and endearing performer as you'd expect, but lacking in power and poor load driving ability, so partner carefully.

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

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



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

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



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

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

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



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



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

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

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



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

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



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

**PREAMPLIFIERS**

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

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

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

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

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

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

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

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

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



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

**POWER AMPLIFIERS**

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

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



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

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

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



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

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

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



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



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

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

**RADFORD STA25 RENAISSANCE** 1986 £977

At the time, very possibly the least cool amplifier on the planet – and we're not talking heat dissipation here. This reworking of Radford's original late sixties design was possessed of a wonderfully rich, old school valve sound with enough power (25W) and lots of subtlety.



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

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



**PHONO STAGES**

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



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

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

**TUNERS**

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



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

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

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

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

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

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

**LEAK TROUGHLINE 1956 £25**  
Series I an interesting ornament but limited to 88-100MHz only. II and III are arguably the best-sounding tuners ever. Adaptation for stereo easy via phono multiplex socket. Fed to a modern outboard decoder they're deliciously lucid with true dimensionality.



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



**REVOX B760 1975 £520**  
More of a semi-pro machine than a domestic bit of kit, the Revox offers superlative measured performance although the sound isn't quite as staggering as the numbers. Fine nonetheless, and surely the most durable tuner here?

**ROGERS T75 1977 £125**  
Superb mid-price British audiophile design, complete with understated black fascia. Fine sound in the true Rogers mould – smooth and sweet with true dimensionality.

**SANSUI TU-9900 1976 £300**  
A flagship Japanese tuner designed to steal sales from the likes of Accuphase and Revox, it boasts superlative RF performance and an extremely smooth and lucid sound, along with very fine build and finish.

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

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



**TECHNICS ST-8080 1976 £180**  
National Panasonic's specialist hi-fi brand was a big hitter back then, and this is no exception. Superb FM stage makes for a very clean and smooth listen with lots of detail and depth.



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



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

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



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

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



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



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

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

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



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



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

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

**LOUDSPEAKERS**  
**ACOUSTIC RESEARCH ARI8S 1978 £125**  
Yank designed, British built loudspeaker became a budget staple for many rock fans, thanks to the great speed from the paper drivers, although finesse was most definitely not their forte...

**BBC LS3/5A 1972 £88**  
Extremely low colouration design is amazing in some respects – articulation, stage depth, clarity – and useless in others (both frequency extremes). Came in wide variety of guises from various manufacturers building it under licence. Partner with Rogers ABI subwoofers for an extra two octaves of bass!

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

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

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



**TANNOY****WESTMINSTER 1985 £4500**

Folded horn monsters which certainly sound good if you have the space. Not the last word in tautness but can drive large rooms and image like few others.

**SPENDOR BCI 1976 £240**

Celestion HF1300 tweeter meets bespoke Spendor Bextrene mid-bass unit – and the result is a beautifully warm yet well focussed sound. A little bass bloom necessitates careful low-stand mounting, but these prove that the seventies did have some fine designs after all!

**MAGNEPLANAR SMGA 198X £800**

Technological loudspeaker with genuinely musical abilities; fast, smooth, open, dry.

**KEF R105 1977 £785**

Three way Bextrene-based floorstander (complete with castors!) gave a truly wide-band listen and massive (500W) power handling. A very neutral, spacious and polite sounding design, but rhythmically well off the pace. The quintessential nineteen seventies loudspeaker.

**IMF TLS80 1976 £550**

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

**MISSION 770 1980 £375**

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

**MISSION 752 1995 £495**

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

**MISSION X-SPACE 1999 £499**

The first mass production sub and sat system using NXT panels is a sure-fire future classic – not flawless, but a tantalisingly unboxy sound nevertheless!

**QUAD ESL57 1956 £45 EACH**

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

**HEYBROOK HB1 1982 £130**

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

**CELESTION SL6 1984 £350**

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

**LEAK SANDWICH 1961 £39 EACH**

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

**QUAD ESL63 1980 £1200**

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

**YAMAHA NS1000 1977 £532**

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

## CLASSIC CONTACTS

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

**GT AUDIO**

(Graham Tricker, Bucks)  
Leak Troughline specialists. Also Quad and most classic tuners, radios and amplifiers restored, repaired.  
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**QUAD ELECTROACOUSTICS**

(Cambs) Quad's service department, able to repair almost all Quad products, from the very first. (Also Audiolab, Mission & Wharfedale).  
Tel: 0845 458001 | www.quad-hifi.co.uk

**Dr MARTIN BASTIN**

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

**ARKLESS ELECTRONICS**

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**CLASSIC NAKAMICHI**

(Paul Wilkins, Worthing, West Sussex).  
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**ONE THING**

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

**LORICRAFT AUDIO**

(Terry O'Sullivan, Bucks)  
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www.garrard501.com

**EXPERT STYLUS COMPANY**

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

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

**REVOX**

(Brian Reeves, Cheshire)  
Revox tape recorder spares, service and repair. Accessories also available.  
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Email: brian@revoxservice.co.uk  
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**SOWTER TRANSFORMERS**

(Brian Sowter, Ipswich)  
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KAYAK

Phantom Of The Night  
Music On Vinyl

Listening to Kayak, you could easily be fooled that they were London-based prog rockers taking influences from Genesis and Yes. The band were known for their instrumental chops and, in their 1973 debut, 'See See The Sun' created a genuine 'lost' classic of intricate art/prog rock.

All was not as it seemed, however, because Kayak were, in fact, Dutch through and through. Keyboardist, Ton Scherpenzeel's, facility at writing lyrics in English provided a commercial entry point for the band to enter the UK market, which they did quite successfully during the seventies over a range of record labels. As time progressed, the band evolved from pure prog to more pop-oriented fare, partly as a result of backing Queen on tour who proved to be a late influence on the Kayak style.

This album sees them during that transition introducing slick

production, harmonies, heavily compressed drums and clear vocals while losing the complex time signatures and impressive instrumental wizardry. That said, the band penned their biggest hit single for this album, 'Ruthless Queen'. There is plenty of charm within the songs on offer on this album and fans of Supertramp and Moody Blues will find much to enjoy in this LP.

This album is part of a major release schedule for Music On Vinyl's (MOV) 'Dutch Masters' sequence featuring well known bands such as Focus and Golden Earring but also lesser known outfits such as Earth And Fire and Supersister plus an early Golden Earrings' (note the plural) psychedelic pop outing 'Miracle Mirror', Alquin's Canterbury prog scene-like 'Marks' that blended folk with prog and a smattering of jazz. Then there's Cuby & The Blizzards' 'Live', a blues rock band, known to English audiences for backing Van Morrison just after he left Them.



HIPOGNOSIS

Setowski  
Audio Cave

The most interesting aspect of this album for readers of Hi-Fi World is not what's inside the luxurious box set but what is printed on the rear. Amongst the label information are the words 'Avid Hi-Fi'. Yep, that Avid, creators of top rated turntables, phono amps and more. The company is branching out into vinyl production.

So what of the music itself? This Polish art-rock/ambient/prog outfit has two albums, 'Sky Is The Limit' (2006) featured here and 'Relusion' (2011), offered as part of a single, limited edition, box set complete with a hard-back book insert that features the work of the renowned Polish artist, Setowski, whose name is emblazoned on the box lid and whose work adorns the same. More samples of the man's complex creations are to be found within the book.

Listening to 'Relusion' and

the track 'Cold' which, at 19:06 minutes, takes up an entire side of the first disc, is gloriously prog-like in its symphonic grandeur. Taking influences from early Pink Floyd and more modern interpretations such as Porcupine Tree plus ambient electronica, the music is ambitious in its scope. Moving to the last track on the album, another full side track spanning 22:23 this time, 'Large Hadron Collider' is a boon for fans of Tangerine Dream with its broad, expansive, synth-laden soundscapes that push you into the far corners of the universe, interspersed with deep, bass crunching low frequency belches. This deep work contrasts with female lead vocalist, KuL who, especially on 'Sky...' lends an almost Bjork-like pop tone without the avant-garde touches. Prog fans are advised to grab a one of the 300 limited editions, settle down with a glass of wine, turn off the lights and let it all wash over you.

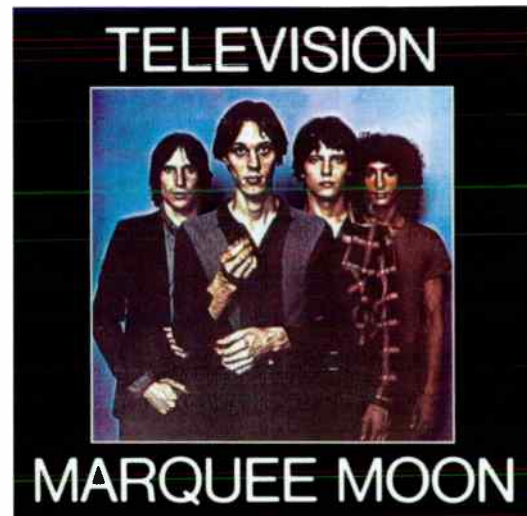
Part of the New York punk scene, Television were remarkably creative in their arrangements, which might sound like an oxymoron to those brought up in the punk ethic. Nevertheless, the band used the guitar in a pure, garage-like manner, removing all of the then traditional blues aspects of guitar playing. Instead, they retained the energy of the guitar but, if anything, added more jazz to their rock. In many ways, the band began as an early model for later post punk outfits.

Fronted by punk icon, Tom Verlaine with Richard Lloyd on guitar, ex-Blondie bassist, Fred Smith plus Billy Ficca on drums, 'Marquee Moon' was released in 1977 and proved to be a terrific guitar rock piece. Both Verlaine and Lloyd bounce off each other but, because they strip away any groove or swing in their approach, the guitar parts are almost cerebral. You can hear it during the band's interlacing instrumental breaks.

It was this experimental venture that laid the ground for future post punk releases.

To secure and meld the instrumentation were Tom Verlaine's lyrics that formed a superb suite of songs relating to an urban scene that had been fractured and splintered, creating pictures and spinning emotions that were ahead of their time, especially when you consider what was going on in the contemporary punk scene.

This Television album is just one of a series of vinyl releases from Warner's Rhino imprint featuring 180gm pressings and including albums such as Yes' prog classic, 'Close To The Edge' (1972), Fleetwood Mac's brilliant double album, 'Tusk' (1979), Alanis Morissette's caustic 'Jagged Little Pill' (1995) and one album you don't see very often in the reissue circuit, Crazy Horse's self-titled 1971 outing with veteran arranger/producer Jack Nitzsche, guitarist Nils Lofgren and slide guitarist, Ry Cooder.



TELEVISION

Marquee Moon  
Rhino/Elektra

An intriguing and quite magnificent box set from the Norwegian trumpet player extraordinaire. This is a seven LP box set spread over four albums, including a new album titled 'Chron'. Also included is Henriksen's debut 'Sakuteiki' plus 'Chiaroscuro' which features Jan Bang and drummer Audun Kleive' and 'Strjon', a tribute to his Norwegian home town Stryn, recorded with Supersilent members Helge Sten and Ståle Storløkken.

Taking each album in turn and starting with the new album, 'Chron', you are faced with a disorientating stream of often dissonant synth structures plus organic instrumentation interludes that lend themselves to minimalist orchestrations that can become tense and oppressive.

'Sakuteiki' is Arve Henriksen's first solo album. A delicate piece that reflects the intricate, beautiful

and balanced arrangement of the ancient Japanese garden planning treatise reflected in the LP's title. Featuring sparse arrangements and recorded in a selection of churches to provide that essential ambience, this collection of trumpet (utilising various breathing techniques), organ and harmonium is a delight.

'Chiaroscuro' continues the theme but includes a range of samples and is, thus, busier but the trumpet themes are slow paced and lonesome.

'Strjon' takes a highly experimental Miles Davies influence and combines it with krautrock keyboards and elegant sound washes. An astounding LP.

There is good news for the dedicated digital audiophile, as the box includes two DVDs. The first offers all of the tracks as FLAC or 16bit/44.1kHz WAV files; the second offers 'Sakuteiki' as 24bit/96kHz WAV files with the other albums as 24bit/44.1kHz WAV files. **PR**



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**ROD ALEXANDER SAYS**

It's with a real sense of nostalgia that I received Tellurium Q's latest creation, the Atom stereo power amplifier. I say stereo, but utilising a configuration Tellurium Q refer to as 'High Separation Dual Mono' they can be used as monoblocks.

Tellurium Q were repeatedly keen to stress that the Atoms were not Class D and unpacking the Atoms, the reason for Geoff's bizarre qualification suddenly became clear. The 35wpc Atoms are very small.

Tellurium Q are famously coy when it comes to revealing technical details of any of their products, but the Atoms are a sliding bias design (reducing current requirements at higher powers) and a high level of channel separation is another key design feature. Tellurium Q appear to have been extremely conservative with the biasing of the amplifier however, as in use, the amplifiers casework saw a miniscule temperature rise.

As a Colin Wonfor design, I expected the Atoms to be detailed, yet lush and inviting. First impressions, however, left me disappointed. The Atoms sounded like, well... like just another transistor power amp. While bass was articulate and tuneful and resolution was good, upper midrange and treble frequencies were grainy. The insight the Atoms provided was comprehensively compromised by archetypal transistor grain. Perseverance proved a virtue, however, with the Atoms steadily coming on song as listening progressed. 20 hours seemed to be the point at which the Atoms went up a whole performance shelf - with a significant reduction in grain, accompanied by a wonderful increase in resolution throughout the frequency range. The overall balance was still oh-so-slightly on the dry side of neutral, but even-handed from top to bottom. 50 hours in, they were really singing...

'Karine Polwart vs Lau' - a collaboration between two of the UK's folks most popular exponents of contemporary folk, showed the Atoms to be a class act, with plucked strings on 'Evergreen' incisive, while vocal harmonies retained a seductive sense of flow.

'Blindsided' from Bon Iver's 'For Emma, Forever Ago' was resonant and delicate in equal measure, the track underpinned by kick drum which through the Atoms had an almost tactile quality, with vocalist Justin Vernon's aching falsetto genuinely affecting. A truly moving result.

Purchasers wanting a lush, back to the future, approximation of Colin Wonfor's Magnum, Inca Tech and TOCA designs should look elsewhere - specifically at the TOCA-inspired Tellurium Q Iridium 20 design. However, those desperate for a fundamentally honest transistor power amp, with incisiveness and grunt far in excess of its 35wpc rating, need look no further. Just don't be tripped up by that long burn-in period...

Compact, with surprising speaker-driving and an ability to get to the heart of the music, the Tellurium Q Atoms are, I feel, a 'must audition' product.

tempo down to Chopin's melancholic Prelude No.7 in A, the well-mastered piano solo fairly shone. Each and every hammer strike was exposed and revealed. Upper mids were both sparkling and shimmering which provided hope among the considered, rather despondent rendition.

Tweaking the review conditions, I decided to move my reference system to a smaller room and hook up my SSD based Apple MacBook. Playing Carol Kidd's WAV rip of 'There Goes My Heart' allowed the Atoms to offer an open, dynamic and very expressive performance. Kidd showed a distinct and understated vocal performance that was delicate in tone but moved with strength amongst her backing jazz combo. Guitar was sprightly and metallic, fast and precise while bass was thoroughly grounded, rooting the track to the soundstage.

A WAV rip of Jimi Hendrix's 'Somewhere' from the recently released 'People, Hell and Angels' showed the axeman's complex guitar stylings. The Atoms enjoyed the big and bold tones and easily coped with the multifaceted nature of the music, providing a nimble performance.

**CONCLUSION**

The Tellurium Q Atom amps offer a superb near-field experience and can

also be successfully installed within a standard hi-fi but with certain provisos and conditions. Despite the well-lit aspect of certain areas of its performance, the Atoms are generally clean, detailed and exhibit a good sense of clarity, but they have practical limitations.

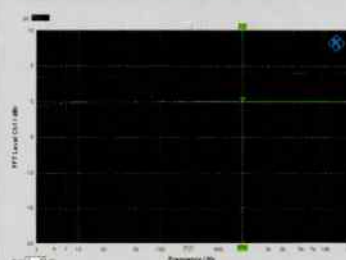
**REFERENCE SYSTEM**

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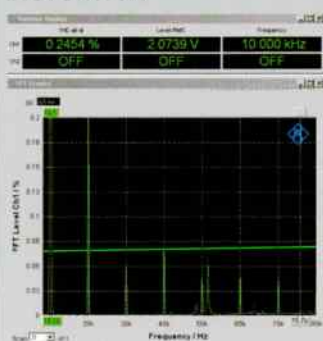
**MEASURED PERFORMANCE**

The Atom produces 21 Watts into 8 Ohms and 30 Watts into 4 Ohms so power is limited. An amplifier of this power goes loud, but not very loud before strain sets in. Large, high sensitivity loudspeakers of 88dB or more sound pressure level (SPL) from 1 Watt

**FREQUENCY RESPONSE**



**DISTORTION**



suit, and a 90dB floor stander is ideal.

Frequency response was flat right across the audio band and up to 100kHz into any load (proof they are not Class D). At low frequencies the Atom reached down to 3Hz, so it goes low too. Damping factor measured 12, a low value so bass might sound a little full, depending upon the acoustic damping of the loudspeaker.

Distortion levels were low across the midband, measuring 0.05%, but distortion harmonics were extended, an unusual property. There was a rise in distortion at high frequencies, 0.24% measured at 1 Watt into 4 Ohms, with an extended harmonic spectrum our analysis shows. This may make treble a little hard or edgy.

The Atom is a low compact, lower power amplifier that offers good measured results, but its distortion pattern is not comparable to the best.

**NK**

Power	21watts
Frequency response	3Hz-100kHz
Separation	78dB
Noise	-118dB
Distortion	0.24%
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*"Offering a clear midrange with tight and efficient bass, the Samba is a refined speaker cable"*

HI-FI World, February 2013

# "one of the brass plant pots rang at a certain frequency"



Tony Bolton

Last month I left you with the news that I had rearranged the upstairs listening room by rotating it 90 degrees. This has resulted in the speakers firing across the width of the room rather than down the length of it. I chose to do this now since I knew that there would be a few days gap in between the flow of equipment for review, while the majority of the Hi-Fi World staff made their way to Bristol for the Sound and Vision show at the Marriott Hotel. This gap gave me the opportunity to tweak the room and system, and to get to know the sound in this new layout.

Over the years I have tried most of the possible ways of setting up this room, and the previous layout had been arrived at as the best possible arrangement given the furniture then present, and the position of power sockets. The recent rewire of the house and the purchase of new record shelves gave me the option of trying a new layout, and so far I am very pleased with it.

That was not to say, however, that it was perfect. With the old layout I had used my Russ Andrews Clean Sweep Test Tone Generator ([www.russandrews.com](http://www.russandrews.com)) to tune out extraneous noises in the room. This is a very useful device which is plugged into a line level input on the amplifier and the volume is set to a normal listening level.

The large knob on the front switches the unit on, and turning it raises the tone produced from 20Hz to 200 Hz. The idea is that as pitch gradually increases you listen to all of the noises that suddenly spring forth from furniture and ornaments.

Having identified a rattling door at a certain frequency, or an ornament that starts vibrating on a shelf, they have to be silenced. I wedge a little bit of cardboard

into the frame to stop doors and windows rattling, and use Blu-Tak or a cork coaster underneath anything that sits on a surface and makes a noise.

Removing this 'living room chorus' (as Russ refers to it) makes an amazing difference to the sound of any room. In fact I would go so far as to say that the difference is akin to a quite substantial equipment upgrade.

One of the benefits in having a room lined with several thousand records, and nearly as many books, is that there is so much damping material that room resonances are pretty well controlled. Running the Sweep Test Tone Generator through its range, I didn't notice any substantial difference between the perceived intensity of the different frequencies.

I am quite sure that Hi-Fi World's measurement apparatus might find inconsistencies in the frequency response of the room, but for all practical purposes I felt that I had got a reasonably flat result. There were certainly no obvious honks or booms that would indicate that I had hit one of the points at which the room dimensions amplified a certain frequency. There was some roll off in the very deep bass, but that is partially speaker roll off, and partially the room being way too small for such low wavelengths to form themselves fully.

A couple of hours later, apart from the aforementioned rattling doors and ornaments, I had discovered that the contents of the gramophone needle tins, that sit on the edge of the bookshelves that go around the room above the picture rail, rattled. So I had put little bits of kitchen roll in each of them to stop the needles shaking about.

One of the brass plant pots rang at a certain frequency so had a

sausage of Blu-Tak hidden inside it to deaden it. A loose shelf on a table rattled, causing ripples across the top of a mug of tea that was sitting on it. It was re-glued into place.

I played a couple of records, and tweaked things a little further by putting a row of cushions on top of the back of the futon (folded in sofa-mode) against the wall. This stopped a vast amount of sound bouncing off the wall and back to my ears a few milliseconds after I had already heard it, resulting in better treble extension and sharper imaging. Previously the futon was freestanding a third of the way down the room so this hadn't been a problem.

The results of all of this have, to my ears, opened the sound up a lot. I am sitting about 18 inches closer to the speakers, but they are wider apart, and have about three foot to the side of each of them. This has resulted in a very spacious soundstage, with the sensation that I can almost reach out and touch someone right in front of me.

The sides are far enough away that I almost feel that I need to turn my head to the side a little, to see the stage wings – not unlike being in the third or fourth row in the stalls (on a level with the stage) in a concert hall or theatre.

I can also play a little louder before the room starts to get too overloaded and the sound begins to feel crowded. Which happens to be some way beyond any volume level I would find comfortable.

So, I have ended up with a better sounding room, one that feels more spacious and gives me more record storage space and better access to the records that I have already got. It was a good day's work I reckon, showing me once again that improving the room is an important part of improving the system. ●

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Jeff Dorgay, *Tone Audio Magazine*, January 2013



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Paul Rigby, *Hi Fi World*, March 2013



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World Radio History



# "jitter affects both image solidity and general high frequency clarity and quality"



Noel Keywood

Since my last column the Sound & Vision AV Show, at Bristol's Marriott hotel, has come and gone. Timed to take place at the end of February every year, I always fear the weather that, if it turns really cold or wet, makes getting there and back, unloading and loading a chore. It also dampens attendance, something that disappoints all exhibitors. This year, however, in spite of a gloomy economic background, the show was busy over its full three days. Even the weather behaved itself.

Magazines are usually sited away from the main body of the show, where space is limited. This year, however, I asked Rohde & Schwarz to join us on the stand with their test equipment, which we rely upon for measurement and which is of interest to manufacturers.

This slightly unusual idea went down well I'm glad to say, Rohde & Schwarz agreed, so we needed a bigger stand to accommodate our needs and their products, comprising two UPV audio analysers and two digital oscilloscopes. That is why, this year, we were in the large and busy Bristol Suite, on the ground floor of the show.

As audio gets increasingly complex, so too does test equipment. I didn't quite know what reaction to expect from a stand displaying products like this. Measurement is close to my heart and it is important to this magazine, but I know it's not everyone's interest. At worst I wondered whether people would think Hi-Fi World had morphed into an electronics trade magazine and avoid the stand altogether, walking blithely past.

Granted, this wasn't likely. Every year, over the twenty years we have attended this show, readers

have thronged around our stand, keeping me busy answering queries and listening to often fascinating backgrounds behind their systems. As this has included DIY and World Audio Design kits I am used to tech talk, down to component level, and dare I admit, this bit of the business fascinates me. Designing, building and tweaking audio products is where the real fun and satisfaction lies. But this year I found myself explaining advanced measurement, with analysers that can be challengingly difficult to use, the menus are so deep and the measurement methodologies so technically daunting.

In the event, we were as busy as always, or even busier. If you came to the stand, thank you for visiting and I hope I managed to speak to you. If I was talking about test routines and background theory, as I found myself doing, then I apologise if that made me unavailable. However, I spoke to so many readers, as always, that this year's dual-role wasn't obstructive I believe, and I was surprised at how many people were interested in what was going on in the technically complex realm of audio measurement.

One test we were running was deceptively simple in set up, if difficult to explain and fierce in its implications: jitter in digital cables. For this we transmitted a digital signal from the UPV's digital generator through both optical and electrical cables, connected to the analyser. What surprised us was the amount of interest this attracted. Jitter, it would seem, is widely perceived as an important issue in digital audio, by readers and manufacturers alike.

Raising the subject of jitter and demonstrating it provoked some interesting responses. PMC loudspeakers work in the profes-

sional studio field and told me it was a big issue for studios in particular, where there is a lot of digital cabling. There is an awareness that jitter affects both image solidity and general high frequency clarity and quality. It is a subtle effect, one I was not aware of until I had the chance to compare jittered and unjittered music. Then I discovered jitter is audible and it does degrade sound quality, but it isn't an effect that is overtly perceivable, unlike overload distortion, say.

I know Bristol well because I studied electrical engineering at the British Aircraft Corporation, Filton – a northern suburb of Bristol. Aircraft, their engines and systems fascinate me still, so when reader and aircraft engineer Keith Stickel arrived at the stand and explained to me about how that industry is coping with communications through glass fiber optic cables on modern aircraft, and their understanding of the impact of jitter in this field, my attention and interest were 100%.

Audio is a fascinating business and having audio analysers on our stand this year broadened my perspectives and added to my knowledge. Digital signals are peculiar in that their analogue properties must be understood and protected if the promise of digital is to be fulfilled – and this is where cables affect sound quality. A stream of engineers, from UK companies and from Europe too, all interested in jitter measurement and analysis, as well as general audio measurement, reminded me just what a broad subject audio has become, and an important one too in our everyday lives.

So the Bristol Show, as we call it, has come and now gone – and it was fascinating as always, for me more so than ever this year with two hats on instead of one! ●

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 Neville Roberts Hi Fi World Feb 2010

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# FXR

Funk & the humble RB300  
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"I recently bought an FXRii arm, and I wanted to drop you a quick line or two to say how much I'm enjoying it. I'd been a little unhappy with my previous setup. Things seemed a bit too bright, and I was getting far more surface noise than I thought I should. I learned a bit about high frequency resonance in arms.

To cut a long story short, I never had any idea an arm could make so much difference. Surface noise is gone. High frequency "glare" is gone. Voices and instruments are so realistic it's almost uncanny. Bass is richer and deeper, but loses none of its resolution.

I still think the G\*\*\*\*\* (a highly respected £3600 Reference arm) I had before is a very good arm, but to my ears the F.XR is in a different class. In fact, of the arms I've had on my deck, it's in a class of its own. Wonderful. So, congratulations on, and thanks for, a phenomenal design. I love it."



Audiofest: Denver Oct 2012,

Against systems upto \$400k, Funk's Saffire + FXR was reviewed thus:

"...this was the first and only room to sound lifelike"

(Thank you)

"...The Series V is a superb piece of engineering and a highly regarded piece of kit, yet it was clear that the FXR delivered more of the music in a calmer and cleaner fashion."

- Jason Kennedy, Tech Radar

"This fine tonearm is now an integral part of my analog arsenal"

- Tone audio

What is it then that makes FXR so special?

Funk's F•X technology

(As applied here to Rega RB300 /301s)

F•X Funk's cross-beam technology is unique available only from Funk. It delivers an arm beam of exceptional rigidity.

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# Box Clever

Tony Bolton discovers the pleasures of the little things in life.



**P**ro-Ject Audio are best known for their range of best selling turntables, but they've also been producing the "Box" series of electronics for some years. This now encompasses everything that you could want to build a hi-fi system tailored to your needs.

The source components include phonostages, docks, tuners, CD players, streamers and a range of amplifiers that includes the new Stereo Box DS under review here. The electronics are designed to fit into an optional sleeve, that is available in several colours, as are the two choices of loudspeakers

that are designed to complement this amplifier. The component facias are available in either black or silver finishes.

This compact unit measures a mere 103 x 72 x 144mm (w x h x d) yet its size belies the power capabilities of the two PWM (Pulse Width Modulation) amplifier modules per channel that are housed inside. We measured a quite impressive 56 Watts per channel into 4 Ohms - and that's enough power for most needs.

The controls are

simple, with buttons on the front panel to control source selection through the USB and four line level inputs. Beside these are buttons to control the volume. These controls are mirrored on the rather natty,



*Despite the small size of the casework, there is enough gap between the phono-sockets to accommodate bulky plugs on the interconnects. The USB input is in the centre at the top, next to the 24V power socket.*

# Vinyl is black!



The Evo ! What an evocative name and rightly so too! The SL-1200 evolved from a Hi Fi turntable into a DJ deck and now we turn it back into a Hi Fi turntable again! Fitted with the legendary SME 309 tonearm and the Audio Technica AT33EV your emotions will run wild. The AT33EV is itself an evolutionary cartridge hence its EV suffix and matches the SME 309 so well. We have worked with direct drive turntables and moving coil cartridges for over 30 years now and the EVO has evolved into a mature product that is quite simply a world beater. We can supply completely new units with 5 year guarantees, used ones with 2 year guarantees, or we can convert your own..



The T-01MC moving coil phono stage has been designed to work with every moving coil cartridge from a DL-103 to a Clearaudio Goldfinger Statement. We know that because we have tried them all and many, many others. The design comes from Dave Cawley who designed and built his first MC phono stage in 1981 and recently manufactured the award winning A.N.T. Kora phono stage. Building on his experience Dave has now produced a dual-mono phono stage with not a single integrated circuit or transistor in sight! No less than 16 FET's are used including a FET discrete power supply. The input FET's are laboriously hand tested and categorised before being inserted in blocks of 8 into the PCB. In stock now at £995.00

**TIMESTEP T-01MC PHONO STAGE**  
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**VERDICT**  
New minimalist phono stage, that sonically, punches well above its weight

**FOR**  
- open and precise  
- plenty of emotion  
- plays old mono records well

**AGAINST**  
- only available in black

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<p><b>SPEAKERS</b> Focal Electra 1008-BE speakers in champagne with high gloss stands £2250 Tannoy Canterbury's, ex demo, like new, £14000) offered for £9995</p> <p><b>PRE-AMPS</b> Audio Note M3 pre amp upgraded with M5 factory fitted phono stage, superb value £3495 Audio Note Zero Remote controlled pre amp, MINT £350</p> <p><b>AMPLIFIERS</b> Rowland 201 monoblocks with PC-1 power supply, superb cond' £3250 Rega Brio-R integrated amp, MINT/BOXED £350 Musical Fidelity XA-1 integrated amp £195 Audio Note Conquest monoblocks, superb condition (£8500) Only £4295</p>	<p>Moon W-7 Power amp, boxed with book £4995 Audio Note OTO PP with phono stage £1295 Almaro A50125A integrated amplifier, MINT with crate (RRP £5730) only £1995 Pure Sound 18 integrated valve amp, superb cond' boxed £1295 Almaro 205 Mk11, NEW, (£1250) special offer £995 Lindley Tyson (Quad 11's) KT88 valve monoblocks £2495</p> <p><b>CD PLAYERS &amp; TRANSPORTS</b> Aesthetix Romulus brand new factory sealed (RRP £6650) offered for £4995 Audio Research CD-5 CD player, mint/boxed £2495 CEC TL-0X CD transport, BRAND NEW, FACTORY SEALED, (£15k) only £9995 Accuphase DP-75V CD player, MINT/BOXED, cost new £10,000 offered for £2995 TRI CD player, NEW, (£1895) special offer £1499</p>	<p><b>TURNTABLES, CARTRIDGES &amp; TONEARMS</b> Project TUBEBOX SE MM/MC phono stage £299 Da Vinci Audio Lab "Grandeza" 10" arm with Cocobolo armwand, inc' Wally protractor. SME mount, Cost new £8300 only £3650 Origami pu7 12" arm, Kondo wired/gloss black finish (£2650) offered for £1595 TRIPLANAR Mk 7 tonearm BRAND NEW (£5K) only £3250 2 Tier Turntable wall mount turntable stand £195 Selection of high end MC cartridges at discount prices. Please call</p> <p><b>MISCELLANEOUS</b> Okutsu Denko 1.5 metre mains cable (US Plugs) £1195 Pure Power 2000 AC reference grade regenerator with aux' battery, MINT, £1995 Audiophile Quatrabase 3 tier stand, MINT/BOXED £1295 Townshend 3 tier S/Sink stand £395</p>	<p>ALL USED CARTRIDGES ARE CHECKED UNDER A MICROSCOPE BEFORE BEING OFFERED FOR SALE. WE TAKE PART EXCHANGE ON NEW &amp; USED STOCK and buy in for cash VISA - SWITCH - MASTER CARD - AMEX - DINERS CLUB WELCOME.</p>

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"I was impressed with the deep and quite tuneful bass that bounced around the room"

*The use of custom designed PWM amplification modules means that very little heat is generated and the two small heatsinks, mounted on the left and right sides, are all that is required to cool a 56 Watt per channel amplifier.*

a pleasant rendition of the 'Moonlight Sonata'. The

piano sound was good for the price point, although the higher harmonics seemed a little obvious in their presentation.

The USB input, connected to my MacBook Pro, did a good job in extracting the detail in sometimes questionable sonic quality YouTube videos.

Like every Class D amp that I have listened to so far, it has a rather assertive top end, but with a solid and tuneful bass. It is not perfect,

but allied with reasonably forgiving speakers, will provide a satisfying listen, and can host a wide variety of inputs to suit nearly every need.

**MUSIC USED:**

Beethoven. 'Ludvig Van Beethoven.' Daniel Barenboim, piano. EMI Records Ltd. 29 0857 1. 1986.  
Otis Redding 'The Definitive Collection'. WEA International Ltd. 9548-31709-2. 1992.

**SYSTEM USED:**

Linn Sondek/ Hadcock 242 Cryo/ Clearaudio Concept MC. Luxman E200 phonostage. Njoe Tjoeb 4000 Reference CD player. Kelly KT3 and NHT SB2 loudspeakers.

credit card sized, remote control unit, which also boasts a combined mute and standby button. The fascia also houses a very clear display which shows volume in 1dB steps.

I initially set the amp up in the upstairs system driving the Kelly KT3s. Starting off with Otis Redding's cover of '(I Can't Get No) Satisfaction' I was impressed with the deep and quite tuneful bass that

bounced around the room. It had a pleasing amount of weight and underpinned well projected vocals. Redding's voice seemed to be a little forward of the band, who occupied a neatly defined space around him. The staging area sat well within the speaker boundaries and was well lit, with firmly defined edges,

beyond which was a wall of blackness.

In deference to the price of this amp I changed from my Kelly KT3s to my budget speakers, a pair of 8 year old NHT SB2s (£200). These are a far more forgiving listen and proved a happier match with this amp, so stayed in situ for the rest of the review.

I changed source to the Sondek and a Direct Metal Mastered reissue of Barenboim playing Beethoven piano sonatas. I was presented with

**MEASURED PERFORMANCE**

The Project Stereo Box DS uses a classic Class D amplifier with 12V d.c. above ground on positive and negative loudspeaker terminals; recent Class Ds (e.g. Hypex, Icepower) don't have such an offset. This is only a problem when using grounded loads, but it also requires output d.c. protection.

This is a Class D with strong high frequency distortion, measurement showed, reaching 1% at 10kHz for all power levels and load values. An extended harmonic structure will likely be heard as a 'breaking glass' quality to

treble.

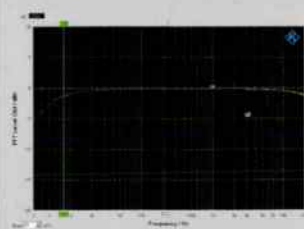
The benefit of Class D is its efficiency, delivering power without heat. A small case with minimal heat sinking can be used and the Stereo Box DS ran cool when delivering 32 Watts into 8 Ohms or 56 Watts into 4 Ohms, maximum output values. These levels mean it will go loud even with hi-fi loudspeakers, in spite of its small size.

Frequency response of the amplifier was flat into 8 Ohms but treble rolled away into 4 Ohms, as shown, measuring -1dB at 20kHz, due to the output filter network Class Ds need.

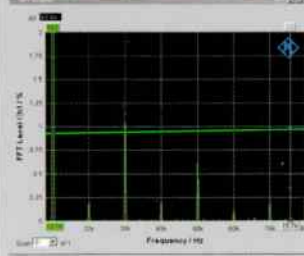
The USB input worked up to 48kHz sample rate, with no option to output higher sampling rates from its handshake to a Mac. Although 16bit resolution also was the only output option on a Mac, playing a 24bit signal did improve linearity, but because the amplifier produces distortion this was of little benefit.

Measurement showed the Project is purposed for playing conventional computer audio, not high resolution digital. It's performance is characterised by strong high frequency distortion common to Class D. **NK**

**FREQUENCY RESPONSE**



**IMPEDANCE**



Power	32watts
Frequency response	8Hz-21kHz
Separation	82dB
Noise	-99dB
Distortion	1%
Sensitivity	300mV

**PRO-JECT STEREO BOX DS**  
£299.00



**VERDICT**

Compact Class D amplifier with a big sound

**FOR**

- deep solid bass.
- well defined soundstage.
- USB input and onboard DAC.
- plenty of power.

**AGAINST**

- treble can sound a bit firm

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# vinyl section

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MAY 2013

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A novel turntable design from Funk Firm impresses Tony Bolton

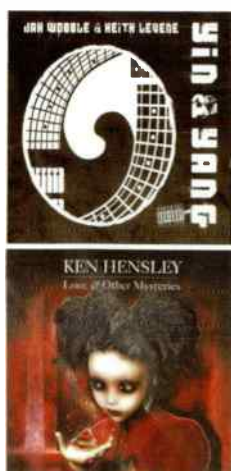
### MING DA MC PHONO AMP 90

Tony Bolton listens to an all-valve phono stage from Ming Da

### GRIEG PIANO CONCERTO PIANO ROLLS PERCY GRAINGER 94

Extraordinary piano rolls from the past, reviewed by Tony Bolton

## news



### TWO FROM CHERRY

Via Cherry Red ([www.cherryred.co.uk](http://www.cherryred.co.uk)) is a new LP via ex-Public Image Ltd members, Jah Wobble and Keith Levine. 'Yin And Yang' is a limited edition white vinyl. The album features Wobble's later spiritual soundscape influences plus his dub-infusions while Levine inserts perpetual anger and nasty guitar riffs. The joining of two evolved artists has produced an intriguing melding of styles.

Ken Hensley, ex-member of Uriah Heep, moves away from prog and rock to offer an album of introspective songs with 'Love And Other Mysteries'. A delicate and sentimental outing.

### CLASSICAL NOTES

Three from Berliner Meister Schallplatten from 2012 ([www.berliner-meister-schallplatten.de](http://www.berliner-meister-schallplatten.de)): Paacali Jumppanen's piano featuring pieces from 'Sibelius/Wagner List/Beethoven'; Bolivar Soloists' 'Musica De Astor Piazzoll' and 'Occident & Orient: Mendelssohn Kammerorchester Leipzig' with Aurélien Bello as the conductor with Kinan Azmeh on clarinet.



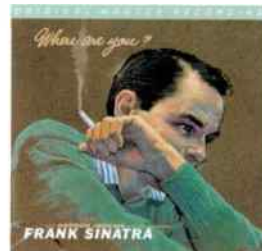
PAACALI JUMPPANEN



BOLÍVAR SOLOISTS



OCCIDENT & ORIENT  
MENDELSSOHN  
KAMMERORCHESTER  
LEIPZIG



### FRANK & BOB

Mobile Fidelity has done Sinatra fans proud with three excellent reissues that cover Frank's Capitol period. The magnificent 'What Are You?' (1957) was Sinatra's first stereo release and the first Capitol album without arranger, Nelson Riddle. Utilising Gordon Jenkins' lush arrangements, Sinatra combines a rich delivery with a tone of poignant regret. 'No One Cares' (1959), also released here, was a superb sequel. 1961's 'Swingin' Session!!!' is a hard driving, up-tempo swing jazz collection where Sinatra revisits his favourites but plays them fast and with passion.

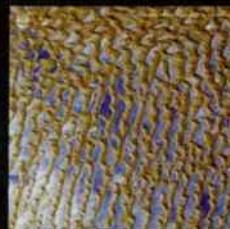
Also look out for Bob Dylan's 'Bringing It All Back Home' (1965).

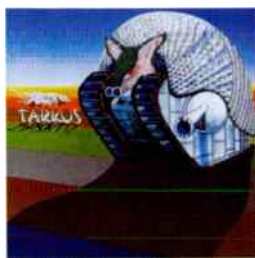
### TAKE A LEFT

Persian vocalist, Jessika Kenney and violinist, Eyvind Kang's release 'The Face Of The Earth' (Editions Mego; [www.editionsmego.com](http://www.editionsmego.com)). A haunting and multi-textural affair – nothing is ever as it seems as voices and violin intertwine.

Hecker's 'Chimerization' features an experimental libretto based upon a script from Iranian writer, Reza Negarestani. A spoken-word, avant-garde piece performed within anechoic and sound-attenuated chamber result in distortive and treated vocalisations.

The album has been individually released within three languages: English, German and Farsi.

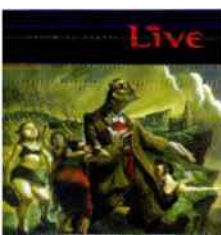




**LIMITED MOV...AND MORE**

Music On Vinyl ([www.musiconvinyl.com](http://www.musiconvinyl.com)) has a range of limited edition vinyl releases on offer. Emerson Lake & Palmer's 'Tarkus' (1971) has been issued as a two-disc set with Porcupine Tree's Steven Wilson supplying stereo mixes as 'The Alternate Tarkus'. You will also find the original poster on the Santana re-issue, 'Abraxas' (1970) while the original motion picture soundtrack, 'Lawless' (2012) featuring the likes of Emmylou Harris and Willie Nelson has been issued on red vinyl for the first 1000 copies. Onto 'Throwing Copper' (1994) from Live which, for the first 1000 pressings, including copper-coloured vinyl and The Who's 'Who's Next' (1971) which offers the original track list, a relative rarity to hear the album as originally released, especially in these 'added rarity' days.

Also watch out for standard issues from Madness 'All The Greatest Hits & More!' (2012) over two LPs plus Sade's 'Diamond Life' (1984).

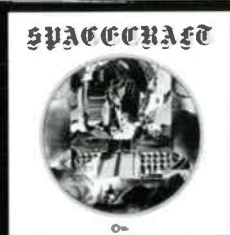


**WAAH WAAH X 3**

Three new releases from Wah Wah ([www.wah-wahsupersonic.com](http://www.wah-wahsupersonic.com)) includes 'Paradoxe' (1978) from Spacecraft, a French, private press LP via John Livengood (ex-Red Noise) and Ivan Coquette (ex-Clearlight), an acid-drenched, unstructured, rhythm-less, Gong-like album.

Also look out for Roberto Cacciapaglia's 'Sei Note In Logica' (1979) combining Philip Glass-like constructions, classical flavours, experimental modulations and synth-based instrumentation.

Lastly, Norma Winstone's 'Edge Of Time' (1972) is the jazz vocalist's debut. Full of agility, improv and astounding phrasing abilities.



**...AND FINALLY**

Ex-Frank Zappa drummer, Chad Wackerman's 'Dreams, Nightmares and Improvisations' from Audio Cave ([www.audiocave.pl](http://www.audiocave.pl); who are currently collaborating with UK hi-fi outfit, Avid, on a new series of vinyl releases) joins ex-Soft Machine guitarist, Allan Holdsworth for a jazz-infused, improv session that takes chances with rhythm and structure.

Two new punk LPs from Rave Up ([www.raveuprecords.com](http://www.raveuprecords.com)). Kidz Next Door features sham 69, Jimmy Pursey's brother on vocals. This LP contains all of Kidz late-seventies studio tracks plus live cuts. Street Kidz, on the other hand were a New York, New York Dolls-like, four-piece. This anthology contains all of the band's early eighties studio material.

Finally, look out for Farmers Market's 'Slav To The Rhythm' (Division; [www.divisionrec.com](http://www.divisionrec.com)), mixing Bulgarian folk, with prog, jazz fusion and electric guitar freak outs.



**SPV ROCKS AGAIN**

New out from SPV ([www.spv.de](http://www.spv.de)) is a reissue of Uriah Heep's 1985 album, 'Equator' that was not one of their best, in fact was one of their worst.

Eighties heavy rock outfit, The Rods' 'Wild Dogs' is another matter. A brilliantly swaggering rock outing with delightfully infectious immature lyrics.

Lita Ford's 'Lita' (1988) was her most consistent solo album. An epic, arena rock of an album full of pop hooks, it was also packed with hits.

Also look out for Fastway's rather too shiny 'Waiting For The Roar' (1986).

**DOUBLE TROUBLE**

Vinyl 180 ([www.vinyl180.com](http://www.vinyl180.com)) has released a magnificent version of Gillan's 'Double Trouble' (1981).

Remastered from the original 1/4 inch tapes this 180g, two LP, deluxe hardback book edition features newly designed inner sleeves, exclusive sleeve notes courtesy of the Deep Purple Appreciation Society (DPAS). It looks lovely and sounds clean, dynamic and fresh. The best version of the album on the market.



# Super spinner

Tony Bolton gets himself in a spin with the Funk Firm's new entry level turntable.



In the last couple of years a lot of media space has been devoted to the vinyl revival that is taking place. As a testament to this there are a steadily increasing number of new turntables coming onto the market. Newhaven based turntable specialists, the Funk Firm, have recently joined this throng by introducing the Little Super Deck.

This example is priced at £1164 including the new F5 arm. It offers a more traditionally styled machine than some of Funk's more modernist creations. The combination of an oiled walnut veneer over the MDF plinth, and the gloss black acrylic top plate, give it a retro appearance, rooted in the 1970s, but done in a 21st Century manner. Black or white versions are available for £1100, with

other colours available to special order and costing the same as this wood finished variant.

Lifting the glass platter reveals a sub platter which is driven by a belt that loops around three pulleys. This is the Vector drive system to be found on all Funk Firm turntables. The brass pulley is attached to the DC motor, while the two black ones are unpowered idlers, serving to position the belt so that the drive is evenly distributed around the platter. A switch at front left selects 33 or 45 rpm. The layout is unusual in having the lower speed to the right-hand side.

Both of these speed settings can be fine tuned by moving the deck to edge of a shelf and using a screwdriver to access the two trim pots found underneath. The left foot

is thoughtfully placed behind this area so that the deck can remain secure on the shelf while this takes place. The three feet are adjustable for leveling the deck.

The platter is topped by a quite thick felt mat, although the Funk Firm's Achromat is available as an upgrade, costing £57.60 for the 3mm thick model. A bright blue example was supplied with this review model, and after a brief comparison I did all of my listening using the Achromat. The bearing assembly sits in a brass housing that contains a hardened steel ball resting against the burnished and hardened steel shaft of the inner platter.

The F5 arm (retailing at £600 if bought separately) is made of aircraft grade aluminium and has a few unusual features. Notably, the anti-





**The three pulleys of the Vector drive system can be seen with the platter mat removed.**

skate weight is adjusted by moving a rod in and out of the bearing housing, instead of moving the anti-skate weight thread along a rod. This is far less fiddly than the conventional system and made fine-tuning the bias setting very easy. The arm bearings are housed in an aluminium housing, run in a seven-ball race.

Setting up is fairly straightforward, although some assembly is required. The instructions are quite comprehensive and easy to follow. The arm requires the headshell to be fitted. This is also aluminium and is secured by a hex-bolt that fits into the top of the arm tube. I am advised that current production models differ from this in having the cartridge alignment slots in the conventional position, instead of the adjustment being carried out by moving the entire headshell along a slot, as in this example. This alteration makes changing headshell an easy operation should you be running, for example, a mono and stereo cartridge, mounted on separate headshells.

Once the cartridge is fitted (I used my Benz Micro Ace L) the arm is balanced using the large rear counterweight. Once the arm is floating level, down-force is applied by sliding a circular weight forward along the arm, in manner that reminded me of the 1970s Mayware Formula 4 unipivot arm. There are calibration markings along the arm tube, that proved pretty accurate when compared with my Roksan Digital Stylus Balance.

Apart from the Achromat, there is an optional upgrade to the power supply, the XL PSU (£360) and the

deck can be mounted on the Kinetic Kradle isolation platform (£450). Since the deck is unsuspended, it will be sensitive to footfalls when the equipment stand is resting on a bouncy floor, so this may well answer a few potential problems. Purchasers may also specify one of the FXR range of arms, priced from £1350.

I set the deck up in the upstairs system in the place vacated by the Sondek, sitting on a Voodoo Airtek

"... it managed to provide a solid image of 'The Man In Black' growling away in his characteristic bass-baritone drawl"

air suspension support on a Target wall stand. Houseproud owners will be pleased to note that the clear acrylic lid is a standard fitment. It slides off its hinges easily and I did all listening with this removed.

First up was a 1961 LP by American songstress Della Reese. Hailing from Detroit, she was discovered by Mahalia Jackson and by the late '50s was building a very

successful career as a jazz singer. This 1961 LP opens with her doing a laid back and somewhat sassy version of the old standard 'Bill Bailey Won't You Please Come Home'. The backing by Duke Ellington's son, Mercer, swings along nicely and Della presents the vocals with a bit of a casual "yeah, right" attitude to her voice. The Little Super Deck got into the groove immediately, with some of the most precise timing that I have heard from a belt drive turntable. Della's somewhat throaty vocals emerged from a point right in front of me and were presented in a very solid, nearly three dimensional way. The sound felt very focussed and grounded, with the band forming a semi circle behind her.

Apart from the strong imaging, the thing that really drew my attention was the snap to the beat. Most belt drives at this price point tend to ever so slightly slur the leading edges of notes. This one had

more of the definition that I would expect to hear from a direct drive, or higher-end belt drive.

Apart from the tighter timing that this gives, the stability of the drive train had another useful effect in producing less disturbance to the stylus in the groove. The slightest variation in rotational speed can cause the stylus to be shaken a little in its tracking of the groove, and



**"Once the arm is balanced, tracking force is set by moving the circular weight forward along the arm. Calibration marks are provided."**

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this often comes across as a crack or crackle, usually (incorrectly) perceived as surface noise due to wear and tear. The smoothness of rotation of the platter had the effect of making records sound cleaner than they do on other, less speed stable decks.

Testing this out, I put on a very beaten up copy of Johnny Cash singing Bob Dylan's 'It Ain't Me Babe'. I do have a better copy, but this one serves a useful purpose in testing the behavioral limits of vinyl replay components. The Little Super Deck rose to the challenge well. Surface noise was within tolerable limits and the F5 arm rode a couple of moderate warps effortlessly. At the same time it managed to provide a solid image of 'The Man In Black' growling away in his characteristic bass-baritone drawl.

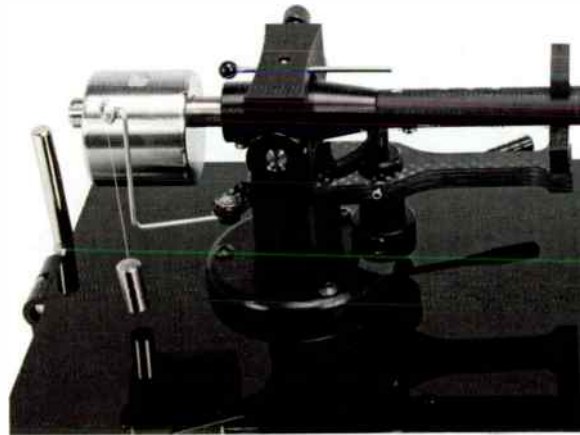
Returning to less crackly climes, I played an early 60's pressing of Gervase De Peyer performing the Mozart Clarinet Concerto with the LSO. At the time he played principle clarinet in the orchestra and this Decca/London stereo recording shows him in good form. The presentation was very good, with this deck's strong imaging capabilities creating the picture of the orchestra in front of me. The arm seemed to be particularly well behaved when coping with orchestral crescendos. The sound remained uncluttered and I was able to follow individual strands of the orchestration with little effort. I felt that the tonality of the various instruments was about right, with no trace of coloration from the arm trying to enhance the higher clarinet notes or the string sound.

I finished off my listening with some pounding trance tracks from the LP 'Electric Roundabout'. This is mostly 140bpm plus trance, and I was impressed with the definition given to the shape of the hard hitting bass notes. I have played this on a lot of decks and the unforgiving pounding beat can upset some arm and cartridge combinations so that, after a short while, the sound loses some of its shape and pace. The F5 and Benz Micro Ace combination sailed through this with aplomb, leaving me able to focus on the electronically generated midrange noises swooping across the soundstage in front of me.

I have taken quite a liking to the Little Super Deck. It seems to provide a very grounded and unenhanced rendition of the contents of the record grooves. There was

plenty of detailed bass output, whether it be electronically created near subsonic growls, or conventional cellos and double bases. I was able to follow the lines of their tunes easily, yet, at the same time, move my attention to the projection of a vocalist in front of me or the shimmer of a high-hat tapping out a counter beat as Della Reese made sultry noises into a microphone.

At this price point it offers excellent value both sonically and, to my eyes, aesthetically. The only thing this deck does not seem to provide is a romantic, rose-tinted-lens view of the music. It seems quite honest in its sonic behaviour. It will let you know that a record is past its best, but doesn't make it the centre of the listener's attention. The focus is always on the musical content of the grooves. Throughout my listening I felt involved in the music, rather than just listening to it, which is surely the whole point of the exercise. Recommended.



*The unusual antis-kate arrangement. The rod inserted through the top of the bearing housing is moved forward or backwards to apply bias.*

**SYSTEM USED:**

Luxman E200 phono stage.  
Townshend Allegri pre-amp.  
2 x Quad 303 power amps.  
Kelly KT3 loudspeakers.

**MUSIC USED:**

Mozart 'Clarinet Concerto in A major.' Gervase De Peyer. London Symphony Orchestra conducted by Peter Maag. London Records. CS.6178. circa 1961.

Miss Della Reese. 'Special Delivery' RCA Victor Records. SF-5112. 1961.

Johnny Cash. 'Orange Blossom Special' CBS Records. BPG 62501. 1965.

Human Blue. 'Electric Roundabout'. Spiral Trax Records. SPIT LP 010. 2002.

**MEASURED PERFORMANCE**

The turntable ran +1.6% fast as delivered to us, which would be heard as raised pitch by some, but speed is adjustable. The twin outrigger pulleys showed what they could do, in conjunction with a good motor. Speed stability was superb for a

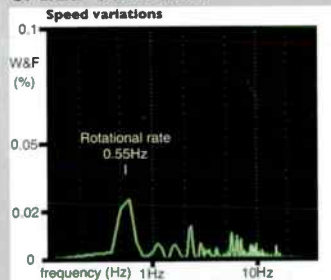
belt drive, basic speed hardly wandering at all. As a result, there was little wow or flutter, a DIN weighted total Wow & Flutter figure of 0.06% being measured. That's a trifle worse than a Direct Drive (0.04%) and better than most belt drives (0.12%). Our speed stability analysis reveals just one low 0.55Hz component (33rpm) and little else in the way of higher frequency wow or flutter components.

The F5 arm was awkward to set up, needing careful adjustment for proper alignment. Our vibrational analysis, made with a Bruel & Kjaer accelerometer shows a well damped structure. The first bending mode lies at 180Hz and a second order mode at 360Hz, but both are low amplitude.

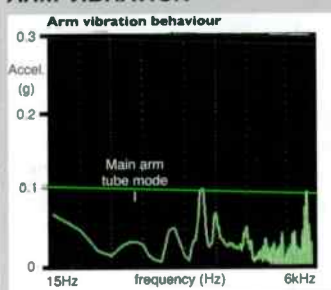
Measurement showed a belt drive turntable of unusual stability that will have rock steady tone, with an arm that is well damped and vibrationally inert – a good performance all round. NK

**Wow** 0.1%  
**Flutter** 0.04%  
**W&F wtd** 0.06%  
**Speed** +1.6% fast

**SPEED STABILITY**



**ARM VIBRATION**



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DECK FROM  
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# Ming swing

**This Chinese phonostage from Ming Da gives music swing, says Tony Bolton.**

**U**ntil July 2011 the name Ming Da was virtually unknown in this country, although it had been established in China for over 20 years, manufacturing valve amplifiers. For the last 20 months their products have been imported by Malvern based Ming Da Valve Audio UK. This is one of two phonostages that they import, the other being the MM only, £399, MC767-RD.

This more expensive model comes in two identically sized black painted metal cases that have portholes on the front through which

you can see the valves, reflected in a polished metal surround, and gently lit by blue LEDs. The one containing the low noise, choke filtered and valve regulated power supply has just a chrome plated switch on the front alongside an LED that lights up to indicate power is on. It is connected via a rear mounted power lead to the phonostage case. The front of this has two knobs, the left controlling volume and the right to select between MC and MM. The panel in the centre displays the choice made in blue letters.

The valve complement runs to 2 x 6N6, 1 x 6P6P and 1 x

12AX7 in the PSU, and 1 x 12AU7 and 4x 6N11 in the phonostage circuit itself. Accompanying this are Aerovox and Philips smoothing capacitors, Jensen capacitors and an Alps volume control. The MC step-up transformers are made in Oxfordshire and shipped out to China.

Since the upstairs system was occupied with the Funk Firm Little Super Deck I plugged the MC2006 into the downstairs system where it found itself fed with my reference Benz Micro Wood SL and the Ortofon 2M 78 (it just sounds so good playing 78s on the 12 inch

Universal arm that I cannot bear to change the cartridge at the moment). This was very easy since the two levels of gain are accessed by different pairs of gold plated phono sockets at the back, so swapping arms (and in this case, groove size and speed) was just a matter of turning a knob.

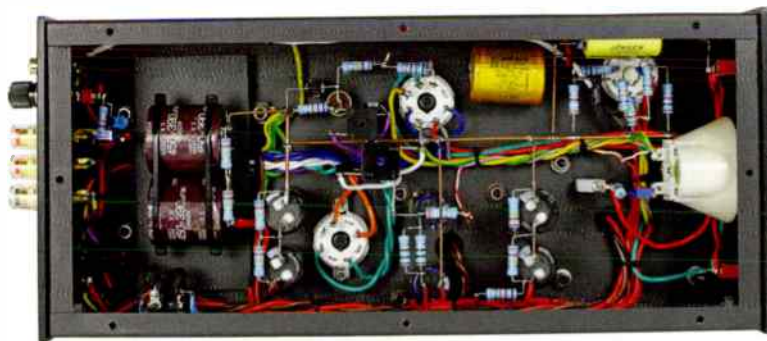
I started off with the Orb's 'Little Fluffy Clouds'. This 12 inch single contains the 'Dance Mk 2' mix on side one. This misses out the well known vocal clips of Rickie Lee Jones talking about the skies in a picturesque memory from her childhood. Instead there is a slightly more upbeat version of the tune that, courtesy of some very carefully altered sounds and samples, has a quite different flavour to the serene nature of the original mix.

The MC2006 presented me with a very big and rich sounding piece of music. The bass was powerful and

“... the treble had that beautiful openness that seems to be able to go on upwards into the sky.”

solid sounding, and certainly blew a few cobwebs off the Ursa Major's subwoofers. The midrange was nicely balanced on top of it while the treble had that beautiful openness that seems to be able to go on upwards into the sky. It had more than a little "club" flavour to its sound, giving it swing, as well as sheer size. I did feel that the bass was a little overdone at the bottom end though.

I decided to keep the sound big by then playing Saint-Saens 'Organ Symphony'. I love the E. Power Biggs recording. This is a difficult piece to record well and maintain a balance all the way through, because there are times where there is a full orchestra, organ and two pianos letting rip. A lot of phonostages will get a little overwrought when presented with this, but not so in this case. Decorum was maintained right through, although I was more convinced than ever that this phonostage produced just a little too much bass for the Tucana II / Ursa Major combination, which is not shy in this department at the best of times.

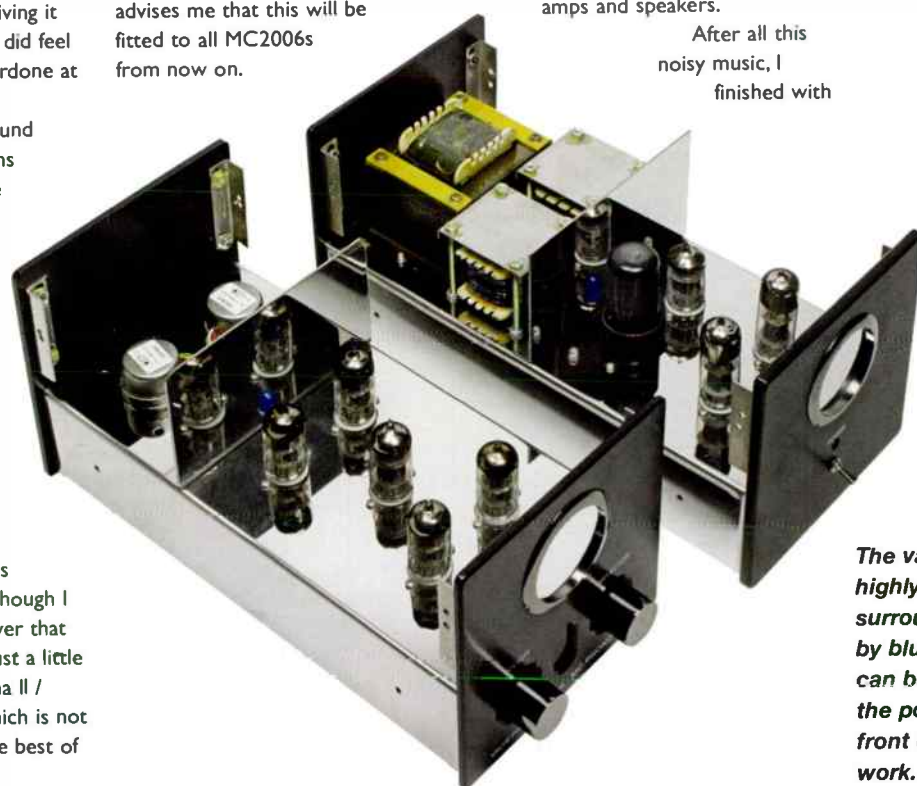


*The neat and orderly layout inside the phonostage casework.*

I decided to try it on the upstairs system, but before I did I tried out the MM input with a few 78s. The richly flavoured sound and the smooth treble response made "Fats" Waller's cover of the '20's hit 'Dinah' swing along with lots of impetus to Zutty Singleton's driving drum beat, and Waller's rollicking keyboard action. I was impressed with the size and scale of the sound. The mono

Once the Funk Firm deck had gone, I put the Sondek back in situ, moved this phonostage upstairs and plugged it straight into the two Quad 303s, taking advantage of the onboard volume control. I played the Orb and the Saint-Saens again and found the bass sound to be better suited to this amp and speaker pairing. It was still the driving force behind the sound but didn't take over quite as much as it had downstairs. However, the treble seemed a little more reticent than before. After some experimentation I plugged the phonostage into the Allegri pre-amp that is now resident, and discovered that the high frequencies returned when the volume was up full but seemed to get a little soft and almost retiring when the volume was turned down. The sound was still very pleasant and enjoyable but it was a drawback in not being able to use this phonostage effectively in a minimalist system of just turntable, phonostage, power amps and speakers.

After all this noisy music, I finished with



*The valves sit in a highly polished metal surround which is lit by blue LEDs. This can be seen through the porthole in the front of the top case-work.*

# RETRO

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**Sockets on the phonostage (left) are well enough spaced to allow quite chunky RCA phonoplugs to be used. Beside these is the ground lift switch for avoiding potential hum problems.**

something gentle, with Mary Travers singing a solo called 'Single Girl'. This American stereo double LP (the UK version was only pressed in mono and sold as two separate records) is in excellent condition, and is a well balanced recording, considering it was compiled from a series of concerts that the group undertook in 1964.

The song is a little paean to the joys of the single lifestyle by a woman who is now married with children. Mary's voice stood right in front of me with the guitars seemingly several feet away to either side. I was very aware of little subtleties and inflections in her voice as she sang, and found myself able to picture the scene being portrayed in front of me. The only thing that did strike me was that her voice and the guitars sounded just a bit fuller than I would deem totally tonally accurate.

This, and the inaccurate response from the volume control, are the two things that stop me awarding

this phono stage five globes. I would regard it as a good 4 1/2. I would be interested to hear it with a different brand of valves installed. I have heard the quite big changes that 'valve rolling' can bring about, so would hesitate to condemn the MC2006 as being too bass heavy without further experimentation. I am being picky, but

this phono stage is so nearly spot-on in so many other ways.

As it stands, I felt that there was just a little too much richness in the sound for me to consider it tonally accurate, but it is so persuasive and joyable in the way it reproduces music that you end up not really caring. It may also be just the tonic a bass-light system is looking for, so I would definitely suggest auditioning it, and I think you will find that you may well enjoy the sound as much as I did.

**SYSTEM USED:**

Clearaudio Master Solution/ Universal 12 inch/ Ortofon 2M 78 and Magnify/ Benz Micro Wood SL.  
Leema Acoustics Tucana II amplifier.  
Chario Ursa Major loudspeakers.  
  
Linn Sondek/ Hadcock 242 Cryo/ Clearaudio Concept MC.  
Townshend Allegri pre-amp.  
2 x Quad 303 power amps.  
Kelly KT3 loudspeakers.

**MUSIC USED:**

Saint-Saens. 'Symphony No.3 in C Minor. Op.78. ("Organ Symphony").  
E. Power Biggs, Organ: Eugene Ormandy conducting the Philadelphia Orchestra. CBS Records. 72132. 1963.  
  
"Fats" Waller and His Rhythm. 'Dinah'. His Master's Voice Records. B.D.5040. 1936.  
  
Peter, Paul and Mary. 'In Concert'. Warner Brothers Records. W. 1555. 1964.  
  
The Orb. 'Little Fluffy Clouds' Waul Mr Modo Records/ Big Life Records. BLR 33T. 1990.

**MEASURED PERFORMANCE**

The MC-Phono 2006 has +1dB bass lift below 50Hz our frequency response analysis shows, and this affected MM and MC inputs equally. It is enough to give a subtle but perceptible increase in bass left compared to other phono stages, most of which measure flat.

Our response at half (HALF) volume shows treble rolled down above 5kHz, measuring -4dB down at 20kHz - enough to dull treble and produce an obviously warm sound balance. It's a not-uncommon problem caused by the potentiometer slider 'seeing' too

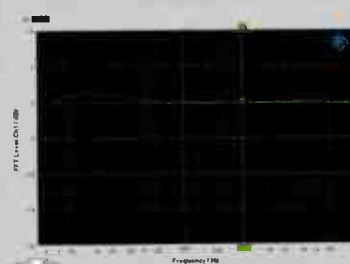
much capacitance in the cable/circuit it feeds, exacerbated by excessive track resistance 47k or 100k. Volume controls must have low value tracks of 1k-10k to avoid this (and thermal noise).

Noise was a little higher than possible, +3dB up on both MM and MC inputs, so this is not the quietest phono stage. On MM it will not matter as cartridge noise swamps input noise, but on MC the Ming Da will have just a tad more hiss than the best, its equivalent input noise measuring 0.14µV against 0.08µV expected from quiet input transformers.

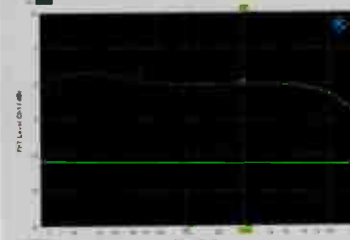
Distortion was low and output overload a massive 30V, giving very high input overload values of 175mV for MM and 19mV for MC. Gain was high for MM at x176 (+45dB) but average for MC at x1600 (+64dB). The MC figure suggests this amp is best used with high-ish output MCs like Ortofons.

The MC-Phono 2006 will have strong bass due to its equalisation. There's a bit more hiss than the best and turning down volume dulls treble so is best avoided. It will likely give an attractive sound if kept at full volume however. NK

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- treble can be a little soft

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**THE VALVES.**

The 6N11 is better known as the ECC88, developed in 1958 by Amperex, the American division of Philips. It was designed as a low noise amplifier in VHF and UHF TV tuners. Its high gain has made it popular in audio equipment.

The 12AX7 (also known as the ECC83) is a miniature dual triode valve first developed by RCA in 1946. It is popular in pre-amplifiers and guitar amps.

The 12AU7 is closely related to the 12AX7, sharing the B9A pin layout, and is a medium gain dual triode. It is better known in Europe as the ECC82. It is often used in domestic audio equipment as a low noise line amplifier and a phase inverter in push pull circuits.

The 6N6 again consists of two triode units mounted in a common bulb. The input section acts as a driver to the output section and is directly coupled to it. The input cathode and output grid are connected internally.

The 6P6P is the Chinese version of the RCA 6V6 beam-power tetrode. It was first introduced in the USA in 1937 and has been used in audio equipment as well as Fender Champ and Gibson GA-40 guitar amps.

# Grainger Plays Grieg

Tony Bolton investigates a historic piano roll recording of Grieg's Piano Concerto.

**C**lassical music is unusual in that it is one of the few musical genres where we are used to hearing 'covers' of a composer's works.

We don't think twice about choosing a certain conductor or orchestra's interpretation of the works of Beethoven or Mozart, yet most of us would object most vociferously to having the Beatles, for instance, interpreted by another performer.

There are, of course, good technical reasons why we cannot hear most of the classical 'greats' performing their own works: there simply was not the technology available to record them for posterity. However, those who lived past the latter quarter of the 19th Century had the opportunity to make recordings of their performances. Some, such as the 1889 cylinder recordings of Brahms, are



Edvard Grieg, Percy Grainger, Nina Grieg and Julius Rontgen at Trolldhaugen, Norway, July 1907

*"Edvard Grieg, Percy Grainger, Nina Grieg and Julius Rontgen at Trolldhaugen, Norway, July 1907."*

mere snippets of works, and the recording quality is so poor that they are regarded more as a historical footnote than a serious example of the composer's performing style. However, by the early 20th Century recording capabilities had improved

enough that we are able to access usable examples of the works of composers such as Camille Saint-Saens and Edvard Grieg.

The latter recorded nine 10 inch sides for the Gramophone and Typewriter Company (later known as HMV) on 2nd May 1903. These were piano solos. His health was deteriorating badly by this stage (he was 60 years old and suffering from pulmonary disorders) and he had

not had the strength to perform his Piano Concerto since 1889. However, in 1906, the year before his death, he became very friendly with the then 24 year old Percy Grainger, a pianist and composer who was achieving huge levels of international popularity.

Grainger spent ten days in the summer of 1907 at Grieg's home 'Trolldhaugen', near Bergen, revising and rehearsing the Piano Concerto in preparation for that year's Leeds Festival. Grieg died suddenly on 4th September 1907, and from this point on Grainger seems to have regarded himself as the approved Interpreter of Grieg's works.

Due to the limited sonic abilities of acoustic era recordings the player piano, or pianola, was a very popular way of listening to both classical and popular music. In 1919 Grainger cut rolls of his performance of Grieg's Piano Concerto. (Duo-Art Nos. 6475, 6479 and 6485.) This historic recording was used in 1978 by Denis Condon, a lecturer



*The Vorsetzer built by Dennis Condon assisted by Peter Phillips as shown on the record cover.*





**The cover of RCA Victor's 1978 release. Cat No. ARL1 3059**

in music at Sydney Teacher's College, and John Hopkins, then conductor of the Sydney Symphony Orchestra, to record a performance of the piece with the orchestra for RCA Victor. It was recorded by the Australian Broadcasting Commission in its Sydney Music Studios on May 2nd and 3rd, 1978, and released on RCA Victor Red Seal LP No. ARL1 3059 later that year.

The roll was read through a machine called a Vorsetzer (German for "sitter-in-front"). This machine has 80 aluminium fingers and two "feet", the movements of which are governed by the roll being read by the mechanism. The machine is sat in front of the piano keyboard and proceeds to play it. This modern incarnation of the Vorsetzer used a combination of pneumatic and electronic technologies

roll. Hopkins then guided the orchestra through the performance, taking the lead from the timing marks that had been placed on the revolving roll.

The results are extraordinary. Grainger's style of playing can, at times, sound quite alien to modern ears. He was of the generation that added their own flourishes and trills to a performance, and was, by all accounts, a fairly flamboyant character. This shows through in his usage of the keyboard. Apart from this florid style of playing, Grainger's timing is quite different to modern examples, with notes being held, or sometimes started late, in an almost jazz-like style of playing.

The second side of the LP contains performances taken from some 1950 recordings that Grainger did with Leopold Stokowski and His Orchestra, so there

"Grainger's style of playing can, at times, sound quite alien to modern ears"

to ensure even distribution of the air pressure to the various valves, to correctly read the style of playing on the

is an opportunity to compare his style on the piano roll with actual live performances.

I would suggest getting a copy of this record. It is probably the closest we will get to a performance of this piece that could be deemed to be approved by Grieg, and as such, makes for very interesting listening. It is also a thoroughly enjoyable performance with a passionate intensity that makes some modern recordings sound quite stilted and dry. A Blu-ray is available from 2L of Norway.

Other contrasting performances that I would recommend trying include Clifford Curzon with the LSO (Decca. LXT 5547 (mono) or SXL 2173 (stereo)) and a recent CD with Steven Hough at the piano with the Bergen Philharmonic Orchestra (Hyperion CDA 67824).



**The label of RCA Victor ARL1 3059**

## THE PIANOLA

Over the years various ideas have been tried to create a self playing piano. From the earliest experiments, the concept of using card or paper that had holes punched in it to actuate the appropriate part of the playing mechanism seems to have been fairly universally adopted. The earliest device that I have heard of was patented in 1842 by Frenchman Claude Seytre, but proved impractical to use. The first practical playing device was that of Forneaux which was exhibited in Philadelphia in 1876. Over the next few years an air driven mechanism took over from the previous mechanical one.

The majority of these machines used foot pedals operating bellows to set up an airflow. This would pass through valves which were actuated by the holes punched in a paper roll. The action of these valves operated a mechanism which moved the appropriate hammer and struck a note.

Early player pianos had little control over the force with which the hammer hit the strings, but by 1913 the Aeolian company had introduced the Duo-Art rolls which had provision for automatic intonation and a high degree of sensitivity to the original performer's technique. Because of this, well known pianists started making rolls of their most popular performances. This resulted in a further increase in the popularity of these machines so that by the early 1920s sales reached their peak. The rise of radio in popularity, and the advent of electrical recording in 1925, and the major increase in sound quality that this gave, hit sales of the player piano hard. The Wall Street Crash in 1929 virtually killed the market overnight.

Although the Aeolian Company struggled on, making rolls into the late 1930s, it wasn't until the 1950s that interest started to revive in these machines. A decade later there was enough interest that production restarted with Aeolian introducing a smaller cased pianola to suit smaller modern housing. This interest has continued, and today, QRS Music, ([www.qrsmusic.com](http://www.qrsmusic.com)) still make a traditional player piano, and currently list 45,000 titles of available rolls.



**The top part of a Weber Duo-Art Player Piano showing the Aeolian mechanism. The paper roll fits into the black housing in the centre and engages with the lower roller. (Image courtesy of <http://justpianos.com.au>)**



**The lower half of the Aeolian mechanism in a Weber Duo-Art machine. (Image courtesy of <http://justpianos.com.au>)**

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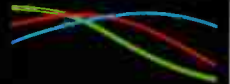


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**AUDIOLAB • 8200CD / 8200A • CD / AMPLIFIER**  
 The award-winning 8200CD features a wealth of digital inputs that will keep it playing all your music regardless of how it may be stored.



**AUDIOLAB • M-DAC • PRE-AMP / DAC**  
 Award-winning DAC featuring a USB input with asynchronous data processing along with two coaxial and optical digital inputs. High-res 24-bit/192kHz music files can be played via its coaxial input.



**CYRUS • CD8 SE2 / 6A • CD PLAYER / AMPLIFIER**  
 With its impressive 40 Watts per channel and six analogue inputs, the 6a amplifier is a great partner for the award-winning CD8 SE2 CD player.



**MARANTZ • CD6004 / PM6004 • CD / AMPLIFIER**  
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**CYRUS • STREAMLINE 2 • MUSIC STREAMING SYSTEM**  
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**ROTEL • RA-10 / RCD-12 • AMPLIFIER / CD**  
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# Old gold

**Rafael Todes listens to the Renaissance Amplification RA-01 300B valve amplifier, and falls in love with their sophisticated sound.**

**R**enaissance Amplification hi-fi products are designed and manufactured in the UK by Integrated Engineering Solutions Ltd (IES).

Founded in 1996 by engineers Chris Jennings and ex-IBM engineer, Greg Speirs the primary aim of the company was to build valve amplifiers for hi-fi use but following a request from Hewlett Packard to design and build data cable measurement systems, its output split into two distinct parts. The RA-01 300B Power Amplifier dates back to the year 2000, the first hi-fi product issued by the company.

Measuring a meagre but genuine 22 Watts, it is a rare breed of Class A push-pull mono amplifier

with an in-house designed output transformer. This is the handiwork of Chris Jennings. It uses multi-layered windings to achieve a wide frequency response and is designed to fill the core for maximum efficiency. It is placed on hollow, low resonant frequency elastomer mounts. A small amount of negative feedback was applied to achieve lower output impedance.

The monoblocks have a delightfully olde-worlde look to them, created by a 22mm solid hardwood frame with gold-plated 3mm brass top plate and a powder-coated steel transformer cover. Internally, the components are hand-wired with solid silver wire and comprise carefully chosen audiophile grade

components, including Kiwame hand-made siliconised carbon resistors, Jensen paper and copper foil-in-oil capacitors, SCR metallised film capacitors, and Black Gate electrolytic capacitors. There is just a single output tap, rated at 6 ohms with an auto-bias circuit for the output valves.

## SOUND QUALITY

For most of the listening, I used the Cabasse Pacific 35A, which have digital amplifiers built into their bass units, and come out with this assistance as highly efficient. This seems to be a symbiosis made in heaven, as the speakers have an extraordinary ability to create a soundstage, and these monoblocks

share the same talents. While the Cabasses have a slightly sharp but detail-ridden midrange, the Renaissance monoblocks have both a purity and clarity which help to maximise the detail of the midrange. The resultant sound was powerful and clean.

First up on the CD player, a BBC MUSIC recording of Haydn's Symphony No 77, the Academy of Ancient Music conducted by Christopher Hogwood, bustles with glorious detail. The rasping gut strings of the violin section sounding more gutty than ever, lovely spacial placing, real clarity as to where the instruments are located. With this combination, there is a tight, fast bass, not perhaps as substantial as with Icon Audio 845s, which with their iron grip create both volume and strength below, but still well proportioned and rhythmically well aligned. I notice that the 300Bs have a fast attack, and illustrate the micro-phrasing in this Haydn Symphony that is up there with the best valve amplifiers that I have heard. They have, together with the Cabasses, an admirable ability to create a sense of layering in the music, both texturally and spatially. The different textures of this classical orchestra are kept from conflating with each other, and the resultant clarity gives the music a really clean, high-resolution feel. The wit and charm of Haydn's maverick humour positively glistens!

Turning to some jazz on vinyl, Kenny Burrell in 'Midnight Blue' on Bluenote, the glorious separation of the players is there again, there is a very live feel to this ancient recording, Ray Barretto's congas sound like they are in the room, the tenor sax is sweet and bustling with personality, and there is a sense of staring deep into the mix. I've not heard this recording sound so revealing and persuasive. The bass underpins the texture, and drives the music forward without dominating, but rather integrating seamlessly.

Doing something that these monoblocks shouldn't be able to do, and connecting my reference B&W802Ds, and listening to Bach's 3rd Brandenburg Concerto, Raymond Leppard on Philips, the amplifiers show their mettle. There is real refinement to the sound, the strings sound utterly natural, radiating the purity and freedom from distortion that pure Class A amplifiers deliver. I particularly enjoy the way the monoblocks portray the cascading

solos in the first movement, tonally accurate, sweet, and holographically imaged. The double bass and cello isn't Stygian in proportion, but it's tight and accurate. The sound doesn't come from the gloop, syrupy variety of valve sound that can be attractive to listen to, rather the quietly understated, natural and effortless variety, that in a way defies categorisation. This really isn't a bad combination at all, in fact I'd almost say that it works!

On to what are probably better soul-mates for the monoblocks, my recently-acquired One Thing Quad 57s, which have been a personal voyage of discovery. They have in my room to be a couple of meters from the wall, on stands, with my head in exactly the correct spot, for them to reveal their magic. Needless-to-say, the monoblocks seem to be symbiotically satisfied with the Quads. Listening to the last Mozart String Quintet, played by the Amadeus Quartet and Cecil Aronowitz on DG vinyl, the beautiful midrange of both parties create some of the most



enticing sounds I've yet had in my listening room. There is real detail in the timbre of these great string instruments, even extending to the way the cello is reproduced.

**CONCLUSION**

I have enjoyed the company of these Renaissance monoblocks greatly, they could well represent the holy grail to those with efficient speakers who seek true sonic refinement. At a price that isn't cheap, but given the bespoke nature of their manufacturing, they still represent fine value I feel.

**REFERENCE SYSTEM**  
 Bel Canto CD2  
 Weiss DAC202  
 Chord Indigo Plus cable  
 Golden Oval-In Digital cable  
 Townshend Allegri Preamp  
 Cabasse Pacific SA3  
 One Thing Quad ESL57's  
 Magnum Dynalab MD90SET  
 AU24 Speakercables  
 Telerium Q Speaker cables

**MEASURED PERFORMANCE**

The Renaissance RA-01 produced 23 Watts into 8 Ohms (1% distortion limit) so it meets its manufacturer's claims. There is no 4 Ohm tap but modern loudspeakers use 4 Ohm bass units where the RA-01 delivers 16 Watts, so power output is limited with real life

loudspeakers.

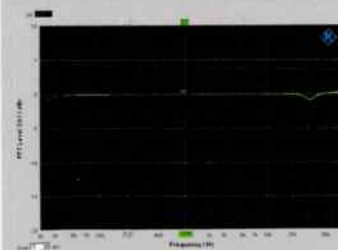
Distortion was relatively low as 300B Class A triode amplifiers go, just 0.02% for example at 1 Watt/1kHz. This inevitably rose into 4 Ohms, to 0.1% and figures were higher at 10kHz, but still good as valve amplifiers go.

Bass distortion was also relatively low, measuring 0.16% at 1 Watt, 40Hz, and 0.6% -1dB below full output. Bass from this amplifier will sound clean as a result, and a damping factor of 3 will apply some small amount of cone control to loudspeakers, if not much. It is this that gives valve amps 'full' bass and sometimes 'soft' bass, but only when acoustic damping of the loudspeaker is limited.

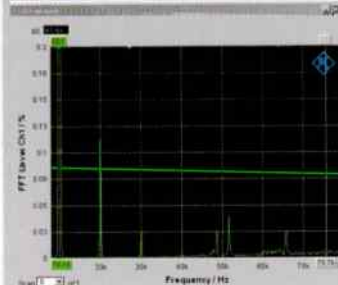
Frequency response was unusually extended, to well past 100kHz, suggesting good output transformers.

The RA-01 measured better than most valve amplifiers of its type and should sound clean in use, but power is limited. **NK**

**FREQUENCY RESPONSE**



**DISTORTION**



<b>Power</b>	23watts
<b>Frequency response</b>	17Hz-100kHz
<b>Noise</b>	-101dB
<b>Distortion</b>	0.12%
<b>Sensitivity</b>	480mV
<b>Damping factor</b>	3

**RENAISSANCE RA-01 £8000**



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# All the fun of the fair!

Martin Pipe visits the UK's largest second hand and vintage hi-fi event.



recorders, speaker drive-units or electronic 'curio', there's no better place to seek. There are also stalls selling new and used vinyl, CDs and tapes of various format. We found Elcasets (remember those?), compact cassettes, ex-BBC reel-to-reel tapes, 8-track cartridges, Minidiscs and even pre-recorded DCCs.

Most of these stalls are themselves manned by friendly enthusiasts, who

and no longer supported.

Sure, a lot of this sort of thing will (eventually?) turn up on eBay, but here you get the chance to handle it and talk face-to-face with the seller. Prices tend to be better, not least because you don't have to worry about excessive postage charges.

The most recent Audiojumble, which took place on February 10th, filled two main halls, a corridor and a couple of smaller rooms used for demonstrations. Organiser John Howes told me that the event's 146 stalls attracted no fewer than 750 visitors, mostly from the UK. However, it's not uncommon to meet audiophiles from Europe or even Asia. "Records", I was told, "were broken" – and fortunately, they weren't of the

**T**wice a year, audio enthusiasts converge on the Angel Leisure Centre in the Kentish town of Tonbridge. Their destination is the ever-popular Audiojumble, one of a number of similar events taking place around the UK at various times. They're lured by the promise of audio equipment ranging from 1920s crystal-sets to hi-fi components of surprisingly-recent vintage. If you're after valves, vintage turntables, old microphones, reel-to-reel tape

are 'thinning out' their collections - if only to make space for newer acquisitions! Others are well-known trade sellers. Prices can vary from very cheap to inordinately expensive, but that's the luck of the draw. However, you're almost guaranteed to find some sort of bargain. If you have practical electronics experience, you can buy non-functioning equipment for next to nothing. Some of it can be repaired with a little 'know-how' and ingenuity. Other gear is often missing various components, but can make a good source of 'spares' for kit that you already own – a moot point, if it's old



**One of Audiojumble's draws is its variety of vintage valves - but there's no guarantee that they'll work. This entrepreneur would test your purchases for £1 a go.**

musical kind. "Who said", exclaimed John, "that 2 channel was dead?"

**The next Audiojumble takes place on Sunday 6th October 2013. [www.audiojumble.co.uk](http://www.audiojumble.co.uk)**

**Pictures: Martin Pipe and Adrian Caspersz**

**Although the front panel of this £65 Akai GX-265D reel-to-reel was in excellent condition, its cabinet was rather tatty. Still, a good buy for anyone with old 'quarter-track' tapes.**





With a Lenco L75-S tonearm, this mint Sugden Connoisseur was selling for £300. A late-'50s Garrard 301 competitor, it coupled idler-drive with a tapered motor-shaft to achieve continuously-variable speed.



Technics' SL-P10, circa 1983, was one of the first wave of CD players. This one, with its beautiful '80s styling and vertical front-loading transport, was going for £150. It still works!



In 1963 Marantz apparently lost money on every 10B tuner, a beautifully-engineered FM-only classic with onboard oscilloscope. A front-panel scratch (and FM's numbered-days) makes this sample's £2000 asking price optimistic.



This electronic-crossover, containing a series of filters based around TL072 op-amps to split a line-level source into high, mid and low bands, was going for for a tenner. Great for active-speaker experimentation!



It's not all 'old stuff'. Around the periphery were dealers demonstrating new kit - such as this iDAC USB DAC (£275) and iCan headphone amplifier, yielding superb sounds from those Grado headphones!



Among the many cassette decks was a Walkman Professional, in excellent condition, for £120. This superb-sounding portable will give many mains-powered decks a run for their money.



Here we have Harning's Agathon, an efficient folded-horn speaker. It's Lowther-equipped - a front-mounted PM6A (plus JBL tweeter) and a PM2C round the back. The owner was asking £2,000 for a pair.



This collectible 1988 Beatles 'roll-top' LP box-set could have been yours for £200. Sourced from early digital remasters, their sound quality has alas been eclipsed by the newer set.



# Cables section

**Y**ou love 'em or hate 'em. Cables raise some people's hackles, but Hi-Fi World readers tell us repeatedly cables improve their sound and are a great upgrade. So here we are with Loudspeaker cables, interconnects and mains cables, as well as accessories such as connecting blocks in a dedicated section. If you hate 'em - don't look. But if you love 'em you now know where the goodies are.

We will look at affordable products across a single manufacturer's range. This month Audiomica cables from Music Works feature.

**This month Paul Rigby looks at Audiomica cables**

## **SPEAKER CABLES**

Audiomica Kammer Clear/Audiomica Dolomit Reference 106

## **INTERCONNECT CABLES**

Audiomica Borax Gold/Audiomica Rhod Reference 107

## **DIGITAL CABLES**

Audiomica Alunite Reference/Audiomica Vandini Gold 109

## SPEAKER CABLES AUDIOMICA KAMMER CLEAR



Well That Ends Well' vinyl album, compared to the Black Rhodium Twirl, lower frequencies on the Kammer were not quite as tight or punchy, blurring the tempo, although it did present a concise soundstage, pulling all the frequencies into one place as a cohesive whole.

This prevented too much bleeding or blurring in the upper frequency regions.

Moving to June Christy and 'Give A Little Whistle', this upper mid-centric track played more to the Kammer's strengths as it kept the small jazz combo firmly in situ while providing the instrumentalists with enough room to express themselves. Treble, via cymbals, was free and easy while piano was energetic and relatively informative. Christy's own vocal performance was both emotive and sensitive.

Turning to CD and David Gray's album, 'White Ladder'. On

'Please Forgive Me', the digital lower frequencies aided the Kammer's soft bass, giving it more form and organisation and allowing the melody to flow. In fact, the cable's rounded, low frequency softness brought an element of the analogue to the digital bottom end.

The emotion of the performance was continued over to the jazz tones of Lee Morgan's Blue Note album, 'Tom Cat'. The rolled off bass tones of the piano provided a dark and tonally ominous presentation that was contrasted by Morgan's own breathy trumpet solo.

### CONCLUSION

When thrust with an abundance of analogue bass, the Audiomica struggles to cope but balance this with a reduction in bass or, better still, give it a digital feed, and the distinctly warming aspect of the cable shines through. Its succinct upper mid performance is complimentary and welcome.

**E**quipped with a 'compensation conductor', an earth cable that connects, via a crocodile clip, to an indirect earth such as a ground socket or hi-fi casing, the Kammer consists of six Oxygen-Free Copper conductors. The weave of the multiconductor cable helps, says the company, to reduce interference by neutralizing the mutual electric current induction through the magnetic field generated by neighbouring wires.

### SOUND QUALITY

Spinning space rockers, Man's 'All's

## SPEAKER CABLES AUDIOMICA DOLOMIT REFERENCE



into others. Distortion was low for this cable, increasing clarity in addition to performance dynamics. This supreme sense of considered transparency allowed the music to flow very easily. That was, in fact, the cable's principle asset, how relaxed it sounded no matter what sonic element I cared to examine.

Switching to the hard rock of Man, the bass performance was punchy, sprightly and nimble, allowing the guitar to dance around the lower frequencies but to fully display their steely presentation and energetic character.

Vocals were given plenty of room to emote while the vocal harmony sequence now flowed like a verbal river, blending effectively but also reminding the ear that, within the group, were individual voices.

Turning to CD and David Gray's 'Please Forgive Me', the Dolomit's

low distortion behaviour allowed Gray to sound leaner and livelier within an agile projection to his vocal. The width of the soundstage was such that individual percussive and synth elements became more noticeable too.

Another challenge, in terms of complexity, was Vivaldi's Four Seasons. During the Allegro ('Spring'), the melange of strings could easily fall over each other to reach the ear, yet the Dolomit was adept at arranging each on the busy soundstage, preventing any sense of the clinical and demanding calm and order to the proceedings. Strings were both sweet and precise with a clarity that spoke of a certain grace within the performance.

### CONCLUSION

Displaying a superb sense of instrumental separation, detail was easy to discern. A calm, efficient and rhythmic performance.

**T**he Dolomit Reference cable consists of eight Oxygen-Free Copper conductors plus a closely woven sheath to help reduce distortion. The cable is hand-terminated with banana plugs.

### SOUND QUALITY

Starting with June Christy's jazz tones within the song 'Give A Little Whistle', the Dolomit immediately impressed. Firstly, accompanying a strong stereo image was a broad soundstage which allowed the instrumentalists to expand their performance without elbowing each other or bleeding their frequencies

### AUDIOMICA KAMMER CLEAR SPEAKER CABLE £305 PER 4.5M WITH TERMINATED 4MM PLUGS



#### VERDICT

An ideal cable for digital systems, the Kammer Clear provides a softening analogue flavour.

#### FDR

-digital performance  
-concise upper mids  
-musicality

#### AGAINST

-bass control

+44 (0)161 491 2932  
www.musicworks-hifi.com

### DOLOMIT REFERENCE £570 PER 4.5M WITH TERMINATED 4MM PLUGS



#### VERDICT

Portraying composed efficiency over all sound frequencies, this low distortion cable offers top sound quality.

#### FDR

- broad soundstage  
- clarity  
- precision  
- low distortion

#### AGAINST

- nothing

+44 (0)161 491 2932  
www.musicworks-hifi.com

## INTERCONNECT CABLES AUDIOMICA BORAX GOLD



cable was of an admirable clarity. Lead guitar, from Half Man Half Biscuit's satirical track, '4AD3CDCD', had a sheen and metallic twang that made its sound vital and ardent. The treble performance was

**T**he cables feature a DFSS (Double Filtering Signal System) filter that sits within a hard plastic tube on the cable. Inside are toroidal cores made from powder iron, a magnetic attenuator offering a high level of saturation induction, so that the filter acts like a choke. The cable itself uses a silver alloy conductor with a hand-terminated gold RCA.

### SOUND QUALITY

The filter system of the Borax appeared to be working as advertised because my first impression of the

good too. Cymbals were easily discerned within the soundstage. In fact, there was never a moment when they appeared to be muscled out by sonic bleeding from other instruments, an all too common element of this track. That said, the cables were not perfect, there did seem to be a slight veiling within the upper midrange. More specific than that, it was as if there was a crowding of detail at the upper end of the frequency spectrum that wanted to push further upwards but, frustratingly, hit a glass ceiling. Playing Handel's 'Wretched Lovers' from Acis & Galatea via the Dunedin

Consort & Players, the slight veiling of the upper mids were a little more pronounced in both the vocal performance and the backing orchestra. The music appeared ready to soar but never quite got off the ground yet the noise floor was satisfyingly low with distortion preventing the more obvious intrusive elements muscling in upon the mix.

That said, the rest of the midrange frequencies provided a satisfyingly resonant playback with string instruments giving a powerful reproduction and more bass-like vocal renditions were particularly impressive, displaying excellent definition

### CONCLUSION

The Borax exhibited an admirable, low distortive, playback that may not have featured an extended upper mid performance but did feature a rich lower frequency playback that suited more bass-oriented fare

### AUDIOMICA BORAX GOLD INTERCONNECT 1M £350



#### VERDICT

Hitting the distortion where it hurts, the Borax Gold offers a fulfilling bass performance.

#### FOR

- low noise floor
- bass
- rich mids

#### AGAINST

- veiled mids

+44 (0)161 491 2932  
www.musicworks-hifi.com

## INTERCONNECT CABLES AUDIOMICA RHOD REFERENCE



### SOUND QUALITY

As soon as the Rhod Reference sprang into action via Handel's 'Wretched Lovers' from Acis & Galatea via the Dunedin

**P**olish-based Audiomica has been around the hi-fi industry for ten years and specialises in cables. Installed to tackle electromagnetic distortion, each cable includes a bulky filter placed halfway along the length. The Rhod Reference features the same DFSS (Double Filtering Signal System) found on the Borax Gold but also includes the company's DSS (Double Screening System) which isolates each conductor to prevent cross-contamination. The cable is also hand-terminated with a gold RCA plug.

Consort & Players track, my instincts forced me to nod with a knowing, self-satisfied knowledge that this is how you want your music to sound. The filtering system really came into its own here. Each vocalist sounded terribly in control. The entire group almost swaying like long grass in the wind. There was also a distinct rhythm in the tidal effect of their vocal gyrations. Upper mids were quite sublime in their smoothness: there was certainly no glass ceiling effects to stifle the potential sound quality here. The low noise floor that was heard initially on the Borax

Gold ran deeper here, giving the backing orchestra a greater chance to insinuate itself from the vocalist's melange, adding to the experience. Bass didn't so much stand out as evenly integrate itself into the mix. This sense of calm was a welcome aspect of the Half Man Half Biscuit track whose high-pitched rhythm guitar can easily squawk if not controlled, leading to listening fatigue. Lead vocals featured a greater intelligibility while the treble performance was lifted to hover over the track. Similarly, bass and percussion, while not emphasised, were strong and tried their best to integrate into the mix as a whole.

### CONCLUSION

The Rhod Reference cable offered a rich maturity to the soundstage, one that extended listening pleasure by almost encouraging the ear into the mix to see what it might discover. A rewarding listen.

### AUDIOMICA RHOD REFERENCE 1M £605



#### VERDICT

Providing a smooth musical rendition, the Rhod Reference is almost opulent in its sonic presentation.

#### FOR

- low distortion
- balanced presentation
- clarity

#### AGAINST

- nothing

+44 (0)161 491 2932  
www.musicworks-hifi.com

## DIGITAL CABLES AUDIOMICA ALUNITE REFERENCE



**T**erminated with gold-plated RCA plugs, the cable has two silver-plated hot wires and a dense silver-plated braid with an impedance of 75 Ohms. The screening features Audiomica's own DFSS filter to reduce distortion.

### SOUND QUALITY

I decided to introduce a valve element into the digital signal while testing the Alunite. Hence, I connected the digital cable from my Densen B-475 reference transport to the Icon CD-X1 valve DAC. Starting with David Gray's 'Please Forgive Me', I was immediately

impressed by Gray's full vocal performance that exhibited a tremendous amount of texture and effusive passion. The well-constructed

soundstage showed a tremendous focus. Without careful control, this track can be subject to some stridency but there was no hint of that here.

The featured acoustic guitar exhibited delicacy and finesse which was enhanced by the general low distortion that improved clarity and background silence. As a result, low-level detail rose and could be easily picked up by the ear.

Turning to classical and Gluck's 'Dance Of The Blessed Spirits' which was the essence of subtlety. This track can become a muddy, confused mess when faced with excessive distortion. The Alunite showed a

terrific ability to tease out each filament of detail, opening the track fully to the ear like a complex flowering bloom.

Moving to the sometimes-temperamental Lee Morgan's 'Tom Cat', this track showed no sign of getting out of hand. The bass tones of the piano were powerful but didn't overly dominate, retaining a place in the mix that allowed the subtle cymbal work to be fully heard while the brass section exhibited a complete suite of metallic textures that were crisp but never clinical. Turning to CPR's 'One For Every Moment', the Alunite established a balanced midrange that infused upper mid life to the vocal harmonies. Deeper bass, meanwhile, was crisp and forceful.

### CONCLUSION

Listening to music via the Alunite was a pleasure. Exhibiting no vices but plenty of sonic highlights, this cable is a toe-tapping delight.

## DIGITAL CABLES AUDIOMICA VANDINI GOLD



**T**he Vandini Gold is equipped with both the company's own DFSS anti-interference filter and the DSS screening system and is terminated with gold-plated RCA plugs.

### SOUND QUALITY

Sound tests began by spinning David Gray's 'Babylon', that impressed due to its smooth presentation and low distortion. Gray showed an almost playful vocal delivery, offering a high degree of sensitivity in his delivery as well as nuance in his interpretation of the lyrics and a multi-layering texture of the presentation.

Subtlety was noticeable within instrumental play. I could now

gauge effort applied to percussion, for example. Another notable feature

was the lack of 'stickiness' amongst the instruments. That is, subtle sounding instruments that may have previously hidden behind or were almost too close to another instrument to enable you to hear its detail in full were now operating and standing on their own, contributing to a fuller soundstage. For example, the backing synth had real depth while cymbal treble was almost ethereal in its wash.

Onto classical and Bach's 'Double Violin Concerto' which took full advantage of the multi-layering effects and the advanced instrumental separation that allowed the conglom-

eration of instruments to stand apart from each other and make a positive contribution to the overall presentation. The included harmonic effects between the violins resulted in an enlightening combination that stemmed from the greater nuance from each individual performance. The soft rock of CPR and the well-mastered track, 'One For Every Moment', allowed the Vandini to shine in terms of the vocal harmonies and the broad soundstage that featured a gamut of dynamic instruments. The cable was particularly adept at tracking the delicate changes in vocal force that the harmonic collage displayed on the stage. Piano was animated while secondary percussion was detailed and perceptive.

### CONCLUSION

When you view the Vandini's combination of sonic capabilities and its attendant price, the result is an audiophile revelation, providing a gratifying level of aural maturity.

### AUDIOMICA ALUNITE REFERENCE 1M RCA DIGITAL INTERCONNECT £399 FOR 1M



#### VERDICT

Combine a low distortion performance with an overall sonic finesse and you have a superb cable digital performer.

#### FOR

- soundstage
- focus
- balance
- punchy bass

#### AGAINST

- nothing

+44 (0)161 491 2932  
www.musicworks-hifi.com

### AUDIOMICA VANDINI GOLD 1M RCA DIGITAL INTERCONNECT £189 FOR 1M



#### VERDICT

A delicately balanced, multi-layered performance produced a mature sonic performance that will delight all audiophiles.

#### FOR

- sonic maturity
- overall sound quality
- low distortion
- transparency

#### AGAINST

- nothing at the price

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www.musicworks-hifi.com

# free reader Classifieds

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ICON AUDIO Stereo 40 MkIII with Jensen caps £900. Icon floorstanders with Chord speaker cable £500. Superb combination. Pair Linn Saras with Naim cable £100. Tel: 07531 835 575 (Glos)

LFO INTEGRATED amp LE3, upgraded to MkIV £1250 or near offers. Also LFO solid core jumper silver connections. Big improvement £100 ono. Tel: Sharon 01255 222 340 or 07955 345 952

DPA 200 pre amp and DPA 200 power amp. £300 each. EAR 834L deluxe pre amp £600. All boxed. Tel: Phill 07890 896 819 after 7pm or leave message (Cumbria)

YAMAHA CD-S2000 SACD-CD player. Yamaha A-S2000 amplifier. Both boxed, mint. £1400 pair. Can deliver UK mainland. Tel: 01423 866 670 weekend only please.

NAD 304 amp £40. Mission 760i speakers £35. Aiwa ADF700 cassette £25. Heybrook open frame speaker stands £35. Tel: 01691 610 589

AVI LABORATORY Series integrated amp. Excellent condition, boxed. £650 inc postage. Tel: Doug 07940 704 570

SONY QS TA-FB920R amplifier. Quality standard range, black, 80w per channel, mint condition, manual, remote control etc. Not being used. Weight 10.3kg. £100. Tel: 0161 370 8179

CYRUS FMX tuner, black, mint condition, highest quality sound. £150. Quad centre speaker, high gloss, rosewood, mint. £70. Buyer collects (Boston). Tel: 01205 724 191

ARCAM DT91/FM/DAB tuner, black finish. Offers. Tel: 0151 677 3521 (Wirral)

PERPETUAL TECHNOLOGIES PIA digital resolution enhancer and Benchmark DAC1 with rack ears. £200 and £400 respectively. Tel: Peter Graves 01642 559 078 or Email: [gravespeter68@gmail.com](mailto:gravespeter68@gmail.com)

GALE 401 classic loudspeakers. Chrome ends. Reconditioned by Wilmslow Audio. Boxed. £400 or offers. Tel: 01825 722 936

CLASSIC 1986 Bose 601-III direct reflective, 2x 8" woofers, 4x 3" tweeters, 8 ohms, 200 watts handling. Genuine walnut hardwood. 12 1/2" depth, width 12 1/2", height 29". Mint. paperwork. £525. Tel: 01455 220 214 (Coventry)

CHORD SIGNATURE, RCA, 1 metre pair. Boxed. £150. 07411 388 152

TWO AIWA 3-head cassette decks, Model 850E. Recent service and calibration checks. £185 each. Alladins cave of audio jumble, part/non working separates, systems and test gear. Free for spares/repair. Tel: Brian 01773 831 830 (Mid Derbyshire)

SPENDOR A6 floorstanding speakers. Oak finish, excellent condition. £1350 ono. Buyer collects. Can demo. Tel: 01708 475 319 (Essex)

LFO INTEGRATED LE-III amp, upgraded to MkIV. Very good condition. £1250 ono. Also LFD solid core jumper silver connections. Big improvement over conventional. Tel: Sharon 07955 345 952 or 01255 222 340

ORTOFON 2M Black cartridge for sale. Complete with original packing and fixing kit. 20 months old and in excellent condition. £250. Phone 07804 121730 (Nottingham)

NOTTINGHAM ANALOGUE Studio Spacedeck turntable. No mods. Space Tone (arm rewired). DNM Reson Recca cartridge MM. One owner from new. Very good condition. £550. Tel: 0151 677 9861 (Wirral)

WELL TEMPERED Classic £1295. Edison Twelve £350. American valve amp £195. Kelvin Labs integrated £295. Snell K's £195. Dean Alto's £100. Oracle Paris, Troughline tuner mono, offers. Tel: 0113 255 9475

LINN INDEX speakers with stands £70. QED DiscSaver phonostage £40. Sansui AV77 video processor £45. JVC TX22L tuner £30. JVC CD1770 cassette, exceptional, £45. Wharfedale Diamonds, originals, £40. Tel: 01708 457 691

SPENDOR SPI/2R speakers, boxed, absolutely mint, nearly 3 years guarantee remaining. Purchased new in 2010. Black ash. £1750 ono. Matching custom made stands also available. Tel: 01323 728 118 (Eastbourne)

WANTED THORENS 124 or preferably 224 turntable and any interesting valve amps from 40's to 70's. Still looking for the elusive single Radford Auditorium speaker. Will travel, cash waiting. 0117 946 7188 [slkw@btinternet.com](mailto:slkw@btinternet.com)

WANTED LARGE heavy power amplifier Sansui AU717, 919 or AU111, Pioneer A858, Rotel, Luxman, Quad, Leak, also Valve pre-amplifier & Linn Sondek turntable or similar Any condition. Will collect. 01726812966.

QUAD 44 & 405 amplifier in original condition wanted. Contact [axtd1010@online.no](mailto:axtd1010@online.no) (Norway)

MUSICAL FIDELITY E500 tuner £100 and T1 tuner £75. Arcam Alpha CD1 £75 and Arcam Black Box DAC £50. Nakamichi CD2 and Aiwa FD460 cassettes, both mint, offers. Tel 077114433796

FREE! PROCEED (Levinson) CDD transport, works, faulty drawer (£2,495), when you buy the matching DAP HDCD dac, (£2,000) for £350. Boxed, manuals. Cambridge Audio Azur 840E balanced pre, mint boxed, (£800), £300. Ruark Solus, rosewood, a few small chips, (£1,200), £300. 01992 626138 Herts.

REGA P3-24 turntable with Ortofon 2M Bronze cartridge, external PS £375; Arcam alpha 9&9P amplifiers £250; Castle Eden speakers £150. All for £700. Buyer collects (Bristol area). 07500-992269, [chorc2001-2@yahoo.co.uk](mailto:chorc2001-2@yahoo.co.uk).

ATC SCM 11 Speakers Cherry 30 months old, boxed (£1,000) £480; Roksan Kandy K2 CD (£899) £450; K2 Amplifier £450; Could deliver Mids/Yorks. Davies Nottingham 07583 640342.

SMM ACRIMAT brand new, £20 XTZ AP100 Power amp, well reviewed. £300 Rega clear isolation shelf, minor scratch not seen when mounted, only £50 07894 836653 [davidprior@email.com](mailto:davidprior@email.com)

MCINTOSH MA2275 integrated amp, 75wpc, drive any speaker (£7500) £3200ono. Magnum Dynalab MD90T tuner, valve input (£1500) £700ono. Both items mint/boxed/manual. Ring 01453 519700.

ELECTRONICS HOBBYIST requires for project faulty or non working Quad 34 preamps, Quad FM3 tuners. Contact Mike 01758 613790.



POWER SUPPLY for Class A amplifiers, ie John Linsley Hood's 1996 or 1969 amplifiers or other low power class A amplifier: £249 no offers. Postage if needed is extra. Call 0207 499 8729.

FOR SALE a collection of 78rpm shellac records of classics. 1 boxed set of 4 discs. 1 boxed set of 5 discs. An unboxed Set of 2 discs and 16 individual discs some are original sleeves and some in plastic. All discs are 12 inch less 4 at 10 inch and all in vgc. Asking £50, buyer collects, extremely heavy. Full detailed list on receipt of a SAE to Aitch, 2 Lea Court, Sandfield Road, Stratford-upon-Avon, CV37 9AJ. Also for the original jazz man a mint (never played) 12inch modern LP of Sophie Tucker £17.50 + P&P

WANTED: TOP quality Hi Fi separates and complete systems, Naim, Linn, Cyrus, Meridian, Arcam etc, fast, friendly response and willing to travel/pay cash. Please call me on 0781 5892458

REGA BRIO R for sale. Immaculate condition, boxed and little used. £350 ono. Contact Andrew on 07791529128 or 020 7252 8122

NAIM FRAM. 1x Cherry Base in vgc. Faint marks at back of shelf. Bought from used Naim dealer (Krescendo HiFi) but have never used it. Instructions and boxed. £399 (RRP £745). Buyer to pay postage or collect from North London. Photos available. Tel: 020 8372 8376. E-mail: adelyn@live.co.uk

RUSS ANDREWS. 1x1m DCT Signature Powerkord £285 (RRP £421.50) 3x1m Signature Powerkords £275 (RRP £399) All cables in near mint condition and fitted with Clipsal in-line UK Mains Plug with RA fuse and with Wattgate 350i Ag IEC Plug. Cable will be bubble wrapped and sent in box. Buyer to pay postage or collect from North London. Photos available. Tel: 020 8372 8376. E-mail: adelyn@live.co.uk

AUDIOQUEST 'SKY' 72v dBs, 1m, RCA, interconnect, mint, battery packs minus batteries, soft packaging. £395 ono must sell overspent! Siltech G7 25th anniversary 770i RCA 1.5m, excellent, £295 ono. Ecosse Ref 'The Baton' RCA, 0.8m, RCA. new £69 wendon frondeg llanfair harlech gwynedd ll462re Tel 01766 781211

CYRUS ICON X4 NXT panel loudspeakers, silver / beech finish: £485 Arcadys SM35c loudspeakers, Beech finish: £265 Onkyo A933 integrated amplifier in silver, with remote, boxed with manual: £95 Quad II valve monoblocks, excellent condition for age: £935, includes leads and spare components (4 Mullard EF86s, PiOs, GT Audio capacitor boards) Various HV capacitors including Audio Note PiOs - call for list. (Winchester) 07527079229

HARBETH P3ESR speakers, finished in maple real wood veneer, and a pair of dedicated stands. All in mint condition. Boxes, packing and instruction manuals included. £1300. Buyer to collect. Phone 01305 263069 (West Dorset).

STEREO DECODER for Leak Troughline Tuner. External, uses same IC (4500) as One Thing Decoder. Fed from Multiplex output or can advise. Comes with Power Supply. £99 +P&P. Tel: 01924 458811.

APOGEE CENTAUR ribbon speakers for sale, excellent condition, new ribbons fitted Jan 2012 at a cost of £300, I have the receipt for this. Transparent sound and a soundstage to die for. Very heavy so cash on collection only. £525.ono. I can email pics on request. Tel: 07806455032. Email: csayers234@aol.com

RUSS ANDREWS Yellow mains cable 2m length £45 also yellow 6VWax extension 4m cable super clamp spike filter £95 buy both For £130 items mint condition cheaper if collected. Tel 01902 884694 email jukey39@yahoo.co.uk

LFD PA2M Power amp (monoblocks in single chassis) Excellent working condition includes upgraded internal hifi tuning.com fuses. Can demonstrate, call for details - Offers (Bedfordshire) e: stuardarshan67@googlegmail.com T: 07870 912 963

DNM PA2 High Current, Mono Blocks Immaculate, £2000 Audiolab 4 x Monoblock Immaculate Latest £1800 Van den Hul Revelation 8 x 5 Monometres. For Bi Amp/Wire 4mm plugs. £950 (new £2000) Tel 07703292064

DENON 103 R cartridge, 10 hours use, almost brand new. £160. Tel 01638 668299.

3 PRS of Missing Link Cryo Reference interconnects, 1x1m rca (£320.) 1x30cm rca (£220.) 1x 0.8m RCA to XLR (£240.) all with certificates. 1 pr of Linn black i/cs (£20.) 2 prs of Linn silver i/cs 0.5m (£90.00 each). Russ Andrews 2m headphone lead for Sennheiser 600,650,etc (£50.00)& 2m headphone extension lead as new (£40.00) call Alan on 07720837194, or biggsylal@sky.com (Chester)

QUAD 11L Loudspeakers Brand new - tried/run-in for less than 1 month. Piano Black lacquer finish. Perfect (10/10). Original box. Price Paid: £466 (538 euros). More info & photos available on request. Units located in Luxembourg - can send by parcel post (approx £25), or bring over on next trip to UK (negotiable). Wanted: £350 o.n.o. Tel: +352-621-500756 or E: barig@pt.lu

PROAC RESPONSE 3.8 in real Yew veneer. Slight cabinet damage, but not noticeable set up. Otherwise perfect. Amazing deep bass at low volume. Can be tested. £1400 ono. Stevee67@gmail.com N. Ireland.

QUAD II Forty Valve Monoblock Amplifiers (Pair) As new with original packaging £1750 ono. Tel. Steve 01268 785808 E-mail steven.dacey@btpenworld.com.

RUARK TEMPLAR II, two way, floor standing loudspeakers. 88db, 1 watt / 1 metre. 50hz, 20khz. Spiked, Rosewood. British made. Brochure. Boxed, as new. Cost £650, Sell £375. Daytime Tel: 0131 4494997

GARRARD 401 turntable £375, SME 3009 (early version) tone arm £180. Telephone 01189 413708.

DYNAVECTOR SUPERSTEREO Adaptor DV SS Adp3 unit. Top of their range. In perfect condition and working order (9/10). Original Price Paid: £1495. More info & photos available on request. Unit located in Luxembourg - can send by parcel post (approx £25), or bring over on next trip to UK (negotiable). Wanted: £800 o.n.o. Tel: +352-621-500756 or E: barig@pt.lu

LINN ACTIVE system for sale, complete, boxed, vgc, all sources; also Nakamichi DR10 & CR2 cassette decks. email for details/photos: crossways@freeuk.com

EB ACOUSTICS EB2 stand-mount speakers - Oak finish Used but in excellent unmarked condition. You do not have to wait 4 months to get your hands on a new pair of these wonderful sealed-box speakers, get these now, they are just about run in! Excellent 87dB sealed-box design, ATM SC11 beaters! Collection only. £480. alan.strudwick@googlegmail.com, Mobile 07725525001 (South Wales)

SUGDEN HEADMASTER pre-amp/ headphone amp vgc £400; Cyrus Power, power amp, black vgc £200. Email steverappleby@gmail.com or text/ call Steve 07905 762363. SE London.

KEF REFERENCE 203-1 in cherry gloss One carefull owner. Very little use near mint condition includes manual and sundries. Can deliver to Devon and Cornwall areas £2,500 01409 241177

PAIR TANNOY Cheviot cabinets with 12" hpd drives recently professionally reconed sound amazing £525. Leak Troughline II valve tuner with stereo decoder fully serviced £75. Tel 07515 284997 North Suffolk

PIONEER A300R Precision Stereo Power Amplifier (modified by Tom Evans) Very rare piece of Tom Evans hardware. This Pioneer A300R Precision has been modified for me by Tom himself to run as a stereo power amplifier. Amazing piece of kit with stunning sound and will drive virtually all speakers to very high levels. Please note the conversion process was a 'one-way' trip, it cannot be reconverted to an integrated amp so you are going to have to use a preamp with it. Note:- perfect working order but case has some surface scratches. £350 o.v.n.o. alan.strudwick@googlegmail.com 07725525001 (Wales)

REGA P3-24 turntable with Ortofon 2M Bronze cartridge, external PS £375; Arcam alpha 9&9P amplifiers £250; Castle Eden speakers £150. All for £700. Buyer collects (Bristol area). 07500-992269, chorc2001-2@yahoo.co.uk.

ICON AUDIO Stereo 40 MkIII with Jensen caps £900. Icon floorstanders with Chord speaker cable £500. Superb combination. Pair Linn Saras with Naim cable £100. Tel: 07531 835 575 (Glos)

# NEXT MONTH – JUNE 2013 ISSUE

Quad's novel 'current dumping' amplifier circuit makes a return in the new QMP monoblock power amplifiers that appeared recently at Bristol's Sound & Vision Show, 2013. With massive power, and the ability to drive the world's most difficult loudspeakers – electrostatic – they may well be a great new amplifier. Find out next month in our June issue.

Pictured below is another quite different amplifier, the Ariand 845. Using a single 845 valve per channel it is less powerful than the Quad, but still superb.

Here are some of the products we hope to bring you in the fab JUNE 2013 issue –

ZONTEK RECORD DECK & DELTA TONEARM

NAD C390 DIRECT DIGITAL AMPLIFIER

YAMAHA BD-A120 BLU RAY PLAYER

LINN KIKO SYSTEM

MOBILE HEADPHONE AMPS FROM JUST AUDIO

ARIAND 845 VALVE AMPLIFIER

QUAD QMP MONO AMPLIFIERS

ICON MB30SE SINGLE ENDED AMPS

SANSUI DR-201V TUNER

iFi Micro iUSB POWER SUPPLY



We either have, or are about to receive these products, I can't guarantee they will appear, commonly due to a need to re-schedule or failure under test.

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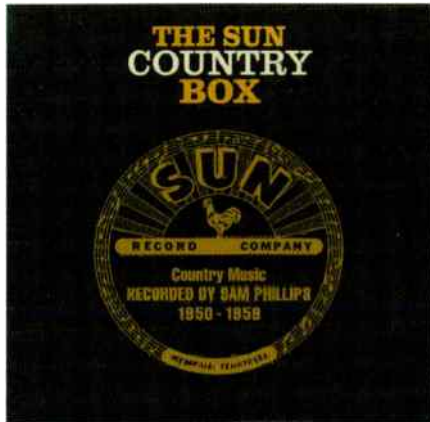
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JULY 2013 ISSUE - 3RD MAY

AUGUST 2013 ISSUE - 4TH JUNE



"that music will either drive you out of the room or rivet you to your chair."

# CHARLIE FEATHERS

## SUN COUNTRY SINGLES 2013

**O**f late, a range of classic albums has filled this column. From The Sex Pistols' 'Never Mind The Bollocks' to Booker T. & The M.G.'s 'Green Onions'. Sometimes, though, classic cuts do not and cannot fill an album. Yet they are more than worthy of recognition. They are notable and undeniably 'great' in their execution, delivery and impact. Such were the handful of songs produced by Charlie Feathers for the Sun record label during the fifties.

Feathers may not have the towering reputation of his label mate, Johnny Cash or the fame and adoration of his other label mate, Elvis Presley, yet Charlie Feathers was a superb country stylist. No matter what song he sung, he dominated it, infusing it with his personality. He would later move to the King label and help to pioneer the rockabilly genre, combining country, blues and bluegrass into an alluring melange. In relative terms, though, the man is still criminally ignored.

"Charlie Feathers' music couldn't have been less commercial," said Hank Davis, re-issue producer for the new set featuring Feathers' work, *The Sun Country Box*. "Charlie has songs on Sun that are stone country. They are brilliant. They sound eerie, almost goose bump-like. The Sun country music that he made is almost worth the price of the box set. So much of it has to do with his voice. If you have heard Charlie Feathers then that is going to make a permanent mark on your consciousness. I have yet to hear anybody else sing like Charlie Feathers. It's an acquired taste. No one is going to put on 'I've Been Deceived' or 'Wedding Gown Of White' and say, 'Yep, that's country music.' That music will either drive you out of the room or rivet you to your chair."

You may have already raised an eyebrow and even a hand of interruption at the notion of the famous 'rock'n'roll' label, Sun, being heavily involved in the country genre. Of course, Johnny Cash was on the roster but what about other roster signings such as Elvis Presley, Carl Perkins (star and writer of the Elvis hit, 'Blue Suede Shoes'), Jerry Lee Lewis and, later, Roy Orbison?

The answer is that, in the beginning,

there was no rock'n'roll. The term hadn't been invented. Elvis Presley played mutant hillbilly music known as 'Hillbilly Bop', which morphed into rockabilly. The notion of Sun and rock'n'roll is merely a commercial construct applied in hindsight.

Country and its 'mutant' evolutions where very much a Sun trademark, therefore, and it's very possible that outsiders such as Charlie Feathers would have been unable to produce his unique brand of country for anyone else. The reason is down to one man, the boss and founder of the label, Sam Philips.

"Sam was one of the original 'no bullshit' producers," said Davis. "For example, a group of musicians, young hopefuls, would come in and try to 'please the man' by playing versions of current hits. Sam would say, 'No, not interested, what else you got?' He would continue to say the same thing, almost pushing the artists against the wall until one guy would say, 'Well we got this one song that Ernie here wrote last week and we're just working it up...' and Sam would say, 'Let me hear it.' That would be the one. He would say, 'Stop trying to please me. Stop playing the hits of the day. Let me hear something that you don't think is ready for prime time. That is where I'm gonna hear the honest stuff.'"

That is how Feathers was able to open up and sing from his heart because Sam Philips listened to anyone who had something to say. This is why Sun Records, as a label, was full of unique artists, outsiders, weirdos and, frankly one-step-away-from-certifiable individuals.

So how can you listen to Feathers' works of genius? You can search for the original singles, of course, but they will set you back hundreds of pounds each. Otherwise, grab a copy of *The Sun Country Box* which features all of Feathers' works plus others greats such as Ernie Chaffin, Jack Clement, Johnny Cash and Jerry Lee Lewis over six CDs, mastered direct from the master tapes, along with a museum-quality, hardback book packed with rare photos of the life and times of the label, memorabilia and records. It's a real tour de force of a box set.

Without Sun, there would have been no Charlie Feathers' country output. Without Charlie Feathers, music would be all the poorer. **PR**

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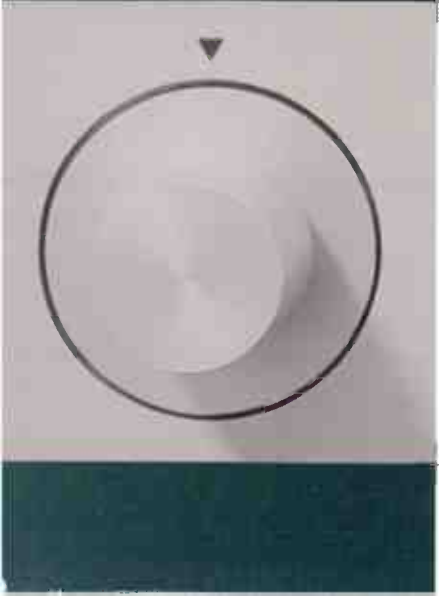
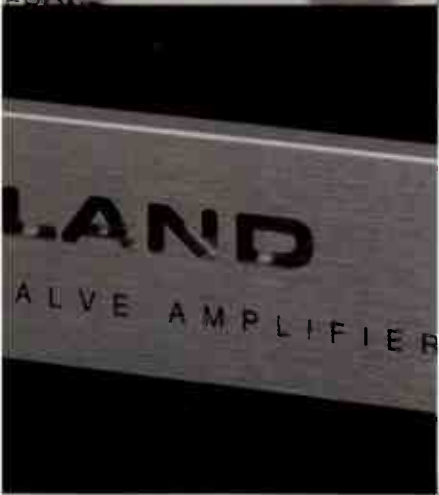
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