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welcome

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verdicts



10 simply the best
9 extremely capable
8 worth auditioning
7 unremarkable
6 seriously flawed
5 keenly priced

The High End Show in Munich, Germany, is aptly named. A huge show spread over three vast halls, the price tags dangling from gleaming products take my breath away. How about €120,000 for a Transrotor turntable? Germany and Switzerland seem able to support this market, but we rarely see such high-end glamour in the U.K. Well, now one of Germany's more celebrated manufacturers, Burmester, has entered the U.K. and in this issue we review their top 032 amplifier, shipped to us direct from the factory in Germany, glistening in all its glory on our front cover and p12-15 of this issue. European high-end arrives in the UK.

An amplifier of a very different kind, an Onkyo TX-8050 stereo receiver also gets close attention from us this month. Network connected and Spotify equipped the TX-8050 is packed with features – and the level of ability we've come to expect from Onkyo. It's sort of an AV receiver, but without AV! See what Paul Rigby thinks about it on p16-19.

Digital HD sound – offering better quality than CD – continues to make the running in today's market place. But digital was born into criticism and controversy and top recording engineer Tony Faulkner tells us about its drawbacks on p26-29, speaking to Rafael Todes of the Allegri String Quartet. It isn't all bad news of course. Modern digital is going places and together Tony and Rafael explore the issues.

Rafael insisted we review the Rega DAC that, somehow, we have missed. He compares it with the admired Metrum Octave reviewed last month. It's an interesting piece of technology and great Rega value as always.

In our section for vinyl spinners Tony Bolton sneaks in a mono moving coil cartridge from Benz Micro of Switzerland, to better listen to his Ray McVay (he won't admit to that!). And Adam Smith sates his hunger with a dual motor EAT E Flat turntable, complete with flat arm!

In all then, this month's Hi-Fi World is as varied and eclectic as ever. I hope you enjoy it.

Noel Keywood
Editor

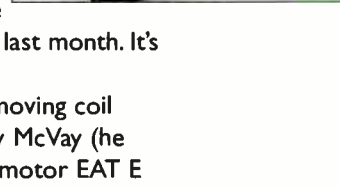
testing (see www.hi-fiworld.co.uk for full explanations of all our tests)

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

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

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

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



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WHARFEDALE MEMORIES

Wharfedale celebrates its 80th anniversary this year and what better way to party than to welcome the return of an old favourite: a limited edition version of the Denton, originally released in 1967. Re-released with the guiding hand of Peter Comeau, the Denton 80th Anniversary Edition is a two-way speaker in the classic bookshelf mode, wrapped in hand veneered mahogany with an inset front baffle and traditional tungsten grey cloth grille.

Under the hood, the Denton has been updated with a woven 125mm Kevlar cone mounted on a rigid die-cast chassis. High frequencies are handled by a 25mm woven textile soft dome tweeter with a high-flux ferrite magnet, fed from a new crossover.

Spanning 320x200x275mm and weighing in at 7.9kg, the new iteration of the Denton is priced at £500. Click on www.wharfedale.co.uk for more information



DENON'S 520s and 720s

Denon has announced the PMA-720AE and DCD-720AE (£350 each) stereo amplifier and CD player respectively. The PMA-720AE integrated amplifier features new Advanced High-Current Single-Push-Pull circuitry while supporting BD, Super Audio CD and DVD-Audio. The featured remote can control a Denon CD or Network Audio Player.

Speaking of which, the DCD-720AE CD player incorporates a 32-bit/192kHz DAC while Denon's Advanced AL32 Processor uses proprietary algorithms to expand audio data to 32bits. Equipped with a USB port for playback from an iDevice or USB memory, the digital signals are upscaled. That remote can also be used to select files, while file names and other information can be viewed on the two-line display. The PMA-720AE and DCD-720AE are available now in black and premium silver.

Need something rather more affordable? Denon's PMA-520AE integrated amp and DCD-520AE CD player are entry-level units (£180 each). The PMA-520AE amp also features the Advanced High-Current Single-Push-Pull circuitry and redesigned remote control, 32bit/192kHz digital to analogue converter and two line display. Call 02890 279830 or type www.denon.co.uk for more information.



NAIM PRE STREAMER

Naim's first networkable, streaming preamp, the NAC-N 172 XS, only needs to be paired with a power amplifier to form a two-box solution offering separate pre and power amplification along with integrated digital sources: UPnP network streaming, internet radio (optional FM/DAB), playback from iPod/MP3/USB and five S/PDIF inputs. The Naim n-Stream app also provides full control of all connected Naim sources.

Offering up to 32bit/192kHz audio files played either from a front-loaded USB port or streamed from UPnP-enabled devices, the box streams and plays WAV, FLAC, ALAC, AIFF, AAC, WMA, Ogg Vorbis and MP3 files with gapless playback available on all lossless file formats. The Naim offers a digital connection for iPod/iPhone, five 24bit/192kHz-capable S/PDIF digital inputs (two RCA, two optical and one 3.5mm Toslink) and three analogue inputs (one DIN, a RCA pair and a 3.5mm front-panel socket) plus an OLED display.

Contact www.naimaudio.com or 01722 426 600 for more information

MARANTZ AV & SOUND

The Marantz SR5007 (£700) is a 7.2 channel receiver that arrives with the famous Marantz circular display and networking facilities for audio streaming from PC and Android, internet radio, online services and AirPlay from Apple iDevices. The SR5007 incorporates six HDMI sockets plus M-DAX2: Marantz Dynamic Expander version 2 to 'enhance' compressed music files. Other utilities include Audyssey MultiEQ XT and Dynamic Volume Control.

Also look out for the Marantz UD5007 (£500) Networking Universal Disc Player, with the ability to play audio and video content from discs, act as a digital streamer from a home network and from the internet including YouTube and video-on-demand via Netflix. Not only does it play CD and SACDs but it has 24fps Blu-ray capability with BD-Live and DLNA 1.5 specifications that supports FLAC.

Both HDMI digital and RCA analogue connections are supported, while 24-bit/192kHz audio decoders and custom analogue output stages are featured too. Both products are available in black and silver-gold.

Click on www.marantz.eu for more information.



SOUNDBAR

Roth's new Sub Zero bar speaker arrives with an optical input to easily connect to cable and satellite. The Roth speaker also sports RCA stereo connectors for additional TV systems. There's a 3.5mm mini jack to hook up an older style TV, as well as the latest smartphones.

Tailored to fit with 32in to 42in screens, the Sub Zero avoids a separate subwoofer design by employing a ClassHD amplifier to power a pair of built-in ultra bass drivers. The speaker driver array numbers eight in total, two of which are vector firing side drivers, delivering enhanced stereo as well as wide-firing FX (Fractal Expansion) sound effects. The bundled Roth remote enables sound adjustments directly from your listening position; the Sub Zero's LED display is dimmable and the price, £149, includes table stands as well as wall brackets.

Click www.rothaudio.co.uk for more information or ring 01753 682782 for more information.



PELLAR

Avid has another phono stage in the offing. The Pellar is the company's entry-level design and includes a low noise, internal power supply. Connections, at the rear, allow for RCA in/out. The default resistance value is set to 47k, making it ideal for MM cartridges. An additional set of RCA connectors allow the resistance values to be tailored to any desired value; so all MC cartridge types are accommodated too. On the underside of the unit, gain settings are available for all MM, low output and high output MC types. Price is £600.

Contact www.avidhifi.co.uk or call 01480 869 900 for more information.



CLARUS CABLES CONTACT DETAILS

The contact details for Clarus Cables were missing from Soundbites, p81 of our August 2012 issue.

They are: +44 (0)843 5235725 www.studio5avb.com



BAYAN DOCK

Bayan Audio's top-of-the-range iPod/iPhone dock arrives with a twin amplifier set-up producing 120W. The Bayan includes dual iPod/iPhone docking points, a five way 2.1 channel stereo speaker configuration and 8in subwoofer, 2in mid-range and 1in tweeters plus 12mm solid wood casing, a 3.5mm jack for other audio sources and Voice Mode option for audiobooks and podcasts. Spanning 45cmx30cmx28cm and weighing in at 6.84kg, the Bayan 7 is priced at £299. The smaller Bayan 3 (£100) and Bayan 1 (£80) are also available.

Click on www.bayanaudio.com for more information.



GO LONDON, WAHOO!

German-based Sonoro Audio, has announced the GoLondon portable DAB/DAB+/FM radio with iPod/MP3 connectivity. Priced at £129 and looking like a big drink, the LCD display is situated at the base of the chassis. A retractable telescopic antenna and volume control knob is embedded in the speaker grille, whilst other portable sources can be connected via the rear-mounted 3.5mm stereo socket. Interchangeable sleeves include one of eleven including a soft-touch black, white, red, green, purple, orange, blue or taupe and felt sleeve in purple, green or grey. Additional sleeves are available separately for £15.99 each.

The GoLondon spans 192x94mm and arrives with NiMH rechargeable batteries lasting up to 12 hours.

Click on www.unlimited.com or ring 0208 200 8282 for more information.

AIM FOR THE MOON

Sim Audio has announced the release of a new phono stage, the dual-mono, fully balanced, differential designed Moon 810LP. Part of the Evolution Series, the 810LP offers selectable gain, impedance loading, capacitance loading and equalisation curves which are all alterable via DIP switches located on the bottom panel.

The power supply features a pi-type filter using 40,000uF of capacitance and dual choke inductance. The four stages of the newly developed M-LoVo MOON low voltage DC regulation circuit includes a circuit made up of low noise ICs and discrete parts while the adjustable resistive loading offers sixty-four settings from 12.1 Ohm to 47 kOhm, the capacitance loading offers sixteen settings from 0pF to 1120pF and the gain settings provides sixteen settings from 40dB to 70dB. The box also includes selectable equalization curves for both the RIAA and the IEC standards.



E-DAC

Epiphany Acoustics' has released a USB-based DAC called the E-DAC. Arriving within a small form factor, aluminium enclosure with custom front and rear panels, input and power is supplied via the USB input on the rear of the unit. The line level analogue output is via a 3.5mm jack. Based on the TE7022L UAC1 engine and ES9023 24bit DAC chip, it supports 16bit and 24bit at sample rates of 44.1kHz, 48kHz and 96kHz with a low noise, on-board filtered power supply. The DAC is not clocked by the USB port/computer but an on-board crystal controlled oscillator. A short, 0.5m, USB to mini USB cable is included in the box, as well as four self adhesive rubber feet. Price is £99.99. Contact www.epiphany-acoustics.co.uk for more information



Denton - living the legacy...

Wharfedale's 80th Anniversary Limited Edition



Britain's most famous loudspeaker brand is 80 years old this year. To celebrate, Wharfedale is reviving one of its most popular models of the past – the Denton.

Introduced in 1967, the Denton exemplified Wharfedale's twin edicts of quality and value, balancing fine craftsmanship, natural sound quality and affordability inside a compact loudspeaker that was bought in its millions right across the globe.

The Denton 80th Anniversary Edition remains true to its illustrious namesake whilst making the most of modern materials and manufacturing techniques to deliver a speaker that is fully equipped for the 21st Century.



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Wharfedale

THIS AND THAT

Ruark Audio is offering a special edition of its R4i music system in Dream White carrying the signatures of all five members of Take That. Swoon, girls. The unit was placed at auction at the Nordoff Robbins O2 Silver Clef Awards. All money raised will go to the charity that is dedicated to transforming the lives of vulnerable children and adults through music.

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



DESK BOUND

La Boite Concept has announced the LD Series (LD120 and larger LD130), a docking station dedicated to laptops which also works with any mobile phone or music device. Via a single cable connection, the LD Series turns your laptop into a music system and when you've had enough of the proverbial boogie, the platform converts into a work desk.



The unit features a seven speaker format with a proprietary Wide Stereo Sound system, an enhanced stereo effect, using a pair of stereo drivers located at the rear of the desk firing into the wall at a 45degree angle, relying on sound wave reflection. In addition, there are four drivers on the front of the unit, side baffles to minimize reflecting obstacles and, finally, a subwoofer below.

The LD130 features Kevlar and carbon fibre drivers, powered by three separate amplifiers with low noise toroidal transformers. The LD120 offers the same configuration but with less power: 120W total power instead of 130W, plus silk and cellulose pulp-based drivers. Your laptop connects to a Burr Brown-powered USB sound card.

The finish mixes natural leather with real cherry wood, matt black and four luxury piano lacquers: pure white, pure black, grey and bright red.

The LD120 with lacquered feet is £870. The lacquered LD130 with matt feet is £1,180. The price of the LD130 in wood with lacquered feet is £1,290.

Click on www.laboiteconcept.com for more information.



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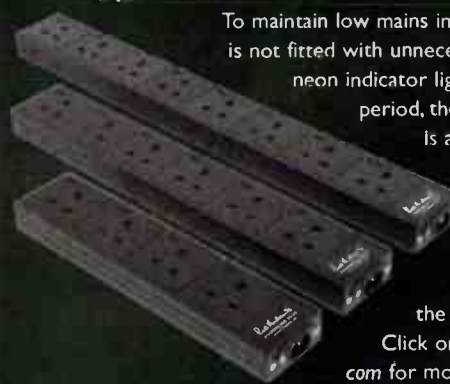
Russ Andrews has just announced the release of the PowerLink Plus mains extension system.

Arriving with four (£75), six (£93) or eight (£111) sockets, similar to those found in the company's SilencerBlock, the PowerLink Plus includes high-pressure contacts that securely grip the plug. Spaced out sockets enable use of larger than normal plugs. The dimensions of the PowerLink Plus have been kept to a minimum, which, together with the black anodising of the aluminum case, help the unit fit into tight spaces and disappear from view.

To maintain low mains impedance, the unit is not fitted with unnecessary switches and neon indicator lights. For a limited period, the PowerLink Plus

is available with an optional half price PowerMax Plus mains cable to connect the PowerLink Plus to the wall socket.

Click on www.russandrews.com for more information or call 01539 797300



COWON A5

The small form factor Cowon A5 personal media player has a 4.8in LCD screen. Running on the Android 2.3 Gingerbread OS and NFS file system, it includes an FM radio and recorder, 512MB of RAM, a 1GHz Arm Cortex CPU plus a USB 2.0 port. It has a JetEffect 5.0 audio equaliser with 44 sound presets, full HD 1080p video playback and an HDMI output for TV. The Cowon A5 32GB is priced at £229 with the A5 64GB at £269.

Click on www.dadaudio.com for more information.



Sound meister



It's big, it's very expensive and it's gorgeous; we're talking about the Burmester 032 amplifier. Noel Keywood swoons.

Burmester are an upmarket German brand founded back in the 1970s. I remember seeing their gleaming products at a show in Berlin, afterward crossing Checkpoint Charlie to East Berlin on a sightseeing trip. Not that there was much to see, other than men with guns.

Berlin is a very different place

now and Burmester have become one of Germany's premiere brands in the meantime, producing fabulously built and finished products – like the 032 amplifier reviewed here.

With a price tag of £11,350 for our premium version of the 032 this is one of the world's more expensive amplifiers. It is a massive and beautifully finished domestic statement product, like MBL

Loudspeakers – another Berlin based manufacturer. Berlin is a city where they seem to like grand statements, like the Brandenburg Gate for example, but at least you can get the 032 into your lounge! It takes two to lift it there however, weighing 36kgs, making it a two man lift for most of us. Measuring 490mm wide and 490mm deep, and 180mm high it will just fit racks, but as 490mm is larger

than the usual 19in width of racks this is not guaranteed.

The central control area is made from machined brass and chrome plated. It is surrounded by heatsink fins that run right around the amplifier and make for a striking appearance. The amplifier ran cold in our hands but as Burmester describe at length the thermal protection circuits I can only assume not all users are as gentle.

The rear panel is a little surprising because it sports lines of XLR sockets for balanced inputs, and very few phono sockets. I used our Electrocompaniet ECD1 DAC to feed the 032's XLR CD inputs, using Chord balanced cables. Burmester state the 032 is fully balanced internally, hence the emphasis on balanced inputs. Those with unbalanced sources can use Tape or Aux 2 inputs.

Balanced circuitry rejects what is termed 'common mode' interference signals, those that affect both lines equally but will cancel at the output. Balanced working has been used by the professional music business for a long time, mainly to avoid hum and interference arising in long cables.

XLR sockets, needed to make



A big toroidal power transformer sits at the front of this amplifier, away from the signal input.

with a silver remote control and a hefty shielded mains cable, both of which were used in our set up. Two remotes are available, a premium metal version priced at £347 and a standard model costing £92.

in (the amplifier is run in at the factory) it showed itself to be a gentle, but smooth performer with a relaxed gait that made for easy listening. It lacks the dry, sterile 'hewn in glass' quality of so many super-amps, coming across as open yet organic – a sound that caresses you into listening it is so beguiling. The ribbon tweeters of our Quadral Wotans highlighted a sweet quality to the strings of Nigel Kennedy's violin playing Vivaldi's 'Spring', where I commonly hear a hardness of tone, sometimes a grey tonality and even harshness. By way of contrast the 032 was deliciously sweet in tonal character, strings were naturally separated without the intense spotlight of some amplifiers and there was oodles of filigree detail.

With the Royal Scottish National Orchestra playing 'Mars the Bringer of War', from The Planets, these strengths were enhanced, horns calling out from a clear point in space, away from violins that were clearly occupying another



"Celic violin played a melancholy tune from a sense of deep space"

balanced connections, are bulky expensive items so it takes a big amplifier like the 032 to house many of them. There are mini XLRs but they are uncommon at present.

I wondered whether the 032's output would be balanced but connecting a loudspeaker between the negative loudspeaker terminal and chassis showed this terminal was dead (at ground potential), but positive was live, so the output stage is unbalanced relative to ground. Whether a balanced output would achieve anything is questionable, because impedances are so low and a loudspeaker is not ground referenced (electrically, it 'floats'), but you never know.

Balancing usually gives a tidier sound, in which there's a trifle less fuzz. It can sometimes produce a sound that seems a little remorseless and sterile, but this may be due to intervening balanced-unbalanced circuitry than the principle, for these days all this is organised in silicon, not through transformers as was once the case.

Our review sample came

Selectable treble and bass tone controls are available, plus a balance control. There is a Surround-sound input that bypasses the volume control for Home Theatre use. There are also fully balanced and unbalanced preamp outputs. There are no digital signal inputs, a USB A socket being for a comms link.

The 032 is beautifully built and finely finished. The selected input and volume control levels are shown by green LED displays and the volume control has very fine resolution. Switch on is silent, the clicking of internal relays signalling that continuity to output is controlled, allowed when all is stable inside.

Minor gripes are a rear mounted quarter-inch headphone socket and one pair of loudspeaker terminals of lacklustre quality. WBT in Essen, Germany have better alternatives, being known for German engineering quality able to complement the 032.

SOUND QUALITY

The 032 showed no sign of the slightly hard, sterile quality I alluded to earlier. After many hours running

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World Radio History



The rear panel carries a row of XLR sockets for balanced connection. There are few phono socket inputs. The loud-speaker terminals could be more impressive, but they accept 4mm banana plugs, bare wire and spade terminals.

area within the sound stage. Strings swelled and subsided with a gentle ease against a nicely dark or 'quiet' background, sudden accents or longer phrases being fluently conveyed. In 'Mercury, The Winged Messenger' bells chimed gently but sweetly as other instruments went about their own business, the role of each made clear by the 032. Crescendos were powerful yet with no sign of hardness or strain appearing; the 032 cruised along smoothly well under any limit I was to find.

Powerful individual drum strikes in Angelique Kidjo's 'The Sound of the Drums' had both form and strength, punching out from the loudspeakers cleanly yet strongly. The 032 doesn't put brute force above expression; it's an amplifier able to combine both into a believable whole, to present a sound that's rounded and convincing, not synthetically enhanced. So whilst the prominent walking bass lines within the Benin rhythms on Kidjo's album 'Fifa' strode along powerfully, there was a relaxed air to their progress. The 032 never sounded strained and was able to describe events with laconic ease. It was a relaxing yet impressive listen.

Plucked acoustic guitar on Jackie Leven's 'Poortoun' had convincing character, the gentle decays from its wooden body tailing away without premature truncation, subtle timbral cues the 032 was able to convey that helped instruments sound realistic.

This amplifier was able to convey instrumental timbre better than most; not only was it lucid in itself but free from any overlaying patina able to mask the natural tones of acoustic instruments. Reverberation from the hand drum at the start of 'The Walled Coves of Ravenscraig' echoed around our listening room and

Celtic violin played a melancholy tune from a sense of deep space, underlining the amplifier's ability to establish a spatial perspective in which instruments and performers were playing, in contrast the flatter perspectives of lesser designs.

CONCLUSION

The 032 took me by surprise. It's sheer size and weight suggested to me I was about to suffer a solid-state battering, but it wasn't to be. The 032 is deliciously gentle and open, with liquid pure treble and understated

power. Placing instruments and singers in a generous sense of space, free from colour or character, this is an amplifier for those who just want to listen to music convincingly reproduced, rather than have it pushed at them with the force of a Mack truck. It's an amplifier of beautiful sophistication to its sound, with equivalent quality of build and finish. In every sense it is grand design, much like the Brandenburg Gate. Listening to it I understand why Burmester out-survived the wall and Check Point Charlie!

MEASURED PERFORMANCE

The 032 produced 112 Watts per channel into 8 Ohms under test. This rose to 196 Watts into a 4 Ohm load, so the 032 delivers enough power to drive all loudspeakers to high volume.

Damping factor was very high, calculating out at 111 at 40Hz, so the amplifier will keep a tight grip on bass cones.

Distortion values were low right across the audio band, measuring 0.002% at 1kHz and 0.02% at 10kHz, at 1 Watt into a 4 Ohm load. The value rose little just below full output. The residual was from crossover in the push-pull output devices, with odd-order components dominating, our analysis shows. This isn't as good as the many modern amplifiers now able to produce just second harmonic. The distortion pattern was stable with level, however, and this is an important characteristic as the ear isn't drawn by a changing audible pattern.

Frequency response stretched from 1Hz up to 55kHz. As the 032 is all-direct coupled the lower limit is set by d.c. servos and is usually at or below 1Hz, so the 032 comes in as expected. Our analysis on a Rohde & Schwarz UPV shows the 032's frequency response graphically, the sharp top limit being due to the noise generator.

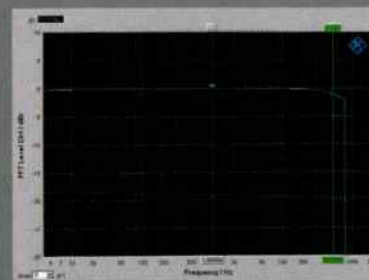
An electronic stepping volume control did not affect the high frequency roll-off, set at a normal 55kHz our analysis shows.

The amplifier has plenty of gain, input sensitivity measuring a high 180mV for full output.

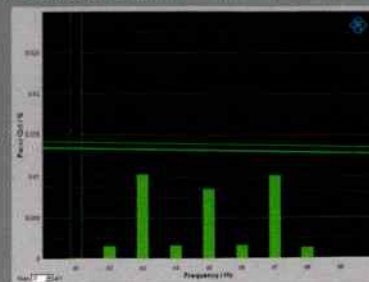
The 032 produced a good set of figures in every area. NK

Power	112watts
CD/tuner/aux.	
Frequency response	8Hz-55kHz
Separation	70dB
Noise	-87dB
Distortion	0.01%
Sensitivity	180mV
Damping factor	111

FREQUENCY RESPONSE



DISTORTION



VERDICT ●●●●●
A beautifully engineered and finished amplifier with a gorgeously sophisticated sound – but expensive!

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FOR
- spacious presentation
- sweet treble
- clear

AGAINST
- large
- no digital input
- one pair LS terminals

On the spot

Onkyo has released a stereo receiver packed with features, majoring on music streaming service Spotify. Paul Rigby reviews the TX-8050.

Onkyo's 80W TX-8050 looks like an AV receiver but is in fact a stereo receiver. It doesn't process video and it has just two channels, but it boasts many features for its £500 asking price.

Before we get to how the Onkyo, spanning 435x150x328mm and weighing in at 8.8kg, actually sounds, there is a job to do in weighing up the array of features it possesses, the facilities that it leaves out (there is no HDMI, for example) and how the included options have been implemented.

Welcome controls include the Pure Audio button to bypass much of the electronics to provide a more direct sound for audiophiles. There's a headphone socket plus an input selector, an optical TOSLink to accept stereo sound from TV, tuning buttons for the FM/AM radio, tone controls, a USB port for MP3 players and memory sticks, plus other navigation aids and incidentals. A slim LED display acts as a read-out.

Over to the rear of the chassis (which is available in black or silver), the packed panel includes two sets of speaker binding posts, an Ethernet port, radio aerial and monitor out

ports, a universal port, TV/tape in/out jacks, VCR/DVR in/out, other sockets for a games console, Zone connections to enable you to share the sound output with another room plus pre-out sockets. A usable, fully featured remote comes as standard.

IN USE

The Onkyo is notable in not including Wi-Fi as standard. When quizzed, an Onkyo spokesman replied that not everyone wanted it. As Onkyo state, a more reliable wired ethernet network connection is available to feed the included internet radio and the featured Spotify facility. Yet, the choice of Wi-Fi as a standard fit seems, to me at least, a missed opportunity: not everyone has their hi-fi next to their router, for a wired connection. Onkyo suggested that users could connect the TX-8050 to a mains plug-related network, or a Wi-Fi access point. Onkyo sell a compact, UFW-1 Wi-Fi dongle for another £50. This is plugged into the USB port at the front of the chassis.

The company doesn't mention this option within the instructions for the receiver. But do you want to see it, sitting in front of the chassis? Dongle or no dongle, I want it plugged in out of sight – meaning at rear. And worse, Wi-Fi then uses the only USB port on the chassis, so where do I plug my iPod? You can buy an iPod dock (for another £50) which will plug into the Universal Port, situated at the back of the chassis.

Looking at the TX-8050's software, you will notice that it supports Spotify, a download and streaming package that opens up access to millions of music tracks in a wide variety of ways and over many platforms via lossy 320kbps files. The Onkyo is linked to the £10 per month, Spotify Premium package that provides: unlimited streaming of

music files; no Ads; an offline playlist option and the use of the service via your mobile.

Spotify, in itself, is a great service for those who are happy to run lossy files but do you really want Spotify as part of your hi-fi reference system? On a computer, laptop, tablet or mobile, perhaps, but within a reference hi-fi?

I was expecting the trumpeted brand tie-in to arrive with 'goodies'. After all, if Onkyo is making a big thing about the inclusion of Spotify within the TX-8050 then I would expect Spotify to be the 'killer app' that forced me to buy the TX-8050 in the first place. How about free months per year off the subscription, or a discount, or an exclusive feature? What you get, in fact, is a convenient access point, only. No discounts, no extended features, no freebies – nothing. As it is then, the Spotify headliner is a little 'ho hum'.

Whipping out my calculator, if you take just a year's subscription usage with Spotify into account and combine that with the home networking, iPod dock and Wi-Fi connection (LAN and Wi-Fi would both be required for different circumstances) then I, for one, would have to spend an extra £270 on the TX-8050 to fully utilise its included facilities and to turn it into a usable system.

The TX-8050 utilises the Apple-friendly Broadcom control chip yet not only is there no AirPlay network





option, which is entirely forgivable because it utilises the more widely used DLNA instead, but the TX-8050 doesn't support Apple Lossless compression either. As it is, the best that it can do is 24bit/96kHz FLAC – but this will give good sound quality. Other supported files formats include MP3, WMA, WMA Lossless, WAV, Ogg Vorbis, AAC, LPCM

If you wish to extend the internet radio facilities via Onkyo's website, then you must be prepared to input the MAC address and IP address of the receiver – hardly user friendly.

Despite my moans and groans, there is plenty to like with the Onkyo including vTuner internet radio, Last.fm and AUPEO! Personal Radio options. You can control (but not set up) the Onkyo via an Android/iPhone App called Remote 2 that handles internet audio, DLNA media served audio (although you cannot play mobile phone-based music files on the Onkyo via DLNA), FM/AM, multiroom audio, the included DAC functionality, onboard amplification and the Moving Magnet phono input.

So what of the most important issue, sound quality?

SOUND QUALITY

Despite the headline-hogging internet and data facilities, the TX-8050 is a traditional amplifier too. To that effect I hooked up my T+A G10 turntable complete with Audio Technica MM cartridge to the supplied phono sockets and loaded up the Jazz Track-released 'Chet Baker Sings' to be confronted with a surprisingly impressive 3D-effect soundstage. Baker's vocals had a pleasing textural grain that was affecting and emotive with commendable clarity while his trumpet playing conveyed a satisfying analogue warmth.

The compressed 'Monolith' LP from Kansas benefitted from low distortion to reduce the rising nature of the upper frequencies, but the TX-8050 still allowed the delicate secondary percussion and acoustic guitar sounds to come through. The basic compressed nature of the music was still audible but the presentation was more approachable. Bass was punchy without offering subterranean depth.

Moving to the XTZ CD-100 CD player and Skunk Anansie's 'Hedonism', the track maintained the excellently structured soundstage but, now that the XTZ was the source,

the digital kick provided a forceful meaty bass response. This well recorded, early generation CD was both dynamic and open in its presentation. I would have liked to have heard the lead guitar given a touch more prominence as it was a little recessed in the midrange but Skin's vocal delivery was both forceful and multi-layered.

Toggling Pure Sound to On banished a slightly metallic, harsh quality and gave the Onkyo an analogue-like sound that was both appealing and approachable.

Plugging the XTZ's digital output into the Onkyo's optical port, thus turning the XTZ into a transport accessing the TX-8050's DAC, the sound was not quite as rich. Although the bass was rather muddy and the upper frequencies were a little metallic during high points and vocal crescendos, the midrange was still detailed and quite incisive.

Turning to the frontal USB port and loading a memory stick with EAC-ripped WAV files, I ran the Carol Kidd track, 'There Goes My Heart'. Kidd's vocal delivery was smooth but with a sensitive edge that gave the track personality. The acoustic guitar solo, an intricate



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sequence, was well portrayed while the piano accompaniment was never masked as can often occur within poor performance amps within the price point.

Moving to a series of chart CD files, the TX-8050 possessed an essential transparency. Excessive peak limiting was obvious but the Onkyo didn't, crucially, add to the bright upper mids and tizzy treble but calmed the upper frequencies well, without losing the open, airy nature that allowed the more pleasant detail to be tracked. Bass was hard, meaty and tight and, for this category of amp, quite characterful.

Replacing the memory stick with my iPod Classic 80GB and playing the same WAV tracks, the iPod provided a high energy presentation, although the mids were a touch thinner and slightly sharper as opposed to the relatively richer USB play.

Internet radio may be a major feature within this receiver, but the Onkyo still offered superb VHF/FM radio performance for the price, even via the supplied shoe-string wire aerial. BBC Radio 3's orchestral works may not have been the last word in extended frequency delivery but they still flowed with a grace that, for the price, was more than commendable.

Pulp's hit single, 'Common People', on BBC Radio 2 was both dynamic and passion-fuelled with an incisive nature that was enhanced by excellent instrumental separation.

Chat, via BBC Radio 4 was a touch thin, which showed the sonic boundaries of the FM module but the limitation was comparatively small bear within this top performing radio facility.

Connecting the Onkyo to the internet through the automatic DHCP protocol was as simple as selecting the Net button on the front panel, the Onkyo did the rest. Streaming chart tracks from my quad-core PC via the featured iPhone App, chart-based WAVs did reveal a small upper mid lift but the presentation's high resolution output produced maturity and warmth, especially via Pure Sound, making listening wholly enjoyable.

The superior mix from Carol Kidd, via the streamed connection, was not only well balanced, it provided more space and air around the soundstage, sounding more natural than my USB memory stick

and also the iPod. Bass was quite chocolatey but still had form and depth, whilst Kidd's delivery was rich and nuanced.

Finally, in terms of streaming, the PC's 'Play To' feature successfully allowed me to control the Onkyo via the PC, pushing music to the TX-8050.

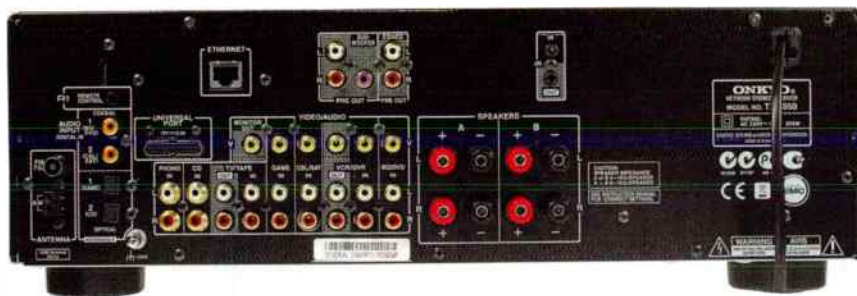
Accessing the internet radio, the TX-8050 produced a very pleasant output via BBC 6 Music's 128kbps WMA output, enhanced via the Onkyo's own inherent high quality internal components. David Bowie's 'Young Americans' may have produced a slight lifting midrange but it scored in terms of musicality. Other stations, pumping out a more usual 128kbps MP3 file produced a brighter sound but as long as volume

levels were not too high, satisfyingly dark silences enhanced good basic clarity.

Turning to Spotify and Maroon 5's 'One More Night', the 320kbps Ogg Vorbis output was easier on the ear than the low sample rate of many competing services.

CONCLUSION

On a purely hi-fi level, the TX-8050 is a cracking budget stereo receiver that should be high on your demo list if you value its wide range of abilities. It can cope with any genre of music and shows a maturity of presentation that belies its relatively low price point. If network connection and Spotify don't interest you then Onkyo's TX-8030 and 8025 may look better value.



VERDICT ●●●●

The TX-8050 provides high quality sound from a wide variety of sources. Spotify is a commercial tie up of questionable value, however.

ONKYO TX-8050 £500

Onkyo
 (+44 (0)1628 473350
 www.onkyo.co.uk

FOR

- sound quality
- set-up
- low distortion output

AGAINST

- design
- feature implementation
- value for money

MEASURED PERFORMANCE

The TX-8050 produced 120 Watts into 8 Ohms and 182 Watts into 4 Ohms, so there is plenty of power available and loud volumes are not a problem. Distortion was low, as always with Onkyo, the critical 10kHz value being just 0.01%, primarily second harmonic, a very good result. There was little change in the distortion pattern with level or frequency too, so harshness is unlikely.

Unlike AV receivers there is no input ADC, so noise, frequency response, distortion and overload change little irrespective of whether normal or Pure Direct are selected, bandwidth remaining 67kHz. The S/PDIF digital inputs, both electrical and optical, accept up to 96kHz sample rate but no higher, with up to 24bit resolution. Frequency response measured flat to 45kHz at 96kHz sample rate, and distortion was low at 0.06% at -60dB with 24bit, so the Onkyo offers very high quality here and gets the full benefit of 24/96. There is no HDMI input.

The VHF/FM tuner possesses a good flat frequency response, but its pilot tone filter rolls off output slowly above 8kHz so there will be no sparkle to treble and a little softness may be evident, but with low distortion and noise this tuner will sound neutral, clean and

easy on the ear. As aerial input signal decreases channel blending occurred to keep hiss down.

Sensitivity was good, full quieting occurring at a low 0.67mV.

The phono stage was accurately equalised, with just a small amount of treble lift, +0.5dB at 20kHz. There is no warp filter so full gain down to 5Hz exists. Sensitivity was normal for an MM cartridge, measuring 4mV and overload a high 100mV. Hiss was very low at -81dB so this input is well designed.

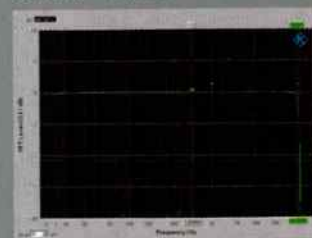
As always the Onkyo measured very well in absolutely all areas and will give excellent results from all inputs. NK

Power	120watts
CD/tuner/aux.	
Frequency response	2Hz-67kHz
Separation	82dB
Noise	-97dB
Distortion	0.01%
Sensitivity	200mV
Damping factor	32

Disc	
Frequency response	2Hz-20kHz
Separation	72dB
Noise	-78dB
Distortion	0.008%
Sensitivity	4mV
Overload	100mV

S/PDIF (24/96)	
Frequency response	2Hz-45kHz
Distortion (-60dB)	0.06%
VHF/FM	
Frequency response	25Hz-8kHz
Separation	58dB
Noise	-68dB
Full quieting at	0.67mV
Distortion	0.3%

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HIFI RACKS HEADPHONE HOLDER £49-£65

I'm in the fortunate position of owning several headphones sets. I'm also in the unfortunate position of not being the tidiest of people. I think there may even be human beings lost in the debris of my office. In such a situation, proper storage of essential equipment is important

otherwise accidents can happen. Take my rather lovely Stax SR-202 headphones which live in my office as part of my computer audio system. Storing these delicate transducers has proven difficult. They are carefully placed on a small cupboard but, over time, are pushed and nudged by other items which are plonked upon it. Sometimes they are even submerged by paperwork. It was only last week that, almost unnoticed and perennially nudged towards the edge of the cupboard, they fell and hit the floor. The left earspeaker nozzle snapped which meant that the earspeaker itself now falls out of the headband. There is nothing to keep it in place. A visit to my wallet is now necessary.

If only I had purchased myself a Hi-Fi Racks Headphone stand – or Holder, as they name them – then none of this would have happened. The Holder is probably the simplest hi-fi accessory that you could ever imagine. It looks like two bits of wood, although its more complex than that but, still, this thing just sits there. Ranging in price from £49 to

£65 depending on whether you buy the cheaper oak version or the more expensive woods such as walnut, cherry, maple, mahogany, satin black or high gloss black, each Headphone Holder is individually hand-made; this isn't a conveyor-belt rush job.

Comprising a strong wood bass with a vertical wooden piece that rises from its centre, this sturdy item is a perfect fit for any headphone (i.e. Sennheiser, Shure, Grado, B&W, etc). Just drape the headphone over the vertical arm and it will relax there, quite happily. What I really need now, though, is some additional method of keeping the lead in order when it is not plugged into my hi-fi. Otherwise it tends to trail on the floor and here Stax ribbon cable is worse because of its bulk.

The Hi-Fi Racks Headphone Holder is a simple idea but a perfectly formed and strongly built item that will keep your headphones neat, tidy and dirt free. **PR**

[+44 (0) 1572 756447
www.hifiracks.co.uk]

soundbites

VERTEX AQ RORAIMA £376.00 FOR 1.0M. £31.53 EACH ADDITIONAL 0.5M

Move your eye to one end of the Roraima and you will see a silver-plated copper conductor with PTFE insulation and top quality connectors. As such, it appears to be a standard, yet high quality power cable. Vertex AQ never do 'normal' though. Keep moving your eye and you will hit upon a large box that sits along the length. This is basically an acoustic absorption block. The conductors pass straight through the module, without a break, to avoid extra resistance.

I compared the Vertex with my reference power cable, the Tellurium Blue. Granted, the Blues are mere cables without the miniature shoe-box 'doing its thing' in the middle but the Blue does a successful job in targeting distortion. Playing a range of Supertramp vinyl via my Avid Acutus, the Roraima produced an immediate effect. The Blue offers low distortion playback but the Vertex reduced that noise floor still further which, frankly,

I didn't think was possible. The lead vocals sounded very clean with a lot more space surrounding the singer.

Spinning a range of compression-heavy chart CDs, via my Densen B-475 CD player, was now a pleasant process. Backing synth effects now proved to be characterful while the reverb had a greater role within the mix. Synth-based strings presented more emotion and romance while bass and the soundstage were far more focused with a strong stereo image.

Anyone who is familiar with Vertex AQ will know that the power cable is but the first step within a co-ordinated chain and really comes into its own as one piece within a larger, modular system. See the website for the Vertex AQ philosophy.

To get a brief peek of the larger picture, I plugged in a Vertex AQ Jaya, a passive shunt filter, into the accompanying power socket to see what changes might occur with both products in the hi-fi chain. The pair, working in tandem, added a new maturity to the sound. Female

vocals now had a new softness, a new femininity that told of a greater emotional insight that even this impressive power cable, on its own, couldn't reproduce.

The soundstage was now broader while midrange heavy synths were richer in tone and more complex. Bass had now evolved, becoming almost exuberant. The addition of the Jaya inserted humanity into the music.

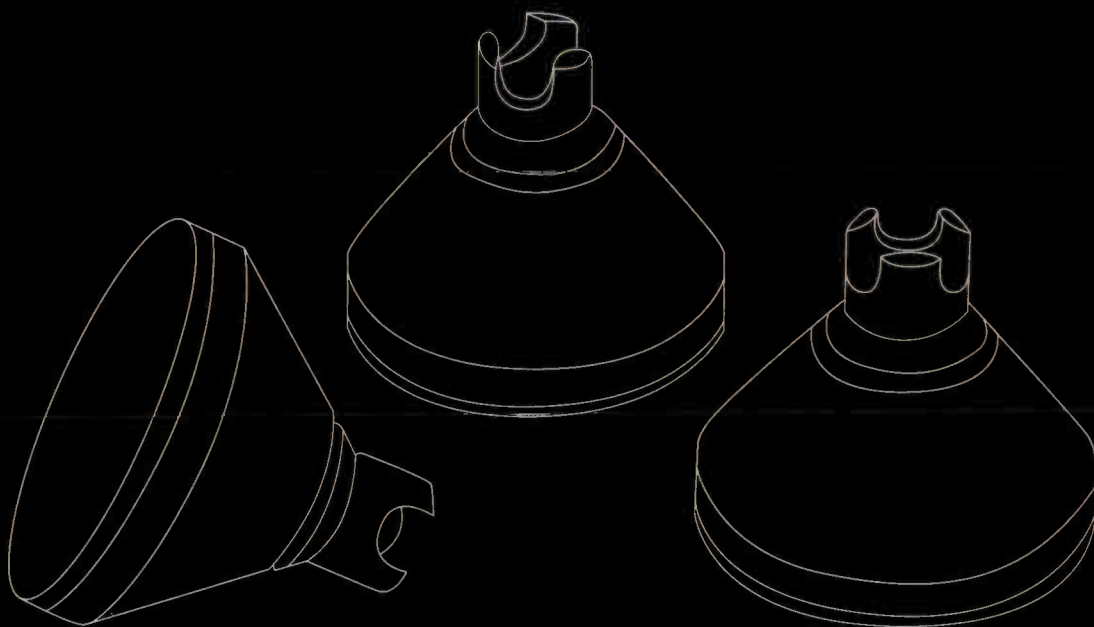
The Roraima is a top quality power cable but it becomes more significant when part of the Vertex AQ modular system. **PR**

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WIN A PAIR OF SUPERB USHER DANCER MINI ONES WORTH £2,500 IN THIS MONTH'S GREAT GIVEAWAY!



"The Be-10 we reviewed in the June 2009 issue was a stunner, but this is a big loudspeaker with a big price tag – £10,000 no less. The Dancer Mini-One reviewed here lies in the same series, with the same cabinet shape and finish, but is scaled down to suit smaller rooms and pockets. It also comes with Usher's own specially developed Diamond tweeter, recently added to all Dancer series models.

Standing just over one metre tall (1062mm) this loudspeaker hits the common 1m benchmark. At 320mm wide the cabinet is relatively slim and relies on a base for stability. The sturdy curved cabinet is heavy, total weight with base being 37.3kgs. Usher's website (www.usheraudio.com) shows five finishes, deep gloss Enzo Read and Piano Ivory, plus Walnut, Violin and Maple wood veneers. The veneers have a silk finish; they are not lacquered.

This is a two way loudspeaker

with 7inch (178mm) bass unit and 1.25inch (32mm) dome treble unit. They cross over at 2.3kHz according to Usher. The bass unit is reflex loaded by a slot port at the base of the front panel. The rear carries a sturdy bi-wire connecting panel able to accept heavy gauge bare wire, 4mm plugs or spades. Links are removed to enable bi-wiring. The Mini-One is a premium loudspeaker and the quality of cabinet finish, trims and the connecting panel is first class.

Usher explain that diamond coating is a process that has been around for some time, and used on tweeters too. However, it adds too much mass and, sure enough, B&W's Diamond tweeter does peak up at 15kHz our measurements of the 804D (February 2011 issue) show, confirming this. To avoid this effect Usher have used a laminated dome with diamond-metal-diamond structure that does not resonate sharply in the audio band, they say and sure enough, measurement confirmed this, although there is a peak above 19kHz. So the problem hasn't disappeared, it has been pushed upward out of the way. It leaves Usher's DMD Diamond tweeter with a flat in-band frequency response and a sound far removed from the clatter of saucapans that aluminium dome tweeters suffer. Diamond tweeters are known for lacking the metallic zing, even rasp, of metal domes and deliver masses of fine detail".

For a chance to win this great prize, just answer the following four easy questions. Send your entries on a postcard only, by 31st August 2012 to:

September 2012 Competition, Hi-Fi World magazine, Unit G4, Argo House, Kilburn Park Road, London NW6 5LF

QUESTIONS

- [1] What tweeter technology is used?**
 [a] mylar
 [b] diamond
 [c] paper
 [d] bubble gum
- [2] How many drive units (ways) ?**
 [a] two
 [b] three
 [c] many
 [d] none

- [3] The total weight is?**
 [a] one ton
 [b] 2.2lbs
 [c] 37.3kgs
 [d] elephantine

- [4] Where is the port?**
 [a] in the base
 [b] rear panel
 [c] front panel
 [d] there isn't one

September 2012 Competition
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Here's your chance to win a pair of Usher Dancer Mini One loudspeakers. Read about them here and answer the questions, at right on this

page.

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**JUNE 2012 REGA RP3 TURNTABLE WINNER
 Mr Basil M. of Perivale, London**



The Barbican's concert hall.

[Barbican Hall with audience © Chris Lee - New York Philharmonic. Courtesy of the Barbican Centre]

Classic technique

Tony Faulkner is a respected recording engineer and early advocate of the use of high digital sampling rates. He talks to Rafael Todes of the Allegri String Quartet about modern recording techniques.

In a career spanning over 40 years, Tony Faulkner has worked with many 'greats' in the classical world. He has recorded for labels including BMG, EMI, Decca, Sony, DG, Philips, Teldec, Telarc, and Hyperion, working with conductors such as Sir Colin Davis, André Previn, Yuri Temirkanov, Yevgeny Svetlanov, Mstislav Rostropovich, Sir Mark Elder, Sir Charles Mackerras, Klaus Tennstedt to name a few.

RT: How did you get into the recording world?

TF: I wanted to be a musician, but had no ambitions to be a performer. Playing 2nd flute in Gilbert and Sullivan's "Trial by Jury", I realized that I was a reasonable flautist, but never going to be a great one and that performing full-time wasn't for me!

RT: Did you ever have an interest in sound reproduction as a kid?





The Neumann USM 69 i stereo microphone with two separate dual-diaphragm capsules. These are mounted vertically and rotate against each other, acting as a classic Blumlein stereo pair.

TF: My dad was the hi-fi expert on the block. He had one of the first tape recorders – a Telefunken KL65 (see <http://galerie.magnetofon.de/displayimage.php?album=100&pos=184>).

I was a terror at the age of nine or ten, and I wanted to record everything possible off the radio or live. I searched for ways to make it work, and sound interesting.

Later I studied languages, and went to the BBC for a job. They offered me something, but suggested I went off and got a Degree, which I duly did – in Physics. During my first year, the University of Surrey started the Tonnmeister course. I applied and was rejected – my statement saying that I was “fundamentally unsuited to the music industry”. So I thought – this is what I have to do!

I spent all my spare time at University recording student performances, and making contacts. In my final year I was asked to do some projects for Teldec, and chose to focus on that over my Physics degree.

One problem with the audiophile business, is that there is a lot of smoke and mirrors. A scientific

background gave me the ability to differentiate between claims that were potentially true, and waffle.

One of my first jobs was doing testing for Angus McKenzie, who was totally blind, and had started Olympic Studios, where the Rolling Stones had recorded for Decca. I had worked in the retail shop attached called “Roundabout Records” whilst still a student, and after university, I



Meridian 618 digital processor, popular in studios for digital recording.

got a job measuring things for Hi-Fi Choice, and Hi-Fi News.

In 1976, I was asked to join the

new Enigma label where we went on to record Beethoven Cycles with the Hallé orchestra, pianist John Lill and the Lindsay String Quartet, and I left Angus to do recording full time. Since then, I have done nothing but chamber music and a huge amount of orchestral music.

RT: What are the main principles and philosophy behind your recordings?

TF: My philosophy is to try and keep things simple. Typically for a Mahler or Beethoven Symphony, I'd use two mics if possible, which is a horrible shock! If I pull up the faders and two mics on their own do not work, I would do whatever is necessary but I don't see the recording process as demanding over-complication, digesting and excreting, but rather a transparent channel.

Some engineers enjoy the process of taking everything to pieces, throwing it around a bit and sticking it back together. I don't think that's the right answer. You should try

and be faithful to the spirit of the live performance. Once you mess around with it, it's irreparable.

Most of my colleagues are much more interventionist than I am. Once you remove responsibility from the performers, they get angry, bored or resigned and they switch off. Our role is to try to be invisible. I want the recording and the performance to be as wonderful as possible, and to survive the chicanes of the recording process. My job is “enable and to protect”.

RT: How about spot miking and the ability to change things afterwards?

TF: I'm not terribly keen on it. I quite like making a commitment at the time. If you have worked with old-time conductors like, for instance, Sir Colin Davis, as opposed to studio-based conductors, if he comes into the box and listens to your sound of Sibelius' 5th

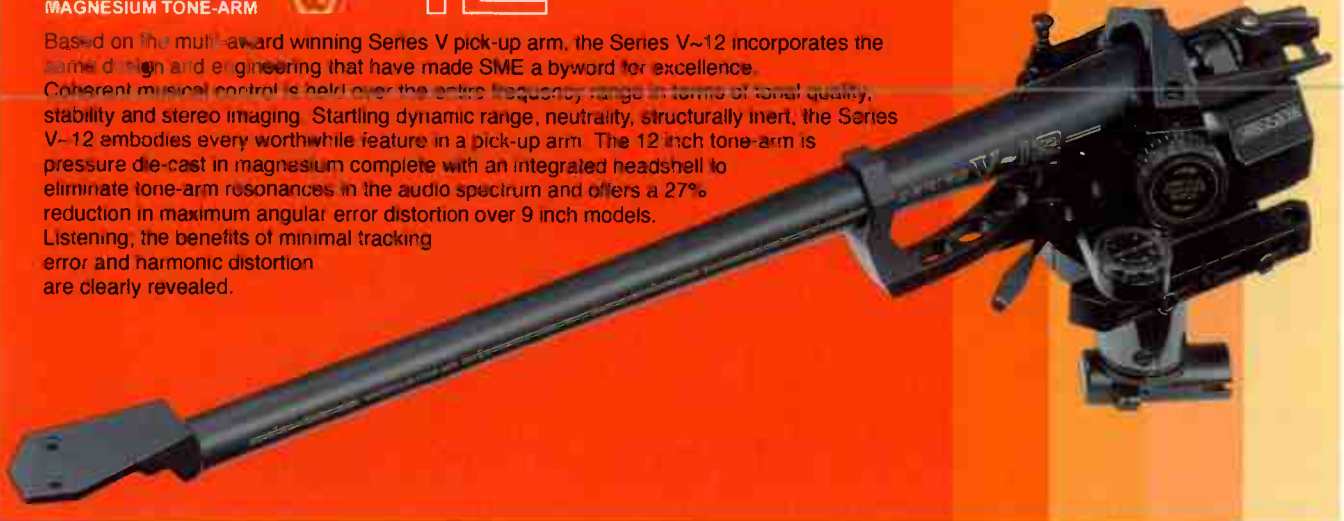


Walthamstow Town Hall, where the Royal Philharmonic Orchestra with André Previn played Beethoven Symphonies.

[Courtesy of Waltham Forest Council]

SERIES V-12 MAGNESIUM TONE-ARM

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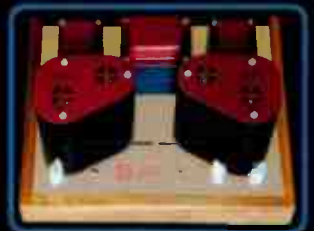
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Symphony, at Watford Town Hall with the LSO, he may say "I like the sound", or "it's a little bit dry", or "the timps aren't very clear-is it something I need to do or something you will do?"

Once this sound has been signed off, the prospect of me changing it is not just something he'd find distasteful, but treacherous! Obviously if you get it home and it's dry and horrible, you need to do something to try to rescue it, but one shouldn't be in that position.

RT: Does that mean you aren't keen on reverb or processing afterwards?

TF: I'm not keen on it. But sometimes, for instance in the Barbican, unless you're very lucky, and particularly with a good conductor – when you tend to be luckier, the acoustic can sound more like a dry cinema or theatre than a live concert hall.

I've recently been going over some of the recordings I made with the LSO Live, which were recorded at 176kHz sample rate, but never released at that rate; I just did it because I've always liked High-Res, I think it sounds very good, and it doesn't prejudice the sound of the CD – so what have you got to lose? Only a bit of tape or disc space. Going back to those High-Res recordings, I don't actually need to add reverb where I did for the CD release.

RT: You were an early adopter of High-Res?

TF: Yes, I started doing 96k in 1993. Later in 1997 I made a greater investment in High-Res in case DVD Audio and/or SACD ever happened.

RT: Do you feel you need really high-end equipment to reap the benefits of High-Res?

TF: When we made our first 24bit recording in Walthamstow Town Hall, the RPO with André Previn doing Beethoven Symphonies, I arrived early as the traffic can be terrible, and was listening to some takes from the previous day's session. I had obtained a dithering box from Meridian, a 618, and was listening to different noise shapes, to see if truncation was the right answer, flicking between truncation and flat dither. One of the cleaners was there and I asked him in a series of blind tests if he could differentiate between the two, and he was 100% right each time. The truncation appeared a bit like a high-pass filter, there was a "cupped-hands" sound

when it was truncated, and the strings went wiry; the differences weren't esoteric at all. I quite like that sort of test.

So digital definitely has "a sound" one even a cleaner can hear! Digital processes are complex and we don't fully understand how what we do affects sound quality, but it does seem to.

RT: What does a good clock sound like?

TF: Two things: first of all the bass sounds much better extended and controlled, and secondly the top end and stereo imagery are much better. The first time I heard this with consumer equipment was when I was over in Japan, and I went to a hi-fi



A DCS Ring DAC based digital convertor.

RT: I've noticed that sometimes a good optical transport can provide better results on 16bit/44.1k than a laptop on High-Res. They are different families of sound, but there is a crossover point – it's not an absolute result.

TF: One thing I notice about so-called "audiophile systems", they never sound as good as they do playing off my hard drive recorded on SADIE on sessions!

In the old analogue days, there would be a good reason: I Sips first generation will always sound better than vinyl or cassette, but with digits you wouldn't expect the results to be significantly different, and yet often I find when I listen to the finished CD, it sounds thinner, scratchier and drier and generally not as clean.

I don't know how or why it happens, but there is obviously something that can happen with digits that can degrade the sound. I find that if I rip a CD into the SADIE, it sounds better than the CD!

RT: What differences do a good clock make to the overall sound. I noticed that when we worked together recently, you took great pains to get the clock right?

TF: The clock is a sort of "digital earth", in the way that if you have a good vinyl system, you'd be very fussy about grounding.

show where DCS had a CD player and had clocked the whole system to the DAC, so the sample point where the digits became analogue was crystal controlled, and this was sent to the transport. So the whole thing was held, absolutely rock-solid, bolted to the clock.

For me, this transformed the sound and was their justification for what was a premium price for what was a complicated product. At that stage many audiophile writers were worried that all digital products would sound the same, which thank-goodness is not the case at all! Some of them sound like breaking glass, some of them sound like you have a cold!

RT: Sometimes I think there is more snake-oil potential in digital than there ever was in vinyl.

TF: Yes, I think so, if you are a small manufacturer, unless you are very hot on the technical side, you're just buying kits, a drive, a chipset, you can put your own power supply in, nice wires, but you don't quite have the control that you'd have with vinyl, wiring up a moving coil cartridge, and the type of arm you can use. It's a different set of snake oils!

NEXT MONTH

More on the way vinyl differs from modern day digital.

mail



LETTER OF THE MONTH PRIZE



KEF Q100 LOUDSPEAKERS

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

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

A pair of KEF Q100 loudspeakers are on their way to CHARLES PIDSLLEY, Letter of the Month winner in our August 2012 issue.

Letter of the Month

THE POWER OF LINN

Having first noted Dr Jeremy Honeybun's April letter concerning the lack of Linn reviews, as an owner of various Linn items I was interested to read Noel's August issue appraisal of the Linn Akurate DSM full system that was 'forced' upon him! – and in particular his rather lukewarm reaction to the amplifier and speakers. The front ends of my fairly modest system consist of Linn LP12/Lingo 1/Ekos 2/Klyde/Linto vinyl and Genki CD feeding a Kairn pre-amp.

The output end however consists of Musical Fidelity XA50 monoblocks (upgraded a couple of years ago by J S Audio – an excellent Hi-Fi World suggestion!) and Tannoy M20 Gold MkII speakers (very effectively upgraded by Derek Gilligan of Kudos fame).

I use Russ Andrews / Kimber mains, interconnects and speaker cables. Everything apart from the cables, cartridge, XA50s and speakers were obtained second hand. The LP12 was bought in 1980 and has been steadily upgraded to 'just short of SE' spec. I have owned the Genki and Kairn for the past six years. I have bought everything other than the cartridge only after careful comparative listening.

I enjoy a wide range of music folk/rock/pop/blues/soul/jazz/classical. The XA50s were originally bought in 1998 to partner an Audiolab 8000C pre-amp because I found that they brought dynamics, space and air – at odds with the rather sterile and grey sound of the Audiolab power amps of that era – and this brings me to my main point.

Like those Audiolab power amps, I



Linn DSM preamplifier and 242 loudspeaker.

find that Linn seem to be able make theirs measure well (as borne out by Noel's review) but somehow sound 'sat upon'. In addition, their speakers often seem to exhibit overblown bass. As a strong supporter of much of what Linn do therefore, I find it frustrating that complete Linn systems just never seem to 'do it' for me.

To my ears, my comparatively modest LP12 and Genki front ends with the Kairn exhibit an unusual combination of clarity and cleanness,

yet warmth and lack of harshness far beyond their price range (particularly second hand!) that I find very appealing, yet I have to turn to other manufacturers to hear their full potential.

It is a shame that Linn resist single item reviews. I am sure that if they changed this policy many more people could learn to appreciate just how good Linn 'front end' gear can be.

I feel that they could also usefully do a u-turn on their 'no CD player' policy and release a Genki replacement

as evidenced by the overall comparatively slow take-up of computer audio; we don't all want to stream our music!

Perhaps Linn could then spend the income from extra sales on developing power amps and speakers to do justice to the rest of their gear! Might I even dare to hope they could allow Hi-Fi World comparative reviews?

Cartridges are of course an item for which reviews are particularly important. Perhaps I could ask right now in fact: are there good alternatives to the Klyde that suit the Ekos?

Finally, on a slightly different matter I am sure that a lot of LP12 owners would be fascinated by a comparative test of the range of LP12 upgrades now available e.g. Funk, Inspire, Tiger Paw et al. A minefield to arrange, I am sure, but if you can pull it off you're welcome to the loan of my deck for a start! All best wishes,

Prof David A Deeks
www.davedeeks.com

Thanks for your views on Linn products David. If you want to exploit Linn's unique three-point cartridge fixing then you have only the Akiva to consider. If you don't care about this then the world is your oyster! Look toward Ortofon, from Cadenza Bronze upward, or to Benz Micro or Van den Hul. All make fine MCs. I am happy with an Ortofon Cadenza Bronze that has a lovely tonality and also a golden sheen to treble. For a darker sound use a Cadenza Black, and Tony Bolton would suggest a model from Benz Micro I suspect. **NK**

AKURATE REPORTING

Thank you for running such a comprehensive and balanced review of Linn in your August issue. It's great to see Linn getting some decent coverage. I actually agree with everything you say, and I was very interested to learn about Linn's approach to the Hi-Fi Press. I feel they are their own worst enemy there. Whilst I am clearly a Linn fan, I would be the first to say that their speakers are pretty awful, for my purposes at least; and I don't think I am understating it there, given their price.

My experience is not great, but I have heard the 242 speakers driven by an Akurate DS. In my experience, although a hi-fi system is a sum of its parts, it is the 'speakers that have the greatest influence on sound quality and character. What one person hates another can love, and there is no substitute for listening, as I'm sure you will agree.

I listen mainly to organ and choral music, and through the 242s the organ



Another loudspeaker from Glasgow that competes with the Linn 242, the Tannoy DC10. Big bass and point source imaging, lovely finish and accurate balance, but lower price tag.

pedal notes were woolly and indistinct. Hook the DSM and the 2200 up to a pair of PMC OB1s, as I have, and the quality is a revelation – and at half the price! I actually bi-amp the speakers with a Linn 4200, which brings further benefits in focus and solidity. I have also heard them through a pair of large Proac floor standers with similar results.

So, Linn produce excellent electronics, but pretty poor speakers, which was more or less your conclusion I think. One just has to rely on a dealer who sells more than one manufacturer's equipment! I don't think Linn should be disappointed at that. One can't be good at everything after all! Thanks again for an excellent review!

Dr Jeremy Honeybun
Abergele
Wales

The Linn 242 loudspeakers came alive on the end of a Tellurium Q Iridium power amplifier, sounding both smooth and dynamic. I understood and appreciated their strengths in this situation, although bass quality remained open to question, shall we say!

But as you note, there's no shortage of competition out there, not just from PMC but also KEF,

B&W, Monitor Audio, Tannoy, Triangle, Quadral – the list goes on – at the price. Against this commercial backdrop the 242s don't look so competitive. They were lacklustre in styling and finish too.

In contrast to the 242s, the Akurate DSM network connected preamp was a tour-de-force of engineering and a rare beast indeed. Few other preamps in the world combine a quality MC phono input along with wi-fi control from an App, plus internet radio and music streaming from network drives or a computer, plus HDMI input and output.

Coincidentally, in this issue we review an Onkyo TX-8050 receiver that could be seen as a budget version of the DSM, offering similar basic functionality. It isn't a Linn by any means of course, but it's an interesting package all the same.

I suspect stereo 'preamps' that do it all will become more popular in future. But in the meantime Linn's DSM stands virtually alone in its broad range of abilities and is as impressive as you said! Linn have a lot to offer. It is a pity that getting it in for review was such a task because more exposure is needed,

especially with a product as complex as the DSM. **NK**

KARAT RELIGION

After a number of months in silence I was motivated by the June 2012 Letter of the Month to drop you a line. I can't stop being amazed by Hi-Fi World readers, their views and fresh opinions based on current or past experiences. In this case, the fact that Steve Bennett's IMFs may be addictive in spite of being icons from a much different era. Steve centers some of his decisions, regarding

mine with a Conrad Johnson and a VTL 5.5 and the results were excellent. The Conrad Johnson is much too expensive but the VTL 5.5, though pricey, is a perfect option and a lot less expensive too.

The phono stage puts a complete different question. We need gain but we also need transparency and analytical detail to compensate for the Koetsu like properties of the Karat. Very good American phono stages are also very expensive ones and Dynavector's own P75 isn't enough for the job.



ASR Basis Exclusive phono stage. "I couldn't be happier with the result" says Mario Kopke Tulio.

the evolution of his system, on keeping his Dynavector Karat 17D3.

I have been directly touched by this option as, after many decades of trying different cartridges, I always come faithfully back to the Karat in any of its incarnations. Maybe two decades ago the main problem I have faced using the then Karat 17D (I think that is how the model was named in the mid nineties) was the need of serious gain to really profit of its genetic qualities.

With the current version, the problem remains and the need for high gain in the preamp still exists. Such a low output challenges you and your records a lot more. To get rid of a baffled sound once and for all, it won't be enough to pick a good preamp and a good phono stage.

If the elected cartridge is a Dynavector Karat, correct equipment matching is absolutely necessary. Most of the Karat's users have no idea about the extraordinary performance they may extract from this classic cartridge.

The Dynavector brand includes several exquisite cartridges and some a lot more expensive than the good old Karat but, the Karat is an addictive object, almost a religious object in the USA where there are plenty of Karat dependants – some even known to swear by it.

The most recent Karat versions must have been designed with the American market in perspective and only such a fact explains why it works better with American pre amps. I've tried

Trying not to go bankrupt I faced the dilemma of using the Karat with an Icon Audio PS3, or go for a solid-state European phono stage. My amplification wouldn't allow the use of the Icon Audio as I am using a pair of bridged (modified) BAT VK60s plus a pair of KEF Reference 107/2 R. Cook. And though very interesting and velvety, the tonality became too dark.

After many different hearings I ended up with a German ASR Basis Exclusive and couldn't be happier with the final results. The sound is crystal clear, instruments are well and singularly placed on the sound stage and the bass levels are more vivid than with the best CDs and respective players. There is a depth and control to bass that was unsuspected before. Voices are amazingly present in the room even with big choral works, Britten or Elgar. Absolutely astounding. I do not ask for more, at least, as previous experiences already told me, for the time being.

I'm currently using two absolutely different turntables, out of the many different turntables I have accumulated for the last 37 years: a heavily modified Technics, like Steve's one (sorry but I don't buy the SME 309 idea) equipped with a Rega RB1000 (modified) and also, because their presentations are so different, a Well Tempered Lab Amadeus GTA (I only changed the plate mat).

Both are equipped with Dynavector Karat cartridges (the Rega arm sports a K 17D2MKII and the Amadeus, the more recent Karat 17D3). In the end

some records and some music styles still need different turntables to spin at their best. But that's how this hobby goes. What's true today will be overtaken next year, vinyl being the only exception I know.

Best regards and thanks for an outstanding Mag!

Mario Kopke Tulio
Lisbon
Portugal

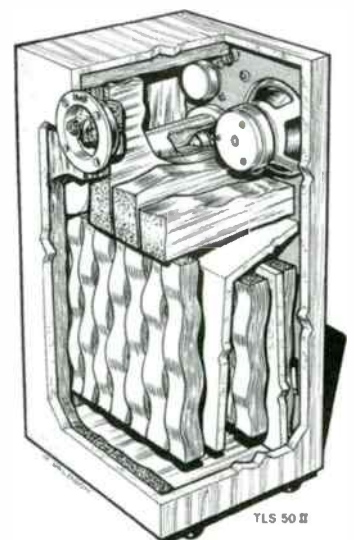
Ah – words of wisdom from deep experience! However, I don't quite understand why you don't 'buy' the SME309; Adam Smith thought it a superb arm sonically and it is beautifully finished too. And I have always used an SME, albeit a 12in one. But then, Regas are good also. Thanks for your experiences, as always. **NK**

IMF DREAMS

I noted your Letter of the Month on IMF Monitor speakers in the June 2012 issue. The IMF Monitor was the speaker of my dreams when it came out and while I never managed to own a pair I did own two sets of IMF Studios (TLS50s in England) that were smaller versions of it.

Living in Philadelphia at the time I got to know Bud Fried (Irving M Fried, or IMF) and we became life long pals even though he always teased me whenever I didn't own his speakers and for my love of Celtic music that he would call tinkle music (Bud listened only to Classical music, especially opera and particularly Wagner).

I note the writer's concern with the slowness of the speaker which, especially with the march of the years, I agree



IMF TLS50 loudspeaker, cutaway diagram from IMF, 1975. It used an 8in bass unit loaded by a transmission line, a midrange, tweeter and super tweeter.

with. Your advice to him is to the point. And I believe I can add to it. I know a couple of current IMF owners, both of whom changed bass drivers. The TDL woofers are drop-ins for the KEF B139s with the same frame, but with a concave rather than flat diaphragm. The result was much tighter, better damped bass. I assume that the Q of the TDLs is lower than the KEFs, Q improving the overall system bass control without fouling up the crossover region. The bass response is much more of a modern vein.

These speakers are, of course, quite old. That could mean that the capacitors in the crossover have deteriorated. Changing them for more modern ones of the same value would probably result in cleaner, more defined sound from top to bottom. And it might improve the bass further also, since improving the bass harmonics should improve the overall bass sonics.

Finally, if he can get into the mid-range enclosure, a card board tube running front baffle to back baffle, he should check the damping. My IMF studios came with a simple roll of foam. Bud changed it to a three layer system, complaining the factory was harming the mid-range in the interest of saving a few pennies.

The back layer was now a short heavy one. The middle layer was much less dense. And the layer behind the driver was very lightly packed. The improvement in reproduction was obvious in seconds when we compared the first one that was changed to the original in the other speaker. The mid-range loading is a short transmission line and the volume right behind the driver is very sensitive to reflection if the damping there is too thick.

If his damping is simple like mine was, I'd try about an inch of foam at the back, then a couple of inches of long hair wool or Acousta-stuf at about the classic half pound /cubic foot (experimentation is probably necessary) and finally a very, very light layer.

I still have warm thoughts of this speaker, sort of like a first love. If I had the space and the extra cash today, I suspect I'd find a pair and update them a bit as I've described above.

Allen Edelstein

New Jersey

USA

Hi Allen. Thanks for your observations. I should perhaps explain to readers that IMFs were built in the UK by IMF UK and distributed in the U.S. by Irving M Fried. Go to <http://www.marklev.com/IMF> for more on their models and tortuous history.

IMF UK then became TDL, run by John Wright until it closed some years ago. The TDL bass unit you

mention is described as "having a thick tapered styrene cone with a plastic coating, this produced a rigid piston action and was extremely light without any cone break up and produced an excellent fast response at low frequencies" by ex-director John Hayes. I hope your info on making improvements is a help to the lucky owners of these monsters.

NK

INSPIRED

You ran a very interesting review of the Inspire mod of the Thorens TD160. As an owner, user, modifier of this particular turntable I can see why the company picked it as a natural upgrade!

If you remember, you published an article about my turntable some time ago. My modifications were considerably cheaper than the Inspire ones and to be honest I think their success is more to do with the 'don't touch what ain't broke' method, than the rather more expensive mods in the review.

For a start, a synchronous AC motor will be far smoother than a DC one, no matter how many poles the new motor has or the quality of the electronics. A DC motor is really lumpy as it moves from coil to coil in its armature.

All you are gaining with DC is torque which, given that you are using a rubber band to connect to the platter is going to be diminished in effect in any

By replacing the plinth too there are additional benefits that relate to feedback and long term stability. I would say that my plinth is still a hollow box so it will never be like the skeletal designs from Avid or others as is the current trend. However, my plinth weighs in at more than most stand mount loudspeaker pairs and more than many floor standing ones too and is non resonant and pretty much sealed from below having over 2 inches of kitchen worktop beneath it in its construction.

I only use a 28 year old SME 3009 fixed arm and an old Ortofon VMS20E but if something like a more recent arm were fitted the humble TD160 would take on all comers.

From what I can see the best way of taking away some further issues of the TD160 is to isolate the AC motor from the mains by building a dedicated quartz locked mains supply which in turn will allow for electronic speed switching (just alter the clock speed in the converter) and do away with the mechanical speed change which is a liability in this turntable. I'm working on that one! Keep up the good work! Regards and best wishes.

Dave Tutt

Tutt Technology

Chatham

Kent

<http://www.tutt-technology.co.uk>



Thorens TD-160 can be improved simply by damping the platter, says Dave Tutt.

case. If you feel that the drag of the stylus is in need of that torque then any motor control of speed needs to relate directly to the speed of the platter. Since there is no feedback mechanism then this will be largely a waste of effort.

Greater damped mass in the platter is what is required in the TD160 to remove the ringing of the outer section. The effect is dramatic. Bass firms and rises in level. Surface noise and the effect of clicks and pops are diminished drastically.

Like quite a few turntables of the 70's and 80's the TD160 is a well designed and solid performer. But any 40 year old machine is going to need maintenance and refurbishment. All moving parts including the suspension are not going to perform now as they did all those years ago.

The debate over AC and DC motors is likely to outlive all of us. A DC motor when not powered but rotated by hand, does indeed appear

lumpy. An AC motor is smoother with no power, but often just as lumpy when running. A true test would be to run both under a load and measure the vibration with an accelerometer. An easier way would be to buy a cheap stethoscope from eBay and listen perhaps.

If stylus drag is an issue then only a properly implemented PLL direct drive will do, or second best something with a very high mass platter like the SME Model 30.

I like the idea of your very heavy plinth and perhaps an SME 309 might finish it off? A small quartz locked mains supply would be good too. I looked at the mains here in Dartmouth, Devon, the other day; I don't know what the neighbours are up to, but the waveform was decidedly not nice: around 2.5% distortion and an odd sloped flat top to the sine wave.

Let us know how you get on.

Dave Cawley, Sound Hi-Fi.

PROG ROCK

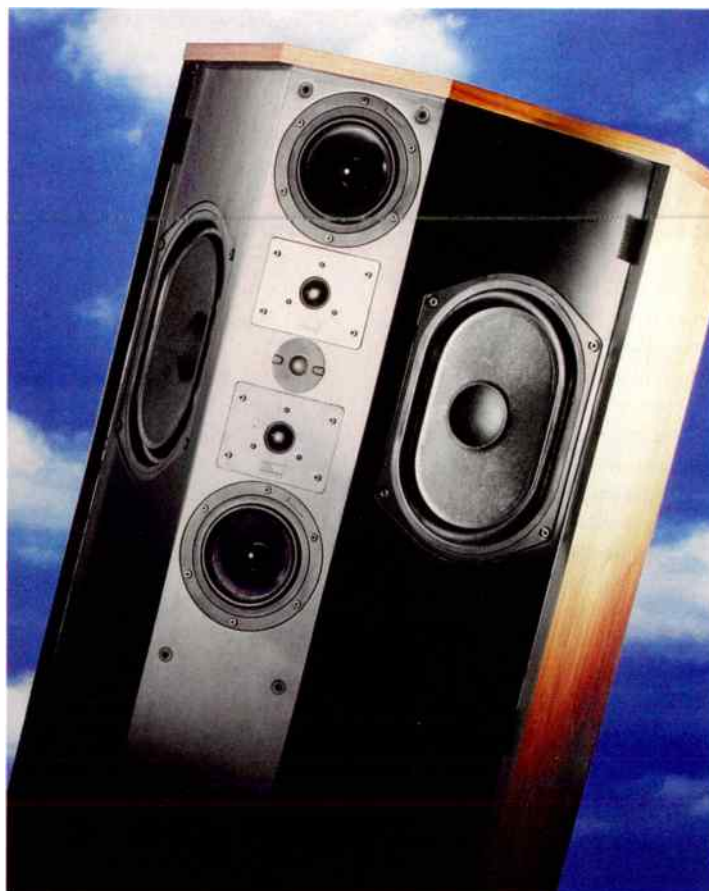
It has been quite a considerable time since I last contacted your still great publication and still my preferred option of the monthly hi-fi mags. I was actually motivated to write having read Steve Bennett's great Letter of the Month in the June 2012 edition. Two things really struck me about it, the first being the refreshing open candor with regard to Prog music. So many people in the Hi-Fi Press treat Prog as a dirty word which is something that I feel very strongly about.

Like many other genre's of music it has it's highs and lows and there are those that would say that it was "of it's time". There are some amazing bands out there as we speak, recording some fantastic Prog music and little recognised for doing so.

The second thing that struck me about the letter and indeed the only thing I will concede to the "of it's time" philosophy is the equipment that it is played on. It was a breath of fresh air reading about Steve's forays into amplifier configurations, arms and cartridges etc, though it was his steadfast use of his beloved IMF reference standard Pro monitor Mk4s and his Technics turntable that I can fully endorse for listening to Prog upon.

I – like many – listen to many different styles and genres of music and for the most part my system (elaborate valve based, mainly analogue) sounds great. However, nothing captures the original retro Prog or for that matter modern Prog albums better than the equipment manufactured at or around the time of it's massive popularity.

Methinks at a time when Prog was manifesting itself in our psyche we were, as individuals, perhaps in our



Big IMFs are great for Prog Rock, says Steve Petch. Pictured are monster TDL Reference monitors, successor to IMFs.

most formative years as far as music goes. Capturing such moments again may prove to be a difficult thing to do with so many things in the equation like age, attitude, surroundings and physical deterioration of both ourselves and the things around us. Thanks for a great letter Steve. Keep enjoying your Prog and of course your great hi-fi too.

Steve Petch at www.progmeister.com

CABLES

I've just been reading your July 2012 issue, as full as ever with interesting items, but there are two things which I would like to comment on. The first is that old chestnut of speaker cables. You review pairs of speaker cables, all priced reasonably. But to those of us who play classical music, there is no mention of such music being used in your assessment. Are we to believe that such cables are merely for those who play simpler stuff, for want of a kinder expression? I notice that this is a trend in hi-fi magazines at the moment, especially the

yellow one! (Rock, Pop and more of the same).

But moving on. I recently, whilst browsing Amazon, ordered some speaker cable which is claimed to be used by EMI in their studios. This is made by someone called Van Damme. Out went my former VDH and in came the Van Damme. To be quite honest I have been very pleased. Considering that the new cable is a fraction of the cost of the old, which I sold on Ebay, it has opened up

The screenshot shows the Presto Classical website interface. At the top, there are navigation links for 'CDs, DVDs, Blu-rays' and 'Sheet Music'. A main banner features 'HOLLAND BAROQUE SOCIETY' and 'RACHEL RODGER'. Below this, there are sections for 'New releases' and 'Future releases'. A 'Special Offers' sidebar on the right lists various discounts, such as 'Opera Sets up to 30% off', 'DVD Classics up to 50% off', and 'DVD Masters Half Price Clearance'. The bottom of the page displays logos for 'RBS WorldPay', 'VISA', 'MasterCard', 'American Express', and 'VISA VISA'.

"Look at the Presto Classics website and click on new and future releases, you will see that CD isn't dead" says Cliff Millward.

the sound to a degree which I didn't expect. I later sent for some more and bi-wired my MA RX6's to my Kandy K2. This act had a greater effect and has taken away the slight sheen noted before.

Now at about £2.16 a metre this seems to beat something costing a lot more, and is something which you should investigate. I think that a lot of cable is over priced and must make a fortune for those peddling it to people who feel afraid of being left behind. Not keeping up with the audio Jones as it were.

My second point concerns the letter from Matthew Abbot in the same issue, regarding the death of CD. I read this in all the hi-fi mags. It's something of a mantra amongst hi-fi buffs. When CD came out we serious music fans welcomed it with open arms because it rid us of surface noise, rumble, off centre holes and end of side distortion. And it gave us better sound quality.

If Mr Abbot and yourselves would like to look at the Presto Classics website and click on new and future releases, you will see that CD isn't dead. The number of new classical CDs is huge. Personally I have no desire to have my music on hard drive or whatever. If I have a flood here at least my CDs will still be playable. If a hard drive crashes everything is lost.

Perhaps I and folks like me are becoming obsolete. We have no desire to get into computerised music storage. We don't trust it, nor do we trust hi-fi experts who bang on about it. There are many companies who can supply needles and spare parts for windup gramophones, and we can buy styli for electrical pickups to play the discs. Such things have become a minority interest, but it means that folks who don't react to the latest fashions and ditch things merely for being a member of the flock, are perhaps wiser and love music for itself. I have a room full of discs from 78s to SACDs and I can handle them and read the sleeve notes. They mean something to me and are my possessions. Something hidden away on a hard drive is not the same.

Best regards,

Cliff Millward
Tipton
Yorkshire

Rafael Todes insists LP is the best source for Classical music, because it offers a better representation of the original venue and instrumental tone than CD, as well as being a true historical record. So views are split here. And Rafael also greatly likes Classical music streaming, because it avoids the less pleasant qualities of CD. I think I am right in saying. So there are opposite views Cliff. If you

can, do try and listen to some quality Classical downloads.

You are absolutely right about hard drive vulnerability. I have lost a lot of music this way, including a lot from iTunes from the days before you could go back and retrieve downloads from your account. But hard drives are getting cheaper and cheaper, making safety backup less onerous, and memory sticks now hold vast amounts of music and are durable. Then there are Solid State Drives, which have a limited write lifetime but an unlimited read lifetime. If you can develop a backup strategy then you will find downloaded and streamed Classical music offers better quality than CD. But as you say, music on something tangible like a disc has its own attractions, durability being just one of them. I've never had an LP crash on me! There are merits in both.

And finally I hope you find what recording engineer Tony Faulkner has to say about all this in his interview with Rafael Todes on p26, interesting. It's great to hear an expert with first hand experience speak. **NK**

TROUGHLINE 3

I pickup a slightly unwell Troughline 3 from eBay for £41. It needed new electrolytics and one resistor that had changed from 47K to 75K on its own! The good news was aside from a very small tweak of the discriminator coil, it sounded stunning!

I then built in a decoder using the National Semiconductors LM1870. No time for a valve one at this present!

The decoder is in the position used I believe in the Stereo versions of this tuner.

As for performance, it is quite astonishing! I am at least 40 miles from the Sutton Coldfield transmitter and I have a simple 3 element Yagi in the roof. I have full signal on all the BBC stations, and no hiss whatsoever in stereo! All original valves and no re-alignment needed.

Even more amazing is that I do not use the AFC. I turn it on in the morning,



Leak Troughline 3 tuner cost Mark Manwaring-White just £40. "What a fab tuner", he says.

MOZART/GRIEG vol II (192kHz)
2L-057-FLAC192
Artist: Dena Piano Duo
Label: 2L FLAC 192kHz 24 bit

Enjoy this wonderful music: for two pianos from two of history's greatest composers. Mozart was without a doubt one of Grieg's first and foremost musical inspirations. What is special about Grieg's adaptation of the Mozart Fantasia in C minor is that he has not reworked it in the traditional manner. Grieg's unusual achievement lies in the fact that he has retained Mozart's text unchanged, adding an entirely new part which is to be performed together with the original. When both parts are played, they interweave and become something entirely new.

The Mozart/Grieg Fantasia for two pianos in C minor is on this album surrounded by Mozart's famous Sonatas in D for two pianos and Grieg's only original work for two pianos, the lesser known masterpiece Old Norwegian Melody with variations.

[More](#)

MOZART/GRIEG vol II (96kHz)
2L-057-FLAC96
Artist: Dena Piano Duo
Label: 2L FLAC 96kHz 24 bit

Enjoy this wonderful music: for two pianos from two of history's greatest composers. Mozart was without a doubt one of Grieg's first and foremost musical inspirations. What is special about Grieg's adaptation of the Mozart Fantasia in C minor is that he has not reworked it in the traditional manner. Grieg's unusual achievement lies in the fact that he has retained Mozart's text unchanged, adding an entirely new part which is to be performed together with the original. When both parts are played, they interweave and become something entirely new.

The Mozart/Grieg Fantasia for two pianos in C minor is on this album surrounded by Mozart's famous Sonatas in D for two pianos and Grieg's only original work for two pianos, the lesser known masterpiece Old Norwegian Melody with variations.

[More](#)

MOZART/GRIEG vol II (5.1 surround)
2L-057-FLAC96MCH
Artist: Dena Piano Duo
Label: 2L FLAC 5.1 surround

Enjoy this wonderful music: for two pianos from two of history's greatest composers. Mozart was without a doubt one of Grieg's first and foremost musical inspirations. What is special about Grieg's adaptation of the Mozart Fantasia in C minor is that he has not reworked it in the traditional manner. Grieg's unusual achievement lies in the fact that he has retained Mozart's text unchanged, adding an entirely new part which is to be performed together with the original. When both parts are played, they interweave and become something entirely new.

The Mozart/Grieg Fantasia for two pianos in C minor is on this album surrounded by Mozart's famous Sonatas in D for two pianos and Grieg's only original work for two pianos, the lesser known masterpiece Old Norwegian Melody with variations.

Produced in DxD (Digital eXtreme Definition, 352kHz/24bit), FLAC 5.1 surround / 96kHz 24 bit real HD.

[More](#)

Classical music downloads from 2L of Norway come in up to 24/192 resolution and sound superb. "We don't trust it" says Cliff Millward. CD is more durable.

rarely re-tune and yet it never drifts at all over the day!

And now that the BBC claim they are backing off on DAB, there is hope it seems!!

What a fab tuner! I am so glad you mentioned them!! I enclose a picture to enhance your enjoyment. Note the green "stereo beacon" in the top right corner of tuning scale Thanks!!

Best regards,

Mark Manwaring-White
Ming Da Valve Audio UK
Great Malvern
www.mingda.co.uk

It looks fabulous Mark, I am envious that you can buy a Troughline 3 for £40. As you may know Tim de Paravicini once designed a valve



Two 99s – No Flake

Providing top quality components and design practices for a reasonable price, Paul Rigby finds the XTZ 99.26 MK.2 loudspeaker a long way from flaky.

What's in a name? Plenty, if you look at this pair of speakers. According to Olle Eliasson, President of XTZ. "The '99'? It's good enough for the 99% of the population. Of the '26': the '2' is for 2-way speaker using two drivers. The '6' is the latest mark. The model number; the next update will be the 99.27".

For the 99.26, Eliasson decided to use "...the best SEAS driver available, the Excel, normally found in expensive speaker designs such as

the \$100,000 Steinway-Lyngdorf".

When it comes to a unit that has good bass performance "...you're looking at a driver that is stiff, made from magnesium, aluminium and the like, working like a piston. The problem, though, is that when you rise to a certain frequency via the mid-bass cone, you get the high peak of a resonance frequency".

"This is where the problems arise and the compromises begin. When you design a two-way speaker, you cannot run the tweeter too low before you decide to crossover, otherwise you will have high

distortion within the tweeter. On the other side, your mid/bass unit cannot operate too high, otherwise it will have a peak and you will hear that instead".

The new cross-over in the 99.26 helps to reduce distortion. "Even with the lower efficiency, which requires more amplification power, the lower distortion and flatter frequency response results in a better sounding speaker".

The ribbon tweeter, a Fountek from China, is XTZ's driver of choice. According to Eliasson, "this particular tweeter has a balanced frequency

response that sounds good and exhibits low distortion. We just had to cap it at the right point".

Eliasson also likes that the off-axis dispersion angle is quite narrow. "We picked the ribbon because I like the sound and the directivity which means less influential room interference. We claim that a flat frequency response is the best compromise".

Weighing in at 10kg and spanning 244x379x352 mm, "the speaker cabinet uses 25mm MDF with a piano black finish which I claim is thick enough to be stable. We also use lots of damping material. It's a pretty expensive cabinet to make – for the price point. The shape is another reason too, it involved lot of processing".

Before I dived into the general sound testing, I decided to take a closer look at the treble tweaking facility. This, after all, would set the 'tone' for the rest of the review. Using two sturdy bridging plugs for each speaker (filling four sockets per speaker), they can be plugged and unplugged to tweak the treble performance to cater for your room shape, music type and personal likes and dislikes. The treble begins flat at 0dB but then can vary between plus and minus 4dB which results in quite a dramatic tonal variation.

SOUND QUALITY

Selecting a range of compressed chart CDs, played on my Densen B-475, selecting the +4dB option produced upper frequencies that were uncomfortable to experience, necessitating a quick change to 0dB. Even at this setting, the compressed CDs were rather offensive so I reduced the level down to -2dB which was far more acceptable. Moving to -4dB was even better, however, offering a perfect balance between detail retrieval, insight and those unruly upper frequencies. Compressed music is most enjoyable at this setting.

Moving to the better recorded and wholly more superior mastering of Skunk Anansie's 'Hedonism', the -4dB setting proved to be dull, lacking in dynamics and sheer joie de vivre. Plugging in the +4dB option was actually an ideal situation for low volume play in small rooms, acting as a pseudo-loudness switch, accentuating detail that would normally be missed at low volumes. In the end, I decided on 0dB for my room for general play, using decently recorded music and high volume.

The only other tweak to consider was the rear bass port and the included foam bass plug. I decided



to keep the plug in to prevent a woolly, disorganised mess that revealed itself when the plug was out.

Spinning compressed chart CDs via the Densen B-475 CD player, I compared the XTZs with the similarly priced Spondor S3/5R2 bookshelf speakers. Configuring the XTZs to the preferred -4dB treble, my immediate impression was that the XTZ found it tough to keep control of the nasty midrange frequencies, producing elements of mid bloom, even at -4dB, whereas the Spondors produced a more open, controlled and mature output. What the XTZs excelled in, however, was the sheer bass power which offered weight, slam and heft. Although the Spondors provided a superior low frequency focus, the XTZs were peerless in their ability to party. The XTZs were most definitely 'alive', offering a presentation with a large, epic feel the proved both involving and forceful.

Switching to the Skunk Anansie track and 0dB on the XTZ treble output, the XTZs found the lower bass area a bit of a challenge in terms of focus and control but the lead guitar rendition gave the instrument plenty of room, providing a broad soundstage. Detail was plentiful while secondary percussion, via the tambourine, was notable in its insightful nature, as was the subtle acoustic guitar. The presentation for the XTZ was nothing if not bold.

Flicking to vinyl

and Horace Silver's 'Cape Verdean Blues'. Via the XTZ, Woody Shaw's trumpet introduction showed a midrange that was energetic with sonic boundaries pushed to the edge, with a freeform style that, even though it lacked some of the tight organization exhibited by the Spondors, showed an easy style. Similarly, the XTZ's vocal tracking was arguably more emotive. Yes, the Spondors nailed Shaw's delivery on the soundstage more accurately but the XTZ did present an infectious freedom and a sonic skip through the daisies.

Onto rock matters and Kansas' 'Monolith' LP. This slightly compressed album resulted in a measure of upper mid lift which prompted my lowering the XTZ treble down to -4dB which helped to tame the harsh vocal crescendos. The multitudinous and delicate elements of 'On the Other Side', including wood block percussion, was well tracked with the XTZs digging deep into the mix. Bass was also exuberant, big and hefty.

CONCLUSION

There is nothing trim and prim about the XTZs. This is the sort of speaker that will be the life and soul of your party. It's a lively listen and a whole heap of fun.

VERDICT

The XTZ 99.26 Mk.2 speakers provide a vivacious and spirited sound, that is enjoyable.

XTZ 99.26 MK.2 £760
 Audio Sanctum
 +44 (0)1623 857707
 www.audiosanctum.co.uk

- FOR**
- high-spirited presentation
 - passionate mids
 - exuberant bass

- AGAINST**
- limited focus
 - bass control

MEASURED PERFORMANCE

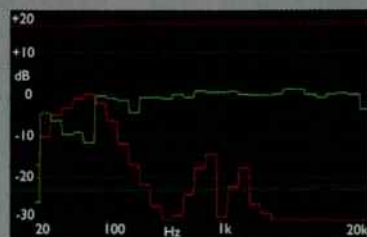
The XTZ 99.26 measured almost ruler flat when set to 0 (zero), meaning both response-adjustment links removed, our analysis shows. It is supremely accurate on-axis in the forward plane. The ribbon had good lateral dispersion but vertically the picture changed somewhat according to listening height, as is common with ribbons. How much impact this has depends upon distance from the loudspeaker and is best assessed by listening. Adjustment using a link gave a perfectly controlled +/- 4dB lift or cut so the 99.26 can be set to sound a little brighter or obviously softer, a neat touch well engineered, our measurements showed.

The port is tuned to 55Hz, both the red port output trace and the impedance curve show. It isn't especially well damped so bass will likely have a bouncy and obvious quality, especially as port output measured +8dB above the drive unit at 80Hz, a high value. The 99.26 reaches down to 40Hz and has some subsonic output too, so bass should sound hefty. Unfortunately, 83dB Sound Pressure Level from one nominal Watt of input is low, not helped by a bass unit with a 6 Ohm d.c.r. giving the speaker a high overall impedance of 7 Ohms. As a result, an amplifier of at least 60 Watts will be needed for high volume and 100 Watts might be

preferable. Our 200ms decay spectrum showed the bass was hot at 80Hz, to be expected from a big driver in a small cabinet, but otherwise the 99.26 lacked overhang and should sound uncoloured.

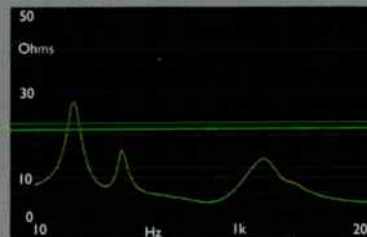
The 99.26 majors on accuracy and adjustability our measurements show. It should give a very smooth, fast and clean sound with obvious bass. NK

FREQUENCY RESPONSE



Green - driver output
 Red - port output

IMPEDANCE





DAC classic

After being wowed by the Metrum DAC last month, Rafael Todes wondered whether comparisons with Rega's DAC were justified. If so, the Rega DAC is a classic.

The Rega is no spring chicken, released in early 2011 it is a classic Digital-to-Analogue Converter (DAC) widely praised for its musicality. Rega proudly proclaim on its website "The early bird catches the worm but the second mouse gets the cheese!" This is a reference to the fact that Rega waited a long time before venturing into the realms of digital.

The DAC is an elegant and solid unit built out of aluminium and steel, exuding the sort of build quality for which Rega has established an enviable reputation. It can convert sampling rates from 32kHz up to 192kHz, with two isolated co-ax inputs, two Toslink inputs, and a USB input which disappointingly is limited to 48kHz and 16bit resolution.

The input stage comprises a Wolfson digital receiver with a high stability, low-jitter clock. The receiver

and PLL have dedicated power supplies, and the DAC stage is a pair of parallel Wolfson WM8742 chips, driven by a buffer stage. Great pains have been taken to remove the noise generated by the PC and other input sources.

conductive polymer capacitors are utilised for DAC decoupling.

The mains lead is an IEC C5, a slightly unusual pattern; it's the rarer type of computer lead, and harder to find in high-quality guise. For this review, I used the supplied lead.

"the Rega sits comfortably with the best DACs I've heard at this price range."

The output amplifier uses a discrete differential multiple feedback filter and output amplifier; there is no sample rate conversion, in order to minimise signal processing. The DAC processes using synchronous clocking.

The capacitors employed in the analogue signal path are Nichicon FG, bypassed with MMK polyester capacitors, and low impedance

There is a wide choice of five filters, varying from linear phase half-band, (the transition region is centred around 1/4 of the sampling rate) to include a soft-knee filter (large transition band which reduces dispersion and delay), an apodising filter (exhibiting a smooth roll-off) as well as a brickwall filter (steep roll-off).



SOUND QUALITY

For the purposes of listening, I started with some High-Res material, using my Weiss DAC202 to connect to my laptop by FireWire and taking the S/PDIF output from the Weiss into the Rega using a Chord cable.

There is a recent release from Linn Records of the 'Symphonie Fantastique' by Berlioz, conducted by Robin Ticciati with the Scottish Chamber Orchestra, recorded at 192kHz. Listening to the "Ball Scene", the Rega DAC presents an attractive sonic picture. The overall sound is smooth and mellow. There are no hard edges or brittle bits – just a wholesome organic-type of sound.

I am not struck by overwhelming detail, but a general coherence, and a sense that the DAC is doing a good job. There is a bit of a glow to the sounds of the string section here, it's not a metallic glow, rather a gentle gloss. This player is significantly better than the players of its generation such as the original Cambridge DAC Magic, showing a refinement that the Cambridge lacked.

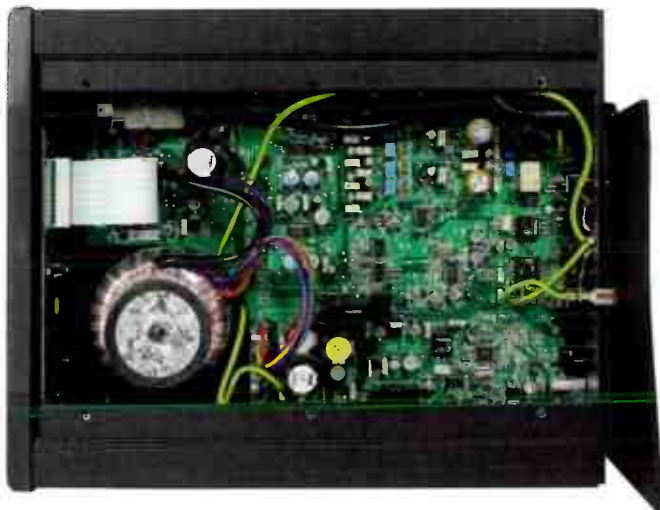
I listened to the same passage with my reference Weiss DAC202 which costs £5000. It is not a fair comparison but an interesting one as it shines some bright light on the areas where the Rega is lacking. The violin section had a greater sense of

depth; I can believe that there are 30 violins playing much more easily with the Weiss.

Spatially the Weiss creates a greater, more accurately delineated soundstage. In my system, the Weiss can sound a bit hard up top, the fault of my listening room most probably and not the DAC, but I sometimes appreciate DACs which are slightly rolled off at the top. There seems to be more variety in the texture of sound I hear from the Weiss. I have a feeling the Rega isn't capturing as much texture or colour, and perhaps is an easier but less challenging listen. At the end of the Waltz, when the cellos and basses start driving forward, the Weiss creates much more sense of momentum. It is more dynamic than the Rega.

A more realistic comparison is with the Metrum Octave that I reviewed last month, at around the same price, albeit with fewer facilities. It is an unusual DAC as it is non-oversampling, and uses the amplifier in effect to provide the filtering. Our measurements showed it to be rolled-off at the top, but it had a superb command of timbre, especially in the midrange, as well as impeccable timing.

I am struck by the sheer beauty of sound the Metrum Octave creates from the strings in the same passage. Where the Rega is warm, the Metrum seems more intensely



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FT-903 RCAs feature α (Alpha) pure-copper conductor for minimal impedance with a heat resistant LCP (Liquid Crystal Polymer Resin) housing. LCP is a superior compound damping material that is also incorporated into the chassis nut to ensure there are no disturbing resonances. The construction of the FT-903 is patent pending and its design.



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NOEL SAYS -

Having been very impressed by the sound of the Metrum Octave DAC we reviewed in the last issue, and fascinated by the many filter options of the Rega DAC, I was eager to hear it.

The Rega offers a more conventional presentation than the Metrum; it is less intense and challenging than the Metrum but as £500 DACs go, the Rega is nothing other than impressive. It finds a lovely sense of space and air in performances, vocal echoes fading away nicely into a believable three dimensional space around John Campbell singing 'Down in the Hole'. Plucked guitar strings had a shiny, vibrant character to them and the midband was generally glassily clear. The Rega has quite a hard patina, although I was using a Sugden A21 SE amplifier and this takes no prisoners.

Bass guitar was firm and drums had plenty of punch; the Rega is good with bass, but here I found that Filter 3 was quite obviously more open and expressive, giving bass instruments clear form and apparent downward extension. I expected apodising filters 4 and 5 to appeal to my sensibilities most, but they seemed a trifle bland and formless. Filters 1 and 2 were somewhere between 3 and 4/5, sounding amenable enough, if a little less challengingly specific in creating instrument outlines. Differences between filters are clear to their designers and easy enough to see under measurement. However, this does not give any idea of how of their subjective impact, if any at all. In this case differences were slight and seemingly subtle, but I quite firmly favoured 3, where Rega recommend 1 and that is what Rafael used.

Another issue is that of the inputs, as electrical and optical usually sound different. Generalising, electrical input usually sounds hard etched, fast and clear, whilst optical TOSlink inputs usually sound less challenging, arguably less intensely detailed but also spacious and natural. Electrical is a direct connection, whilst optical runs through a transmitter and receiver, and a cheap polymer cable. I didn't much like the electrical input of the Rega; optical was smoother and more open as it often is, remaining my preference as usual. However, I know some prefer electrical and both cables and earthing arrangements may well come into this, because optical provides electrical isolation, eliminating earth currents.

At the price the Rega DAC is certainly a very strong player and undoubtedly a good buy, providing you don't want to channel high-res (24/96) from the computer through it. NK

concentrated in the timbre of the sound, and more characterised tonally.

At the bottom end of the audio spectre, when the basses and cellos start the final push to the end, there is a more sluggish attack on the Metrum; it sounds a little bassy compared to the Rega.

The Rega does the big orchestra holography more generously than the Metrum. The soundstage is a bit wider and deeper, but not up to the almost epic proportions that the Weiss creates.

Listening to the Puccini 'Messa di Gloria', Pappano with the LSO on EMI, the choir comes across particularly well, sounding smooth and refined. The overall reproduction of these large forces is more confused than the reference Weiss. I am aware that the massive soundstage of this large-scale project is noticeably shallower than the Weiss. The Metrum has the beauty of tone, a more analogue-type of sound, concentrated sweetness to a greater degree than the Rega, but has less of an accurate holographic image, as well as being less articulate in the bass region.



CONCLUSION

The Rega sits comfortably with the best DACs I've heard at this price range. Whether one prefers the Metrum to it is a moot point. The Rega has a larger presentation and better definition on the bass, but the Metrum pips it in terms of sheer sweetness and beauty of tone. The ultimate choice is a personal one and will vary with the type of music listened to.

Looking to the future, I would welcome the "second mouse" not only getting the cheese, but also a better USB interface than the one included in this DAC, as well as the convenience of remote control! That apart, it is a fine DAC and sonically something of a classic.

REFERENCE SYSTEM

- VAC Auricle Monoblocs
- B&W802ds
- Chord Indigo Plus SPDIF cable
- Music First Passive Preamp
- Weiss DAC202
- Metrum Octave
- Halide Bridge

VERDICT ●●●●● £

A lovely sound characterised by dimensionality and strong bass. Among the best DACs at its price.

REGA DAC £498
 Rega Research Limited
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FOR

- deep stereo stage
- luminous strings
- strong bass

AGAINST

- no 26/96 via USB
- no remote control
- no audio band filter

MEASURED PERFORMANCE

The Rega DAC has no fewer than five filters; 1 is a Linear phase soft knee; 2 Minimum phase soft knee; 3 Linear phase brickwall; 4 Minimum phase apodising; 5 Linear phase apodising.

Amplitude response measured flat to 42kHz with filters 1 and 2, with a 192kHz sample rate signal. The "soft knee" description means a slow but smooth roll off.

Filter 3 was flattest and widest, reaching 70kHz (-3dB).

The apodising filters (4 & 5) avoid time domain pre-ringing and were flat to 36kHz (-1dB) and these are likely to sound most easy going and natural, although differences will be small and not especially obvious between all these filters.

Both optical and electrical S/PDIF inputs worked to 192kHz sample rate. Distortion was low with 16bit, measuring 0.2% at -60dB, and this fell to a low 0.08% with 24bit resolution. Noise was low too and dynamic range high with both 16bit and 24bit.

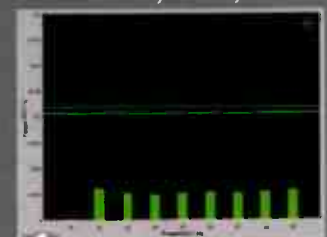
The Rega DAC measured well in all respects, our measurements with a Rohde & Schwarz UPV audio analyser showed. It also has an interesting filter set with many options. NK

Frequency response (-1dB)	2Hz-53kHz
CD	
Distortion	%
0dB	0.005
-60dB (16/24bit)	0.2 / 0.08
Separation (1kHz)	115dB
Noise (IEC A)	-102dB
Dynamic range (24bit)	108dB
Output	2.2V

FREQUENCY RESPONSE (f3)



DISTORTION, -60dB, 24bit



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The Music Chain

Much is written about music and the musicians who entertain us, and we rightly exalt great musicians. But there is an interlinked chain of participants, two of which are I believe are crucial to our music scene in today's world.

For centuries the music chain was a very short one – composers or songwriters, musicians and listeners, and the judgement on quality was immediate. Recording technologies have changed all this exponentially.

Today, we listen to most of our music from a recording and this gives recording engineers the opportunity to avoid poor acoustics, duff notes and off days. This, of course, means the chain has grown to include the recording engineers, the recording engineers, the music distribution system (retailers or downloads), hi-fi manufacturers, hi-fi sellers and the hi-fi purchasers, the latter being the listeners.

I should start by saying that hi-fi has become an adulterated term that no longer has its original meaning because it's applied to much equipment that certainly should not be termed high-fidelity.

It's said that a chain is only as strong as its weakest link.

However, I believe there are two particularly strong links that, if removed from the chain, would seriously damage the quality of recorded music. These are the audiophile, or hi-fi connoisseur, and the specialist hi-fi

retailer, the latter in nearly all cases also being the former because it's their interest that has driven them into their particular business. These are the people who most appreciate how exciting and involving music can be and how it can deliver an emotional experience.

Hi-Fi Connoisseurs

So why is the hi-fi connoisseur so important to the music industry? By their nature, audiophiles are generally avid music lovers who enhance their enjoyment through listening to music at its very best quality level, which means playing great recordings through hi-end hi-fi to achieve the most outstanding results.

Without the audiophile, the main driver for quality would probably be removed from the chain. Let's be honest, over recent years the majority of music listeners now settle for MP3 convenience and, therefore, mediocre sound quality, that is 'pre-ruined' music. If the pendulum ever swings so far that all but a few listen to highly compressed formats such as MP3, music producers will not waste their resources on producing high quality recordings because it would be commercially unnecessary, even if their recording engineers wanted to achieve the best they could. After all, an MP3 or AAC file, the iTunes default format, downloaded at 128 kbps (the most popular download speed), is about one-eleventh the size of a full resolution CD track, 1411 kbps, so the quality is inevitably far inferior. Information is irretrievably lost and the full dynamic

range is lacking. Using an iPod while jogging does not really raise a quality issue but playing low-resolution tracks through an iPod docking station that feeds into a decent hi-fi system, is a disaster area. It's rubbish quality made louder. Fortunately, there is still significant demand from audiophiles committed to sound quality to sustain the production of high quality recordings, but it would be a tragedy if there weren't. For example, most classical recordings downloaded as an MP3 or AAC file are a complete waste of time because there is so much information missing that they are reduced to just the essence of a tune.

Specialist Hi-Fi Retailers

Just as essential a link in the chain as the hi-fi connoisseur is the specialist hi-fi retailer and the two are rightly dependent on each other. Without the specialist retailer the hi-end hi-fi manufacturer would have to rely on the internet and hi-fi magazine reviewers to try and assess the relative merits and performance of their products against that of their competitors – a notoriously unreliable decision making process. Specialist hi-fi retailers are constantly being offered new products for assessment and potential stocking and, as it is also their hobby as well as their livelihood, they are greatly interested in achieving the best performance and seeking out the most outstanding products and combinations. More than that though is their relationship with audiophiles for, if they are to stay in business, they must satisfy the most discerning customers in the industry. The reality is that audiophiles and specialist hi-fi retailers are essential to each other.



UK Hi-Fi Dealers near you



Future of Recorded Music

What are the future prospects of maintaining high quality music recordings? We must hope that audiophiles, or hi-fi connoisseurs, or perhaps most accurately described, music lovers, will continue to drive the demand for quality. But another important reason for hope within the mass-market is that there is no longer any over-riding reason for MP3 and AAC to have such a following. These formats were designed to overcome very slow download speeds and expensive memory capacity. These are not significant factors for most people now. Full resolution audio streaming, as well as CD quality downloads, are already available and will become the norm as the wider public becomes aware of the tremendous quality benefit. This has happened with HD TV so we know this awareness can grow rapidly. In the meantime, we must highly value hi-fi connoisseurs and specialist hi-fi retailers, of which the ones listed on this page represent the UK's finest. Specialist dealers know how to choose the products that combine as a superb system and how to get the best out of it by expert installation in the home. If there's a price premium over an internet purchase, it's probably a small one, but it's unquestionably worth the difference.



STAR QUALITIES

VALUE FOR MONEY.....	★ ★ ★ ★ ★
SERVICE.....	★ ★ ★ ★ ★
FACILITIES.....	★ ★ ★ ★ ★
VERDICT.....	★ ★ ★ ★ ★



OUR TOP 20 UK HI-FI DEALERS

SOUTH

Ashford, Kent

SOUNDCRAFT HI-FI
40 High Street.
t: 01233 624441
www.soundcraft-hifi.com

Chelmsford

RAYLEIGH HI-FI SOUND & VISION
216 Moulsham Street.
t: 01245 265245
www.rayleighhifi.com

Kingston-upon-Thames

INFIDELITY
9 High Street,
Hampton Wick.
t: 020 8943 3530
www.infidelity.co.uk

Maidenhead

AUDIO VENUE
36 Queen Street.
t: 01628 633995
www.audiovenue.com

Rayleigh, Essex

RAYLEIGH HI-FI
44a High Street.
t: 01268 779762
www.rayleighhifi.com

Southend-on-Sea

RAYLEIGH HI-FI SOUND & VISION
132/4 London Road.
t: 01702 435255
www.rayleighhifi.com

LONDON

Ealing

AUDIO VENUE
27 Bond Street.
t: 020 8567 8703
www.audiovenue.com

N1

GRAHAMS HI-FI
190a New North Road.
t: 020 7226 5500
www.grahams.co.uk

SW11

ORANGES & LEMONS
61/63 Webbs Road.
t: 020 7924 2043
www.oandlhifi.co.uk

SW20

O'BRIEN HI-FI
60 Durham Road.
t: 020 8946 1528
www.obrienhifi.com

SOUTH WEST

Bath

AUDIENCE
14 Broad Street.
t: 01225 333110
www.audience.org.uk

Exeter

GULLIFORD HI-FI
97 Sidwell Street.
t: 01392 491194
www.gullifordhifi.co.uk

MIDLANDS

Banbury

OVERTURE
3 Church Lane.
t: 01295 272158
www.overture.co.uk

Birmingham

MUSIC MATTERS
363 Hagley Road, Edgbaston.
t: 0121 429 2811
www.musicmatters.co.uk

Coventry

FRANK HARVEY
163 Spon Street.
t: 024 7652 5200
www.frankharvey.co.uk

Leicester

CYMBIOSIS
6 Hotel Street.
t: 0116 262 3754
www.cymbiosis.com

Nottingham

CASTLE SOUND & VISION
48/50 Maid Marian Way.
t: 0115 9584404
www.castlesoundvision.com

NORTH

Cheadle

THE AUDIO WORKS
14 Stockport Road.
t: 0161 428 7887
www.theaudioworks.co.uk

Chester

ACOUSTICA
17 Hoole Road.
t: 01244 344227
www.acoustica.co.uk

Hull

THE AUDIO ROOM
2 George Street, Hedon
t: 01482 891375
www.theaudiroom.co.uk

York

SOUND ORGANISATION
2 Gillygate.
t: 01904 627108
www.soundorg.co.uk

These specialist dealers have been selected because they are known to do an excellent job in guiding customers towards hi-fi that will give years of musical enjoyment and total satisfaction.



Go digital

Wyred 4 Sound's little mINT is as close as you can get to a digital amplifier. Noel Keywood looks at it what can do.

The mINT uses B&O Icepower Class D power modules that represent the latest technology in hi-fi amplifiers. As a result the tiny mINT delivers 100 Watts per channel but runs just warm, and it has digital inputs. What more could you want? Well, decent sound quality, something for which Class D has no great reputation.

Early Class D amplifiers produced massive amounts of high frequency distortion of a most bizarre nature that sounded like breaking glass. As B&O state though, Class D – analogue not digital – is an evolving technology. The best I have heard to date are Hypex modules, as used in Channel Islands amplifiers, and they measure the best too. There may well be a link through to the mINT because Hypex spun out of Philips, and B&O are owned by Philips, so Icepower may well use similar technology. If so this is a mINT that could be tasty.

Although made in California the mINT comes with conventional loudspeaker terminals and IEC mains input. As well as accepting spades, popular in America, the shrouded loudspeaker terminals also take large gauge bare cable and 4mm banana plugs. The power supply can be switched between 115V and 230V. A small rocker switch for power is located on the cramped rear panel, just above the IEC input, but the front panel carries an On/off button, that lights green at Off and blue at On.

The rear panel crucially carries digital inputs, USB that works up to 96kHz sample rate, and S/PDIF that works to 192kHz sample rate through both electrical and optical inputs. On a Mac, 24/192 files can be played, being downsampled to 96k by the Mac before output to the mINT.

There are two analogue Aux inputs, a Home Theatre bypass (removes the volume control and gives unity gain), an Aux out and a power amp input. The front panel carries a quarter-inch headphone output jack socket. As

there is only a Type A USB printer input, and no 3.5mm jack input or Bluetooth, an iPhone or iPad can only be connected through a dock. The mINT misses a trick here; Bluetooth streaming is a fast approaching feature that may become a must-have, irrespective of its CD quality limitation.

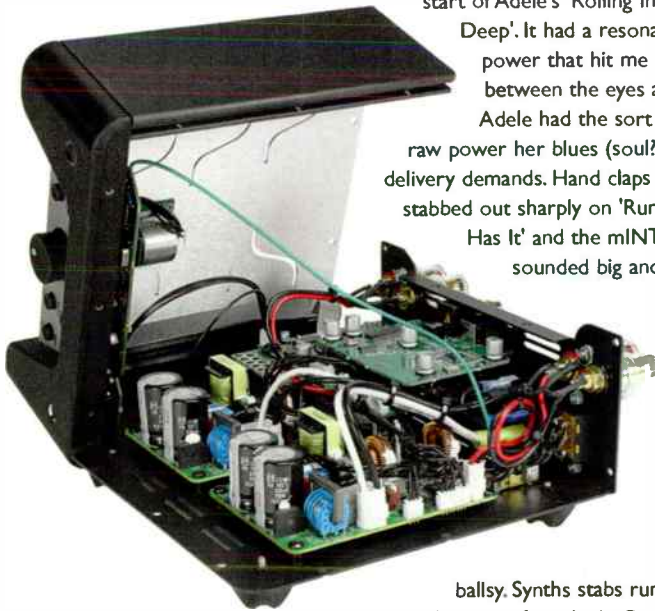
Balancing this is the fact that USB has been implemented to work natively with Macs and with a downloadable driver using PCs. With an adaptor you can also use the optical S/PDIF output of a Mac, available within the headphone socket. A simple remote control is provided.

SOUND QUALITY

The mINT was run in over a week to give it the handbook requested 100hours plus of music, by spinning Angelique Kidjo on 'repeat', input via optical S/PDIF. Our sample came run-in in any case, so this was precautionary.

First using the whole amplifier, as it were, with least outside assistance by connecting our Cyrus





start of Adele's 'Rolling In The Deep'. It had a resonant power that hit me between the eyes and Adele had the sort of raw power her blues (soul?) delivery demands. Hand claps stabbed out sharply on 'Rumour Has It' and the mINT sounded big and

entertainment, if still a bit curiously vague and inflated by the fruity bottom end of the amplifier. I am being critical though. By computer audio standards the mINT offers solid entertainment from a computer, but it has competition from 'digital' amps like the new Cambridge 651A costing £450, and Cyrus 6/8 amps. with digital cards.

CONCLUSION

The Wyred for Sound mINT is a great package if you want big power and plenty of guts behind your Rock, played through a modern, compact system. It's ability to accept high resolution digital audio up to 24/192 is a clear advantage, as is its ability to knock stand mounters off their stands. Not the last word in spatial or temporal definition it will appeal less to Classical fans, but it is still a good buy for the majority, in the context at which it is aimed.

VERDICT ●●●●
A powerful amplifier that's easy on the ear makes the mINT great for a computer audio system that can blow the windows out.

WYRED 4 SOUND mINT INTEGRATED AMP £1299
Item Audio
+44 (0)1782 621225
www.wyred4sound.com

- FOR**
- copious power
 - big bass
 - small size

- AGAINST**
- temporally vague
 - diffuse imaging
 - appearance

CD transport into the optical S/PDIF input, strings of The Royal Philharmonic playing 'Marche Slave' were grey of tone, mellifluous and there was some midband glare from horns. Images across the sound stage were not strongly established, temporally or positionally. It was all a little vague and none too enticing, but the mINT was thrown to the lions, being surrounded by some of the world's best Class A amplifiers passing through our offices.

Switching to the analogue inputs to listen to the amplifier alone gave a clearer picture of the Icepower amplifier. It has plenty of bottom end weight and puts goodly amounts of heft into its delivery; kettle drums rolled thunderously and strings sounded almost muted at high frequencies with Marche Slave. There was still a sense of vagueness, temporally and positionally, but the Icepowers – in the mINT at least – came over as almost warm, big chested and fulsome – and easy on the ear. Gone was the glare and greyneyness of tone via S/PDIF. So in spite of measuring really well, it appears the digital convertors of the mINT have limitations – and I tried both optical and electrical S/PDIF.

The picture changed when I moved from Classical to Rock. Then the Icepowers showed they could put real weight behind drum at the

ballsy. Synths stabs rumbled around the room from Lady Ga Ga's 'Monster', making me very aware the mINT has truck loads of low bass power. Spinning through Rock albums put emphasis on the amplifier's strengths, drawing attention away from its weaker areas exposed by Classical. There's plenty of power on tap, rolling deep bass, a smooth enough midband and quite innocuous treble. The specific sound staging of Rock, with a limited array of instruments, put less emphasis on the amplifier's vague imaging and diffuse timing.

Hooking up a Mac Book Pro running OS-X 10.7.3 (Lion) 24/96 files like 'Misery' from Dave's True Story sounded smooth and atmospheric, and Trondheim Solistene's 24/192 'Divertiment' was easily enjoyable

MEASURED PERFORMANCE

Delivering 78 Watts into 8 Ohms and no less than 132 Watts into 4 Ohms from a compact package, the mINT shows what Class D can do. That's a lot of power from such a small amplifier - and it runs just warm. There was the usual high frequency switching residual, in this case at around 560kHz, but no d.c. on the output terminals relative to ground, where early Class Ds commonly ran a 25V - 70V offset. Across the loudspeaker terminals d.c. offset was a normal enough 15mV or so - perfectly acceptable.

Class Ds would also change frequency response with load, and were band limited. There was little change in frequency response between 8 Ohm and 4 Ohm loads and the amplifier ran flat to 60kHz, just like most amplifiers. It was not all-direct coupled though, reaching down to 4.5Hz (-1dB) before rolling off. Response was unaffected by volume level.

Both distortion levels and distortion patterns with Class D are an issue and here again the Wyred 4 Sound was better than usual. At high frequencies (10kHz) distortion rose with output, starting off at a low 0.06% at 1 Watt into 4 Ohm but ending up measuring a high-ish 0.25% near to full output. Although a bit behind good analogue amplifiers it was no disgrace. There appeared to be some noise on the output and bizarrely it rose as volume was turned down and spurious residuals appeared.

Output impedance was low, resulting in a very high damping factor of 88, so bass should sound controlled.

The optical digital input produced less distortion than most, just 0.11% at -60dB with a 24bit input signal, and flat frequency response to 22kHz with a 48kHz sample rate test signal, and to 90kHz (-3dB) with a 192kHz sample rate signal, as our Rohde & Schwarz UPV

frequency response analysis shows.

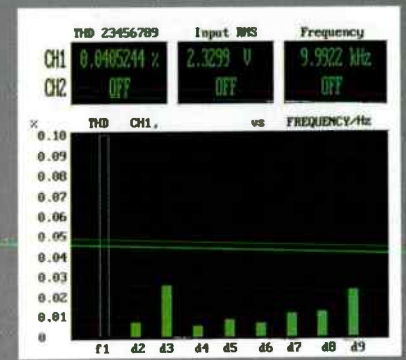
The mINT gave good results all round under test. It is a well developed Class D. It does not reach analogue amplifier standards but it gets very close and should avoid the usual "breaking glass" treble quality of Class D. NK

Power	78watts
CD/tuner/aux.	
Frequency response	4.5Hz-60kHz
Separation	81dB
Noise	-81dB
Distortion	0.06%
Sensitivity	600mV

FREQUENCY RESPONSE S/PDIF 24/192



DISTORTION, 1W, 10kHz



icon Audio

Our NEW MB 90 MK II m KT120

100+100 Watts pure valve power



Designed by David Shaw



**LDT Low Distortion
Tertiary Transformers**

Pictured with optional TJ Full Music, SG Treasure valves and Jensen Copper foil in paper and oil audio capacitors

Valve power for bigger speakers!

New materials and design techniques enables the manufacture of outstanding loudspeakers for the larger room with hitherto undreamt of performance. But this is often done with complex crossovers absorbing a lot of power and making a "difficult load" for amplifiers. Many valve amplifiers are relatively low powered and will struggle to deliver the required current. Transistor power comes very cheap with excellent specifications on paper but often fails to deliver the degree of enlightenment hoped for. We know this from the many phone calls we get that people who have already "bought the T Shirt" and find that long-term listening is disappointing. The new Russian super-strong KT120 valve gave us the opportunity to design a power amplifier of outstanding quality and power from only four audio valves. Our unique in-house designed and wound LDT transformers have the capacity to fully deliver the musical energy generated in this remarkable valve. Amongst our biggest mono block amplifiers. They are ideal for someone wanting a fast dynamic sound, but without a fatiguing mechanical quality. Both big power supply and big output transformers are requisite. The new KT120 has caused a storm in the hi fi world, with 50% more power than the KT88. It enabled us improve the sonics, power, distortion and reliability. An excellent alternative to a solid state transistor amplifier, the MB90 II m will deliver the finest detail of modern recordings in a more satisfying way or present jazz and rock music without harshness or tizz.

Two Amplifiers in One. The importance of Triode

The triode sound is preferred by many hi fi fans, but the power is always lower. Ignored or neglected in the past we give equal priority to the triode function so the full quality is maintained. With our UL/Triode switch you can change from 100 watts to 55 watts of pure triode sound at the flick of a switch. 4 Ohm loading is also given equal priority enabling lower impedance speakers to give maximum performance without compromise.

Now with "Easy Bias" Meter

We think of our amplifiers as musical instruments. Like a piano needs occasional tuning, big amplifiers need the bias checking. This way you can be sure of 100% performance all of the time. Now made very easy with our "easy bias" meter. If the pointer is in the "black" it's correct! Also useful to check if your valves are worn and how much audio power you are using. Long term performance is important to us and this useful aid will take the guesswork out of maintaining your amplifier.

Our new series of "Low Distortion Tertiary" output transformers are the best we have ever made, enabling us to reduce global feedback by about 40%. All our amplifiers are designed and finished in Leicester. Warranty and service is done by the engineers that designed them so you can be sure of long term performance. We incorporate a "standby" switch in order to protect the valves during warm up. All of our amplifiers are hand made using "point to point" soldering without using printed circuit boards. We are convinced this sounds better. It allows for very easy servicing, upgrades and modifications. High quality components are used throughout including silver plated PTFE audio cable SCR capacitors audiophile resistors. Loudspeakers of nominal impedance between 3 ohms and 10 ohms may be used with virtually no reduction in power or quality. A choke regulated power supply adds richness to the sound quality that silicon devices alone are unable to do. In short we have created an amplifier of excellent flexibility and quality which retains the qualities traditional of traditional design and performance. Bespoke upgrades available including silver/copper capacitors, valves and design.

From £2,399 (inc UK VAT). Upgradeable See also our new LA5tx transformer based pre amplifier and other award winning amplifiers on our website

www.iconaudio.com sales@iconaudio.com

icon Audio

World Radio History

Leicester UK



PRO-JECT ACRYL IT £100

The Pro-Ject Debut, in its various incarnations, is a very good turntable, but, like most things in life there is always room for a little improvement. One of the areas that provides a variety of options to choose from in the Pro-Ject accessories list is the platter. The standard fitment is made of pressed steel, 10 inches in diameter (the new Debut 3SE uses a 12 inch platter) and is covered with a felt mat. This can be replaced with a leather mat (the Leather It, £50) or

the platter can be replaced entirely with the Acryl It, which comes as a standard fitment on the £335 Debut Esprit.

As the name suggests, the Acryl It is made from acrylic, machined on a lathe from a solid block. Fitting is easy; the old platter is lifted off and the Acryl It put in its place. No arm adjustment is required since the Acryl It is designed to support the record at the same height as the steel platter and felt mat.

There was no subtlety in the difference to the sound from the moment the needle touched the record. Any noise present in the run in groove was considerably reduced and the music, from the first note of Tchaikovsky's 'Serenade For Strings' (Von Karajan and the Berlin Philharmonic Orchestra) seemed to be projected forward into the room, and to occupy a bigger and more focussed space.

The midrange and the treble showed the most obvious improvement, gaining in clarity and

definition. The violins had previously sounded a little muted and their placement on the soundstage was a little vague. With the Acryl It, they seemed to stride forward and take their place as the lead instruments in this piece, and I was able to accurately picture where they were placed spatially.

The bass also benefitted, being deeper and more precisely timed, as well as displaying more varieties of tonal colour.

At £100 this product is not cheap, but the improvement that it provides makes it a very worthwhile upgrade to any model of Debut that is fitted with a steel platter. It will also fit a lot of older Pro-Ject decks which came equipped with a glass platter and felt mat, and would, I feel, provide some sonic improvement there as well.

The Acryl It sounds good and looks good. **TB**

+44 (0) 1235 511166
www.henleydesigns.co.uk

soundbites



ISOTEK SUPREME MAINS CABLE £475

IsoTek have made a name for themselves as providers of some of the most effective mains filtration devices currently available. However there is no point in removing extraneous mains borne interference and then using mains cables that let pollutants back in again. So IsoTek also make a range of mains cables starting with the Premium model, at £95 for 1.5m, and going up to the

Extreme High Current Mains Cable at £495 for the same length.

Placed just below this in the order of precedence is the £475 Supreme High Current Mains Cable under review here. This uses 2.5 sq. mm conductors of 99.999999% pure copper which are manufactured with a slight twist in them which helps reject RFI. Further RFI rejection is provided by an active shield using a pseudo balanced arrangement where the shield is firmly anchored to the incoming earth.

At the mains end is a Furutech plug made with a eutectic copper Alpha conductor, rhodium plated pins and an ABS body. At the other end the IEC plug is of IsoTek's own design and features 24 ct gold connectors.

This cable is quite stiff so space needs to be allowed behind the equipment for it to curve gently, sharp 90 degree bends are not possible. I plugged it into the Leema Acoustics Tucana II amplifier and was initially presented with a capable but fairly unremarkable sound. This gradually improved over the next couple of days into a sound that was

authoritative and expansive.

I found that I was more aware of detail and shape at the frequency extremes, with the subwoofers on the Chario Ursa Majors getting a little more exercise than usual. The bass was not overpowering but gained in solidity and shape, whilst retaining its dexterity.

Mid band sounds, such as singers, seemed further forward in the mix, and the treble seemed to extend higher, carrying with it more background information, which helped to describe the sound of a venue, or provide those little subtleties of realism that transform listening to a recording into listening to a performance.

At £475, this is the most expensive mains cable that I currently have in the house. I also have to say that it is the best that I have tried so far, releasing an extra layer of performance that I had not heard from my system before. Despite the price, I do recommend trying it. It works superbly well. **TB**

www.isoteksystems.com

Trough-line

Several companies have offered an upgrade service for the legendary Leak Trough-Line FM tuner in the past, but what can be achieved by amateur enthusiasts? Neville Roberts describes his very own approach to doing it yourself...



Trough-Line 2 front view before upgrades

Upgrading the legendary Leak Trough-Line FM tuner was big business in the nineteen nineties, but with rumours of the demise of FM stereo broadcasting in the UK, interest dwindled in recent years. However, it now looks like good old FM has had

superior sound. The BBC, working in partnership with Standard Telephones and Cables Ltd (later STC plc), were developing this technology for the UK, and a certain Harold Joseph Leak and his British company H. J. Leak & Company Limited were one of the first to develop their own tuner for this emerging market.

will be tuned to run at 100.8MHz and the output of the mixer will again be 12.5MHz. This means that all further processing of the signal is conveniently done at a single frequency – the IF – thus no further tuning for different stations is required.

One of the challenges of radio circuit design in the nineteen fifties and sixties was to design an oscillator that was stable. Many tuners of the time needed to be periodically retuned as they warmed up, otherwise they would distort. The problem was mainly caused by changes in inductor dimensions with temperature (a particular problem

Most FM tuners work on the superheterodyne principle and the Trough-Line is no exception. The radio frequency signal enters a mixer, along with the output of a local oscillator, in order to produce a so-called intermediate frequency (IF) signal, which in the case of the Trough-Line is 12.5MHz. Tuning the receiver involves changing the frequency of the local oscillator so for the Trough-Line to tune in Radio 3 at 90.7MHz, the local oscillator will be tuned to run at 103.2MHz. The output of the mixer will be the difference of these frequencies: 12.5MHz. Similarly, to tune in Radio 2 at 88.3MHz, the local oscillator



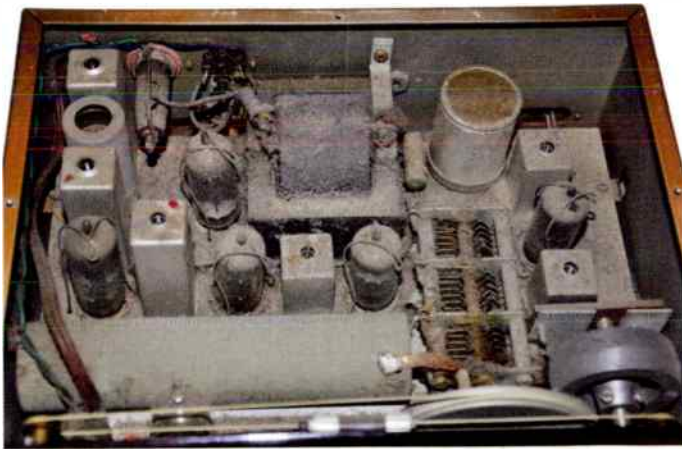
Trough-Line 2 rear view before upgrades

a stay of execution and is set to continue for a good while. And with this in mind, what better time to perform a few well-judged mods? This special tuner lives on in people's hearts and minds because of its exceptional sonics.

The story starts way back in the nineteen fifties, when we were still listening to Medium Wave and Long Wave. Many budding audiophiles were waiting for the arrival of Frequency Modulation broadcasts, which promised greatly reduced background noise and far



Underside before fitting of upgrades



Inside top of dusty Trough-Line 2!

with valve equipment) that would lead to significant variations in their electrical properties at the 100MHz region chosen for FM broadcasts.

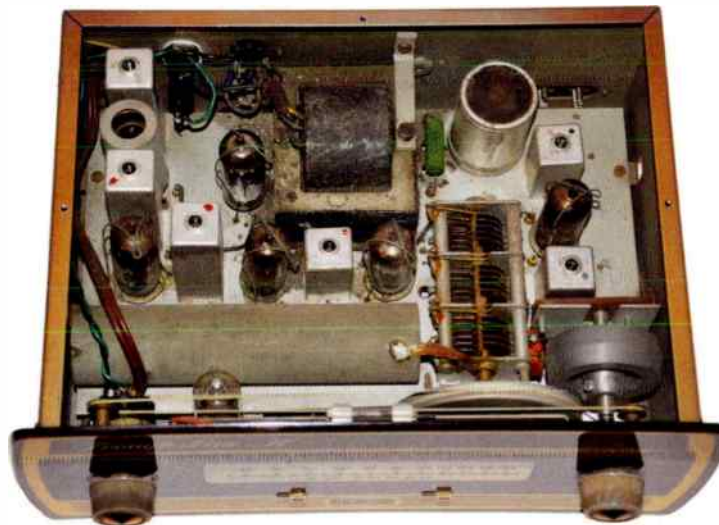
LEAKED PLANS

Leak's solution to this problem was to design a circuit that used a tapped transmission line as the main tuning element, rather than conventional wound coils or inductors. They developed a tuner that used a quarter-wavelength section of transmission line, shorted at one end, which behaved as a parallel resonant circuit of very high Q and electrical stability. The mechanical construction led to a device of great rigidity and electrical stability. Tuning across the frequency range was achieved with a conventional air-dielectric variable capacitor.

The first Leak FM tuners utilised a U-shaped trough as the 'concentric' outer conductor for ease of production and as a result, the tuner was christened 'The Trough-Line'. In the original model Trough-Line Mk.1 launched in 1955, the U-shaped trough had its open side placed facing downwards under the chassis. Subsequent models used a metal cylinder as the outer conductor.

As with the later models, the original Trough-Line utilised a Foster-Seeley discriminator circuit and a

at the time: the Ratio detector and the Foster-Seeley detector or discriminator. The Foster-Seeley discriminator has the disadvantage over the ratio detector of being affected by amplitude variations and



Inside top after vacuuming

therefore requires a limiter stage preceding it. It does, however, offer lower levels of distortion and that is why Leak chose to use the design.

The Mk.1 only covered the range of 88-100 MHz, while the later models covered the full range of 88-108 MHz. A particular feature of all

Trough-Line Mk.2, which sported a distinctive 'Art Deco' front panel made of Diakon (a form of acrylic plastic made by Lucite International Inc.) in brown and gold, rather than the gold enamelled steel finish of the Mk.1. This matched their range of Varislope amplifiers. Apart from the wider tuning range, the valve complement was changed to accommodate a switchable Automatic Frequency Control (AFC) and Local/Distance sensitivity control on the front panel, as well as some changes to the design of the line to reduce weight and costs.

At that time, no decision had been made nationally about the standard for FM stereo, so a separate output on the back panel prior to the de-emphasis circuit would allow the mono unit to be upgraded in the future to stereo by connecting an external decoder.

In 1964 the Trough-Line Mk.2 was phased out for the Trough-Line Mk.3, which adopted a new visual style. Silver and black was now the order of the day with the passing of the Art Deco style of the Mk.2. Apart from the exterior appearance, it was identical to the Mk.2 electrically.

"a fully serviced Trough-Line upgraded with modern components is considered one of the finest sounding tuners ever made, and is therefore highly sought-after..."

'magic eye' EM81 valve as a tuning indicator (incidentally, the EM81 and the later EM84 were often used as a level meter in early domestic tape recorders). There were two types of FM detectors that were popular

the Trough-Lines was that they were self-powered from the mains supply – unlike many other British tuners of the time that required HT and LT power from the power amplifier.

In 1960, Leak launched the

Then, in 1966, the Trough-Line Stereo was launched as a result of the BBC adopting the same standard as in America, the GE-Zenith multiplex system. Some changes to the Mk.3 circuit and valve line-up

"Far beyond my expectations" - Peter Ball



Enterprise C

"The ultimate real world tonearm" HI FI WORLD

We believe great sound quality makes listening to music one of the most uplifting and engaging experiences in life. For this reason our products are not just "good" or even "better" - they embody a refusal to be satisfied with anything but the best at every level. If you want to transform your system, then changing to an Origin Live tonearm will yield an awesome improvement.



Conqueror MK3C

Tonearm of the Year Award HI FI WORLD

Most wanted component award STEREO TIMES (USA)

Best sound at the show award KLANGBILDER (Vienna)

Perfect 10 award "The most addictive product I've heard"
AUDIO 10 (USA)

"For me Origin Live in the analogue sector is the discovery of the year! ..."
IMAGE HI FI (Germany)



Illustrious MK3C

Best Analogue Product Award FEDELTA' DEL SUONO (Italy)

"An utter delight" Iain Manson (Owner UK)

"The value of this arm is off the scale" John Stratton (Owner - Canada)



Encounter MK3C

Editors Choice Award THE ABSOLUTE SOUND (USA)

Product of the Year Award HI FI +

"One of the truly special products I have reviewed in the last 18 years"
STEREOPHILE (USA)



Silver MK3A

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Best of Year Award "the Origin Live Silver tonearm is phenomenal and makes me realize what a bargain it truly is at its asking price" 6 MOONS

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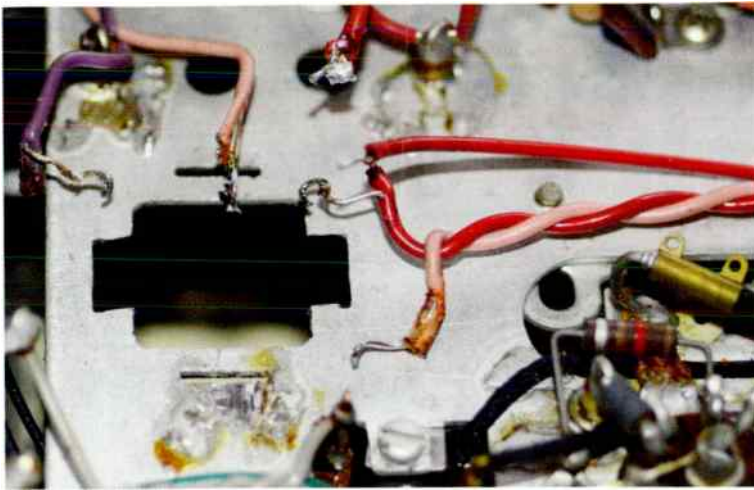
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Chassis underside showing enlarged cut-out for Mundorf HT capacitor

were required as Leak did not want to change the Foster-Seeley discriminator, which has a limited bandwidth, and compromises were reached between increased bandwidth and lower sensitivity. This was necessary in order to feed the internal stereo decoder that, incidentally, used three

solid-state technology and Leak was no exception. The Trough-Line Stereo was phased out in favour of a new semiconductor-based design called the Stereofetic.

However, in the decades since the Trough-Line era, it became clear that no one had ever bettered the sound produced by a Trough-Line. Consequently, a unit that has been fully serviced and upgraded with modern components is considered to be one of the finest sounding tuners ever made, and therefore highly sought-after.

GOING FOR THE ONE

As GT Audio, one of the companies who used to offer a vintage restoration service puts it, "the restorations are not cheap," and with the rising cost of labour, it is becoming increasingly expensive. This got me thinking – I wondered what could be achieved by a DIYer with inadequate test equipment and limited FM tuner alignment experience?

There are, once again, some real bargains to be had on eBay and I was fortunate enough to pick

up a Trough-Line Mk.2 for £60. When my prize arrived (which was described rather oxymoronically as 'working but untested'), it was not in bad condition externally, but upon removal of the lid, it appeared to have spent most of its life stored in a vacuum cleaner dust bag!

Further investigation revealed that, with my unit, part of the mains fuse was missing and the on/off switch on the volume control had failed. Another fortuitous eBay purchase enabled the volume control to be replaced with a New Old Stock (NOS) one and the fuse holder, together with the mains lead, was also replaced. This was followed by a thorough vacuuming and an overall clean using isopropyl alcohol before powering it up to see how well it worked, if at all. Well, I'm pleased to say that it worked like a dream and the sound quality from this mono tuner was nothing short of breathtaking.

Another thing I noted, which is likely to be an issue with any unit of this age, was that the little rubber feet had perished and weren't supporting the tuner properly. New feet were acquired via, you guessed it, eBay – black polyurethane 20.5mm square x 13.2mm high self-adhesive feet fitted the bill perfectly! Obviously, getting the vintage tuner working is an important starting point. From there, one can determine what needs to be done, what is desirable to do and what should be left alone...

NEXT MONTH -

What you can and cannot do at home to renovate the Trough-Line. Differences between models, and fitting a stereo decoder.

SAFETY

All valve (tube) equipment contain dangerous voltages and old equipment is especially dangerous because of decay. Before switching on check that the chassis is earthed using a continuity meter (Maplins sell them) and check again by using a neon screwdriver that it isn't live after switch on.

A common practice is to wind up mains slowly using a Variac, to avoid a sudden bang and possible damage to the mains transformer, or fire from an overheating component.

After switching off, high voltages will be maintained by the electrolytic power supply capacitors, unless they are fitted with bypass resistors of around 100k.

Farnell and RS Components can supply parts, as can Maplins.



Mundorf HT capacitor and Mills series resistor fitted

AF126 germanium PNP transistors. Alas, this decoder falls short of the mark in terms of quality and is best replaced with a modern Phase Lock Loop (PLL) decoder. By 1969, many companies looked towards the new



Chassis underside showing 3rd HT & bypass capacitors fitted

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Turntables



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Pro-Ject RPM 10.1

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Pro-Ject Debut S/E3

Special Edition version of the world-famous Debut turntable; the ultimate in affordable Hi-Fi. Improved Motor Suspension - 12" Platter - Gloss Black Finish - Ortofon OM 10 Super Pre-Fitted



Pro-Ject Xpression III

Latest incarnation of the original Pro-Ject 1 turntable. An improvement on the Mk II model. Stylish Anthracite Finish - Acrylic Platter - 8.6C Tonearm - Ortofon 2m Red Pre-Fitted



Ortofon TA-110 Tonearm

Stylish arm with innovative internal damping, for a more solid performance than its predecessor. 9" Arm - S-Shape Design - Easy to Set-Up - Supplied with Headshell and Arm Wire

Pick-Up Cartridges



Ortofon 2m

The new standard in moving-magnet cartridges. Along with a unique styling, the 2m Series boasts numerous technological advances and better stylus cuts than all that came before them.



Ortofon Cadenza

An award-winning, high-end series of Moving-Coil cartridges that replaced the extremely popular MC Jubilee and Kontrapunkt models. All-new processes now combine to make a market-leading range.



Ortofon MC Windfeld

Possibly the world's most high-tech analogue cartridge. Lovingly designed by Ortofon's ex-Chief Engineer, Per Windfeld - a true Hi-Fi visionary.

Phono Stages and Accessories



Pro-Ject Phono Box S

Brand new phono pre-amp inspired by the world's most popular budget phono stage - the Phono Box. This S version combines great sound and features for MM & MC cartridges at an attractive price.



Lehmann Black Cube Decade

Lehmann Audio equipment is made for music enthusiasts, by music enthusiasts. The Black Cube Decade was designed as a celebration of the cult Black Cube phono stage's enduring success in 2005.



Accessories

We keep in stock an impressive catalogue of accessories and spare parts; from the Spin Clean Record Washer System to replacement Power Supplies. See our website for more information.

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We are delighted to announce the launch of our new website. With extensive information on all of our products and brands, a detailed 'Where to Buy' section offering informative listings of all our recommended resellers, a 'Help & Advice' section covering product-specific and general Hi-Fi topics, and an all-new Shop; 2012 will see henleydesigns.co.uk turn into the ultimate Hi-Fi portal.

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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.

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.

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.



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-XI 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-TI 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 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 brought 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.

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.

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..

**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 SPI0 1973 £400

Seminal Japanese engineering. Sonics depend on plinths, but a well mounted SPI0/II will give any modern a hard time, especially in respect of bass power and midband accuracy.

REGA PLANAR 3 1978 £79

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

GARRARD 301/401 1953 £19

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

**ROKSAN XERXES 1984 £550**

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

SONY PS-B80 1978 £800

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

THORENS TD124 1959 £ N/A

The template for virtually every 1970s 'superdeck', this iconic design was the only real competition for Garrard's 301. It was sweeter and more lyrical, yet lighter and less impactful in the bass.

**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.

HADCOCK GH228 1976 £46

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

**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.

NAIM ARO 1986 £875

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



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

INTEGRATED AMPLIFIERS/COMBOS

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

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

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



SUGDEN C51/P51 1976 £130
 Soft sounding early Sugden combo with a plethora of facilities and filters, complete with seventies-tastic DIN socketry. A sweet and endearing performer as you'd expect, but lacking in power and poor load driving ability, so partner carefully.

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

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



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

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



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

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

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



MUSICAL FIDELITY A1 1985 £350
 Beguiling Class A integrated with exquisite styling. Questionable reliability.



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

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.

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

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.

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



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...

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

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

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



LEAK STEREO 60 1958 £N/A

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

LECSON API 1973 £ N/A

Madcap cylindrical styling alluded to its 'tower of power' pretensions, but it wasn't. Poor build, but decently clean sounding when working.

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!

LEAK POINT ONE, TL10, TL12.1, TL/12 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.



MUSICAL FIDELITY XA200 1996 £

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!

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.

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.



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

CRÉEK 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.

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.



YAMAHA CT7000 1977 £444

Reputedly the best of the classic Jap analogues, this combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

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?

NAD 4140 1995 £199

Brilliant affordable digital tuner has a smooth, detailed musical sound plus sensible real-world facilities.

ROGERS T75 1977 £125

Superb mid-price British audiophile design, complete with understated black fascia. Fine sound in the true Rogers mould – smooth and sweet with fine dimensionality.

SANSUI TU-9900 1976 £300

A flagship Japanese tuner designed to steal sales from the likes of Accuphase and Revox, it boasts superlative RF performance and an extremely smooth and lucid sound, along with very fine build and finish.

SONY ST-5950 1977 £222

One of the first Dolby FM-equipped tuners, a format that came to nought. Still, it was Sony's most expensive tuner to date, and boasted a very good sound quality allied to brilliant ergonomics.

SEQUERRA MODEL I 1973 £1300

Possibly the ultimate FM tuner. Massive in terms of technology, size and features dedicated to extracting every ounce of performance from radio, including impressive multi-purpose oscilloscope display.



TECHNICS ST-8080 1976 £180

National Panasonic's specialist hi-fi brand was a big hitter back then, and this is no exception. Superb FM stage makes for a very clean and smooth listen with lots of detail and depth.



ANALOGUE RECORDERS

YAMAHA TC-800GL 1977 £179

Early classic with ski-slope styling courtesy of Mario Bellini. Middling sonics by modern standards, but cool nonetheless!



AIWA XD-009 1989 £600

Aiwa's Nak beater didn't, but it wasn't half bad nonetheless. Massive spec even included a 16x4 DAC!

NAKAMICHI CR-7E 1987 £800

The very best sounding Nakamichi ever - but lacks the visual drama of a Dragon.



PIONEER CTF-950 1978 £400

Not up to modern standards sonically, but a great symbol of the cassette deck art nonetheless.



REVOX A77 1968 £145

The first domestic open reel that the pros used at home. Superbly made, but sonically off the pace these days. B77 better, but couldn't match the Japanese.



SONY WM-D6C 1985 £290

Single capstan transport on a par with a Swiss watch, single rec/replay head better than most Naks. Result: sublime.



SONY TC-377 1972 £N/A

A competitor to the Akai 4000D open reel machine, the Sony offered better sound quality and is still no slouch by modern standards

DIGITAL RECORDERS

SONY MDS-JE555ES 2000 £900

The best sounding MD deck ever, thanks to awesome build and heroic ATRAC-DSP Type R coding.



PIONEER

PDR-555RW 1999 £480

For a moment, this was the CD recorder to have. Clean and detailed.

MARANTZ DR-17 1999 £1100

Probably the best sounding CD recorder made; built like a brick 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 AB1 subwoofers for an extra two octaves of bass!

LOWTHER PM6A 1957 £18

EACH

This seminal full-range driver is still manufactured. High sensitivity, as fitted to many classic horn designs.

HH ELECTRONICS TPA-50D

AMPLIFIERS 1973 £110

Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain. Not exactly stylish, however.

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.

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.



SPENDOR BCI 1976 £240

Celestion HF1300 tweeter meets bespoke Spendor Bextrene mid-bass unit - and the result is a beautifully warm yet well focussed sound. A little bass bloom necessitates careful low-stand mounting, but these prove that the seventies did have some fine designs after all!

QUAD ESL57 1956 £45

EACH

Wonderfully open and neutral sound puts box loudspeakers to shame. Properly serviced they give superb midband performance, although frequency extremes less impressive. Ideally, use in stacked pairs or with subwoofers and supertweeters.



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.

MAGNEPLANAR SMGA 198X £800

Technological loudspeaker with genuinely musical abilities; fast, smooth, open, dry.



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.

HEYBROOK HBI 1982 £130

Peter Comeau-designed standmounters with an amazingly lyrical yet decently refined sound. Good enough to partner with very high end ancillaries, yet great with budget kit too. A classic.

CELESTION SL6 1984 £350

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

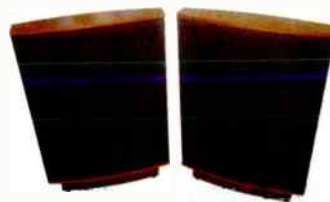
LEAK SANDWICH 1961 £39 EACH

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!



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!



CLASSIC CONTACTS

When a classic goes 'poof' your troubles have just started, but there may be a good ending. Replacing failing parts can improve the sound, so here is a short listing of all these companies who specialise in getting a classic up and running again after its deposited a small ring of soot on your ceiling!

GT AUDIO

(Graham Tricker, Bucks)
Leak Troughline specialists. Also Quad and most classic tuners, radios and amplifiers restored, repaired.
Tel: 01895 833099
Mob: 07960 962579
www.gtaudio.com

TECHNICAL AND GENERAL

(East Sussex)
Turntable parts - wide range of spares and accessories, plus arms and cartridges.
Tel: 01892 654534

CARTRIDGE MAN

(Len Gregory, London)
Specialist cartridge re-tipping service and repairs. High quality special cartridges.
Tel: 020 8688 6565
Email: thecartridgeman@talktalk.net
www.thecartridgeman.com

QUAD ELECTROACOUSTICS

(Cams) 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

(Northumberland)
Specialist in repairs, restoration and modifications to all amplifiers, valve or solid state, ancient and modern.
Tel.: 01670 530674
Email: info@arklesselectronics.com
www.arklesselectronics.com

CLASSIQUE SOUNDS

(Paul Greenfield, Leicester)
ESL-57s restored, rebuilt, fully renovated or improved. Leak, Quad valves amps etc.
Tel: 0845 123 5137/
Mob: 0116 2835821
Email: classique_sounds@yahoo.co.uk
www.flashbacksales.co.uk/classique

WEMBLEY LOUDSPEAKER

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Comprehensive loudspeaker servicing.
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www.wembleyloudspeaker.com

CLASSIC NAKAMICHI

(Paul Wilkins, Worthing, West Sussex).
Restore, Repair & Service Nakamichi Cassette Decks.
Tel: 01903 695695
Email: paul@bowersandwilkins.co.uk
www.bowersandwilkins.co.uk

ONE THING

(Coventry) Specialist in electrostatic panel manufacture and repair. Can refurbish ESL 57s and 63s as well as Leak Troughlines and Quad IIs.
Email: one.thing@ntlworld.com
www.onethingaudio.com

LORICRAFT AUDIO

(Terry O'Sullivan, Bucks)
Garrard 301/401 and their own 501 repair, spares and service.:
Tel: 01488 72267
www.garrard501.com

EXPERT STYLUS COMPANY

(Wyndham Hodgson, Surrey) Stylus replacement service for all types of cartridge. Including precise profiling for 78s. Tel: 01372 276604
Email: w.hodgson@btclick.com

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.
Tel: 0161 499 2349
Email: brian@revoxservice.co.uk
www.revov.freeuk.com

SOWTER TRANSFORMERS

(Brian Sowter, Ipswich)
Large range of audio transformers for valve amps, cartridges, line drive, interstage plus all associated services.
Tel: 01473 252794
www.sowter.co.uk

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(London)
Tannoy loudspeaker parts, restoration and repair. Also Epos and TDL loudspeakers.
Tel: 020 8 864 8008
www.lockwoodaudio.co.uk

ATV AUDIO

(Henry Dulat, Surrey)
Repairs, restorations and upgrades to valve and transistor amps and all analogue audio including Revox.
Tel: 01372 456921 Mobile: 07730 134973



A class sound

Class A amplifiers are known for top sound quality – but they have problems. Sugden's A21SE is a solution to many, Noel Keywood finds.

You don't have to spend much time reading amplifier specs or browsing forums before the description 'Class A' appears. And when it does it is held up as the gold standard in amplifier topology, the best sounding type of amplifier available.

In spite of their reputation, Class A amplifiers are not popular in the real world, with manufacturers or the public at large. They run hot and are very inefficient; ten times more power can be drawn from the mains than is available for output, so a 10 Watt Class A amplifier can draw up to 100 Watts of mains power. It's no environmental disaster of course, the same as a light bulb (old style!) but if you want a 50 Watt amplifier things start to get hot – literally.

The A21SE is a lot smaller and lighter than most Class As and it doesn't run very hot either I found. That's because it uses different and more efficient circuitry that raises efficiency, lessening heat output. All the same Sugden still quote a modest

30 Watts per channel (8 Ohms) and under test ours barely managed that.

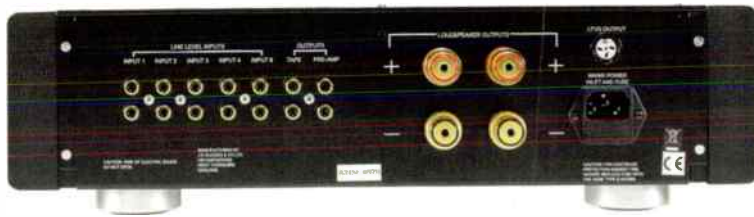
Yet unlike most Class A amplifiers, at 14kgs the SE is easily liftable and its 115x430x360mm dimensions allow it to blend into a lounge environment easily. This is a Class A you can use in the home easily enough, even in the summer.

With the A21SE Sugden keep

it simple. As standard it comes with five line inputs and one pair of loudspeaker output terminals. If you want a phono stage then this is available as optional extra. There is a fixed tape output and a preamp output. Remote control is provided for volume only.

We reviewed the A21SE way back in our May 2005 issue and our





editor loved it then. I didn't hear it at that time, but I am well acquainted with Sugden's A21a II amplifier as we have had one for a long time and use it as a reference. The A21SE is bigger and Sugden claim it is better at dealing with low loads.

Class A avoids many ills inherent in the common push-pull amplifier, notably crossover distortion – and both the Tellurium Q Iridium and the A21SE obviously lacked this

"it has a dynamic range and speed that makes it sound superbly lively and vivacious."

under measurement. However, that is not to say they lacked distortion but the A21SE was very linear I found, turning in impressively low distortion figures at critical low outputs, at 10kHz. So the A21SE does measure very well; it truly meets all expectations here.

However, as far as audiophiles are concerned Class A means low power and reasonable but not massive volume.

The way to ameliorate this limitation is to use 90dB efficient floorstanding loudspeakers able to go very loud from a few Watts. Remember, the bigger the loudspeaker, the less power is needed. It's counter intuitive and still I read on the internet that big loudspeakers need big amplifiers – but they don't. Hook the A21SE up to a pair of giant Tannoys and it'll blow you across the room.

Not so many of us have the room for such monsters, but today's floor standers commonly come in at 90dB and this is plenty high enough, so paired suitably the A21SE isn't as limited as it might seem. I rarely use more than 5-10Watts and play loud. However, Rafael Todes plays in a live orchestra and listens at full orchestral level – meaning very loud. For him, the Iridium was obviously power limited, if a wonderful sonic experience and the same would apply to the A21SE. So whether its power is a limitation or not depends much upon your own experience and your neighbour's tolerance levels. My old Victorian terrace has simple double

layer, solid brick walls with no cavity and my neighbours hear everything I play unfortunately, so Class A suits me fine!

SOUND QUALITY

The A21SE has a remarkable sense of see-through clarity, but this accompanies an almost peculiar ability to set up three-dimensional images in hard wrought outline. Saxophone in the Pink Panther

theme hung in space between a pair of Spendor A3 loudspeakers (next issue!) with a mesmeric sense of ambience about it. The gentle tap of stick against cymbal had a crystalline purity that made for razor sharp precision. This is a very 'fast' sounding amplifier where, for example, the guitar strings tortured by Nils Lofgren's fast finger work have a vivid, almost lacerative quality about them. However, in this instance laceration doesn't come from the high frequency distortions that bedevil most transistor amplifiers. The A21SE is desperately fast, but sweet and clear to an extent that is unmatched by other transistor amplifiers. It was said by us before – and quite rightly – that this is one of the world's best amplifiers and I am happy to repeat the point. When Lofgren's fingers race across the strings in 'Keith Don't Go' the A21SE maintained perfect composure, with no hint of smear or strain. It just seemed totally capable, free of the slight haze or fuzz that subliminally stains most transistor amplifiers.

The A21SE has the tightest and best

defined bass I've heard, apart from the Iridium and perhaps a few others. However, it doesn't have the seismic grunt of some amplifiers, Musical Fidelity's AMS50 being one example, a Class A that can deliver more current, but is also commensurately larger and more expensive. The Sugden is a baby as Class As go but it has a dynamic range and speed that makes it sound superbly lively and vivacious. This is a fun amplifier to listen to as a result, bringing a grin to my face from the off.

Strings were liquid and swelled freely in Tchaikovsky's 'March Slave'. The gently played theme was crisply timed, and interjections from the orchestra stabbed out powerfully. Cymbal crashes were enriched by filigree detail, sounding rich but sweetly clear. Horns forced the theme at me, underlining just how dynamic the A21SE is.

CONCLUSION

This is an amplifier for aficionados. If transistor amplifiers sound OK to you, then its strengths may well seem irrelevant. Or if you want to be hammered by even more bass from the synths that surround Lady Ga Ga, again the A21SE might not be quite what you are after.

However, if you want to hear how transistor amplifiers should sound – and I wish they would sound! – then this is the one. It is an utterly superb amplifier that is exciting to listen to with both Rock and Classical music, as any good amplifier should be.

VERDICT ●●●●●
 Fantastic sound quality with hard sculpted images, deep detail and tight bass, but don't expect disco volumes.

SUGDEN A21SE £2,480
 J.E. Sugden & Co
 ☎ +44 (0) 1924 404088
 www.sugdenaudio.com

- FOR**
- superbly clear
 - fast and tight
 - easy to use
- AGAINST**
- limited power
 - no digital inputs
 - phono is extra

MEASURED PERFORMANCE

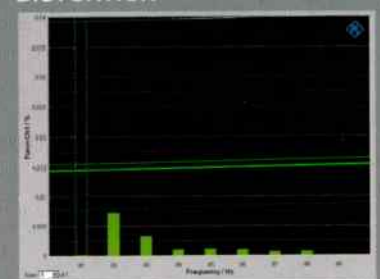
We first measured this Single Ended transistor amplifier in our May 2005 issue and much stays the same, but there are some positive changes. Power into 8 Ohms goes up to 24 Watts, but what appears to be current limiting curtails power into 4 Ohms to 28 Watts; it was impossible to get the steady 34 Watts into 4 Ohms of the earlier model. Damping factor was high at 47 so bass control should be good. Subsonic output, as before, rolls off below 20Hz. Distortion was lower than before and mostly second harmonic, measuring just 0.007% at 1 Watt into 4 Ohms. There was no crossover distortion of course, this being a Single Ended amplifier (i.e. not push-pull like almost all others) and no high order harmonics. The distortion pattern changed little with level. Only into 4 Ohms at 10kHz did distortion start to rise at high power levels, as before, but this isn't a scenario that determines sound quality. Sensitivity was very high as before, so the A21SE will handle just about all sources.

The A21SE turns in a very neat set

of performance figures, in spite of it using a rare SE circuit configuration. In particular this amplifier, by its nature, has no crossover distortion and it was both stable and very linear in its distortion behaviour. NK

Power	24watts
CD/tuner/aux.	
Frequency response	14Hz-150kHz
Separation	76dB
Noise	-80dB
Distortion	0.007%
Sensitivity	90mV
Damping factor	47

DISTORTION



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Twenty Tot

Adam Smith takes a listen to PMC's dinky Twenty.21 loudspeakers.

I was recently smitten by the range-topping PMC Twenty.24 loudspeakers, so this review was going to be a bit of a disappointment, wasn't it? My real love is large loudspeakers. Then I recalled that one of my favourite loudspeakers from PMC's older ranges is the DB1i. I remember being impressed at the way PMC's transmission line technology had wrought such an expansive sound from such a dinky box (and yes, that really is what 'DB' stands for!). I was keen, therefore to see if they could pull off the same trick twice...

Initial impressions were very good indeed. The 21s share the same 27mm Solonex soft dome tweeter as the 24s, but this time mated to

a smaller 140mm bass/midrange driver. This driver is loaded by a transmission line of 1.72m effective length (5.6ft in old money) and vents on the front panel below it. This is an unusual step for PMC as their previous standmounters such as the aforementioned DB1i have featured rear-firing lines; however, PMC's Keith Tonge explained that the re-arrangement allowed for a greater effective line length and thus more bass. This would seem to be borne out, on paper at least, by the fact that it is the TB2i in the old range that achieves the same frequency range as the Twenty.21s, from a bigger cabinet.

The two drivers are united by a high quality crossover circuit that utilises the same crossover frequency

of 1.8kHz shared by all models in the range. Ultra thick copper tracking adorns the PCB for minimal signal loss and two pairs of terminals on the rear panel permit bi-wiring or bi-amping once the supplied links are removed. Of course, a standmounter requires stands and PMC have done themselves proud here as well, designing in-house a fine matching stand for the 21s. This consists of a sandwich style top plate with a layer of damping rubber, a feature repeated at on the bottom plate. Two vertical tubes support the top plate. The front one is hollow and can be filled with the damping material of your choice. The rear tube is damped in its own right but not fillable because it has another trick up its sleeve,

namely disguising the cables used to connect to the speaker – which runs in at the bottom either under the stand or into a slot behind it, and out of a second slot near the top. This, combined with the superb finish of the loudspeaker itself and another impressively solid yet fixing-free grille mounting, means that the Twenty.21s are an absolute pleasure to welcome into the domestic environment.

PMC seem to be on something of a design roll at the moment as I love the sloped-back styling of the whole range and the matching stand ensures that sense of style is not lost on the smaller models.

So, the Twenty.21s are a visual and tactile delight, but could they deliver the goods sonically? I was keen to find out...

SOUND QUALITY

Having spent a good deal of time positioning the Twenty.24s to obtain best performance, I found myself repeating the task with the 21s. The rising treble response means that they are best not positioned firing directly at you, as per many speakers, PMC instead recommending that their listening axes cross behind your head. In fact, I brought the speakers closer together than usual and had them firing straight ahead and with this position established, the results were hugely impressive.

Correctly oriented, that rising treble suddenly smoothes out to become a magnificent swathe of upper end detail that grips and times like few other compacts at the price. I actually played the introduction to Steely Dan's 'Jack of Speed' over and over about six times in a row, simply because the cymbals were so crisp, vivid and utterly delightful!

When the track started properly though, Donald Fagen's vocals were captured perfectly centre-stage and the backing bass line propelled the action along with vigour and purposeful intent. The bass from these tiny tots may not be quite up to the task of rattling ornaments off shelves, but it digs impressively deep and without any hint of overblown strain. It is aided in its task by an upper bass that is lithe and blessed with seriously impressive levels of detail.

Imagery from the



Twenty.21s was no less of a joy to behold, again once they were positioned correctly. Their generally decent swathe of spatiality suddenly opened up like a flower in the morning sun when that sweet spot was hit and they impressed me greatly with the stability of their central image, combined with the vertical scale and atmosphere that accompanied this.

The introduction to Stevie Wonder's 'Higher Ground' features a lovely big cymbal repeatedly struck in the right channel and the PMCs shimmered this off into the distance gloriously each time.

Equally, they were one of the few loudspeakers I have encountered that kept the background synthesiser work of Underworld's 'Jumbo' vivid even when the main drum and bass lines started; many loudspeakers tend to lose it in the background.

No matter what I chose to feed the PMCs, they absolutely lapped it up, giving everything a highly infectious sense of tautness and musicality. Piles of LP sleeves grew in my listening room late into the evenings during their stay and I never once found anything that would trip them up sonically. They have an unerring musicality and will even play at quite anti-social levels if required, without exhibiting any sense of strain.

CONCLUSION

So the baby of the bunch punches just as hard as the daddy of the range and with even more enthusiasm. The PMC Twenty.21s are an object lesson in how to wring a big sound from a small box with virtually none of the compromises this usually entails.

Yes, maybe others have done similar but nearly all models that I can think of, off the top of my head, wear price tags considerably larger than that of the 21s. If your heart wants big loudspeakers but your head says they must be small, then look no further.

REFERENCE SYSTEM BOX
 Garrard 301 turntable
 Jelco SA-750D tonearm
 Ortofon Xpression cartridge
 Marantz CD94/CDA94 CD player
 Anatek MC1 phono stage
 Naim Supernait amplifier



VERDICT ●●●●●
 The baby of the Twenty range impresses just as much as the range-topper. The 21s are gifted and accomplished musical performers.

PMC TWENTY.21/STANDS
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 PMC Loudspeakers
 ☎ +44(0)870 4441044
 www.pmc-speakers.com

- FOR**
- impressive bass weight
 - superb detail
 - musically addictive!
 - build and styling
- AGAINST**
- position carefully

MEASURED PERFORMANCE

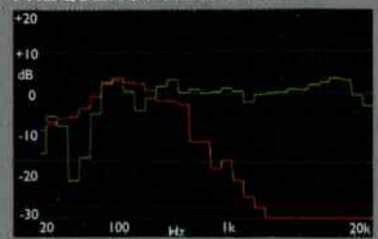
The twenty-21 has a smooth on-axis frequency response free from unevenness or the common crossover dip, but it does have the usual treble lift of modern loudspeakers. Measuring +5dB at 10kHz, the twenty-21 will sound obviously bright in tonal balance. Our graph shows response 30 degrees off-axis and this lessens treble a little, so the cabinet is best pointed down a room and not straight at listeners. Dispersion was wide and drive unit phase matching good, so a lot of treble energy will be put into a room, but imaging and sound stage should benefit.

The slot port (red trace) extends bass a little, down to 50Hz, but there is little deep bass. Our impedance curve shows it damps the bass unit very well, making the twenty-21 an easy (resistive) amplifier load. However, the bass unit has a high DCR of 6 Ohms and the loudspeaker has a very high overall impedance of 9.5 Ohms. This doesn't help sensitivity, which was a low 84dB from one nominal watt (2.8V) of input power. Amplifiers of 60 Watts or more are needed for high volume.

very clean. However, there is a strong mode at 80Hz and this will likely help determine bass quality.

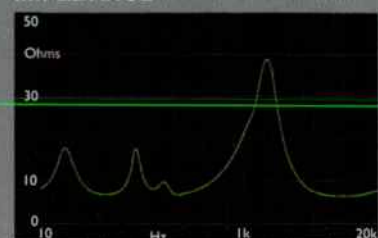
The twenty-21 is well engineered. It will have a bright balance and being insensitive it needs power to go loud, but it should sound clean and have controlled bass. NK

FREQUENCY RESPONSE



Green - driver output
 Red - port output

IMPEDANCE



A 200mS decay analysis shows there is little coloration and few obvious box returns over most of the audio band, and the tweeter looks



GENE PARSONS

Birds Of A Feather

Sierra

Probably best known as being a member of The Byrds, during their progressive country-rock phase with the likes of Clarence White and John York, debuting on 'Dr. Byrds & Mr. Hyde', Parsons went solo in 1973, joined the Flying Burrito Brothers (founded by Gram Parsons and Chris Hillman, also both ex-Byrds) and then joined Sierra to release the album, 'Melodies', in 1980. This album was produced in 1992, as 'Parsons Green'. The latter stemming from Meridian Green, the daughter of folk singer Bob Gibson. Parsons and Green married in 1986 but this album was the pair's debut as a singing partnership.

Delivering his own brand of folk rock, Parsons, with Green, presents a laid back, almost swinging country vibe that takes its time and doesn't so much as wallop you over the head but gently settles into your consciousness. The approach is light with the songs sung in an easy-going manner. The highlights within the album include Parsons' own guitar playing, which is often undervalued but is shown here, resplendent, on 'Lily's Hotbread' which shows Parsons at his finger-picking best.

Technically, there's a warm sonic blanket laying over the production.

A true analogue recording, complete with an analogue delay and sources taken direct from master tapes, this vinyl release is a bit of a 'lost and found' piece. Just a few copies of the album exist at the label so, if you want one, stop reading this and contact the label on sierrarecords.goestores.com!

Also ask Sierra about another vinyl rarity, the Gram Parsons LP 'Gram Parsons And The Fallen Angels - Live 1973'. Starring Emmylou Harris, the album was broadcast live on 13 March 1973 at the Ultra Sonic Recording Studios, Hempstead, NY, USA for the WILR-FM radio station, also in NY.

BOB DYLAN

The Basement Tapes

Mobile Fidelity

This is a true blend of Dylan and The Band. Dylan is subsumed into the collective. Sharing, as he does, vocal duties with his Band colleagues...at least, that is what it's supposed to sound like. What, in fact, has happened here is that The Band's Robbie Robertson has edited the tapes to give that impression. Inserting newly discovered demos and overdubbing them in the mix, Robertson has altered the original balance because The Band were not as heavily involved on the original recording (any dedicated fan will

realise this immediately if they ever get their hands on the original five CD bootleg).

Nevertheless, in this 'shared' environment, Dylan actually sounds very relaxed and is obviously enjoying himself immensely, giving the record a touch of the party atmosphere and a light touch. Dylan is playful on his own contributions, wallowing in the varied genres that he tackles from blues to folk to rock with added asides and jokes aimed at his own backing band. Speaking of which, The Band, even if they mainly occupy tweaked demos, also perform magnificently so, despite the rather manufactured content, the finished article is a highly recommend listen.

Technically, the cut is, as ever with Mobile Fidelity, truly analogue, sporting an analogue delay while the mastering, done with the original master tapes - not a digital copy but the real tapes - has produced a glorious 3D image within the spacious and airy soundstage. More than that, the disc plays with deep, dark, silences. The final album, which features the standard soft plastic inner sleeves and 180gm wax, has been spread over two discs.

If you enjoy the works of Mobile Fidelity then also take a gander at the label's latest Elvis Costello release, 'Almost Blue' (1981), a country-tinged project.





TASTE

On The Boards Music On Vinyl

Released in 1970, Taste were a power trio from Ireland from the same mould as Eric Clapton's Cream but, in this case, fronted by songwriter and vocalist, Rory Gallagher. This was the band's final studio album but it was also their best.

Gallagher has a rip roaring time on this album, making the guitar talk like few others could. His complex melodic structures contrast well with his innate style which is nothing if not 'clean'. Gallagher makes his guitar sound like an individual entity, playing on its own to support the Gallagher vocal.

Technically, Music On Vinyl (MOV) has used a digital delay for this album but has utilised hi-res digital files that have been loaded directly into the workstation to bypass the normal digital delay restriction, maintaining the resolution. The silence of the cut is a wonder to behold, producing a dazzling clarity that lifts up detail from the soundstage like a knife might raise a slice of gold leaf. While the soundstage itself not only has depth but height.

Rory Gallagher fans should also look out for two other Music On Vinyl releases. 'Tattoo' (1973) was Gallagher's second album release

that somehow was written during a full blown tour. As such, it is pretty incredible just how good this LP sounds. The second release is a rare item indeed. Created for Record Store Day on 21 April 2012 (a day to support High St record shops, where record labels supplied them with collectables and limited editions that were supposed to be for sale only within shops and not on the internet), 'Stompin' Ground' is a limited edition 10in, six-track EP featuring extra tracks that have recently appeared on CD issues but have been previously unavailable on vinyl.

PHANTOM LIMB

The Pines Naim

Sometimes described as a country/soul band, which stretches the genres rather thin, methinks, this UK five-piece certainly has a country rock lilt, I'll give them that. In fact, they even have a late-Byrds ethic but without the jangly Rickenbacker. A lazy presentation gives room, though, for the lead vocalist, Yolanda Quartey (who provides a big, black, powerful, confident and controlling delivery) to sit back and tell us her story. This Band-like approach to music allows you to devour the song, the performance and the audiophile qualities of the LP, in that order. Easy, low key but with an impact-potential

that creates its own tension, at times, this is a grower of an album.

Technically, the mastering has had to deal with a whole host of activity. Apart from a powerful lead vocal, there's a harmonic range of backing singers plus instruments. It's a job that's been done well, however. The latter have been delicately arranged around the soundstage while the stereo image is strong and there's enough instrumental separation to provide a sense of air and space.

If this album has intrigued you then look out for other productions from Naim such as ace guitarist, Antonio Forcione's Quartet 'In Concert'. A double album, the release showcases Forcione's adept skill which has earned him the rather extended nickname of the Hendrix of the acoustic guitar. Tellison's 'The Wages Of Fear' takes a more indie-rock approach whose music is based on an energetic presentation complete with repetitive strain injury-inducing electric guitar strumming. It's when they leave this one-paced approach that they become interesting, however.

Finally, AM's 'Future Sons & Daughters'. Now this is an interesting album that features arrangements quirky enough to hold your attention. There's some sixties cool and musical influences in there combined with low key indie vibes.



Renaissance

Rafael Todes on the delights of an 18 year old DPA Renaissance amplifier that cost him £240.

I was fortunate enough to review the Deltec Precision Audio PDM3 DAC recently, and its charms fuelled my interest in the company. While this product was from the second flowering of Deltec, the earlier incarnation was cut short in its prime, when in 1992 it ceased trading. Deltec Precision Audio was originally started by Adrian Walker and Rob Watts whilst students at Cardiff University. Rob, one of the main architects of the company, went on to design the classic Chord 64 DAC, and I have noticed that whenever the mention of his name occurs, the word 'genius' is never far away!

The Renaissance amplifier I'm looking at here was a cut-down, budget version of the power amplifiers Deltec had produced

earlier, involving the innovation that multiple feedback loops could be used to provide an extraordinarily high-gain bandwidth product, high resolution, high RF immunity and linearity. This is immediately apparent when listening to the amplifier.

Over 97% of the components are surface-mounted, which means that components can be smaller, use shorter leads with lower inductance and resistance – and suffer fewer RF problems. There is, however, a downside: reliability can sometimes suffer as there is less solder used on each joint.

I have been using a Renaissance in my second system, to drive a pair of Celestion SL6s, with an old Meridian 104 tuner, bought for £80 on eBay. I had previously used an Audiolab 8000A, which had the

power and the reserve to drive these relatively inefficient speakers. The resultant sound had good bass control, but added a touch of glass to the proceedings.

Having purchased the Renaissance amplifier on Gumtree for £240, I was surprised and initially a bit disappointed by the weight of the package that arrived. These days, the quality of an amplifier is almost always associated with high mass, with the possible exception of digital amplifiers which can be much lighter due to their greater efficiency.

However, I was not prepared for the sound that was to emerge. The glassy midrange of the Audiolab instantly disappeared, in its place appeared a most beautifully elegant, smooth, rich midrange, with a bass grip that was in evidence even on the



Celestions, that can be found wanting in the lower regions.

The Renaissance had a compelling sound, one that made me want to leave the Meridian 104 tuner on all the time. In particular, with large orchestral music, it has a level of control which is quite staggering considering the secondhand value of the unit. Every time I hear a different genre of music, I'm fascinated to hear how the amplifier will bring it to life. As a string player, I particularly enjoy the string sound it creates, relaxed, textured, and sweet. At the top end, especially with the human voice, there is an absence of distortion and a beguiling quality that enables the musical line to float effortlessly.

There are rather eccentric tone controls on the unit. Electronic switches click to alter treble and bass in discrete steps. When the unit is switched off, these are reset to zero. You can't really be sure what is the current state of the tone controls at any given time, and this is one of the less effective design solutions of the amplifier. Inputs are selected by the same type of switch, each successive click cycles the input by one. In my amplifier the switch is malfunctioning, and it can take several cycles to get



the right input.

There is a phono section on my amplifier; some versions left the factory with line levels only, some with phono stages built-in. The quality of the phono stage is good, but not really up to the quality of the rest of the amplifier.

Similarly, there is a headphone socket on the rear panel, which gives good results, with a curiously compacted soundstage compared to my Graham Slee Solo or Weiss DAC202 headphone amplifiers, when using Sennheiser HD650s.

Another eccentricity of design is the location of the on/off switch on the rear panel. When rack-mounted, this leads to groping around and a sore arm.

As a curiosity, I hooked the Renaissance up to my reference B&W802Ds. I wouldn't normally expect much out of this combination, a 35W amplifier driving some

relatively difficult to drive loads, but was pleasantly surprised to see that the Renaissance could stir up some hefty volumes without any distortion or breaking sweat. My usual VAC Auricle Monoblocs need not worry, but it was impressive how this brilliantly-designed mid-range 18-year-old amplifier performed when faced with a high-end system. The bass lacked the sheer force of the VACs, but the beautifully airy treble still shone through. Not a replacement, but a good back-up if the valve amps blow up! It is worth mentioning that the cheapest equivalent VAC amplifier is northwards of £5000!

For those people looking for a stunning vintage bargain, and are prepared to break away from the mainstream Naim/Audiolab/Meridian mould, they will be delighted at what this innovatively designed amplifier can do, for a secondhand price that belies its true audio quality.



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Blue Moon

BlueAnt has entered the increasingly crowded lifestyle-oriented, mobile accessories market. Paul Rigby reviews the Embrace headphones.

The 'lifestyle headphone' niche is a specialist audio area better known for style over substance, although the B&W P3 – a direct competitor – has recently forced people to take this aurally-neglected genre more seriously. The BlueAnt Embrace is the latest design in the field, taking many of the technology and style cues from B&W's Apple-friendly form. Based on a strong design structure, the BlueAnt headphones can be folded, like the similarly specified B&W P3 headphones. Unlike the B&W design, only the ear-pads can be folded flat on the Embrace, not the headband itself. Neither is the Embrace as chic or as well implemented: the ear-pads can be removed but only via clunky plastic locating lugs instead of the P3's slick magnetic connectors.

On the upside, the Embrace provides greater padded comfort, reducing listening fatigue significantly. The memory foam pads can reportedly also be used, with a measure of success, on an aircraft for noise isolation (as opposed to noise cancellation) but I didn't test this option.

Arriving complete with a faux leather case, a volume/microphone combo lead for iPhone/iPad/iPod and an OMTP converter, allowing you to use the lead with other, non-Apple, devices you can also attach a straight-through connection lead as an alternative.

SOUND QUALITY

Although not specifically designed for home hi-fi use, I wanted to see how far I could push the Embrace headphones, so connected them to

my reference system, feeding the phones with a range of overly-compressed chart-based CDs via my Densen B-475. The Embrace altered the B&W P3's low frequency emphasis by displaying impressive bass, but better merging it into the music. This helped move attention to the midrange. Emerging synth strings and complex vocal harmonies were easier to identify, changing the balance of the presentation.

Moving to Gagarin's latest electronica album, 'Biophilia', instead of the P3's haunting, low frequency tilt, the Embrace added nuance, air and space to the synth soundscapes, contributing new aural information.

Onto jazz, Dexter Gordon's LP, 'Doin' Alright' and his hard swinging bop antics, the Embrace provided a sense of the man behind the sax. Breath phases added a certain subtlety and sophistication, there was new room around the treble-rich cymbals, yet bass remained strong enough to underpin the tune.

Spinning Kansas' vinyl LP, 'Monolith', the Embrace produced a balanced mix. Despite providing a less than sophisticated midrange, the Embrace did deliver a full suite of frequencies that successfully tracked the complex, multi-instrumental bridge of the first track, 'On the Other Side', with some ease.

Similarly, via the Chet Baker LP 'Chet Baker Sings' the Embrace could not fully exploit the swathe of information coming at it. Nevertheless these 'phones made a good fist of the task, showing they could perform well on a quality budget hi-fi system. Bass was firm and consistent while the soundstage was quite engrossing.

Turning to my iPhone 4S plugged

into the highly regarded Epiphany Acoustics EHP-02 portable amplifier and playing a selection of EAC-ripped WAVs, the B&W P3 brought a forceful, detailed performance to Carol Kidd's jazz vocal on 'There Goes My Heart'. The Embrace, which was a touch more difficult to drive, requiring more gain than the P3 for the same degree of volume, changed the emphasis towards a gloriously relaxed presentation with enough air and space to track the complex acoustic guitar solo without a problem. Cymbals were light and fragile, displaying extended reverb tails. Bass was characterful while Kidd's vocal had a silky sheen but was incisive enough to be light, mobile and responsive.

The Embrace's open nature gave a greater insight into the compression affecting the suite of excessively peak limited chart tracks, underlining the transparent nature of the phones. Bass was punchy with a real sense of weight while the mix's metallic edge was successfully discerned. Vocals displayed a broader array of layering and detailing.

CONCLUSION

Sacrificing style for comfort, the BlueAnt Embrace headphones produced surprisingly good sound quality for a reasonable price, performing well across all genres.



VERDICT ●●●●●

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"that didn't stop him from being imprisoned for rape and ordered to work on a road gang"



paul rigby

I must admit that I'm a sucker for a vocal harmony. There is something about the coming together of several human voices, within a blend, that pieces together within the brain to form a pleasing, uplifting, completed sonic jigsaw. Each voice fitting with the rest to create a whole new tonal picture. Oddly, the UK has never been too interested in the format, most harmony groups being relegated to TV variety shows during the seventies. But many European countries and especially the USA have traditional and innovative harmony groups in abundance. They range from the Barber Shop Quartets to more contemporary groupings offering complex and highly innovative song selections that can leave you breathless with their inventive arrangements.

One of the principle roots of the harmony collective is the rhythm and blues vocal group, more commonly known as the doo wop genre that stemmed from harmonising outfits such as the urban-sourced Ink Spots, Mills Brothers and the Golden Gate Quartet plus a range of country-oriented gospel combos. Growing in popularity and surviving into the early sixties, the genre spawned classic groups such as The Drifters, the Coasters and The Platters.

Anyone who has an interest in doo wop or in harmony groups in general should take a look at a new series issued by Germany's Bear Family records. Called 'The Complete Story Of Doo Wop', the label has issued a series of CDs concentrating upon a period of doo wop history. 'Volume 1' looks at doo wop's pre-history, from 1939-1949, 'Volume 2' looks at 1950, 'Volume 3' at 1951, 'Volume 4' at 1952 and 'Volume 5' at 1953. Each CD arrives in a digipak format with a booklet included

within. Packed with information, each booklet spans eighty-three pages and includes rare images of the groups themselves plus scans of original records. Each and every artist featured within each volume is profiled too. You'll find one CD in each volume but the label hasn't stinted on the content as you'll find around thirty tracks on each.

With so many groups featured, you get a real flavour of the entire scene and the subtle changes in style over the years. It's also fascinating to see how each group presented themselves and how they would be equipped. For example, The Four Vagabonds found their star during the forties where they sang through some fortunate political strife. During the early forties, the American Federation of Musicians president, James Petrillo, called his members out on strike over royalty issues. This meant that no musician could play for a record company.

Despite warnings of the strike and labels subsequently stock-piling songs to release during the strike, the supply quickly ran out, meaning that vocal stars looked to harmony backing singers to provide a human rhythm section. This provided manna from heaven for the Four Vagabonds because they not only had the harmonies but each member could do a fair impression of an instrument. Of the four group members Norval Taborn mimicked a trumpet, John Jordan and Robert O'Neal piped up with the 'trombones' while Ray Grant chipped in with his impression of the bass fiddle.

The vast majority of doo wop singers were black and the fame that some found because of their talent often provided no buffer to their day-to-day lives. For others, it acted as a release and a saviour to what could have been. Take Eugene

Mumford who appeared as a singer with a group known as The Larks – present, here, on Volume 4, singing a track called 'Hold Me'. Mumford had a powerful voice but that didn't stop him from being imprisoned for rape and ordered to work on a road gang at Durham, California for a grand total of two and a half years. The charge, brought to court by a white woman, was a false one and, fortunately for Mumford, he was given a full pardon.

His fortunes further improved as he was subsequently invited to sing with the Larks where hits followed in addition to a TV appearance on the Perry Como Show. Mumford would extend his singing career by replacing the legendary Jackie Wilson as lead singer with The Dominoes.

Utilising a series of CDs, such as this, compiled by a respected record label with the support of experts, reaches that ideal of having fun while being educated. Doo wop was a cultural phenomenon that tapped into the zeitgeist but it was also an essential part of music's long-term evolution. With this series, for example, you will learn how it affected and helped to launch rock'n'roll – a connection that is often missed by textbooks. And while there is plenty to like about supportive, third party books, there is nothing like actually hearing those voices from the past to put the genre into context.

Doo wop also saw the rise of small, independent labels. This series reflects on how the major labels could be wrong-footed and slow to react (that wouldn't be the last time, either).

The series reaches Volume 5 but I'm hoping to see many more before it's complete. A class act, this is an essential suite of CDs for any true music fan. ●



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tony bolton

This is a strange job at times. Each month a range of products arrives at my door for me to explore and assess. Some take a little getting to know, time being required to comprehend the effect they have upon the sound, and whether they will gradually grow on me over a period of extended listening.

Others arrive, are plugged in and their sonic effect is obvious from the first sound emanating from the speakers.

Sometimes I come across a product that is excellent but does not tickle my aural taste buds in just the right way, and here, hopefully I manage to set personal preferences aside and recognise the product's benefits even if they are not to my taste.

The converse may also apply at times, where there is some aspect of the sound that attracts me, even if the overall package is not going to appeal to the majority of listeners. Again, I would hope I employ a dispassionate view point in discussing this.

Once in a blue moon, there is a product that does something special, something that takes the overall sound quality up to a new level. Such a product sees me excitedly ransacking shelves that are loaded with the results of over 35 years of collecting records and exploring music. I start listening to old favourites and records that I haven't played in ages, finding new aspects to the music that I had previously missed or just a presentation that seems to take me closer to the actual event of the recording.

Over the years I have gradually built up both of my systems to levels where I think they are both a pleasure to listen to and effective tools for the job; the two concepts

not necessarily being that easy to reconcile. From the work point of view I want a system to be revealing of any changes that take place within it. From the personal point of view I want something that is both relaxing and involving to listen to, and as you can guess, the two do not always go together.

A perfect example of this is the Piega Premium I loudspeakers that I reviewed back in the December 2011 issue. I am still enjoying a love/hate relationship with these transducers. I enjoy their explicit analysis of whatever is fed into them, but also find myself almost diving for cover behind the sofa when that analysis gets a little too explicit. As a tool for the job they are amazing, but as a relaxing evening listen they require very careful selection of both partnering equipment and material.

In the review I commented that we all balance a system to suit our sonic preferences, but also to the demands of our chosen music carrier. In my case this is primarily vinyl, with a moderate chunk of 78s thrown in for good measure. A lot of my modern electronica is on CD, but I will always look for a vinyl copy first before buying one of the silver frisbees.

I also have a large collection of cassettes, some pre-recorded, others recorded by myself over the years on either the Nakamichi Dragon or my BX300 (we are a two Nak household), as well as a selection of open-reel tapes. The open-reel machines are currently queued up for servicing, as and when money and time allows.

With this disparate grouping of sources, and the demands of the work versus pleasure listening conundrum, finding a product that fits into either system as a permanent fixture can be quite a difficult exercise. However, this month there have been two

products that have managed that rare achievement and look set to become permanent fixtures in my systems.

The first is the IsoTek Supreme mains lead. As I commented in the review it is expensive, but the changes that it has made to the sound of my downstairs system (Clearaudio turntable, Leema Acoustics electronics, Chario Ursa Major speakers) when plugged into the Tucana II amplifier have made me decide that this will become my amp mains lead of choice for the foreseeable future. I love the combination of openness, solidity, definition and power that it has released into the system.

The upstairs system has been transformed – at least the LP side has – and that is my major source, by the installation of the Funk Firm K Drive II motor and power supply unit. It seems to have lifted the Sondek sound over a hurdle – that being the slight, but oh so important difference between believing that you are listening to an actual performance of the music in front of you, rather than being aware of listening to a recording of that performance.

Such differences are minute, and often very subtle, but once they have been heard it is very difficult, if not impossible to go backwards. It is the closest thing that I have yet found to time travel, giving me the sensation that I am actually sitting in some smokey basement club listening to Benny Goodman, or in the finest seats at La Scala in Milan with Maria Callas singing in front of me.

Over the years each upgrade has got me closer to that target of realism, but this month something special has happened, a hitherto unseen barrier has been crossed and there is no going back. Good though both systems were before, these changes have upped the game by a small but important margin. ●

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"a younger generation of women all stand 6ft+ tall, bevies of them blocking the bar in this club".



noel keywood

It's not often that you get rescued from a fate lovelier than death by Mike Creek, founder of Creek Audio, but that is what happened to me recently. The occasion was the launch of a new Roksan Oxygen amplifier that has been long in gestation. It was held at a club on London's King's Road, Chelsea, an 'interesting' venue if ever there was one.

Roksan, I learnt at this launch, have spent years designing a touch-sensitive amplifier that is small, runs cool 'cos it's Class D and is powerful – again because it's Class D. Although it can be controlled by touch if you are within reach, it can also be controlled from the settee by a wi-fi connected device, which of course means primarily an iPhone or iPad.

As is becoming common, although wi-fi is used to exert control, direct radio transmission via Bluetooth can be used to stream music to it from a music library on iPhone or iPad, or any Bluetooth equipped device of course. At present you get no better than CD quality via Bluetooth because its maximum data rate cannot support anything better, but because CDs can sound better after they are ripped this is still no bad thing.

I didn't know quite what to expect when invited to the Roksan event in Chelsea. Companies commonly launch key products in 'interesting' places, usually outside the UK, but a club on the King's Road is a new one to me. It isn't unknown territory though because I live a short ride away on the Underground. So no problem with getting there.

There was a problem in trying to order drinks at the bar. Vitamin enhanced Cornflakes must be the reason why a younger generation of women all stand 6ft+ tall, bevies of them blocking the bar in this club.

OK, looking down I realised why I was looking up: all were teetering atop platform shoes with heels to match the Eiffel Tower. But it was still an interesting scene, shall I say? But when a chap can't get his orange juice, it is frustrating.

Feeling lemon-like in this situation I was more than happy to suddenly spot Mike Creek in the gloom. If there is ever a man to tell me about how amplifiers work, it is he. You see, in spite of the scenery and talk of Class D I was actually wondering about the intricacies of various Class A biasing schemes, as one does! So when I should have been looking elsewhere I was in truth thinking about something I'd never really ever bothered to think about: how Class A works. I know how it works in a push-pull amplifier, but I know little about SEs, or Single-Ended. In theory they are simplicity itself, in practice they are anything but.

My interest in SEs was spurred a long time ago when Tim de Paravicini presented us with just such an animal. It used huge power transistors and ran stinking hot, even on a big block of a heat sink. But it sounded viciously fast, clean and punchy – a take no prisoners sound that was quite a shock.

I imagined an SE was quite simple to design and build, since the basic circuit is used everywhere in electronics. You just scale it up and – bingo – you have the world's best power amp., plus a bigger electricity bill. But reading some great amplifier design tomes I have and treasure, on a rainy Saturday before the Roksan launch, soon put me right on that simple assumption.

A basic transistor SE is 11% efficient, needs massive heatsinking and produces little power. An ideal SE would be built around a choke as a load, but transistor amplifier designers

absolutely refuse to consider this option. And once you invoke a choke you might as well add a few turns and call it a transformer. And as all transistor amp designers know, they went out with the Ark and are not welcome back.

That leaves one last option, as far as I am aware, and that is a constant current source. In effect, it means using transistors to simulate the properties of a choke. And this is what the Sugden SE amplifiers rely upon. It is a circuit developed by Jim Sugden a long time ago and honed to result in the excellent A21SE I review in this issue. It measures beautifully and it sounds divine, although little like a valve SE I should point out. Sonically, there's little to link them, apart from a certain solidity and cleanliness in their sound.

It was a little difficult swapping between B&O Icepower in the Wyred 4 Sound mINT and the A21SE, but they are very different products and can hardly be compared. The simple fact is the Class D modules in the mINT are where everyone is heading. The Roksan Oxygen amplifiers rely on Class D for small size and cool running and Mike Creek managed to hold my attention against serious distractions by explaining how Creek Audio are developing Class D amplifiers with compact Switch Mode power supplies that sound really good.

That gave me hope. To date Class D has been a bit hit-or-miss sonically. NuForce of Taiwan probably make the best and Hypex modules are good, but otherwise I'm in no hurry to change class.

A fate lovelier than death eluded me and I ended up leaving the club at 10.30pm knowing a lot more about Class A amplifiers and our Class D future than I expected. I must go clubbing more often! ●

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 or we can convert your own, even if you bought it used.

The SME 309 tonearm is a delight to use, to look at and more importantly to listen with! Featuring the very same tapered magnesium armtube as the SME V you might wonder why this tonearm has such a low price tag. SME have a very long history and pedigree of making as they say "The best tonearms in the world" and we agree with them. This might be the last tonearm you buy, and in the long term has to be the very best value for anyone. We fit more 309s than all other arms added together, we simply love them to bits!

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"the best thing a music lover could do was to get a good radiogram"



adam smith

I suppose I should be used to it by now, but I can't help thinking that the good old hi-fi industry has once again been somewhat hard done-by in a recent televisual delight – maybe not quite as badly as the debacle that was the Gadget Show vinyl versus CD versus MP3 test a few years back, but disappointing nonetheless.

The program to which I am referring is the entertaining and informative 'The House the 50s Built' which is an entertaining look at the way in which science and technology moved Britain from the drab and austere post-war years of the 1940s up to the days that led into the swinging 60s.

Through the course of the series I have learned about the developments in plastic technology that made furniture cheaper, more attractive and more durable, the new man-made materials that made clothing brighter and less difficult to keep looking good and the whole raft of home domestic appliances that made the life of the housewife much easier. It's a fascinating program and led by an enthusiastic presenter with a suitably daft but ingenious 'mad scientist' sidekick!

Consequently, when I saw the shot of records and record players in the 'coming next episode' segment one week, I was very keen to know what informative nuggets would be served up and how much of the British hi-fi industry's glorious past would be uncovered. Sadly, the answer was "not much".

On the upside, presenter Brendan Walker did go into a good amount of detail with regard to the

replacement of shellac records with vinyl, including demonstrations of how both materials were made and the advantages conferred by moving away from making your music carrier from a resin secreted by a bug! Unfortunately this also included the obligatory test of dropping a pile of 78s from a height to see how easily they smashed. Not only was I sure I could hear my esteemed colleague and shellac aficionado Tony Bolton's cries of anguish from his home over 150 miles away, but it brought back unpleasant memories of a similar unplanned incident that happened to me years ago – instantly reducing my 78 collection from around 30 to 1 in a single stroke!

Unfortunately, the equipment side of things was less comprehensively covered. It was explained how the main source of entertainment in the homes during the late 1940s was still a wind-up gramophone and that the advent of the mighty Dansette changed all that. I suppose that this was indeed so, given that this particular episode was focusing on the changes made in children's bedrooms, but what about the items from the living room (which was, after all, where that aforementioned wind-up gramophone was located)?

Obviously, I wouldn't expect a huge amount of wondrous, geeky detail but I feel that mention should really have been made of the fact that it was in this decade that the term 'high fidelity' was coined for the first time and that the possibilities for home entertainment took some of the biggest leaps forward in the history of the subject.

Ironically, it was the vet Alf

Wight, writing under his well known pseudonym of James Herriot, who summed it up well in one of his books. An avid music lover, he recalled his purchase of a new item of home music reproduction, stating that in the days before the advent of stereo, surround sound and the like "the best thing a music lover could do was to get a good radiogram".

Fast forward to the end of the decade, though, and how things had changed. Now, we had the likes of the Quad II and 22 amplifiers and ESL57 loudspeaker as well as the firm establishment of the Leak 'Point One' series, the Garrard 30 I and the SME3009. Ranges from the likes of Wharfedale, Goodmans and Tannoy increased greatly in number and, even if some of those items did end up in cabinets that resembled the good old radiogram, performance had leapt ahead by a vast margin.

The point that I felt was glossed over somewhat was that the home music lover had a vastly increased range of equipment choice by the end of the 1950s and I just personally thought it was a shame that this was not made more of. Yes, there was an important change in the culture of society as the seven inch single and rock 'n' roll took hold, but it was also the start of a glorious British hi-fi industry that reigned supreme for decades.

It is doubly saddening to think that many of these names still survive today, 70 years later, and yet I am willing to wager that many of the population at large, who will have enjoyed the television program in question, will have never even heard of them. ●

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Tony Bolton listens to a high end mono cartridge – no less!

news



SIREENA SORTIE

German-based label, Sireena (www.sireena.de), has a trio of new albums out and about. Prog fans will love the reissue of Yes' 'Open Your Eyes' (1997), last seen as a digital issue via Eagle, but here presented as a double disc vinyl issue.



While (some) Nektar fans will be happy to see 'Down To Earth', when it arrived in 1974 the circus-like concept album horrified resident fans, although new listeners loved it blending pub rock, funk and prog.



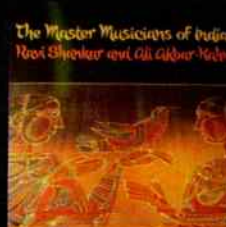
Finally, check out the latest in the label's own Swamprider's compilations, devoted to fresh and/or edgy songs and performances. 'New Rides Of The Furious Swampriders' features tracks via Blondie's Deborah Harry (plus Chris Stein and Nick Cave), Lydia Lunch and Johnny Dowd (with Brian Wilson).

BLOKES

Italian-based Doxy has a range of great value-for-money LP packages that includes a 180gm disc along with a CD fixed to the front, secured with an information-packed card strip. Three have been released this month: Sonny Rollins' 'Freedom Suite' (1958) is a masterpiece, featuring sax, bass and drums. His last album for Riverside. Roy Orbison's 'Lonely And Blue' (1960), his breakthrough debut that stands as one of the best recorded, early stereo releases. Also, look out for the great tenor sax player, Stan Getz's 'Plays' (1954), a top quality quintet performance.

Other, standard, non-CD packed, Doxy releases include: 'The Charles Mingus Quintet + Max Roach' (1955) a Mingus-dominated LP that shows a twisted genius at his best; Donald Byrd's 'Royal Flush' (1961) includes stars such as a young Herbie Hancock and Pepper Adams. A steady, hard bop album; Ravi Shanker and Ali Akbar-Kahn's 'The Master Musicians Of India', recorded in 1959 was to be a direct influence on The Beatles while Bobby Bland's 'Two Steps From The Blues' (1961), is an impressive vocal blues LP featuring electric and soul-based blues backing. Great songs, great delivery.

Also check out a pair of Rumble records. Marv Johnson's 'Marvellous' is his pre-Motown, United Artists LP release from 1960 while 'Clyde McPhatter & the Drifters' a compilation of McPhatter's two year stint with the band during the mid-fifties.





MOV MEN

It's a rather testosterone-filled Vinyl News section, this month and Music On Vinyl (www.musiconvinyl.com) add their own dose of hairy armpits and builders bum to the mix beginning with two from Bob Dylan. 'Good As I Been To You' (1992) a LP of folk covers (his first) and the first harmonica-dominated piece since the late sixties. Good but not great. 'Love And Theft' (2001) was great, though. An LP of original songs and his best since 'Blood On The Tracks'.

There's also a couple of Leonard Cohen albums. 'Various Positions' (1985), recorded with Jennifer Warnes, is Cohen at his languid best, while 'Dear Heather' (2001) looks back on a full life. A mellow, hushed delivery, the album is nevertheless upbeat.

Neil Diamond has been building his street cred profile of late. 'The Bang Years 1966-1968' will only aid that. Featuring a 12-page booklet with exclusive liner notes and pictures, this double album shows the man transforming from songwriter to performer with some of his best songs. A superb compilation.

Also look out for White Zombie's 'La Sexorcisto: Devil Music Vol. 1' (1991) on limited edition coloured vinyl. A demonic, shocking album that changed the face of heavy metal. Sam Cooke's 'Twistin' the Night Away' (1962), a lovely album that combined soul and dance. John Cale's 'Vintage Violence' (1970) debut is not at all scary but offered some of the most intelligent pop around. Finally, David Bowie's 'Heathen' (2002), his best LP since 'Scary Monsters' was consistent with a confident Bowie recapturing the tone of the seventies.



ROCK TILL YOU DROP

Suitably starting off this rock collection is a rooster, well, The Roosters. 'All Of Our Days' (1965-1966) is a collection of folk-rock, garage singles rarities from the mid-sixties, via Break-A-Way (www.break-a-way.de) including different band incarnations, rare photos plus a band history.



Over to another German outfit, SPV (www.spv.de) and Axel Rudi Pell's new release, 'Circle Of The Oath'. Don't expect innovation or changes in direction, this is Pell in his comfort zone, which will please his fans no-end.

From SPV is four-piece, heavy metal band, Running Wild's 'Shadowmaker' on limited edition clear vinyl. A new, comeback piece, seven years after the last release and three years since the band broke up. A lively LP, infused with new found passion.

Also look out for Monster Magnet's steady major label debut, 'Superjudge' (1993), Pere Ubu's proto-punk, 1998, release, 'Pennsylvania' via Vinyl Lovers. A paranoid culumnic to industrial America. Finally, check out the proto-post rock of Mothlite's Dark Age (*kscope*; www.kscope.com). A floaty yet charming album that Tears For Fears fans will love.



...AND FINALLY

The Avalanches' 'Since I Left You' (Modular/XL) is a jaunty, funky, disco-laden beaty bop that bathes in innocence and happy times.

Released on limited purple vinyl, there's more traditional Americana-based rock vibes from Lee Bains III & The Glory Fires' 'There's A Bomb In Gilead' (www.olivenergy.com).

An upbeat, guitar-based LP with a hint of swamp smell to the vibe.

The See See's 'Fountain Mountain' (Great Pop Supplement; www.greatpopsupplement.com) is a jangly guitar. Byrds-like, hippified rock with a touch of The Stone Roses within.



Brief Encounter

Created by popular demand, the 9.5" Origin Live Encounter 3c tonearm has now been extended. Paul Rigby reviews the new 12" version.

Just half a mile from the Origin Live offices, the legendary Spitfire fighter plane was created by designer, RJ Mitchell. Born out of his Southampton-based office, the precursors to the WW2 legend, his S.5, S.6 and S.6B race-winning planes successfully took part in the Schneider Trophy and contested the world air speed record.

That competitive streak also resides in the head of Origin Live boss, Mark Baker, "I sail in high performance, Olympic Class Tornado, 20ft Catamaran boats at Weston, off Southampton. Unfortunately, the Tornado national champion resides there too. It's a tough life so there's a continual battle to see who comes

second. We regularly enter the national and world championships. The latter features 150 boats for the Dart 18 class, which we also sail. Don't ask me where I came though! I'm not professional, just an amateur."

But you know what they say about audiophiles and our general geeky nature, we can't stop tweaking, can we? "I'm heavily into tuning," said Baker, "because I have sailed competitively for so long. For example, there's about fifty different factors to make a boat go faster, never mind the tactics on the course. Every bit of extra stiffness is very important. This tuning psyche is in my DNA. Take the carbon fibre boat masts. They vary greatly, there is a lot of technology that goes into a construction of a

good mast."

As Baker will tell you, there is carbon fibre and there is carbon fibre. To say that a mast or an Encounter 3c tonearm uses carbon fibre, means absolutely nothing. Aluminium can outperform a badly designed carbon fibre tonearm. It's the way that carbon fibre is applied that makes the difference. "It's a bit like the differences between balsa and ebony," said Baker, "yet both are wood."

Hence, when you look at the new 12" Encounter 3c tonearm from Origin Live and you hear that it's made from carbon fibre, don't assume that it's the stuff they use to make fishing rods or golf clubs, "Researching the right carbon fibre

material has cost us a lot of time and money. Most people would gasp at spending £2,000 to do a simple tonearm test to investigate one property of carbon fibre. That's how much it costs to do a single test and we have gone on from there to do many more."

Such tests have taken place on the new Encounter 3c. Normally produced to a 9.5" specification, the company has now issued a 12" because of the large amount of requests, "...from Garrard owners, in particular," said Baker. "That turntable is big enough to take them. We were also interested to see if a 12" version was truly better. There is a difference of opinion."

The Encounter is in its fourth generation now. Based on the dual-pivot design, the carbon tube also includes ebony within it, "We used carbon fibre and ebony together because, as good as carbon fibre is

for details on the lower cost arms, "That's the cheap route," said Baker. "This is why the Rega RB300 sounds bright because it rings loudly. It has stainless steel almost throughout. Stainless steel is cheap and there is no finishing. The rear stub of the Encounter, in contrast, the thing the counter-weight sits upon, costs about ten times the price of a stainless steel model, for example. There are three types of stainless steel alone and one is a lot better than the other two. In our lower ranged arms we use that particular one. We have to because of costs. The trick is to get an even frequency response throughout the range using different materials."

The 12" version of the Encounter 3c might be longer but there is no threat of extra loading, which is minimal, "The arm supports could take a 100 times the strain. It's massively over engineered," said Baker.

"the 12in provided more bass extension that in no way swamped the soundstage but just pushed the arm's awareness into a new, lower frequency range"

at self damping, it still rings. Ebony is the best material for the price to enhance the damping."

And dual pivot? It's like a straight forward uni-pivot but, instead of having one point into a cup you have two. It pivots like the SME-based knife-edge bearing, "The advantage over the 'knife' is that the contact area is massively reduced," said Baker. "That second 'point' moves in the vertical plane only, the horizontal point is handled by conventional bearings. The advantage is that you have very low friction and tremendous decoupling taking place. The bearing points are tungsten and the cups are made from hardened metal. We started with jewelled bearings but they tend to shatter."

Origin Live use different metal alloys for the yoke depending on the grade of arm, "It's not just the material costs but the machining costs of certain alloys. The Encounter is the low-end of the dual pivot range. It uses a lighter yoke," said Baker.

Unlike some of its competitors, Origin Live doesn't use stainless steel on an extensive basis, just



ESL-57 (One Thing modded) speakers completed the reference chain.

Spinning Chet Baker's 'Chet Bakers Sings' well recorded jazz LP, some arms take Baker's almost choirboy-like delivery and focus on the high registers only. Of course, the Encounter 3c 12in addressed this area too but in a rather different manner. It wasn't until I heard the 3c 12in that I realised that much of the competition can add an element of upper mid bloom which the 3c 12in removed completely. What resulted was a sharper, cleaner transcription that was also faster because of it. Other arms can also sometimes smear notes that stretch the vocal delivery. This far more focused rendition provided a clarity that also emphasised the silences in between the notes. The 3c 12in was also notable because it supported the lower frequencies within Baker's voice. This strengthened bass balance and added little-heard texture to his delivery, emphasising his emotive presentation.

The incisive detail offered by

SOUND QUALITY

I installed the 12" Encounter 3c onto an Origin Live Calypso turntable (£1,500) complete with a Dynavector 10x5 cartridge (£329). The VTL IT-85 valve integrated amp plus Quad



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Michell Orbe SE, AC motor version, excellent	599 Krell FR2200 Power, crated	1799 Leema Stream 3, nr mint boxed	399 Magnephanor MG1.6, excellent boxed
Orocle Delphi mk2, excellent	1199 Krell FR2200 Power, excellent boxed	2499 Leema Stream 3, nr mint boxed	799 Martin Logan Odyssey, excellent boxed
Ortofon TA1000 tonearm, brand new unused	949 Krell KSA2005 Power, vgc	1499 Micromega CD30, nr mint boxed new model REDUCED	999 Meridian M20 Active speakers
Project Essential/Genie/Debut all ex demo	499 Krell KAY400i, excellent boxed, just serviced	1599 Musical Fidelity A3CD, excellent boxed	399 Meridian M1 Active speakers, boxed due in
PS Audio GCPH Phono Stage ex demo	Coll Leak TL12+ Monos, vgc for year	749 Musical Fidelity DM25 kW Transport and DAC, vgc boxed	1899 Mirae DM6 diploes, excellent sound for peanuts
Quad 24P phono stage, as new boxed, weeks old	599 Linn Wakonda MM/sneaky Tuner	349 Musical Fidelity CD1, early CD player with valves, vgc	299 Monitor Audio Radius HD, various ex display
Rega RPI ex demo	899 Linn LK100, vgc	299 Musical Fidelity 3D NuVista player, excellent boxed	1199 Monitor Audio Silver RS6, excellent boxed
Rega Planar 3 Green boxed	179 Linn Kairn, excellent boxed	399 NAD C545Bee, excellent boxed	1399 Monitor Audio Silver RX, various ex display
Rega P3, St Georges flag, excellent boxed	249 Linn Majik integrated with remote	299 NAIM CD3.5, excellent boxed	349 Monitor Audio Platinum PL100s with stands ex demo
Rega TIPSU boxed as new	299 Melody M2A3 Monoblock amps ex demo, save £2250	1749 NAIM CD35.2, excellent with remote	549 Nakh 7.0 Classic, excellent boxed
Revo Fono MM boxed as new	99 Melody 101 Preamplifier, world renowned ex demo	2499 Ortel DAC due in	Coll PSB Alpha 81 Stereoophile Product of the year BARGAIN!!!
Reveler GTX c/w Linn LVK, Goldring 1012, boxed	99 Micromega IAG0, near mint boxed	199 Primare CD21, near mint boxed	99 Q Acoustics 2000 series, various ex demo
Roksan TMS1 & DSU, superb, boxed	179 Musical Fidelity Iyphoon Power amplifiers (pair)	399 QED Digit	49 Quad ES157s, good working order
Roksan Xerxes, Kuzma Stogi, new PSU, boxed	1749 Musical Fidelity 3a preamp & P150 Power amplifier	199 Rego Saturn, excellent with remote	599 Rogers LS30, in rosewood, excellent boxed
Roksan Radius S.2 ex demo	749 Musical Fidelity M3 Integrated with PSU Boxed	799 Rego Planet 2000, excellent boxed	279 Spenner SA11 c/w matching stands, due in
Roksan Nima, univipal tonearm vgc	899 Musical Fidelity A3CR Pre/Power, excellent boxed	599 Rego Planet K2, excellent boxed	549 Thiel CS7.2, vgc, just refurbished...
SME Series V, vgc boxed	299 NAD C3268EE ex demo nr mint	Coll Roksan Kandy K1, excellent boxed	199 Townshend Seismic 2, nr mint boxed
SME 3009/2, excellent boxed	1249 NAIM Supercap 2, ex demo nr mint	899 Rotel RCD02, excellent, remote	749 Usher 5120 and matching Subwoofers
SME 3009/2, excellent	249 NAIM NAP200 excellent boxed	1899 Shonling CD180, excellent	349 Usher 718 Diamonds, excellent boxed, ex demo
The Source, offboard p/s vgc & new Ortofon TA1000	899 NAIM NAC282 with Naps, excellent boxed	1999 Slim Devices Transporter, excellent boxed	119 Wharfedale Diamond Home cinema pack, ex demo
Sumiko Cartridges, various ex display	1799 NAIM NAP250X, ex demo, 2009 model	799 Sony SCD X8940, reasonable condition	649 Wharfedale ID.1 ex demo, nr mint boxed
Technics SL110/SME3009, vgc	1699 NAIM NAC122X/NAP150X excellent boxed	1699 TEAC P700/D700 Transport/DAC combo, excellent	249 Wharfedale 10.3 ex demo, excellent boxed
Thorens TD309, ex display bargain	349 NAIM NAC92/NAP90 Pre Power, nr mint boxed	399 TEAC D1 DAC, excellent	749 Wharfedale Active Diamond 7.1s - rare boxed!
Thorens TD124/SME3009 excellent	999 NVA P60MC/P5/A40, Pre/PSU/Power excellent boxed	299 Unison Research Unico CD ex demo	899 Wilson Benesh Curve, excellent boxed
Thorens TD124 mk2, excellent	799 Pioneer AA000TX Lithos upgrade, giant killer	599 Wadia iPod dock, nr mint ex demo	249 Wilson Watt/Puppy 3/2, vgc, crated due in...
Tom Evans The Groove, excellent	899 Puresound ZAC3, excellent boxed	1299 AV/ACCESSORIES/CABLES	
Townsend Rock 2, Rego tonearm vgc boxed	499 Quad 99 Pre/Power excellent boxed	Coll Chord cables, various ex demo	Coll Audio Analogue Crescendo Amp & CD, ex demo
Townsend Rock 2, Mission 774LC, excellent	399 Quad 33/44/303/405 all vgc	1749 Chord Indigo, ex display	Coll Microemga CD10 & IAG0, both as new
Wall Tempered Reference, superb!	1999 Radford STA25mk3, vgc for year	999 Chord Signature, ex display	Coll Kreil Showcase Cinema 7.1 system (HDMI), mint boxed
Wilson Benesh Act 1 Tonearm, nr mint superb	799 Raysonic SP100mk2, excellent boxed	399 Chord Signatone, ex display	7499 NAIM UnitiQute & Kudos X2s, ex demo
	299 Rega Cursa/Maia, original cast case models boxed	199 Naim Hicap - Olive, excellent	399 NAIM Uniti ex demo - mint
	1999 Rotei RC972 Preamp, remote	1199 Onkyo TXNR609 & MA Radius R90HD10 pack BRAND NEW	1499 Onkyo TXNR609 & Wharfedale Speaker pack ex demo
	349 Sonus Faber Musica Integrated, excellent	799 QED Jonduit 3m mains cable	49 Onkyo TXNR609 & MA Radius R90HD10 pack BRAND NEW
	199 TACT Audio RCS 2.0 Room Correcting preamplifier	499 Townshend Seismic rock, 4 tier mint	1099 TEAC DISTINCTION SERIES - Special deals - ON DEMO
	349 Unison Research Unico, excellent boxed	399 Trichord Research Powerblock	Coll TEAC Mini systems brand new - call for details!
	Coll Unison Research Aria S2, valve integrated	399 Van den Hul First Ultimate 0.8m	Coll TEAC CRH500 All in one network system ex demo
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Replacing the included wall-wart power supply for the Calypso turntable, used for the Encounter 3c arm review, the Upgrade Transformer from Origin Live spans 145x65x215mm, weighs 500g and features a specially selected, vibration-free, 225VA, 15V toroid. The Upgrade Transformer can be used with any Origin Live turntable but arrives as standard with the Sovereign turntable.

Running the Chet Baker LP through the new unit saw an immediate reduction in 'distortion'. Greater clarity then enhanced dynamics. Baker's trumpet was very clean and the piano adopted a more complex persona, principally because enhanced lucidity revealed additional information from the instrument. Also, the soundstage increased in depth while stereo images benefitted from an enhanced sense of polish and sheen.

Turning to electronica and Autechre, the new transformer was very impressive. The found sound samples sounded fully formed, like ceramic balls on a wooden surface. A delicious hard elasticity to them provided a sense of percussion while deep bass had an all encompassing aura, bringing greater prominence to lower frequencies. An affecting track, this musical sequence left me almost breathless in its sonic variety and precision, forming a meticulous assault on my senses.

the 3c 12in was quite staggering. To the extent the off-mic shuffling and movements in and around the studio played a larger part in the performance, enhanced by the broad soundstage and good instrumental separation upon it. Piano was light yet texturally complex, trumpets had an inoffensive metallic sheen while bass provided a solid grounding for the whole ensemble.

Changing to the more contemporary electronica of Autechre's 'Cichlisuite', the extended piece was quite startlingly effective in the midband with its sound samples forming a central rhythm, almost popping out of the centre of the soundstage while the synth backing sequence offered a soundscape of clean, controlled and almost romantic washes. Bass was dry in its focused control yet possessed a fullness and seemingly a warmth of its own, supporting the track as a whole – a real eyebrow raising performance.

Moving on to rock with Prog influences, and I have often been offended by the compressed overtones of Kansas' 'Monolith' LP. The Encounter 3c 12in approached this problem in a unique manner. It lessens the compressive side effects by reducing their impact. How does it do that?

Imagine you're holding a piece of string. Look closely at it and you see the string isn't a single strand but a collection of finer threads woven in unison. See how the threads group

together for strength, how they lean and rely on each other, how they bend and twist yet retain their essential strong malleability. Then move away from the string. With that information now in your head, you see the piece of string in a different way. It's no longer a lumpen 'thing', it's a collection of threads.

That's what the Encounter 3c 12in does to music. Harsh frequencies no longer directly hit my ear all at the same time, in one leaden-like chunk. Instead, a fine examination of the individual aspects of each part of the music, allowed each detailed element to be appreciated on an individual basis.

Which is all well and good but is the 12in version of the Encounter 3c any different or better, aurally, than the standard issue 9.5in? I grabbed a second Calypso/Dynavector turntable and installed a 9.5in Encounter 3c to find out.

Spinning the Kansas LP, the 9.5in arm was lighter in the bass region than the 12" which portrayed a weightier, more confident aspect

with a larger mass and presence. The 9.5in arm was lighter on its feet in the midband. The spatial aspects of its presentation were impressive, isolating the electric guitar strings and reflecting an almost ethereal and feather-light touch. The 12in strengthened secondary percussion, displaying a rich tone that more naturally integrated itself within the soundstage while handling the compression issue with ease, displaying a more mature approach. Vocal crescendos were brighter on the 9.5in but the 12in was both creamier and richer in its presentation.

Turning to Autechre's electronica, the 9.5in produced an insightful mid performance, revealing new layers within the introductory synth sequence, while the 12in had a greater low frequency shock effect when the bass first appeared, displaying a real wallop that gave the track presence. There was a starker contrast with the sound samples too.

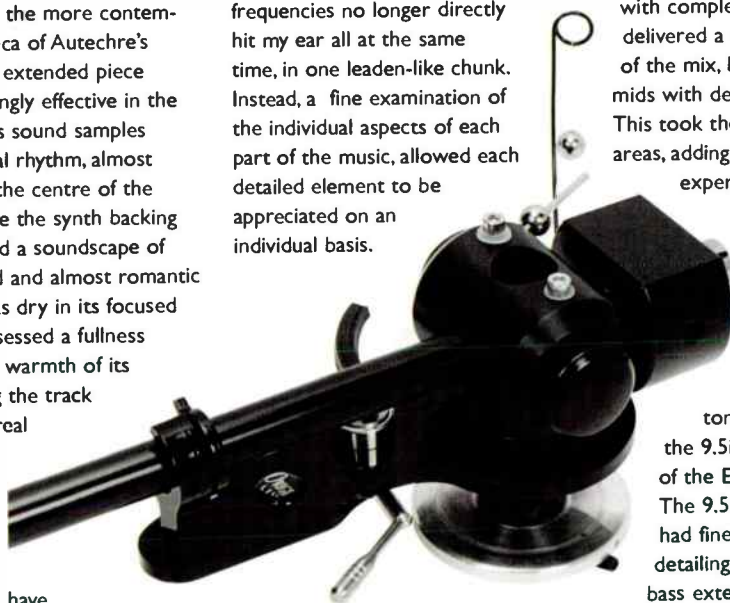
The 9.5in arm had a melodic personality, its midrange incisiveness highlighting filigree detail over the broad soundstage but the 12's richer presentation added a sense of eloquent maturity. It rounded off the samples, giving each a more realistic 'thunk'.

Listening to the jazz of Chet Baker, the 9.5in offered a tremendous midrange performance with complex layering but the 12in delivered a perceptive investigation of the mix, blending more rounded mids with deeper bass extension. This took the arrangement into new areas, adding a degree of solidity and experience.

CONCLUSION

If ever there was a case of swings and roundabouts within a hardware comparison then the tonal differences between the 9.5in and 12in versions of the Encounter 3c were it. The 9.5in had a lighter step. It had finesse and style with fine detailing. The 12in provided more bass extension that in no way swamped the soundstage but just pushed the arm's awareness into a new, lower frequency range, opening the door into a grown-up arena that sounded both adult and rounded.

Both arms produced superb quality sound yet I feel that the 12in arm, on this system, provided a better balance. It relaxed more into the mix, making sound production effortless and more natural. It was a close-run choice, though.



VERDICT ●●●●●

With a keen level of detail and an extended lower end, the Origin Live Encounter 3c 12in arm is a force to be reckoned with.

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FOR

- bass extension
- mature presentation
- incisive detail
- dynamic

AGAINST

- size

A quick spin

Tony Bolton packs his bags and takes a quick spin around the Pro-Ject turntable factory in the Upper Moravian Vale. Find out where that is by reading on...

Having reviewed a great many Pro-Ject turntables over the years I was pleased to be invited by UK distributor, Henley Designs, to visit the factory in the Czech Republic. The factory is in Litovel, a pleasant little city with a population of 10,000 in the Upper Moravian Vale. It straddles the River Moravia which is bridged by the 1692 Bridge of St. John, the third oldest bridge in the Czech Republic.

The factory is on the edge of the city, and in the Communist era was the home to Tesla Litovel. In 1992, following the fall of Communism, it was incorporated into a company called ETA Hlinsko. At this time, Heinz Lichtenegger, founder and owner of Vienna based Pro-Ject Audio, started using the factory for the production of Pro-Ject turntables. In 1999 Sev took over the premises and production facilities, and currently employs 190 workers. The establishment is comprehensively equipped and all parts of the manufacturing process, from the machining of raw materials through to the packing and distribution of the finished turntables, take place here.



Litovel is surrounded by farm land and is situated on a plain fringed by distant hills and mountains.



The imposing exterior of the SEV (pronounced seff) factory in Litovel in the Olomouc region of the Czech Republic. The town is also home to one of the world's oldest breweries.



One of the many CNC machines that populate the factory. This one creates motor pulleys from long alloy rods inserted at one end.

The finished pulleys awaiting delivery to the assembly department. The alloy rods on the right, and stacked vertically on the left, are the raw material from which these motor pulleys are produced.

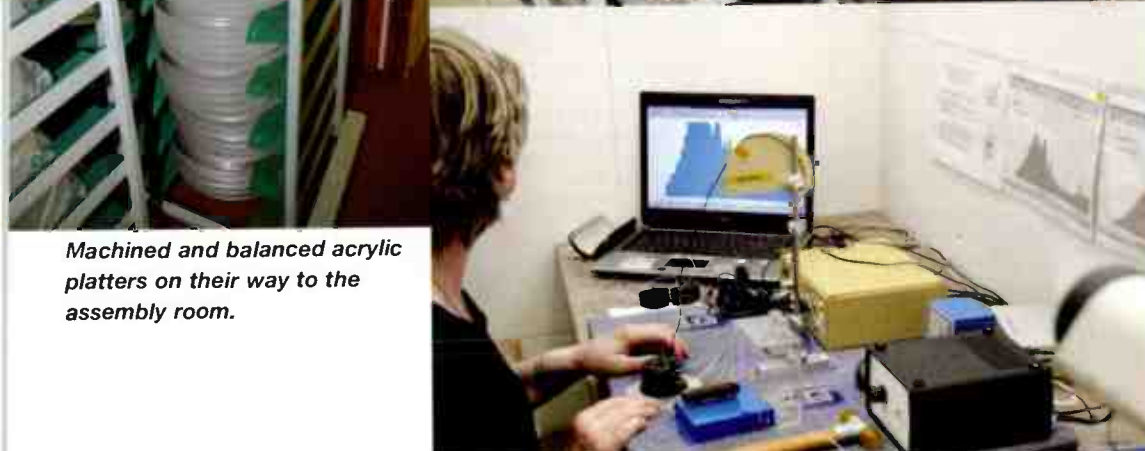


An acrylic turntable platter being machined. These are a standard fitment on the Debut Esprit and are available as an after-market upgrade to most of the Debut range (see this month's Soundbites for a review). These will also fit most older Pro-Ject turntables that are fitted with a glass and felt platter.

All painted components are sprayed by hand...



... before being left to dry on racks. These will later be wheeled through to the assembly department.



Machined and balanced acrylic platters on their way to the assembly room.

Each motor is individually tested. The screen shows motor resonance readings that are compared with the graphs on the wall. Motors that fail are recycled. Those that pass are divided into three grades based on performance parameters, and will be distributed to the appropriate product assembly line.



Each drive belt is individually machined to remove any excess material left from the moulding process, and to provide a surface that will grip the smooth edges of the platter. The pile of pale grey belts on top of the grey cabinet at the front are already machined, the darker ones near the machinist's arm await the process.

RETRO

REPRODUCTION

QUALITY HIGH FIDELITY & VINTAGE

AMPLIFIERS

Audionote kit1 30db	£995	Veddyne SPL 8000T1 subwoofer	£380
Audiolab 8000Q british 11bit mint boxed	£395	Veddyne SPL 1200 remote control sub	£595
Anatek monoblocks £2400 new	£995		
Audionet integrated amp superb engineering and german construction	£1595	TURNABLES/TONEARMS	
Bel Canto remote valve pre amp	£695	Audiolab 8000 PPA phono stage	£595
BKS T140 American power amp great for driving electrostatics	£345	Audio Ongami PU7	£995
Croft integrated valve amp 4x EL34 with valve phono stage	£495	Clearaudio Victory cartridge £1000 new	£345
Cyrus straightline integrated amp	£245	Clearaudio Master Reference with parallel tracking tonearm	£POA
Cyrus XPA power amp	£295	Creek OBH 9 moving coil pre amp	£95
Cyrus PSX great condition	£175	EAR 834P mm/mc with volume	£795
Cyrus II superb condition	£225	Garrard 301 with custom aluminium & polished granite plinth	£1195
Dynaco stereo 80 valve power amp	£795	Garrard 401 in birch ply custom plinth with lid	£POA
EAR 834L	£695	Garrard 401	£595
Golden Tube Audio superb American made tube pre amp	£475	Graham Slee Fanfare Gram amp 3 moving coil phono stage boxed as new 10mths old	£195
Harmon Kardon PM665 popular range integrated amp	£360	Graham Slee PSU1 power supply upgrade as new	£130
Hoveland HP100 with MM phono stage valve pre amp	£2995	Graham Slee Era Gold V with PSU1	£325
Hoveland Sapphire valve power amp	£3495	Infinity Black Widow tonearm SME mount great with high compliance cartridges	£195
JBL Synthesis S650 5 channel power amp	£495	Linn LP12 various	from £445
Krell KSA250 Class A power amp	£2295	Linn Basik turntable no arm or lid	£65
Krell 400X remote balanced integrated amp	£1795	Linn Axis with Akito tonearm never been used boxed as new	£495
Mendian 100 series three box power amp	£295	Luxman PT300 turntable	£375
Mendian 568 series processor	£395	Micell Focus 1	£295
Mission 776/777 pre and power amplifier 100w cast case work a real classic	£795	Micell Iso/Hera phono stage	£375
Musical Fidelity E200 balanced remote pre amp	£295	Musical Fidelity XLP5 phono stage cylindrical type PA1 phono stage	£125
Musical Fidelity E300 balanced power amp	£350	Pure Sound T10 moving coil transformer high and low settings 1 month old boxed	£275
Musical Fidelity valve X-pre amp	£225	Project RMP9	£395
Musical Fidelity Class A integrated amp	£275	Rothwell Rossan phono stage mm	£295
Naim 90 power amp boxed	£225	SME 10 with tonearm with V	£3295
Naim Flatcap 2 boxed	£445	SME 3009 tonearm series II	£225
Naim 42.5	£225	SME series 3 tonearms various	from £175
Naim 140 olive case work	£345	Synrix LE1 tonearm recently wired with cardas cable fitted and checked by Audio Origami	£275
Naim Nait 5i boxed mint	£595	System Deck II biscuit tin model (SME mount)	£245
Naim CD 5 with power supply	£1395	Thorens TD125 MKII	£225
Naim NACDS power supply new style front panel	£695	Technics SP10 direct drive turntable	£495
Naim Teddy Pardo PSU	£575		
Naim 52 pre amp	£795		
Pase Linear 700 power amp	£495		
Primare A20 integrated amp	£395		
Quad 405 MkII	£225		
Quad 34 pre amp phono socket	£225		
Russ Andrews power pack III Naim switch mode power supply	£225		
Shangling MC30 all in one valve system black & silver	£475		
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Sugden Masterclass power amp	£1995		
Sugden Masterclass pre amplifier remote balanced input/output	£795		
Sony F540E heavyweight integrated	£245		

SPEAKERS

Acoustic Energy AE1	£495	ARCAM CD73 24bit cd player black finish	£225
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ATC SCM7 boxed mint	£395	Marantz CD50 multibit dac	£95
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Castle Chester dark oak finish	£345	Moon Equinox RS new £2295	£995
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Gradient SW63 bass modules for with active crossover for ESL boxed	£695	Nakamichi MB10 5 disc music bank cd player	£175
Final 500 Electrostatics	£795	Pink Triangle Itaural HDCD superb player	£3000 new serviced
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Goodmans Magnum K's	£125	Rotel RA965 BX classic old school cd player boxed mint condition	£195
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KEF RDM Two monitor speakers	£395	Sony XE680 SACD player	£195
Linn MKII Kans	£195	TEAC UDH01 USB DAC	£275
Linn Sara active speakers	£145		
Lockwood Minor cabinet for Tannoy 10"	£195		
Martin Logan Aenus Electrostatic speakers	£945		
Martin Logan Aeon Electrostatic speakers	£1195		
Magnaplanar 1.4	£795		
Mission 751	£225		
Mission 753	£295		
Mono Pulse 32A 8 months old ex dem	£495		
Mono Pulse 32S ex dem	£645		
Monitor Audio Silver 8i cherry finish	£495		
Monitor Audio GS10 piano black finish	£495		
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Quad ESL63 need work	£245		
Sentonian early 60s corner speaker pair	£495		
Sara Fuji SF1-35 open baffle 3 way design	£495		

Velodyne SPL 8000T1 subwoofer	£380
Velodyne SPL 1200 remote control sub	£595

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Marantz CD52 MKII special edition	£145
Marantz CD50 multibit dac	£95
Mendian 506 20 bit CD player	£495
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Mendian 208 and CD player with built in pre	£345
Musical Fidelity A3CD 24bit CD player boxed	£325
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Mendian 204 Tuner	£245
Naim NAT02 recently serviced	£650
Nakamich BX150E	£145
Quad FM4	£175
Rotel RT1082 DAB tuner	£225
Sony ST5100 FM/AM classic 70's tuner	£125
Sony 700ES tuner	£75
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Assembling a Pro-Ject Debut Carbon turntable.



A Pro-Ject 6 Perspex part way through assembly.

After assembly each turntable is calibrated and adjusted using a test record.



After assembly and calibration each turntable is then plugged in and left to run for 24 hours to ensure that it is working correctly. Note the variety of plug sockets for models for the UK, Europe and the USA.

The finished product. The new Pro-Ject Xtension 10. It comes fitted with the 10 inch Evolution tonearm and retails at £2000.

I would like to thank Heinz Lichtenegger and his wife Jozefina for their hospitality and Simon Powell of Henley Designs for the photographs.

Note Perfect

Adam Smith listens to EAT's E-flat turntable.

I don't think there can be any doubt in anyone's mind that the 1980s are back with a vengeance. Take a look around you in everyday life and you'll see legwarmers and those white-rimmed Ray ban sunglasses that somehow managed to look cool on the cast of Miami Vice, but looked ridiculous on everyone else.

Equally, turn on the radio and some of the latest dross riding high in the charts makes it seem as if Stock Aitken and Waterman have never been away. So why this sudden trip down memory lane you may wonder? Well, you see, I recently

unpacked the EAT E-Flat turntable and suddenly it feels like I'm back in 1983 again.

The reason for this is very simple – this was the year in which NAD launched the 5120 turntable to great surprise. It was their first in-house designed model, following various re-badged Garrard and ADC efforts and featured a very strange flat tonearm, made from the same material used as the base for PCBs. It was an interesting idea but caused as many problems as it solved and was soon dropped for a conventional tubular arm, but its spirit has been well and truly resurrected by Euro Audio Team and their new E-Flat turntable you see before you.

Of course, things have moved on greatly since the NAD's day, and the ten inch flat arm of the EAT is actually made of carbon fibre with a metal insert, and EAT can supply arms of differing masses to suit different cartridges. At the other end, the arm rests on a unipivot bearing and the lead-out wires connect into a locking plug on top of the bearing housing, thus making arm changes relatively painless. Further back, the first encounter with several instances of sorbothane appears, in this case, to decouple the counterweight from the arm itself, and two weights of different masses are supplied to, again, make cartridge fitment easier.

Like the Forte and Forte S

turntables, before it, the E-Flat utilises a platter of high mass, which is driven by a twin motor arrangement. However, on this occasion, those motors have been relocated to under the deck rather than being on show and just a single belt is used to wrap around the periphery of both pulleys and a sub-platter to transfer drive. The platter itself weighs in at 6.9kg and is somewhat reminiscent of that used on the Inspire Monarch, being 330mm in diameter and featuring a sloping outer edge. Internally the platter contains a layer of sorbothane and it is topped with a fixed mat made from recycled LPs to which a superbly engineered clamp bonds the record snugly.

More sorbothane is to be found around the bearing housing, arm mounting and feet in order to apply damping and the bearing and platter aperture are suspended beneath the main plinth, although in a fairly firm manner – there is nothing like the bounce of an LP12 to be seen here. The control circuitry is built into the plinth and two buttons on the front right hand corner offer speed selection; blue LEDs flashing in the appropriate button as the platter winds itself gently up to speed and glowing steadily once there. A third button brings everything to a halt and glows green to remind you of this. Power is supplied to the deck by a plug-top transformer that supplies





"the helicopter at the beginning of this track thundered into my room"



15Vdc to a socket on the rear of the plinth which, bizarrely, is labelled '16Vdc'!

Fit and finish of the E-Flat is truly scrumptious, with the gloss back plinth having an almost liquid shimmer to it. When set up, the deck looks surprisingly neat and compact, belying its generous dimensions. Although I enjoy a fully blinged-up and colossal turntable as much as the next person, the E-Flat has an understated style and subtle sophis-

tication that makes it a much more domestically acceptable companion than one of the aforementioned oil rig lookalikes. My only tiny area of concern is with regard to the packaging – our well-travelled review sample arrived in one piece but the wooden outer box was well on the way to giving up the ghost, as was the polystyrene packaging inside. Certainly my listening room resembled the interior of a Christmas snow globe once I'd

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TURNTABLES/CD PLAYERS

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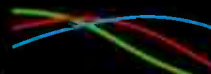
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unpacked it! I would venture to say that a deck of this calibre really deserves some properly supportive die-cut material to cradle it well.

SOUND QUALITY

The opening bars of The Eagles 'Long road out of Eden' were enough to set me thinking that this was a turntable I was going to enjoy, and so it turned out to be. The E-Flat just simply took the performance and pushed it firmly but gently out of the loudspeakers and into my lap so that it positively washed over me. Those who are familiar with the track will know that it begins with some soft orchestral notes and the sound of blowing wind – this was so vivid through the EAT I was on



the verge of getting up and checking the closure of the windows in our old Victorian house, afraid that the Hurricane Herbert blowing outside had finally breached our defences...

As the action moved into the main body of the song, the deck pulled a glorious, deep, effortless bass line from the depths and this served to beautifully underpin Don Henley's vocals. In fact, as I write this, I am going to have to be careful as I can foresee over-use of words like 'languid' and 'ease' but these words were exactly what came to mind as the EAT played – it never once seemed to be under duress or struggling to compose itself but

instead played on happily and with a rock-solid sense of composure.

This is not to say it cannot attack the hard stuff either. Moving to Pink Floyd's 'The Wall' and cranking the volume to highly unsavoury levels, I sat back to enjoy 'Another Brick in the Wall Part 1'. This then flowed into 'The Happiest Days of our lives' and I could feel my grin growing as the full fury of the helicopter at the beginning of this track thundered into my room. When the explosive drum beat followed, not only did I jump but my feline listening companion leapt skywards and disappeared from the room at high speed! Similar tracks showed that the dynamic abilities of the E-Flat are quite stupendous and its low end is commanding, fulsome and beautifully controlled. Equally, it serves up a positive swathe of detail and never once felt slow or wallowy.

The sense of insight that the deck imposes onto music carries up throughout the frequency range, resulting in a bewitchingly detailed sense of 'being there' that never once left me anywhere but at the heart of the performance. The minutiae that it resolves from instruments is little short of staggering but yet it never goes into forensic overload and dissects the performance to the point it becomes a collection of instruments rather than an all-enveloping whole. The depth perspective it offers, plus the lateral stage width and the sheer musicality with which it reproduces everything fed to it, means that each song really does come across in a new light.

At the top of the tree, the EAT once again strikes a very pure note. Its treble perspicacity means that the tiniest background detail is captured and yet it never sounds strained or harsh. The combination of mass and damping used in its design definitely

takes away unwanted mush but the balance has been struck perfectly so

that the sound is never too muted, constrained or darkly veiled, but overwhelmingly pure and lucid.

REFERENCE SYSTEM BOX
Ortofon Kontrapunkt b cartridge
Anatek MC1 phono stage
Naim Supernait amplifier
Modified Ferrograph S1 loudspeakers

CONCLUSION

There is no doubt in my mind that the EAT E-Flat is one of the finest turntables at its price point. In many ways, its sonic character reminds me of the Roksan Xerxes, in that I never sat down in front of it in order to be wowed by a particular aspect of its performance, but rather by the effortless way in which it affects an air of easy competency in all aspects of its reproduction. When my Garrard 301 hasn't been used for a while I find myself reaching for the tracks with a bit of bass welly as this is what it does so well, but in the entire time the EAT was with me, my search for audition material was purely based on the music I wanted to hear, rather than any particular desire to be sated.

To accompany its sense of understated style, the E-Flat has a similarly understated brilliance to all that it does, in sonic terms. If its price is within your turntable budget then I would say it should be very high on your audition list as it is a truly addictive musical companion.

VERDICT ●●●●●
Beautifully built and with an effortless sense of musical ease, the E-Flat epitomises the very best of vinyl replay.

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FOR

- styling
- effortless musicality
- glorious midband
- engaging ease

AGAINST

- longevity of packaging?

MEASURED PERFORMANCE

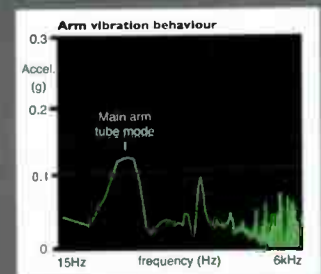
The EAT turntable was speed stable, with little wow at basic rotational rate of 0.55Hz. The highest wow component was at 1.1Hz, our analysis shows and measured just 0.05%. Further up the band there is very little in the way of either wow or flutter, making the EAT a very impressive performer.

The bendy arm is compliant in the vertical plane and so a basic beam mode resonance was inevitable, at a low frequency. Our analysis shows the main bending mode was a low 125Hz, where most tubular arms go off at 220Hz or thereabouts. This may affect bass and lower midrange image positioning. Further up the frequency band the arm is well damped and relatively 'quiet'. Its headshell doesn't suffer the myriad ringing modes of conventional metal headshells and may well give clear treble.

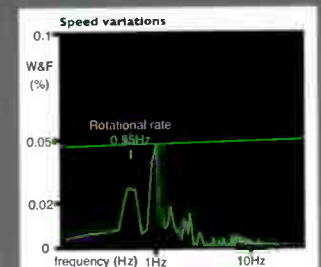
The E-Flat arm is flexible and this shows up under measurement. But it is no disaster and the dual-motor turntable is very speed stable, so overall the E-Flat measures well enough. NK

Speed	+0.2%
Wow	0.1%
Flutter	0.04%
Total W&F (unwtd)	0.1%
Total W&F (wtd)	0.08%

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Funk Firm K Drive

Tony Bolton fits a new D.C. motor upgrade to his Linn LP12 and likes what he hears.



In the February 2012 edition of this magazine I used a Funk Firm modified Linn Sondek to discuss the benefits of repositioning the motor on a turntable. The motor in question is a DC powered one and, as a long term user of DC motors on my LP12, I became curious to see how it compared with the Origin Live units that are normally found in upgraded LP12s. With this in mind, Funk Firm founder, Arthur Khoubesserian supplied me with a motor unit and a K Drive II power supply.

Although housed in a standard looking extruded aluminium case, the K Drive II is anything but conventional. It uses a BD 140 silicon Epitaxial Planar PNP transistor running-single ended in Class A to produce a clean drive signal to the motor. There is servo control of the motor but this only operates when speed fluctuations are detected.

A rotary switch on the front selects



between the two speeds offered, and these can be fine-tuned by using a small screwdriver to adjust the two pots accessed through small holes in the front panel. If, like me, you require 78 rpm as well, then the Funk Firm will make a simple internal adjustment that allows the 45 rpm

adjuster to reach up to these dizzying velocities.

Fitting was very simple, requiring the removal of the old motor and any associated power supplies, and the insertion of the new unit which is held in by two bolts. If you are replacing a Valhalla powered AC motor, then please remember that Valhalla boards carry lethal voltages and must not be touched for a good couple of hours after being unplugged. A single lead plugs into the back of the PSU via a five-pin-DIN plug, mains goes into the unit via a conventional IEC socket.

After a couple of hours running to settle it in I started listening. The first thing that I noticed was a blissful silence from the motor. The Origin Live units that I have used, no matter how well adjusted, all make a little noise, that, in a quiet room, can be audible a couple of feet away from the deck. This one was inaudible until my head was a matter of inches away from it.

The next thing that I noticed was the lower noise floor. Surface noise was extremely low, even on well played records, and the music seemed to hang in space in front of me. Dennis Brain's performance of the Mozart Horn Concertos was reproduced with a vividness and clarity that seemed to deny the age of the record. I was particularly impressed with the speed and precision of the attack and decay of notes, and the resultant impression of tighter timing to the music.

Moving onto stereo and Matt Monroe's opening song from 'The Italian Job Soundtrack', 'On Days Like These', I sat and reveled in

the panoramic soundstage in front of me. Monroe seemed a little further forward into the room than I am used to, and the orchestra occupied a bit more space around him. It felt as though the music had been liberated from the system and had become its own entity, performing in front of me.

This impression was reinforced when playing Morcheeba's second LP 'Big Calm'. If someone had told me that Skye Edwards was standing in front of me, caressing me with her voice, I would have been willing to believe them. The sound felt real and tangible.

I am very impressed with this motor and power supply. If you are changing from a normal AC motor then the effect will be transformative. The bass smooths out, loses a lot of the characteristic Sondek fruitiness, and goes deeper. All other sounds have greater clarity, space and definition. Compared to other DC motors the difference was a lot less pronounced but still noticeable, with a certain air of sophistication that, on occasion, made me forget that I was listening to a system, which is surely the whole point of the exercise. I can thoroughly recommend this product, I felt that it enhanced the performance of my Sondek and took it up to a new, previously unattained level.

SYSTEM USED:

Linn Sondek/ Hadcock 242 Cryo arm/
Clearaudio Concept MC.
Luxman E200 phono stage,
Bent Audio TAP-X passive pre-amp.
2 x Quad 303 power amps.
Kelly KT3 loudspeakers.

MUSIC USED:

Mozart 'Horn Concertos Nos. 1 - 4'.
Dennis Brain, Herbert Von Karajan conducting the Philharmonia Orchestra. Columbia Records. 33CX1140. 1954.

'The Italian Job Soundtrack'. Quincy Jones/Matt Monroe. Paramount Records. SPFL 256. 1969.

Morcheeba. 'Big Calm'. Indochina Records. ZENO17LP. 1998.

VERDICT

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AGAINST

- nothing



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Mono Micro

Mono lives on in the Benz Micro Ace SH moving coil cartridge, Tony Bolton is happy to find.

As regular readers will have realised, my record collection includes a sizeable chunk of older mono recordings which I have collected over the years, covering most genres from classical through to sixties pop. Some show the ravages of time, others look as though they have never been played, but all share one thing in common; they rarely sound at their best when played through a stereo phonostage with a stereo cartridge tracking them.

This is for a very simple reason. Tracking the variable depth and width of a stereo groove as it snakes across a record requires the cartridge to be both physically compliant and electrically responsive on all axis – vertical, horizontal and diagonal.

Mono recordings are cut laterally with the groove being of a constant depth and width. Therefore any non horizontal movement of the stylus is due to surface imperfections or damage, and will come across as pops and crackles. This is the reason that I like phonostages to have a mono switch. It goes a long way towards cutting out any extraneous noises, leaving the listener with just the music.

There is another way of dealing with this problem, which is to use a dedicated mono cartridge such as the Benz Micro Ace SH Mono under review here. It looks like a conventional stereo cartridge, with four connecting pins mounted at the back of the blue acrylic body, but has a different internal layout. The pure-iron-cross coil and magnet assembly have been rotated 45 degrees and

the generators only respond to lateral movement of the cantilever. This is then combined with the 0.28mm diameter, solid boron cantilever and the side bonded micro-ridge stylus of the stereo Ace.

Three versions are available with low (0.4mV), medium (0.8mV) and high (2.5mV) outputs, the latter being able to drive a moving magnet phonostage satisfactorily. The difference in output is created by altering the thickness and number of turns of the wire in the hand wound coils of the various models. Internal impedance of this high output example is quoted as 95 Ohms. The

"the sound was punchier and more direct, with a sensation of greater precision to the timing"

recommended loading is 1k Ohms to 47k Ohms. I settled on the latter, with the tracking weight sounding correct at 1.79 grams.

Remembering that the Ace SL took quite a long time to run in and to sound at its best (the instructions quote 40 hours) I was unsurprised to find that this one also sounded pleasant but rather uptight for the first few hours. After about 40 sides it had begun to get into its stride, and certain family traits that were very apparent on the far higher mileage

stereo model began to come forth.

The first to show up was the almost spaniel-like bounce and go attitude to anything with a danceable rhythm. Humphrey Lyttelton's version of the 1922 hit 'I Wish I Could Shimmy Like My Sister Kate' felt as though it should have had the audience in the Royal Festival Hall jiving in the aisles. It was portrayed

with a zest and vigour that, I think, accurately captured the flavour of the moment. Compared to playing the same record with the stereo Ace (and the phonostage in mono) this cartridge seemed to have a tighter grip on the leading edges of sounds. It also tracked the record with a near complete disregard for the odd blemish the disc had acquired in 57 years of existence, seeming to produce a quieter background than its sibling. This was obvious from the opening moments, where the



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sound of the audience seemed to fade in from a blacker space in front of me, and Humph's voice, during his introduction, stood forward of the sounds a little more.

Good behaviour with demanding record surfaces seemed to be one of this cartridge's strong points. This last Christmas I used some money that I received to satisfy one of my periodic outbreaks of Francophilia and raided ebay.fr. Amongst my haul of early 60's pop was an 7 inch EP called 'Sylvie', featuring a favourite song of mine from the period; 'La Plus Belle



Pour Aller Dancer' and sung by the doyenne of the French "yeye girls", Sylvie Vartan. I felt that the seller's description of the record's condition was a bit optimistic. It played in an acceptable but uninspired way, with a gentle halo of crackles around the music. Played with the Ace Mono, things improved quite a lot. The sound was a lot more substantial, with deeper and more obvious bass and better projection of the midrange and vocals. In the higher frequencies, there was a clearer demarcation between the music and the surface noise. It sounded more like the record that I thought that I had bought. It could never sound new, but it stopped sounding tired.

The year that this record came out, Sylvie Vartan played the Paris Olympia with the Beatles so I dug out the LP that they had crossed the Channel to promote. This is an early pressing of 'With The Beatles' that has survived the years well. Played with the stereo Ace it sounded good, but played with the mono version, I felt that I was getting closer to the music. The sound was punchier and more direct, with a sensation of greater precision to the timing. Their cover of Chuck Berry's 'Money' had a raw edge to it that made it sound more exciting than I am used to hearing. With no distractions from any pops or crackles I focussed on the space the sound occupied. The soundstage was both wide and

MUSIC USED:

Bach 'Brandenburg Concertos No.2 in F Major and No.3 in G Major' Karl Munchinger conducting Stuttgart Chamber Orchestra. Decca Records. LX 3029. 1950.

Humphrey Lyttelton and his Band. 'Jazz At The Royal Festival Hall'. Parlophone Records. PMD 1032. 1954

The Beatles 'With The Beatles'. Parlophone Records. PMC 1206. 1963

Sylvie Vartan. 'Sylvie'. RCA Victor Records. 86.046. 1964

deep, and I found myself wondering if stereo would have given me any extra sensation of realism to the performance.

This went through my mind again, later on, when playing one of my earliest LPs. This Decca recording of the Bach Brandenburg Concertos was among the first microgroove releases in this country in January 1950, some 18 months after the format was launched by Columbia (CBS) in America. It certainly showcased the new medium, with a tonal palette that seemed to accurately portray the differing sounds of the Stuttgart Chamber Orchestra. Concerto No.3 was written for violin, viola and violoncello, backed with a violone (a low pitched six-stringed instrument) and a harpsichord. Both movements are Allegros and the Ace seemed to bring out a certain bounce to the rhythm that, for me, conjured up images of elegantly dressed Georgian-era ladies and gentlemen parading across a ballroom. Playing this again with the stereo Ace, it still sounded good, and tonally correct but just a little less substantial, and I had a subtle awareness that I was listening to an older piece of vinyl.

After my experiences with the Ortofon Cadenza Mono (see HFW May 2011) and now this Benz, I am more convinced than ever that the only real way to hear my mono records at their best is with a mono cartridge. Switching a phonostage or pre-amp to mono gives good results, but using the proper cartridge for the job raises the standard of reproduction further. I think it also provides a more honest

description of the recording, and the medium's capabilities.

This also sums up the Ace Mono. I think it is honest in its sound, with a certain tenacious quality with the timing that makes it sound quite fresh and vibrant. Compared with the Ortofon, it is a little more bouncy, and if I only listened to classical or opera then I would probably choose the slightly more measured sound of the Danish design. For jazz and pop I think the Benz adds a little sparkle to proceedings and would be my preference. Both are superb at their job and I think the final choice would be entirely system and musical genre dependent. There is one caveat; both will cause you to question whether stereo is actually an improvement.

SYSTEM USED:

Clearaudio Master Solution turntable/ Magnify arm. Benz Micro Ace SL cartridge.

Leema Acoustics Agena phonostage/ Tucana II amplifier. Chario Ursa Major loudspeakers.

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FOR

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AGAINST

- nothing that I have found so far

MEASURED PERFORMANCE

The Benz Micro Ace SH Mono exhibits gently falling treble output into a 1k Ohm load, our frequency response analysis shows, so it will have a soft, even warm sound under these conditions. A 47K load lifts high treble to flatness. The red trace shows quite pronounced loss on inner grooves. Whether this will be apparent when playing old mono cuts is doubtful though, as high treble wasn't common and if the information is absent, then there is nothing to reproduce.

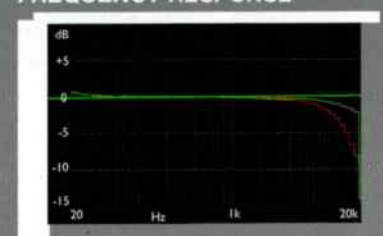
Distortion was very low at 0.7%, second harmonic on a 45µm peak amplitude cut. Tracking was fairly good, if not exceptional, since the SH was unable to stay in the groove on full level 'torture' tracks, even at 2gms downforce, the maximum recommended. Output was high at 0.8mV at 5cms/sec rms but still well below MMs, most of which provide 5x more output, so there needs to be plenty of gain spare in the preamp/ amplifier to cope. Whilst a High output MC seems like a good idea, extra coil turns adversely affect tracking – that is

the trade off. The SL will track best, but need an MC phono stage.

The Ace SH Mono will have a soft sound into low loads but is flat into 47k. It measures well and should do a good job. NK

Tracking force	2gms
Weight	8.8gms
Frequency response	20Hz - 18kHz
Tracking ability (300Hz)	
lateral	65µm
lateral (1kHz)	18cms/sec.
Distortion (45µm)	
lateral	0.7%
Output (5cms/sec rms)	0.8mV

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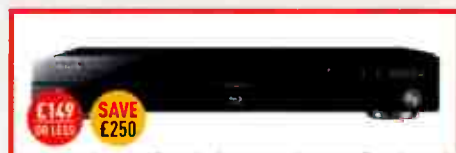
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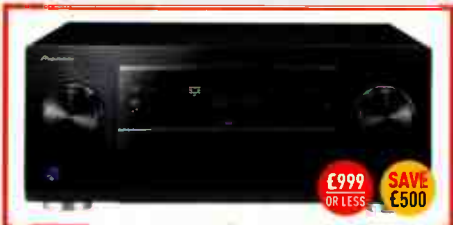
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NEXT MONTH

With the Olympics now in full swing you'll be wanting to hear it on the radio perhaps and could be thinking that below we're about to review a suitable classic from the 1960s. But not so. It's the delightful new Index streamer from Chord Electronics, packaged with a Chordette, that you can find in next month's issue. Below is some of what we hope to bring you, irregular weather permitting.

LOUDSPEAKERS

Epos Elan 35
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FEATURE

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from top engineer Tony Faulkner - part II
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CHOCOLATE WATCH BAND

NO WAY OUT

1967

"with every passing year, their music becomes more relevant and more inspirational"

Sometimes classic records become classic in spite of themselves, the band and the people and surrounding events. Such was 'No Way Out'. The band itself played a cross between garage and psychedelic and were created in 1965: they burned out during 1968. This short-lived outfit may have only been alive for three years but it seems that, with every passing year, their music becomes more relevant and more inspirational as successive new generations of fans become enamoured with their works.

Copies of the original 'No Way Out' album fetch three figure sums while unofficial bootlegs are for sale all over Europe. Hence, it is great to see an official CD release by the US-based Sundazed record label that has been excellently mastered, providing digital fans with a quality reproduction that the bootlegs just cannot match. The Sundazed issue features a multi gatefold fold-out digipak complete with extensive sleeve notes, rare photos, a scan of the original master tape notes, plus promo label images.

The production of the original album was difficult and was based around the old story of exploitation. Basically, the Watch Band were a bunch of kids who knew no better, were enjoying themselves, their association with rock gods such as playing with Jefferson Airplane, Yardbirds and Grateful Dead and feeling the glow of (hopefully) nearby rock stardom while the guys behind the scenes cared little for them but used the band for their own ends.

Hence, the band's first album

featured just two of the ten studio recordings intact. Lead singer, Dave Aguilar was rather surprised to hear that six of the tracks no longer featured his voice but session singer, Don Bennett while two other tracks were by a different band! Part of a studio group put together by the album's engineer, Richie Podolor.

This sort of thing happened all over again for the band's second album, 'The Inner Mystique' (which Sundazed has also just issued and is also, for the record, excellently mastered and well worth grabbing).

Lead singer, Dave Aguilar, himself, attempts to convey the confusion of the time, "It caused a lot of problems, but then I'll try and explain where our heads were at the time. We were sixteen, eighteen, nineteen years old. We'd been picked up by this producer. We were flown down to L.A. We were told, on a Thursday, that, on the Friday, a jet would pick you up and you would go down and record an album and spend a week in L.A. There would be a limo that would pick you up at the airport. Every meal that you ate was catered.

We really had no virtual studio experience recording. So we weren't prepared to go into the studio. We hadn't been writing music. We were stage performers. That's where our heads were. Going into a studio and everything that went in around it, that was fun. We were not crazy about the songs but then again we had no background preparation. We didn't go in with songs of our own that we wanted to record. We didn't

know that he (Podolor) was changing them and adding people to it, and adding stuff to the album, 'til months after we'd been in the studio and we were gone".

The albums didn't represent the original band fully but, despite all of that, both LPs are superb garage/psychedelic records. There's a definite Rolling Stones-like theme running throughout the album. The blues-tinged rock on 'Let's Talk About Girls' features an airy, spacey production with plenty of energy, light secondary percussion and heavy duty vocals while the Wilson Pickett standard, 'Midnight Hour', like 'Girls' has enough psychedelic infusion to lend it a slightly otherworldly presentation.

When you get to their own penned material, such as 'Gone And Passes By', the psychedelic aspects flow into the soundstage combining eastern instrumentation, treated vocals and flower power accents. 'Expo 2000', which was written by the band's engineer Richie Podolor, is a fuzz guitar-based instrumental with plenty of spaced out sound effects that gives it an almost Joe Meek flavour.

This is a manufactured album where, during its creation, young innocents were sacrificed to the gods of art.

And yet Aguilar confirms that, in the very end, it didn't really matter. At that precise moment, they were having a ball, "We felt that we had arrived, just on a different level. We weren't selling records but that didn't really matter to us at the time". **FR**

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