VINYL NEWS AND REVIEWS SECTION SEE PAGE 80

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LOUDSPEAKERS have a hole in the middle – and it’s not a port. It is the gap between low frequencies and high frequencies where the two cone drive units have difficulty meeting up in decent fashion. This always was the justification for a three-way loudspeaker – one with a midrange unit that best covers the region where the ear and brain together are most alert. And KEF’s new R5 has an aluminium cone midrange unit of impeccable pedigree. That’s why it threw so much information at me – see our review on p10. Such a well-developed loudspeaker is almost challenging; you need to feed it decent digital or lovely LP. Get this bit right however and the R5s sing.

Whilst the KEFs were aurally challenging, Chord Electronics’s M Scaler was mentally challenging. A lot of e-mails went back and forth on this one as I needed to make sure my review was not only informative but also technically accurate. Chord Electronics are not only masters of digital they also are, as a company, very helpful – to their customers as well as reviewers. This thankfully allowed me to get a good understanding of M Scaler, to explain and resolve what I was hearing.

And with M Scaler it is all about hearing. Transfigurational hearing I would say! See our review on p25.

One million being bigger than 93,000, M Scaler sort-of out shone Chord Electronics new Hugo TT2 DAC – see our review on p18. In practice it is a supplemental filter for it (and other DACs), Even though Hugo TT2’s 93,000 tap filter might not match M Scaler it still easily outruns all other DACs, giving a massively impressive sound – as well as unbeatable measured performance.

Meanwhile, the glorious LP sails on unfazed by such matters. Project have interestingly decided to offer an all-discrete phono stage that Martin Pipe reviews on p89. Silicon chips were never purposed for LP; better is possible.

The art and science of audio makes itself known in our April 2019 issue. I hope you find it a great read.

Noel Keywood
Editor

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

To ensure the utmost accuracy in our product reviews, Hi-Fi World has extremely comprehensive in-house test facilities, and our test equipment – from big names like Rohde & Schwarz and Hewlett Packard – is amongst the most advanced in the world. Loudspeakers are measured using a calibrated Bruel & Kjaer microphone feeding a Clio based computer analyser, using pulsed and gated sinewaves, in a large room to eliminate the room’s influence. Pickup arm vibration is measured with a Bruel & Kjær accelerometer.

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The new R Series.
The only thing to remain the same is the name.

At KEF the quest for sonic perfection demands constant innovation. So when we sought to improve R Series we completely re-engineered it and changed everything. Discover the full story on our R Series website and find your local KEF dealer for a breathtaking demonstration.

KEF.COM/RSERIES
email: news@hi-fiworld.co.uk

news

KLIPSCH KOLLECTION

One new speaker? Pah. Instead Klipsch gives us an entire new range - the 18-strong Reference Premiere Series - for which is claimed a “string of improvements” including new horn technology, high-grade materials, luxury finishes and various sonic enhancements. The entry point is £400, which will buy you a pair of RP-400M bookshelf speakers. At the other end of the scale are the Doioby Atmos-integrated P-8060FA floorstanders, a pair of which has a £2400 price tag. Yes, home cinema is evidently where Klipsch is at; a variety of subwoofer, surround and centre channel options are also being offered. Klipsch seems particularly proud of its 90x90 Tractrix horns, which are reckoned to improve high-frequency response and extension while enhancing imaging and dynamics. The tweeters behind them feature exclusive ‘Linear Travel Suspension’, titanium diaphragms and weighted ceramic housings for dynamics, detail and cleanliness. What makes the Reference Premiers stand out on first acquaintance, though, are their distinctive copper-spun ‘Cerametallic’ woofer cones - which work in conjunction with Tractrix reflex-ports to deliver “controlled low-end and midrange reproduction”.

Contact: Henley Audio, +44 01235 511166, www.henleyaudio.co.uk

TOO GOOD TO BE TRUE...

In the January issue, we inadvertently jumbled up our digits when quoting the price of van den Hul’s XGW Colibri Signature Stradivarius cartridge. High-end vinyl addicts were no doubt salivating at the prospect of paying a mere £4750 for one of these hand-crafted moving-coil marvels - a ‘flipping bargain’, as vdH’s PR puts it - but you can actually expect to shell out £7450 for one. Many apologies to vdH, UK distributor Decent Audio and disappointed punters...

Contact: Decent Audio, +44 03602 054669, www.decentaudio.co.uk

LIFE BEHIND THE COUNTER

Even if you’ve never read that Nick Hornby novel, you might have wondered what goes on behind the scenes of a record shop. Sure, vinyl has attracted interest of late... but isn’t that more than offset by the Internet-driven decline of the high street, and its effect on ‘bootsfall’? Thankfully, the very same Internet can now help satisfy your curiosity. Head to YouTube and seek out “Behind the Counter” - which is described as “an exciting and brand-new video series that tells the engaging stories behind the weird and wonderful world of the independent record shop”. Presented by Bowers & Wilkins, Record Store Day UK and Classic Album Sunday, it consists of a weekly video featuring “one of the UK’s most intriguing record stores”. The twelve-episode series will receive addition until Record Store Day UK on 13th April, new videos going live each Tuesday at 4 pm. The first episode, featuring Margate’s ‘Transmission Records’, can be found at https://bit.ly/2A79Ey.

BIG MAC LIFESTYLE

When one thinks of McIntosh, those iconic big and beautiful black boxes with blue-backlit meters spring to mind. But there’s more to McIntosh than traditional hi-fi gear. McIntosh is now also targeting the luxury Custom Install market with its new ‘multi-channel distribution’ amplifiers (the £4,495 two-channel MI128 and £5,995 four-channel MI254), in-wall speakers (the £2,495 WS300 and larger £2,995 WS500) and £1,495 CS200 in-ceiling speaker. The two amps, which use Class-D technology to deliver 250W to each channel (8 ohms) without the need for cooling fans, can easily distribute stereo signals to multiple outputs. They boast 12V triggering, auto signal-sensing, installer-friendly physical dimensions...and those famous meters! All of the speakers are three-way and voice-matched to each other for seamless integration, and can be adapted to two-channel or multi-channel applications. The 93mm-deep WS300 and WS500 are fully-enclosed with controlled air-chambers to ensure high performance. Each features one (WS300) or two (WS500) 165mm woven glass-fibre woofers, a pair of 30mm inverted-dome midranges and a 19mm titanium-dome tweeter. The CS200 takes in-ceiling speakers to new performance heights with its 100mm woven glass-fibre woofer, and rotatable array for the midrange and tweeter.

Contact: McIntosh, www.mcintoshlabs.com
FISH TALES
Platinum-selling artist Fish, who first attracted acclaim through his work with prog-rockers Marillion, is evidently a fan of Parasound gear. In his home, you’ll find a Halo integrated amplifier. A Halo in their dedicated studio facility located close to Edinburgh, meanwhile, is helping Fish and his bandmates to record forthcoming album ‘Weitschmerz’.

Fish also put his signature on a Parasound hi-fi system that recently sold at auction in aid of Fish’s chosen charity, Chest Heart & Stroke Scotland. The lucky winner - lifelong fan Barry Capper - got to meet his musical hero during the presentation of a £1,000 cheque to the charity. His wife made the bid as a “surprise Christmas present”.

Parasound’s UK importer Connected Distribution organised the charity auction in conjunction with Fish, who is a Parasound endorsee. “For any loyal fan, owning something signed by your musical hero is a real coup,” said Connected’s Mike Bonnette.


A VISIBLE DIFFERENCE?
Most pickup cartridges involve the stylus-driven interaction between a magnet and coiled fashion from very fine copper wire. However, there’s another non-magnetic contender when it comes to vinyl replay – from DS Audio, which unveiled its first optical cartridge (the DS-W1) back in 2013. The DS-W1 uses a beam of light to read stylus/cantilever movement. Lower weight and freedom from magnetic friction are claimed to equate to delicacy, sensitivity, subtlety and musical believability; however, a special phonostage is necessary. The DS-W1 and phono stage were expensive at over £6k. 2017’s DS002 follow-up brought costs down to under £5k, but now we have the DS-E1. Using “an aluminum cantilever and elliptical stylus” to bring costs down, the DS-E1 and accompanying phonostage can be yours for £2,295.

Contact: Sound Foundations, +44 0118 981 4238. www.ds-audio-w.biz or www.soundfoundations.com

FROM CLEAR TO CLEAN
New from Clearaudio is the Smart Matrix Silent record cleaning machine, which sells for £1,375 (the dust cover is another £125). Replacing the earlier Smart Matrix Professional model, the Silent is “designed for intensive and continuous use” and employs vacuum-cleaning capabilities that are described by Clearaudio as “gentle yet highly effective”. Claimed to be “effortlessly-simple to operate and maintain”, the Silent is evidently built to last - the arm, chassis and accompanying SMS Seal record clamp are all machined from solid aluminium, while the motor in its heart is a powerful yet quiet 500Watt type. The unit’s multifunctional cleaning vacuum and anesthetic arm features a sliding record-size selector that enables you to clean 12in. LPs/singles, 10in. EPs and 7in. singles. The unit will accommodate both vinyl and shellac discs. It looks good too - here’s a cleaner that you’ll be happy to place alongside your hi-fi.

Contact: Sound Foundations (UK distributor), 0118 981 4238 www.clearaudio.de

FOR WANT OF A WASHER...
A mere tenner buys this clever washer from Miyajima, the Japanese firm best known for ‘artisan’ phono cartridges. It will be of value to audiophiles whose tonearms have a SME-type bayonet-fitting headshell. These headshells have a non-rigid washer at the point of tonearm fitment and there’s often a perceptible degree of movement. Miyajima’s new ultra-thin split washer is embossed with three indentations, designed to produce a more rigid and less flexible joint, coupling headshell and cartridge more tightly to the tonearm. This “smallest of upgrades” is said to “clearly-improve sound quality”, with benefits including “tighter bass and a more vibrant, dynamic and expressive presentation”. For less than the price of a record, it’s got to be worth a try.

Contact: Timestep Distribution +44 (0)1803 833346. www.miyajima-loh.co.uk
**DIGITAL RADIO ON THE UP?**

According to listening figures covering the last quarter of 2018, from audience monitoring body RAJAR, 52.6% of listeners are now tuning in digitally; this figure - "a record" - claims trade body Digital Radio UK - is the simple average of the BBC (51.5%) and commercial (53.9%) radio listening proportions.

Digital Radio UK estimates that in-car digital listening grew by 15 million hours, now accounting for 37.5% of all such listening. According to data from CAP/SMMT from the end of 2018, 93% of new cars sold now come with DAB as standard. Nearly 2.5m new vehicles fitted with DAB radios were registered in 2018. Digital listening, says Digital Radio UK, "is increasingly the norm...all demographics aged between 10 and 64 have digital listening above 50%: 35-44 year olds are evidently the biggest fans. 58.5% of them consuming radio in this way, perhaps hardly surprisingly. BBC 6 Music is the most popular digital-only station with 2.3m listeners.

However, the RAJAR figures reveal that total UK radio audiences were down by 0.9%. In London, the drop was a staggering 3.9%, equating to many thousands of listeners. The audience of BBC Radio 2, still the UK's most popular station, shrunk from 15.49m to 14.89m. There are now 1.83m Radio 3 listeners - 120,000 fewer than last year - while Radio 4 lost 769,000 listeners. Only the World Service gained audience. Most digital stations report modest growth, although the number of absolute listeners fell from 2.6m to 2.4m.

Visit www.rajarr.co.uk

**THE VOICE OF Q**

A couple of years ago, Armour Home’s Q Acoustics speaker brand made waves with their Concept 500 floorstanders. Now they’ve shrunk said speakers to bookshelf size and called the result of their experiments the Concept 300. During the intervening period, Q’s boffins also used their experience to refine the advanced underlying technology. It starts with the P2P-braced - and wood-finished - cabinet, which is built up from three individual layers separated by ‘Dual Gelcore’. This is a non-setting gel that turns high-frequency vibrations into heat for a more focused audio performance. Cabinet resonances are claimed to have "been reduced to negligible levels." To this high-tech box are fitted a woofer with 165mm impregnated paper cone, and a dome tweeter that features a very subtle horn-shaped profile.

The biwireable Concept 300, which is intended for use with amplifiers rated between 20W and 200W, sells for £2,999 with stands. They’re available in gloss black/rosewood, gloss white/oak or dual silver/ebony.

Contact: Q Acoustics, +44 01279 301111 www.qacoustics.co.uk

**YOU’VE BEEN FRAMED...**

American brand Bose has officially launched, in USA at any rate, its intriguing "AR Frames": These high-tech shades “combine the protection and style of premium sunglasses, the functionality and performance of open-ear wireless headphones, and the world’s first audio augmented-reality platform” to create a “truly revolutionary” wearable device. Described as “the tiniest, thinnest, most lightweight Bose system ever”, the AR Frames can “stream music and information, make or take phone calls, and access virtual assistants”: Instead of "changing what you see, or using a lens to superimpose objects in your sightline", the Frames – which determine location with a 9-axis motion sensor and your phone’s GPS system – automatically add a “layer of audio, connecting you to endless possibilities for travel, learning, entertainment, gaming, and more”.

There’s no UK launch date yet, and some are already selling these devices on eBay for grossly-inflated prices. An alternative is to buy them for $199 via the New York shopping concierge Big Apple Buddy – but the press release drawing our attention to its scheme neglected to cover issues like warranties or technical support.
KEF’s big, black, new R5 floorstanders have technological attitude. KEF was founded on hard engineering analysis back in the 1960s, made it’s name that way and continues with the tradition today, now as a successful part of Gold Peak (China). And you’ll get the whiff of this background – or more if such things interest you – in all of the company’s literature for the new R5. So what I’m looking at here is an unashamedly advanced loudspeaker in technological terms.

What we need in a loudspeaker is one that commits no great sins and suits our expectations. And the R5 is neatly tailored to do just this I found. It’s a high technology design in which subtle but appropriate balances have been made to ensure it appeals, since with loudspeaker design you have to get it all right – and then ensure it sounds good. Technological perfection isn’t the same as sonic acceptability and KEF have struck a nice balance with this compact three-way floor stander aimed at typical
UK living rooms; an R7 and R11 exist for bigger spaces and higher sonic power.

Standing one metre high (1070mm) the RS is sized like most of its showroom rivals. KEF have kept the front narrow at 177mm to improve radiating characteristics they say, whilst depth is 350mm including terminals. For stability the RSs come with bolt-on outrigger feet that take width to 270mm total. Our ‘speakers were nicely finished in a deep gloss black but white and walnut are options.

Because the cabinet has many internal bracing panels it is heavy at 27.3kgs and feels very solid and rigid when being moved. Adjustable spikes with spanner are supplied, plus foam huhs for the ports to damp down bass if necessary – something that can be needed for smaller rooms to lessen their boom. Cups are supplied to fit under the spikes to protect wooden floors.

The RS features KEF’s well developed Uni-Q driver where an aluminium dome tweeter is placed concentrically within an aluminium cone mid-range unit, giving a single assembly that works across a very wide range, in the RS from 400Hz up to 20kHz. Concentricity and the closeness of the tweeter to the cone’s apex together eliminate the usual phase cancellations and asymmetric behaviour of most three-ways, for a more focussed and consistent sound both at the listening position and around the room. This unit sits in a shallow sealed chamber and it appears from KEF’s exploded diagram rear radiation is absorbed by a foam ring Tangerine wave guides direct high frequency sound across the surface, resulting in an unusually smooth result on and off axis, our measurements show. There’s little difference between pointing the cabinets straight down a room or turning them in to face directly at listeners, the Uni-Q is so well honed.

Above and below the Uni-Q sit hybrid 130mm bass units with a shallow concave aluminium front face backed by a paper cone. They both work into the rear cabinet whose chambers are coupled, but the upper and lower ports are tuned differently, the lower one working at a lower frequency making it more likely to excite a small room and the best initial target for a bung I suspect.

Twin ports with staggered tuning, bi-wire terminals and sturdy cast alloy outrigger feet for stability. The spikes are adjustable – spanner supplied!

Note that all drive units have an aluminium face for consistency of sound character.

The rear carries a bi-wiring panel with integral links, heavy terminals being able to accept 4mm banana plugs, spade connectors or bare wires.

**SOUND QUALITY**

For the most part I drove the RSs from our Creek Evolution 100A amplifier, via Chord Signature cables. Sources were an Oppo BDP-205D Universal player acting as a CD transport, feeding Chord Electronics M Scaler via its own optical cable, connected to an Audiolab M-DAC+. A MacBook Pro fed DSD from Audirvana Plus straight to M-DAC+, and hi-res PCM to M Scaler. The ‘speakers were run in for 50 hours.

Spinning Jan Akerman (CD) singing Am I Losing You – a simply structured track with vocals over guitar – the RSs were vivid in portrayal. Rather than the slight sense of thin-ness and sharpness that comes from raised treble of so many current loudspeakers, the KEFs offered a timbrally rich insight into the instrument, plucked notes having speed without ferretion. Akerman’s vocals were focussed and stable in front of me, pushed forward and gripping.

With uncompressed Rock tracks (CD) of wide dynamic range these KEFs gave an in-my-face delivery – especially of vocals – that was both refined yet viably exciting and very stable in image outline.

As measurement suggested the RSs sound full bodied – but not bloated – and bass was both firm and strong, if not heavy in our large (25ft long) room. There was startling power to drums from Marilyn Mazur’s Drum Impro, with solid and controlled low end follow up. KEF know how to engineer in good low end control and the RSs offered a fine demonstration of their knowledge here.

Nigel Kennedy’s Stradivarius violin was well lit and firmly delivered. The strong midrange presence of these ‘speakers pushed it out at me and I was thankful for the healing qualities of the ESS ES9038 chip in Arcam’s CD50 player, that I used early on, to make 16bit from CD palatable – because the sound bordered on edgy so much was being revealed. At times with complex material like this I also felt the midband could be usefully more transparent in nature.

The RSs Uni-Q unit is both obvious and revealing of what’s being fed in – which was challenging at times. Fine if what’s being fed in is fine – high quality from vinyl...
“Tellurium Q Statements are no usual cable affair and if I’ve called the Silver Diamonds an Emotional Tour de Force what are then the Tellurium Q Statements!? Well, they certainly transcend any typical labeling and this time I’m elevating them on the throne, that they clearly deserve. Their stand out, extraordinary performance can only be recognized with the 2018 Editor Choice Award!”

-Matej Isak, Mono & Stereo

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for example — but I was getting to hear some of the problem’s within recordings: Nigel Kennedy’s violin on CD always had a slightly eggy sheen to it for example — and the RSs made this quality of the recording more obvious. It’s a phenomenon I’ve muttered about before with good hi-fi products: the sound doesn’t necessarily get better!

Salvation came both from smooth DSD digital, and preened PCM digital from Chord Electronics’ M Scaler (see review in this issue). Via M Scaler the RSs better looked into the Stravinsky, revealing both its qualities and Kennedy’s playing, his vigorous tempo made apparent by their clean recreation.

The consistent tonal signature of the RSs was made clear with Loreena McKennitt’s The Gates of Istanbul (CD), as well as their bass. The opening and continuing plucked bass had strength and yet was firm. Bouzouki came through with natural clarity and a lively dynamic. The whole track hung together beautifully.

Fleetwood Mac’s Dreams (24/96) kicked off hard and fast from Mick Fleetwood’s drum kit, Stevie Nicks vocals were pushed out forcibly and cymbal crashes crashed — a quality of the recording. Bass was supple and speedy, and in good proportion.

The Minnesota Orchestra playing Korsakov’s Dance of the Tumblers, from Snow Maiden (24/96), came over full sized and powerful, a lovely smooth swathe of instruments set out left to right in front of me. Violas were made obvious but I could hear their contribution in succinct form.

The RSs also revealed differences between Tchaikovsky’s Serenade for Strings (2L, Norway) as DSD64 (2.8MHz) and DSD 128 (5.6MHz) with a slightly finer and more intricate sound from the latter. Their resolution of fine detail is superb and, with strong projection, illuminates orchestral works.

CONCLUSION
KEF’s new RSs come over as all-of-a-piece: there’s no stingy treble nor disconnected bass. They are mid-band projective and this means they do need a very good source or you end up hearing — as I heard — problems in the recordings. That’s the other side of listening to KEF’s revealing Uni-Q drive unit, something you won’t hear elsewhere. I almost apologise for having to say “gentlemen, look to your sources” (women too!) for these ’speakers, but if you do then the RSs deliver a sound that’s impressive.

MEASURED PERFORMANCE
Frequency response of the KEF R5, using third-octave analysis of pink noise, runs smoothly from 60Hz to 20kHz within +/-3dB limits. There’s some slight variation across this range but overall smoothness of the trace shows this is a loudspeaker free from the myriad of minor local resonances that add colour.

Starting at the top end first — meaning high treble — the aluminium dome tweeter that sits behind a ‘Tangerine’ waveguide delivers an extraordinarily smooth response free from peaking, on-axis and off-axis; it is consistent in delivery wherever you sit or however the speakers are angled. Lack of lift or peaking means the R5 will have a top end free from the obvious emphasis of so many of today’s loudspeakers, and also lacking their sharpness, incision and quite often the coarseness that accompanies lifted treble due to emphasis of distortion, especially from CD. So smooth and colour free treble.

Output below 1kHz lifts a little, by +2dB at most, to add some sense of body to the sound; without this a loudspeaker can sound starkly dry. Low bass rolls down smoothly below 80Hz, output supported by the upper port that peaks at 50Hz (red trace) and the lower port that has broader output stretching from 30Hz to 45Hz (orange trace). The R5 cuts off sharply below 30Hz, so it delivers deep bass but not subsonics. It has been designed to work close to a rear wall in medium sized room of around 16ft-20ft long.

Sensitivity was 87dB sound pressure level (SPL) produced from one nominal Watt (2.8V) of input, exactly as quoted. However, the R5 draws current to achieve this, being a very low impedance design with a 3.5 Ohm d.c.r. and a measured impedance with pink noise of 4.7 Ohms. Our trace shows there are no residual reactive peaks, due to offset-tuned bass chambers or a compensation network. Amplifiers of 40 Watts per channel will go loud with these ‘speakers.

The R5 is well engineered and technically accurate. NK

FREQUENCY RESPONSE
Green - driver output
Red/orange - port output

IMPEDANCE

KEF R5 £2000

OUTSTANDING - amongst the best.

VERDICT
A focussed and cohesive sound with great insight and fine bass.

FOR
- midrange insight
- controlled bass
- excellent build and finish

AGAINST
- lack transparency

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WIN A SUPERB QUAD ARTERA PLAY+ CD PLAYER WORTH £1199.95 IN THIS MONTH’S GREAT GIVEAWAY!

Here’s your chance to win the superb Quad Artera Play+ CD player/DAC we reviewed in the December 2018 issue. Read the review excerpt below and answer the questions.

“We reviewed the original Artera Play in our January 2016 issue and were impressed. This is a CD player and preamplifier combined, built around the ES9018 Sabre32 series DAC from ESS of California – renowned for its sound quality. Moreover, it has a smoothness of sound in keeping with the Quad tradition. A chip tried and tested – and all but famous for getting great sound from CD.

The Play+ has analogue phono socket (unbalanced) inputs that run through the volume control and to the output sockets. By default there is no gain (x1) so what goes in comes out almost unaltered, except in volume but this allows two other analogue sources to be hooked into the system – even a Phono stage. When I say “no gain” that is from phono socket input to output, from phono socket input to balanced (XLR socket) output there is a gain of x2 (+6dB) but this will only come into play if the XLR outputs are used to feed a power amplifier with XLR inputs, such as Quad’s own matching Artera Stereo power amplifier (140W). Also, gain (or attenuation) can be dialled into the system – up to x2.3 (+73dB) – and this could be useful to match in low gain external Phono stages.

Yes, the Play+ can be used as a general purpose analogue preamplifier. Additionally, there are S/PDIF digital inputs, optical and electrical, plus a USB input for computer connection”.

For a chance to win this great prize, answer the four easy questions at right. Send your entries on a postcard only, by 11th April 2019 to: April 2019 Competition, Hi-Fi World magazine, Studio 204, Buspace Studio, Conlan Street, Notting Hill, London W10 9AP

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[1] The Artera Play review issue was –
[a] December 2019
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[c] December 2018
[d] December 2000

[2] The DAC is famous for –
[a] number of pins
[b] size
[c] power consumption
[d] great sound from CD

[3] The matching power amplifier is –
[a] Artera Stereo
[b] Leak Stereo 60
[c] WAD 5881
[d] Sinclair ZX60

[4] Computer connection is via –
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Products from Chord Electronics are always fascinating – even exciting, sometimes confusing. And that’s just what I found when reviewing Hugo TT2 with M Scaler. Notes in the handbook allude to the ‘power’ of Hugo TT2’s audio outputs. Chord Electronics explain there are discrete power amplifiers in Hugo TT2 that can drive loudspeakers direct, especially sensitive horn loudspeakers. We drove a pair of Tannoy Westminsters – large horns – from a portable Mojo in our January 2016 issue. Could Hugo TT2 drive loudspeakers, slashing system cost? More later!

Let’s look at cost. Hugo TT2 is priced at £3995 – a substantial sum. The TT means it is a table-top version of Hugo, more expensive and without batteries. It has a partnering 100Watt power amplifier that you’ll see in many website shots, TTOBY, price £2899. However, it will drive any power amplifier. M Scaler is £3495 and I talk about this separately on following pages just for clarity.

It’s a super high-technology DAC that Hugo TT2 is presented – and usually talked out – using Chord Electronics own and unique digital-to-analogue converter (DAC) designed by Rob Watts. Manufacturers normally buy in DAC chips from outside suppliers. What you get here is a highly-specialised and continually advancing design from Mr. Watts that, our measurements show, out-runs all else except ESS (although AKM get close). However, Rob Watts states that where other designs have digital filters with hundreds of taps and make compromises as a result, Hugo TT2 now has 98,304 taps in its filter, fed by a x16 oversampled signal. M Scaler ups this to a massive 1 million taps, again fed by a x16 oversampled signal.

Chord Electronics sent us M Scaler with Hugo TT2 so we could hear the difference, a task made easier by our Martin Logan electrostatic loudspeakers. And our ability to measure the thing: there are only two analysers in the world able to do this – they have one, we have the other. Interestingly they quote a class-leading 127dB dynamic range and
we measure 128dB from amplifier output, or 124dB from DAC output – both outstanding values.

In addition to being a unique DAC, Hugo TT2 is also a pre-amplifier and headphone amplifier they say. Hmm... Yes, it is, but it does not have analogue inputs, so cannot accept external analogue sources. The ‘pre-amplifier’ bit relates to the fact that very high gain is available, enough to drive a power amplifier direct or act as a power amplifier in its own right. Two gain settings (Hi and Lo), a big illuminated spherical volume control (centre) and both phono-socket (unbalanced) and XLR-socket (balanced) analogue outputs being fitted to make it all happen.

These days headphones rule and Hugo TT2 is designed to cope, with no less than two full size 1/4in (6.35mm) jacks, plus a 3.5mm mini jack, so no adaptors are needed. Those on-board power amps let Hugo TT2 drive headphones down to 16 Ohms or lower, with massive voltage swing so even the most difficult of headphones offer no challenge. An unusual addition is three selectable levels of Crossfeed between channels to give a more loudspeaker-like presentation. The only omission is the lack of a balanced output. Plugging headphones in disables amplifier mode (i.e. the analogue outputs).

There are arrays of digital inputs. A fully isolated USB input allows Hugo TT2 to be used as a computer’s headphone DAC or to send audio from the computer to the hi-fi. The TT2 accepts native DSD (PC only) up to x8 (DSD 512). At present double-rate x2 DSD (DSD128) is about the limit for music files, because of their size. If you run a PC a DSD driver must be downloaded from Chord Electronics to run native or DoP. If you run a Mac the paid-for Audirvana Plus app. sends via DoP that works to DSD128 only in Hugo TT2.

In addition to the USB input there are two electrical S/PDIF digital inputs via BNC sockets, not the usual phono sockets. They can be used independently, as usual, to accept a digital stream from outside sources, or together as a special DBNC (Dual BNC) input to accept the DBNC output of M Scaler. There are two optical inputs for which Chord Electronics now supply matching cables to ensure they reach 192kHz sample rate. There are no AES/EBU balanced digital inputs. And there are two digital outputs for future use with Chord Electronics products.

Another input is Bluetooth with aptX compression, for streaming from mobile phones or any other device such as iPads and portable players that now mostly come with Bluetooth. A small, light (plastic) and simple remote control unit is provided with all functions, including volume control, input selection and filter selection.

There are four filters, an incise neutral filter (Filter 1) that offers ‘absolute reference’ they say, and the same with high frequency roll-off (Filter 2) to ‘remove noise’ they say, and the same with high frequency roll-off (Filter 3) and again the same with high frequency roll-off (Filter 4). Differences between these filters were not great and sonic differences small. They work with DSD also to reduce high frequency noise (2 and 4), a problem inherent to DSD.

Like all Chord Electronics products Hugo TT2 is of exceptional build and finish. The case is machined from solid alloy, making it wonderfully strong and with superb contours and detailing. The company light up the whole device in their usual style: the spherical volume control at centre changes colour to show gain, the colour palette moving from red (low) up to green (center/balanced) and then into blues to purples and eventually white (max). Internally, the LEDs change colour on the circuit board to indicate sample rate (or DSD) and this is visible through the top window. Case dimensions are 235mm wide, 223mm deep and 46mm high, with a weight of 2.53kgs.

Power is supplied by a Chinese external switch-mode power supply block that delivers 15V at a high 4A through a cable 2340cm (11ft) long.

The illuminated volume ball on a shaft at front, connected to green potentiometer behind. Six green super-capacitors (left) bolster the power supply. At right is the Bluetooth radio module. At centre the square black FPGA chip that holds the WTA filter and DAC.
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in total. Chord Electronics exclusively use switch-mode supplies and are happy with them, even though they are shunned by many others. To compensate for any possible limitations in supply transient behaviour ‘super capacitors’ are fitted to store charge within the unit.

And finally to the power amplifier potential of Hugo TT2. Hugo TT2 produces 20 Watts from its XLR outputs. However, it doesn’t have the heat sinking or devices to produce such power on a continuous basis. It works fine and goes loud, but very loud will overheat (there are protection circuits). Small loudspeakers are insensitive to expect lower volume — but they will work well enough on a desk where speakers are close to your ears.

**SOUND QUALITY**

I used Martin Logan ESL-X hybrid electrostatic loudspeakers driven by a Creek Evolution 100A amplifier via its direct XLR inputs (no volume control) through Chord Company Epic XLR cables. Loudspeaker cables were Chord Company (not Chord Electronics; they are different and unrelated companies) Signature UL cables. The unit was run in Amp mode, mostly Filter 1 and with volume set at light blue where full dynamic range is available.

Digital was delivered from an Oppo BDP-205D Universal player acting as a CD transport, coupled optically to the Hugo with the cable supplied that was a tighter fit into the Toslink socket than our cables. A MacBook Pro running Audirvana Plus by a very broad soundstage where the audience yelped and shouted from hard left to hard right in lively fashion, yet they were clear of the vocals with well-identified distance. This sense of dimensional resolution with hard images on a wide yet firm canvas remained throughout my listening. Lofgren’s rapid finger-picking was super clear, with better timing between fine details from the strings than I have ever heard, giving a sense of intense insight. It was breathtaking — and not just because of the qualities mentioned but because of a sense of great dynamic contrast too. An astonishing level of revelation was obvious from this track alone, as well as ability to lay out the acoustic being picked up by Lofgren’s mic.

Another almost-peculiar property made itself very clear with images were hewn from stone with clear space between them — and a vivid dynamic all but defining what high-fidelity must be.

Fleetwood Mac’s ‘Dreams’ (24/96) — a hi-res transcription from an old analogue master tape (1977)

"breathtaking clarity, giving a starkly clear and concise sound unmatched elsewhere.

— hit me with a dramatic start from Mick Fleetwood’s drum kit that had surgical punch — but some of the cymbal crashes were too well revealed, I know the top end of this track is a bit raggy and here Hugo TT2 made the fact obvious. In effect it revealed limitations in the transcription or original recording.

Comparisons got interesting with Diana Krall singing ‘Narrow Daylight’ on hires PCM (24/96) and DSD64.

To my surprise there was not much difference. Both were relentlessly sharp in timing, clean and clear; DSD

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without the romance I associate with it.

With classical DSD tracks like Dejan Lazic playing Brahms’ ‘Piano Concerto No3’ although there was fabulous insight - the almost relentless clarity of this DAC made for a lack of organic warmth that was not what I expect from DSD. Again though, the tremendous sense of timing and broad sound stage gave Hugo TT2 a sense of rigid composure no other DAC can match, strings coming through with assured presence.

After writing the above I was told Hugo TT2 converts DSD to PCM, presumably because the custom FPGA chip lacks a DSD process route with low pass filter. This explains what I heard though.

With hi-res classical such as the Minnesota Orchestra playing Korsakov’s ‘Dance of the Tumblers’ from ‘The Snow Maiden’ (24/96), TT2’s large canvas made the orchestra sound both vast and dynamically engaging, kettle drums having sudden and solid power when struck, the instruments all seemingly well separated with clear air between them. Again, it was time to run up the volume!

This was something I kept doing and suddenly the penny dropped. Using Amp mode at high gain – light blue and above on the volume sphere – maximises dynamic range. And I was running at light blue and above, effectively achieving a dynamic range of 130dB or more. That’s way above the 120dB of top class rivals.

An issue Hugo TT2 raised was that of ‘insight’. It appears to have insight into digital, as it were. Transcriptions of old analogue performances had their faults revealed and did not sound wholly better Modern hi-res recordings fairly assaulted me with everything from detail to dynamics, sounding almost too good to be true. Good CD was fine but old CD was revealed as, well – old CD and not so nice.

Bluetooth worked well once I had entered the PIN number demanded, which the handbook tells to mention: it is 0000. Interesting that the limitations of aptX compression became quite obvious in contrast to all else.

And finally Hugo TT2 did indeed drive our Martin Logan ESL X loudspeakers quite loud (Hi gain) via the XLR output sockets, using a pair of adaptor leads I soldered up (XLR to 4mm line socket). At times I fancied there was a tad more detail but then there was less low-end drive, David Bowie’s ‘Suffragette City’ missing a bit of propulsive power. So a bit of a compromise here but do-able all the same.

Headphones are best used at Lo gain that limits output to 3V – more than enough. Sound quality showed all the traits I heard with loudspeakers, cross-feed (XFeed) making the experience less in-head.

CONCLUSION

Hugo TT2 resolves both CD and hi-res digital with breathtaking clarity, giving a starkly clear and concise sound unmatched elsewhere. It also has fantastic timing and almost full scale (0dB FS) to match other manufacturers. Our -60dB test is more meaningful and now widely used, S/PDIF and USB gave identical figures.

Distortion with CD (16bit) measured 0.1% at -60dB, not a lot different to usual due to quantisation noise inherent in 16bit. Dynamic range was 101dB.

The S/PDIF electrical (BNC socket) and optical digital inputs (with supplied optical cable) both accepted 192kHz sample rate PCM, frequency response measuring flat to 55kHz (-1dB) with Filter 1 and 3 before slow roll off to the 96kHz upper theoretical limit, our analysis showing Filter 1. Filters 2 and 4 had a 21kHz (-12dB) upper limit – low. They are quite strong filters.

At Lo gain the headphone outputs delivered 3V max, at Hi gain 6V max. – more than enough for all headphones. Distortion an dynamic range values were identical to Line out at Hi gain, just tad lower at Lo gain.

Results with M Scaler were identical although dynamic range did reach 129dB.

Hugo TT2 delivers class leading measured performance in all areas. It has huge dynamic range and unusually low distortion. NK.

MEASURED PERFORMANCE

The crucial BAJ Dynamic Range value of Hugo TT2 was 124dB in DAC mode and 128dB in Amplifier mode, set to Hi gain and with volume advanced to avoid output clipping (light blue on the volume control). Both are exceptionally high values not bettered elsewhere, although ESS DACs match the figure.

DesignerRob Watts insists distortion is more important than dynamic range and here the Hugo TT2 produced a record low value of 0.008% at -60dB with 24bit - see our analysis. At best rivals manage 0.02% so Hugo TT2 has half their distortion. Note that Chord Electronics only quote distortion at FREQUENCY RESPONSE.

DISTORTION

Our DIY loudspeaker adaptor leads, XLR to 4mm line socket (not available commercially; go to RS Components).

peculiarly tight yet punchy bass. It is a little short on warmth, especially with DSD, majoring on deep analysis instead – undoubtedly its forte.

To hear CD and hi-res like you’ve never heard it before, and as you will not hear it anywhere else, this is the DAC to audition.
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To celebrate producing a one million tap digital filter Chord Electronics have released M Scaler. M Scaler isn’t a product you’ll find elsewhere, even though upsampling is not a new idea. However, M Scaler doesn’t just upscale, it also possesses a Watts Transient Aligned (WTA) filter in its most advanced ever state because of those milestone one million taps. That’s what you pay £3495 for. And trust it will produce better sound!

To clarify the purpose of this product, it is to get the very best from CD, by first scaling up sample rate from the low 44.1kHz – necessary in 1982 when Philips and Sony were developing CD – to 705.6kHz that will run on today’s silicon. Then the stream is passed through the WTA filter and on to an array of outputs. There are standard S/PDIF digital outputs in the form of one electrical via a BNC socket, and one optical via a TOSLINK socket, for connection to an external DAC. This can be any DAC, not just one from Chord Electronics – if with limitations I’ll explain later. For Hugo TT2 and other Chord Electronics products there is also a Dual BNC (DBNC) output pair that outputs at the full 768kHz sample rate.

Input wise, there are two electrical BNC socket inputs, two TOSLINK opticals and one galvanically isolated USB for connection.
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but Chord Electronics disarmingly indicate in a chart within M Scaler’s handbook that there’s no sound quality improvement, except when blue (x2) is selected (why white also at x2 gives no improvement I have no idea).

To summarise simply, M Scaler works best with CD and 48kHz sample rate files, with output taken from the DBNC socket-pair to a Chord Electronics DAC with DBNC input.

Queried about the special DBNC connection, Rob Watts told me it is an AES S/PDIF dual-mono mode with changes to the data bits to flag this status. DBNC does not bypass all Hugo TT2’s filters by the way; the first of three stages is bypassed, the second two stages remain active.

Like Hugo TT2, build and finish of M Scaler is impressive, its case being machined from solid alloy, making it wonderfully strong and with superb contours and detailing. Case dimension are 235mm wide, 236mm deep and 40.5mm high, with weight of 2.55kgs.

Power is supplied by the same Chinese external switch-mode power supply block used with Hugo TT2, delivering 15V at a high 4A through a cable 335cms (11ft) long in total.

There is a video mode that reduces filter time delay (0.6secs) to speech synchronises with the picture, achieving this by reducing the number of filter taps.

The USB input did not accept DSD from my MacBook Pro laptop running Audirvana, that is packaged as DoP code. It may accept native DSD from a PC, but you can’t get a Mac to do this. M Scaler is about improving PCM, not reproducing DSD.

**SOUND QUALITY**

I used M Scaler mainly with CD delivered in optically from our Oppo BDP-20SD Universal player acting as a CD transport. Unsurprisingly perhaps, it does not change the sound of Hugo TT2 so much as magnify it to a degree that was eye popping. With Nils Lofgren’s Keith Don’t Go the sound stage became even larger and more densely

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Under the cover – another cover! This one with non-removable screws to shield from prying eyes, as well as provide further RF screening.

At front in a line are the acrylic spheres that act as illuminated switches.

...to a computer. Both a front panel spherical button (2nd from left) or the remote control can be used to step between inputs, the button changing colour to show selection. Output sample rate is set by an illuminated spherical button third-in from left. Lit red the unit is set to

"Like Hugo TT2, build and finish of M Scaler is impressive"

...bypass, then with CD x2 upsampling to 88.2kHz is green, x4 to 176.4kHz is blue and max upscale of x16 to 768kHz is white. Now on to practicalities.

M Scaler as a real world product must feed external commercial DACs and at present most DAC chips work up to but not higher than 768kHz; older designs 352.8kHz. So whatever goes into M Scaler must come out TOSLINK cables barely work past 96kHz, not just because of internal losses and low bandwidth of the cheap plastic optical conductor, but also because of imprecise termination in TOSLINK sockets – wiggle ‘em at high sample rates and see what happens! So the optical output of M Scaler is restricted to 192kHz for entirely practical reasons. The data still passes through the WTA filter
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powerful, as if images had gained physical weight. There was more internal detail too. The only slight alteration, rather than amplification, was a subtle smoothing of the sheen on strings, from Nigel Kennedy playing Massenet’s Meditation. was unspectacular, but a complicating factor was I had to use the Arcam’s unbalanced outputs to feed the Creek’s line input and volume control; neither Arcam or Creek have volume adjustment on their balanced lines. So perhaps some muddle crept in as a result. Whatever, whilst this combo worked at a functional level, it did not convey the sonic benefits of M Scaler.

The warning here then is M Scaler has problems interfacing with DACs other than Hugo TT2. Yet at the same time I thought its coupling with M-DAC+ was sublime and, for me at least, I would rate this pairing worth hearing. The extraordinary cleanliness, composure and timing of M Scaler, as well as its sound staging properties were all passed to M-DAC+ that in turn sent out a sound that was big bodied and easy going.

CONCLUSION
Chord Electronics M Scaler embodies Rob Watts view of how to perfectly reproduce digital. I thought it was devastating. You get to clearly hear how CD can sound when all the rubbish is swept away, performers and instruments all being placed in solid form on a wide and clear sound stage. Add in almost peculiar bass timing and separation and you end up with a sound not available elsewhere.

It’s expensive – as you must expect from a technologial exercise dedicated to FPGA silicon to make it happen and commercially available. It works most assuredly with Chord Electronics DACs having a DBNC input and is for PCM, not DSD. Book a demo and have a listen. This is a unique and extraordinary product.

CHORD ELECTRONICS
HUGO M SCALER
£3,495
OUTSTANDING - amongst the best

VERDICT
If you want the best from CD, M Scaler is a must-listen. Expensive but worryingly good.

FOR
- sound quality
- small size
- build quality

AGAINST
- inconsistent with ext. DACs
- no DSD

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At left, two gold plated BNC digital inputs, two optical inputs and a USB for computer connection (centre). Then optical and BNC outputs, and right twin DBNC outputs for Chord Electronics products with matching DBNC inputs.

"the sound stage became larger and more densely powerful, as if images had gained physical weight"
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Ready for Roon

Powerful music server software for today’s home, Roon may be just what you are looking for. Noel Keywood explains.

Readers ask about Roon music distribution software. And Chord Electronics told us “we use Roon is Shows”: Big endorsement. So what is Roon? Here’s a short explanation.

In essence, Roon catalogues your music collection, retrieves artwork and background info from on-line sources, lists alternatives within a genre that may be of interest to you, controls storage (e.g. from a dedicated NAS drive), and finally sends the digital signal to your hi-fi in whatever format best suits it.

The last bit is the hi-fi bit in hardware terms: music can be sent to your hi-fi in just about any format, including DSD.

Roon works with MQA and Tidal Masters, enabling hi-res streaming from internet source straight to your hi-fi. It’s a massively capable and comprehensive piece of software, but technically dense.

Cost? Yearly cost is $119 and lifetime subscription is $499. There is a two week free trial (go to https://roonlabs.com/). The system works best with a Roon optimised Nucleus or Nucleus+ audio servers at £1500/£2500. The Nucleus is based on an Intel NUC PC that has sufficient internal processing power to assemble and deliver data without delay.

Alternatively, a NAS drive with Roon ROCK server software can be used – only possible with drives able to run this software. If you have a reasonably powerful PC or Mac and leave it running, no need for a dedicated server, but dedicated servers lack noisy peripherals such as Bluetooth, wi-fi and other services, so are preferable.

Receiving a Roon stream gets complicated. It can send any digital format a DAC can handle, so no worry here. All the same, Roon choose to identify products as ‘Roon Tested’ or ‘Roon Ready’.

‘Roon Tested’ products have been tested in-house to provide users with best settings for that product.

‘Roon Ready’ products are able to run the company’s end-point software, ‘embedded into’ devices to give best results. This implements RAAT – Roon Advanced Audio Transport. Roon told us: “these products offer the best of Roon’s features including high-resolution streaming, two-way control, Signal Path integration, and synchronized multi-room playback”.

To offer all this Roon regularly update their software and the price includes a host of licenses for outside services that supply meta-data (data about the music). They also aim to make the system easy to use and friendly. But at the same time there are a lot of settings and menus to navigate for best results.

Will a Roon Ready product ever...
appear with tubes? Wouldn’t dare ask.

**RUNNING ROON**

Roon can be installed simply and cheaply, onto a PC or Mac (or Linux) – the best way to start out. Or you can go the whole hog – complex, expensive – and limited to Roon Ready products. Here’s a quick run down of Roon in a basic set-up.

I ran Roon on a Mac (112MB download) connected via USB to an Audiolab M-DAC+. There were no problems. You are asked to identify music folders and provide permission for on-line data retrieval but the user interface screens are well designed and clear. Roon did well in identifying a thick melange of ‘music’, including recognising a lot of obscure test tracks not for commercial release, whilst defauling to a grey cover for test material recorded on Audacity and therefore not on any searchable database.

Audiolab’s M-DAC+ was recognised and selected but remained silent until the Mac’s Sound panel had Preferences to send DSD over PCM using DoP made no difference – a surprise because Audirvana Plus has no problem here: M-DAC+ flags up DSD64/128. It appears then that on a Mac, the Mac version sends DSD as PCM, not DoP.

This issue apart Roon offers a seamless and impressive user experience in basic form. The play screen carries album cover artwork, release date, an album review that gives useful background information – even an editorial star rating that raised my eyebrows a few times! Audio format data (AAC, FLAC etc), sample rate (e.g. 44.1kHz for CD) and identifies quality differences – neat.

Even better in principle, if arguably not in practice, Roon provides a dynamic range value for an album (not a track) – something I found intriguing. In their Knowledge Base it is identified as an EBU R128 LRA value. Some of these I had doubts about, but dynamic range tracks from CD samplers measured a measly 8 (MAAT says 12/14) and Jackie Leven’s The Mystery of Love is Greater than the Mystery of Death a high 15 where MAAT says around 8/14. The reason is explained by MAAT (www.maat.digial/dimeter), whose dynamic range meter I use: “LRA turns out to be useless for dynamic measurement of pop and MOR music genres due to its inherent design, which ignores the top 5% of content, in terms of amplitude, so as to prevent extremely loud passages from affecting the overall result. Unfortunately, that top 5% of amplitude is where 90% of modern music lives”. Roon at least broaches the subject and gets a value up on screen – it’s a start!

Roon not only sees your music collection but tidal and Qobuz on-line music servers too. This brings into the picture Tidal Masters and Roon’s ability to process MQA from end-to-end, a subject I have yet to explore. Already one expert tells me they don’t agree with the filtering used within MQA, their filtering being better – so this is a subject that will run!

Sound quality? Running M-DAC+ (via XLR) through a Creek Evolution 100A amplifier and Martin Logan ESL-X hybrid electrostatic loudspeakers, as well as headphones (various), the sound was crisp and clear – obviously high quality. This is a quick look at Roon at a functional level – not an in-depth sonic assessment that demands a Roon ready-end-point. But even in basic and reasonably inexpensive form it does deliver a rich musical experience, as claimed.

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**Moon 280D DAC with MiND 2 is a Roon Ready DAC able to accept Tidal Masters, Deezer Hi-Fi and Qobuz Sublime+ music services.**

The Roon play screen, with album artwork (from an on-line database), review, an amplitude time-line at bottom. Below the cover this file has been identified as an AAC at 44.1kHz – an iTunes escapee. Beneath is an EBU R128 dynamic range value of 15.
Appealing Acoustics

Compact loudspeakers have many advantages – especially for those who are looking to position them in small to medium-sized rooms.

However, getting them to deliver good sound at a realistic price can be a difficult task. Bass power and a sense of musical scale are all made more difficult when the designer is working with a small cabinet.

Take a first look at Acoustic Energy’s new £599 AE 300s and you’d immediately think they’d suffer on these factors. Measuring a diminutive 300mm x 175mm x 260mm (H/W/D) they are small – but Acoustic Energy has packed some clever technology into the package.

First of all there’s a newly-developed 130mm mid-bass drive unit. This features a ceramic aluminium sandwich cone with a shallow profile but a high-force, long-throw motor system for extended low-frequency output.

Allied to this is a 25mm aluminium dome tweeter especially designed for the AE 300s. It is housed in a proprietary Wide Dispersion Technology waveguide aimed at providing a wider sweet spot.

These drivers are housed in an MDF cabinet which is nicely rounded at the top, bottom and sides and features a slot-shaped reflex port on the rear to help boost bass output.

SOUND QUALITY

The immediate thing that struck me about the AE 300s is just how big they sound for their size. Closing my eyes I could easily believe I was listening to a pair of floorstanders – yet the Acoustic Energys are much smaller and rather more room friendly.
However, just as in any quality loudspeaker, set-up is important. So I placed them on a pair of solid stands and angled them towards the listening position. Experimenting here showed they sound best in this position. Having them firing straight down the room didn’t work well for me.

Well-positioned though they were, bringing a vibrancy to whatever music I played. Bass on ‘Joy Division’s ‘She’s Lost Control’ was extremely strong and distinct coming over with admirable force. It punched hard but there was no sense of overhang or cabinet colouration – just a tight feeling to the notes from Peter Hook’s instrument.

The Acoustic Energys also projected Ian Curtis’s voice well into the room while the whole track had a propulsive quality to it. These ‘speakers sound fast, working well on rock and pop music. Playing The White Stripes’ ‘Seven Nation Army’ the drums which underpin the track crackled vibrantly, rim-shots coming over brightly but never edging into harsh territory.

All this was through a Creek Evolution 100A amplifier which has some 110 Watts of power on offer. And these Acoustic Energys do need some grunt to really get them going (see our Measured Performance for full information). They will certainly not be for those who prefer low-powered valve amplifiers.

However, with this combination correct performance comes alive. Correct positioning makes a difference; the slot port at rear makes close-to-wall positioning work well. There’s no annoying boom, just a seamless sound that has a coherent whole to it.

On Nick Cave and The Bad Seeds’ ‘The Curse Of Millhaven’ the guttural vocals sent a shiver down my spine but, while prominent, they didn’t detract from the guitar work below. Instead everything was in the right place with good separation between the whole band.

If there’s any criticism to be made it’s that the 300s lack a little bit of sophistication compared to some more expensive rivals.

Playing Mahler’s ‘No 4’ by the San Francisco Symphony the string section sounded a little constrained with a lack of absolute resolution. However, we are talking about a £599 standmount loudspeaker here – and one that excels in what it does. For example, the leading edge of the wide dispersion will make this an amenable to hear, rather than edgy or sharp like uneven-response tweeters, adding in subtle high treble presence.

Lack of an upper midrange dip at crossover around 3kHz ensures strong delivery of detail.

Like most loudspeakers of its size the AE 300 is purpose for rear wall mounting and this helps lift output that falls away slowly below 80Hz. A loudspeaker like this is best on a stand at one end of the room with listening at the other, so it drives the lowest room mode effectively.

Lower bass is supported by a rear firing slot port around 60Hz (red trace) that our impedance analysis also shows as a trough at 60Hz with residual peaks either side. The port is quite sharply tuned, suggesting lively bass.

Sensitivity was on the low side at 85dB sound pressure level (SPL) produced from one nominal Watt (2.8V) of input. Amplifiers of 60 Watts per channel will go loud with these ‘speakers. The reason is this is an 8 Ohm nominal impedance loudspeaker, where most are now 6 Ohms or less.

Fundamentally accurate but specifically voiced, the AE 300 will come over as fast, forward and with lively bass. It does need some power however, due to low sensitivity. NK

**CONCLUSION**

As compact loudspeakers go the Acoustic Energy AE 300s are hard to beat. They may be small but they sound sophisticated, detailed and larger than they look. Pair them with a decently-powered amplifier and they will provide a brilliant combination that’s well worth hearing.

The AE 300’s slot port on the rear enhances bass capability as well as working well next to a rear wall.

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**MEASURED PERFORMANCE**

Frequency response of the AE 300, using third-octave analysis of pink noise, shows basically level output from 60Hz to 20kHz within +/-3dB limits. There’s variation across this range that will add character. Some plateau lift around 200Hz will add a little lower-end body, whilst a midband lift around 1kHz will help project vocals, giving strong image presence.

The tweeter lifts by around +2dB above 3kHz, enough to add top end sheen. However, its smooth output and positioning makes a difference; the slot port at rear makes close-to-wall positioning work well. There’s no annoying boom, just a seamless sound that has a coherent whole to it.

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**ACOUSTIC ENERGY AE 300 £599**

**OUTSTANDING - amongst the best**

**VALUE - keenly priced**

**VERDICT**

A compact loudspeaker that punches well above its weight. Highly recommended.

**FOR**

- tight bass
- fast sound
- easy positioning

**AGAINST**

- nothing at the price

Acoustic Energy
+44 (0)1285 654432
www.acousticenergy.co.uk
COMING CLEAN

Paul Rigby's review of the Kirmuss Audio KARC-1 stimulates me to write with firstly a few comments on the review and then to share my own ultrasonic based cleaning system.

It is clear from reading the review that the Kirmuss device is very dependant on manual processes, with up to five spray and brush steps each followed by 5 minutes in the ultrasonic tank. Although less dirty records may need less time, this means at least half an hour per record I note up to two LPs and two singles can be cleaned together, but need to be staggered by a minute.

Watching the videos on the Kirmuss web site is essential and quite entertaining and gives more detail than I suspect space allowed Mr Rigby. Additional information gleaned from the videos is that the ultrasonic cleaner needs to be rested after about five cycles to cool down and the fluid in the tank needs replenishing after cleaning 15-20 records.

In summary, the Kirmuss cleaning system does appear to offer the most thorough clean a record can hope for, but at a cost of considerable time and effort. I would suggest one would only wish to use it for the most valuable and treasured items in the collection, although the amount of handling required makes me anxious about unintended damage.

Believing all this in mind and the lack of a drying process (evaporation and polish being the finishing stage according to the video), I think the review would have benefited from a weighing up of the input required versus the result obtained compared to the all-in-one solution available.

A few years ago I was looking...
at options to upgrade from my Disco Antistat cleaner and investigated ultrasonic cleaners. Being unable/unwilling to spend upwards of £3000 on an all-in-one solution, I concocted the following process, all using the Audodesk system fluid diluted with distilled water (no alcohol content)

Firstly I carry out a pre-wash using the old Discostat and discarded fluid from the ultrasonic bath, unless it’s visibly murky.

Secondly I use a rotating record clamp with up to three records called the Vinyl Stack Ultrasonic spin kit, imported from USA This rotates the records submerged to the label in an ultrasonic tank. The frequency is 40kHz and power 360W I use a 5 minute cycle in temperatures between 21 and 40 deg C I use a speed for the spin which completes 3–4 spins in those 5 minutes.

Lastly, having drained the records in the faithful Disco Antistat rack I dry them off using a manual vacuum device called the KAB EV1. There is a vacuum motor within this device, vacuum being supplied by attaching a domestic vacuum cleaner to the pipe at the side! (see photo). The record is manually turned on the turntable until dry. A little experimentation is needed in the attachment of the vacuum cleaner to achieve the right balance of suction. Records are then inserted into anti-static inner sleeves and the cover in a polythene jacket.

What of the results? Invariably the records look very shiny and clean. There is no residue on the stylus which surely must be a good sign. All of the listening comments in the review apply, particularly dynamics and extended range, top and bottom. The sound stage appears broader as well.

Not all noise is removed and the results do seem quite variable, with some records being completely quiet and others disappointingly noisy. Still, I did get the worst offenders cleaned using an all-in-one system and was comforted if still disappointed to find there was no improvement. I suspect this depends upon the nature of the contaminant, with some being welded into the record surface.

The total cost of my system excluding domestic vacuum cleaner cost around £1000, much the same as the K1muss. This was mainly due to the horrendous freight costs of importation from the States.

I estimate I can clean 36 records in about 3 hours, so the trade off for not quite the best clean is that I can keep on top of cleaning my acquisitions, many from charity shops. The fluids to clean 200 records cost £50 i.e. 25p per record.

Regards,

Charles Pidsley.

Hi Charles. That is both fascinating and helpful to other readers. Thank you. I recall long ago a comment made by a professional that vinyl contains lubricants that can be leached out by cleaning with strong alcohol solvents, making the vinyl noisier, not quieter. This is not to be confused with natural release agents, as it often is.

An article on LP moulding compound in an AES 100th Anniversary of the Phonograph (1977) confirms the use of fillers, modifiers, plasticisers and anti-static agents in addition, so harsh chemical treatment of vinyl may well cause damage. Your findings that some LPs don’t respond to cleaning is likely due to low quality vinyl with noisy fillers, plasticisers or even coarse carbon black or removal of lubricant in the cleaning process.

I would have thought that light pressure washing with water may be sensible, perhaps after an LP is soaked to loosen matter. I leave my records alone, being fearful about causing harm.

Also, I notice that some LPs become noisier over time, apparently as lubricants slowly dry out. This suggests restoration would mean soaking in a vinyl lubricant – not washing at all. I have no idea what lubricant might be thought, or whether old vinyl could re-absorb it. But all this suggests that aggressive cleaning in particular is not necessarily a good idea for the LP. There might be better ways to restore vinyl than attacking it!

NK

HERE’S AN UPDATE

Well, it has been a few months since I last put pen to paper – thought it was about time I gave an update.

In response to my last letter you suggested Quad CD player and a valve based phono stage from Quad or Icon Audio You also recommended some sound absorption for the back wall. Well, I have sort of taken your advice. On the phono stage I finally settled on an EAR 834P and this will be arriving in the coming week, so valves are in :) I was tempted by the Icon Audio but two boxes put me off due to space challenges. Why do we not hear anything about EAR or Audonate phono stages these days? I also would be interested in other such phono stages.

On the CD side of things I have listened to a number of CD player combinations. One of my favourite was a two-box affair from Italian company Lector, it weighed over 40kg, came in two large boxes and used valves in the output stage, it sounded superb but sheer size counted against it and so reluctantly had to say no. I also listened to a couple of secondhand Audio Research players (with and without valves). I also tried to get my mitts on an AMR CD777 but no luck/availability and too impatient to wait weeks just to hear.

I finally decided on an as new secondhand Canary Audio CT600 transport along with a Chord Q test DAC. I took a risk on the transport, buying it unheard which is really a

EAR’s 834P valve phono stage. *Arriving in the coming week, so valves are in* says John Speight.
(even with an old Rega DAC) I am extremely happy with my choice. It looks and sounds superb, built like a battleship.

I am currently waiting for the delivery of the Chord but based on demonstrations expect the set up to sound superb. The DAC was a challenge, I really wanted to try valve based DACs following my experience with Lector but was really challenged to find any at the right price point and to demo was difficult. It is a real shame that Icon Audio don’t do a DAC, Audio-note are just too expensive and large. I was also tempted by the Sugden DAC but funds dictated a no, but never mind, maybe next time. This is a really dangerous and expensive hobby.

I have put on my Christmas wish list the floor standing sound absorption panels from GIK acoustics (www.gikacoustics.co.uk), it will be interesting to see how these impact the sound. Have you tried them out – if so what were your findings?

I have also decided to end my time with ripping music in my main system. I spent a long time ripping over 500 CDs to a VortexBox, working out how to connect to a DAC, the internet via range extenders over mains etc, then downloading iPeng and finally getting music to be heard. Anyway, now the device is sitting on eBay and hopefully will be shipped to someone who will get better use out of it than me.

I also think I will give streaming a miss. Why? Firstly, the complexity. Secondly, I find it extremely hard to decide what to listen to, going through the iPod to choose and end up selecting the same old albums! With CDs and Records you look through your collection, decide what to put on and then listen end-to-end. I would say that overall, the quality is pretty good though and maybe in the future I will re-consider.

Last point: Would be good to get system reviews in your publication. I note that one of the competing magazines does articles on dealer setups, which I think is a good start. Challenge is that the articles are too high-level and it would be nice to have more in-depth stories. The other would be articles on how you take a system and slowly improve, through set up, changes to ancillaries etc. I recall one publication did this as an on-going story and each month they introduced a change and then determined impact, value-for-money etc.

“l am currently waiting for the delivery of the Chord Qutest DAC but based on demonstrations expect the set up to sound superb” says John Speight.

Next year I reckon it will be time to look at new MC cartridges; my current Ortofon is getting a lot of use :)”

John Speight

Hi John. You will find your new EAR 834P valve phono stage a great sonic match into your system, ended by Martin Logan Classic ESL9 hybrid electrostatic loudspeakers (that you forget to mention!). The ML’s big XStat electrostatic panels are almost horribly revealing and will confirm to you the quality of sound from valves. Lots of fun ahead!

We haven’t tried out GIK acoustics panels but this is a good way to go with rear-firing dipole electrostatic panels. Just make sure you move them around a bit – in other words experiment. Start out 1ft behind the panel. Move closer and you will hear them, move back and you will reach a sweet spot. Also try angling at 45 degrees, left and right, so as not to direct lower frequency non-absorbed energy back through the XStat panel.

A big record collection has late-night ceremony, the album cover artwork being an experience you can’t get by any other means.

And finally please say something about your sound if you can. I thought those big XStats deeply dramatic. Tell us what you think. This is the exciting bit after all! NK

MY SOLUTION

Mark Pitchford’s dilemma in your February 2019 edition Letters was an interesting one. Noel’s knowledge of modern turntables is far superior to mine. If it was left to me – yes, you’ve guessed it – a well fitted Garrard 401 with an SME arm and – if he could get one – a Denon DL304 cartridge; Expert Stylus and Cartridge Company may be able to assist.

The plinth would be a Slateage plinth system. This should appease Mrs PI Slate age website https://www.slateage.com/plinth. Expert Stylus and Cartridge Company’s e-mail info@expertstylus.co.uk

I wouldn’t have thought that a subwoofer would be required with the La Scalas – as Noel said only if you want a better headphone! What may be worth a try is to toe in the La Scalas, so they sit across the right angle of the two walls. This may just augment bass enough.

Mike Bickley.

Hi Mike. Yes, a Garrard 401 with SME IV is going to allow most instruments, The Garrard has pace and bass like no other, it has a midrange of mid-range hard colour from the big, cast alloy platter, unless a better platter mat is fitted, but that is seemingly its main sin – and not a big one, in truth you can hear that is has less temporal precision than a Direct Drive but the rest of the 401’s sound is so overwhelming this hardly seems to matter. It would match Mark’s system but I felt a Timeless modified Technics SL-1200G with Rega or SME arm was on balance (and arguably) better, or more simply a Rega P9. But I would not disagree with your choice, having Garrard 401 in my DNA!

A Denon DL304 moving coil cartridge would not be my choice, but it is historically related in sound quality I guess – and much loved for its sound: big powerful and spacious with no lack of confidence.
Large horns do not go low. The Tannoy Westminsters we reviewed in our November 2015 issue reached down to 60Hz. Worse, Mark Pitchford’s La Scalas were – his pics show – half way down a room, which is the worst position to drive it. Understandable then that deep bass was absent.

A subwoofer is a solution but subwoofers of normal variety are not going to match into such a loudspeaker unless set up with a measuring microphone and spectrum analyser. Without such careful tuning you end up with an overpowered untuned bass system that’s just a sonic headache.

Thanks for your views though; I know where you are coming from.

NK

QUEEN

At the beginning of 2019, it is very interesting for me to muse upon the fact that after many album releases, through many decades, and after just about all of said releases, this particular band are quoted as saying that they almost broke up. Every band member apparently quit (behind closed doors) at some time or another, only to rejoin the group (behind closed doors again) and carry on regardless. When you have four painters all painting on the same canvas, it can get a little uncomfortable, one band member was quoted as saying recently.

In the early days, there was next to no money, differences of opinion, shall we or shall we not continue as a band. There may have even been a slightly negative change in public appreciation of the band at one point and there was certainly a massive shake up of the musical landscape due any moment, which you may have thought would not have helped their long term cause.

The shake up was Punk and the band I’m talking about are Queen... With the extremely sad passing of their lead singer in 1991, which could potentially have been the end of the band, (bearing in mind that lead singer was the mighty Freddie Mercury, that is no crazy suggestion), if we jump forward to today, not too much seems to have changed.

Queen are still (and perhaps even more than ever), everywhere in 2019. Musical theatre, currently touring internationally. A new film, which has been longed for by fans for what seems like an eternity. The music for every other advert on television, or maybe it just seems that way, and this from a band that said no to letting Sylvester Stallone use Another One Bites the Dust as the theme tune for Rocky III. Incidental music for many television shows. Appearing many times on the countless lists of the top 10 or top 100 rock ‘n’ roll countdowns. Books. Magazine front covers. Deluxe re-releases of their back catalogue. Tours. A pop up store in the centre of London. An intriguing 3D book/memoir. A website and forum in full flow and a seemingly endless fascination with everything Queen.

And why on earth not? By the time I have pressed send on this communication it would not surprise me at all to learn that Queen had been victorious in a vote to run the country or will have been contacted by Elon Musk and are set to be whisked away to become the first band to play in space. Either way, when all is said and done, I believe that if Freddie Mercury could be aware of the current state of play, he would be delighted that Queen are still wearing his crown. 2029. Now who would bet against it...

Neil Porter.

UK SKILLS

In a thought provoking piece in his “Opinion” column of the Feb 2019 edition “The Far East leads...” Noel explores two basic questions: (1) lack of electronics skills in UK, and (2) why large projects, especially UK Gov projects always go over time and over budget. It made me think and I’d like to comment on both.

There are a few UK companies that lead the world in Hi-Fi products, but they are usually high-end (read expensive) and niche (e.g. valves). For example Audio Note. I bought an Audio Note M6 pre-amp a couple of years ago. When I picked it up the owner of AN, Peter Quastrop, gave me a factory tour. I saw the workstations of technicians building circuits using high quality discrete components, soldered, wired and tested by hand; technicians winding coils for the 101 cartridge and even the vat of special wax used to dip mains transformers to minimise vibration. All based on designs by Andy Grove. These require very specialist skills which, as Noel says, sadly, are not much in demand.

When I started out, 40 years ago, I spent 3 years full-time at a Technical College learning the skills to become a Telecommunications & Electronics Technician. I went to work with my trusty ‘scope, Ava, and a fish-box of spare components, seeking out failing resistors, caps, coils, diodes, valves and transistors.

“A well settled Garrard 401 with a SMEIV arm and – if he could get one – a Denon DL304 cartridge, all in a Slateage plinth system should appease Mrs P!” says Mike Bickley about Mark Pitchford’s system (Letters February 2019 issue).
in radio transmitters, radars, mainframe computers, terminals and direction finders. All skills that are no longer required with today's disposable hi-fi and electronics. There was a time when every village hosted a TV repair man with such skills.

Which raises the question: where do you learn about electronics today? Noel is right, we no longer have the skills in the UK. Hi-Fi World no longer has DIY supplement, on the cheap paper, in the middle as a pull-out. As Noel said in a piece a few months ago, we no longer discuss hi-fi in technical terms and now use more abstract or "soft" descriptions. How many readers today could explain the difference between Class A, B, C, D amplifiers - the knowledge is no longer there. How many understand EMC interference and how to stop it?

One of the last bastions of electronic education is in Amateur Radio. The licence used to be run at colleges throughout the UK as a City & Guilds evening class. Today it's administered by the RSGB and as three courses (Foundation, Intermediate & Advanced) and taught by volunteers at local Radio Clubs. It does give a basic understanding and the RSGB does produce a number of books to help develop the topic. But it is still fairly superficial and lightweight with an almost complete lack of the detailed Maths which is needed to really understand the topic. It's hard to explain the difference between frequency modulation and Phase modulation without maths.

It's easy to say this doesn't matter and the skills are no longer needed but I would suggest, this is a slippery slope. Once we start to simplify and abandon areas of knowledge the whole of society is diminished. And we lurch even further towards a world governed by smoothies and short attention spans.

Which brings me to Noel's second interesting point: why do projects overrun. It's a simple fact that all projects, and especially UK Gov. projects, will go over time and over budget. Logically they cannot fail to do so, and I'll explain why.

"I bought an Audio Note M6 pre-amp a couple of years ago. When I picked it up the owner of AN, Peter Qvortrup, gave me a factory tour" says Ted Martin.

A project is specified as a set of tasks often drawn out as a set of interconnected boxes (precedence diagram) or arrows (arrow network). Estimates are drawn up for each task of the time needed to complete, the resources, and the cost. And each task is shown in relation to the one before and the one after. For example you don't need to employ the bricklayers until you have foundations, so you don't want to buy the bricks before you need them. You don't want plasterers until the walls are built or buy the plaster (especially as gypsum has a short useable shelf life!).

Now, for simplicity, assume each task can finish either Early, On-time, or Late. In fact Early doesn't help much as you invariably can't bring any other tasks forward. If the tasks are specified accurately then if you run a probability

tendered to all EU countries And, the Gov purchasers, driven by politicians always trot out the same-old "we must have value for the UK taxpayer..." mantra. This means, in practice, the cheapest quote will be selected.

And so how do companies win the business? Well first they strip out the Risk element and then the contingency, and then a little more "just for the pot". Hence right from the start the project is bound to overrun on time and cost.

Many companies use their Lobbyists to cozy up to the politicians and Civil Servants "we've got a nice little earner for you when you retire..."."Fancy being a Neddy?"

The objective is to discover the cheapest quote so far. Then they say the magic words to a politicians ears: "We'll do it for 10% less" and the politician can announce an "amazingly.

Analysis (often called a Monte-Carlo Analysis) against the project plan, and if the plan has more than 10 tasks, with equal probability of each task being either Early, On-time, or Late you will find that there is a 99% (+) probability of the overall project finishing late and over budget.

So, if we know the project will finish late and over budget, what's the answer? The answer is to add 25% Contingency to all estimates (time & cost especially) and then a further 25% to cover Risk. And that of course is where the problems start.

All UK Gov. projects have to be good deal for the taxpayer." Of course, the winning company doesn't really have a clue, no due diligence has been done, but hey, why do it if they haven't won the business and a win-win all round.

And then when the project starts to overrun the feeling is hidden for as long as possible before being greeted with universal surprise when the contractor demands a further bang of cash.

And so the big question leaping from Noel's piece is how do we get the skills we need to regenerate our economy, where is the next generation of skilled technicians coming from? And how do we stop politicians and Civil Servants making a fortune on every project.
Servants (i.e. amateurs) from creating vanity projects which divert huge amounts of cash into white elephants? Let’s spend the money on something useful like, for example, developing high quality technical skills in the next generations.

And one final and true story My brother, who lives in Belgium, had an Arcam Alpha 6 CD player with a fault. He took it to his main dealer who said it can’t be fixed and offered him 10% off a new player. He took it to another dealer — same story. Then, on the advice of a friend, he took it to a technician from Poland who had a small repair shop in a backstreet garage in Brussels. The fix cost 10 Euros and two years later it still runs perfectly.

The moral here is that in Poland they don’t have the same throw-away consumer economy. They don’t have the same incomes or lifestyle, and so they still have technicians who understand how hi-fi works and can fix things. But then, if we all learned to fix things how would companies survive, and how would their Chief Execs justify their huge annual bonus?

Best regards,

Ted Martin

Hi Ted — and wow! That is one big appraisal — with I believe a lot of rude truth in it. Thank you very much for your views.

Everyone has — and now expects to have — a mobile phone, computer, iPad and what have you. None are produced in the UK. A Hong Kong University lecturer told me that primary schoolchildren are introduced to the subject of electronics through toys and it is woven into the educational curriculum. For this reason perhaps (if it is so) all the gadgets we use are made in the Far East. There has to be some identifiable reason that Britain lacks skills that now underpin the world’s largest equal, from Apple through to Foxconn. Most depressing of all though is that there is no recognition of our failure here. Complacency reigns. There is a stubborn refusal to put basic electricity/electronics into UK school curriculums for example, to promote interest and provide an overview understanding. It can be both simple and quick to teach the basics. Maplin used to stock a range of educational kits but sadly that has all gone too.

If you are in this educational sphere and would like to comment — including disagreement — do please e-mail us at letters@hi-fiworld.co.uk. NK

“Decca remastered much of their back catalogue in the ‘70s; these can be distinguished by the Decca logo on the label being rectangular rather than a quarter moon” says Mark Hodgson.

THE DAYS OF DECCA

I share your correspondent Mike Buckley’s love (letters, Feb) of Decca! Argo LPs from the ‘60s. Decca worked on submarine detection in WW2, subsequently launching “full frequency range recording” on 78s.

LP was launched in the US by Columbia in 1948, and in the UK by Decca in 1950. Because of the slower rotational speed, higher frequencies were less bright, so around the mid-’50s Decca adopted half-speed mastering, this led to criticism that the bass was less apparent, so in the early stereo era (late ’50s/ early ‘60s) they abandoned their purist microphone setup (a stereo pair) to put a ‘spot mike’ on the timpani, and area ones on the basses and cellos.

Also in this period, they edited the master tape, not a copy, before mastering, e.g on Solti’s Wagner “Ring” cycle (1958-65), leaving much repair work (due to stretching and breaks) for later engineers digitising the recordings for CD reissue.

Still in pursuit of perfection, and not satisfied with their early stereo cutting heads, they remastered much of their back catalogue in the ‘70s; these can be distinguished by the Decca logo on the label being rectangular rather than a “quarter moon”. Some audiophiles may disagree, but I think this sound (marginally) better, and I daresay this admirable dedication to excellence contributed to the company’s demise and takeover by Polygram (now Universal) c.1979.

Final point: from 1957-67, American RCA recordings in the UK and Europe were made (and mostly distributed) by Decca in the UK, including (though not for distribution) the mail order subscription series for Reader’s Digest, which sound much better on the original LPs if you can find them (I daresay the CDs, on various labels, are made from tapes some generations removed from the originals).

Kind regards,

Mark Hodgson

SOUNDS OF THE 70S

A huge thank you to you and Paul Rigby for the Fotheringay item in your January 2019 issue. I was a student in London in 1970 and was lucky to see and hear Fotheringay on the student gigs circuit. Their music has stayed with me all my life and I have regularly listened to the original vinyl LP, and the later CD I have bought the new LP but I would love to have an SACD or a high definition download of the original studio tapes! I rate the Fotheringay album and Fairport Convention ‘Lying and Lying’ as the twin peaks of British electric folk. ‘The Sea’ is one of my favourite songs and I have probably played it more than any other song over the years. It is a song about rising sea levels, written back in 1970 (or earlier) and in the form of a riddle. It is a true, and haunting, classic. In just a few poetic words she infers that the rise in sea levels since the last ice age, ‘the coming of the sea’, are part of human ‘folk memory’ and we should be concerned. The words are available via Google.

“Jerry Donahue from Fotheringay went on to become one of the most influential Fender Telecaster players ever” Mike Tartaglia Kershaw notes.

However, I am disappointed that Paul spent so many words on the Sandy Denny / John Peel ‘interview’. He could have told us instead that, for example, Jerry Donahue from Fotheringay went on to become one of the most influential Fender Telecaster players ever, including recording a solo album called ‘Telecasting Recast’ (1998). He was once labelled “the string-bending king of the planet!” And of course whole books have been written about Sandy Denny. What more is there to say? She will always be one of the best ever.

Best wishes,

Mike Tartaglia Kershaw

www.hi-fiworld.co.uk  APRIL 2019  HI-FI WORLD  41
Joining the M-Two Movement...

Martin Pipe explores a capable duo from the revitalised Musical Fidelity marque.

Recently and with little publicity, Musical Fidelity was acquired by Austrian turntable specialist Project. Maybe that’s why the cartons of their products reviewed here – the M2si integrated amplifier and M2SCD CD player – feature a prominent ‘Austrian Brand’ message. The M2s are the entry-level options of an M-series that go all the way to ‘no compromise’ M8 products. The new M2si amplifier is purely analogue, with no onboard DAC for digital sources. Oddly – given the new owner’s passion for vinyl – there’s no phono stage either. In all fairness, you’ll get better results from
REVIEW

“can deliver music in a manner that does not in any way shame Musical Fidelity’s enviable heritage.”

A decent off-board pre-amp than you would from a cheap circuit thrown in to boost the feature count and I review a suitable contender – amusingly enough, Pro-Ject’s Phono Box S2 Ultra – elsewhere in this issue. In all, the no-nonsense M2Si is equipped with six unbalanced line-level inputs, on rear-panel phono sockets. A blue LED indicator indicates the one that’s selected, either with the button underneath or the remote control (which will also adjust volume).

Promisingly, one of the inputs is marked ‘Tape’. However, that’s all it is – just another input; it’s not the ‘tape monitor’ of a genuine tape loop, although the M2Si does dedicate a fixed line-level output so that the selected source can be fed to a recording device.

Next to this fixed output is ‘pre out’, which is subject to the actions of the volume control, allowing the use of an alternative power amplifier. The M2Si doesn’t have tone controls, or any similar circuitry to potentially-muddy music.

The only other feature of note is the M2Si’s ability to dovetail with audio-visual cinema gear, enabling your amp and speakers to reproduce
Musical Fidelity has endowed the M2si’s rear panel with six analogue line inputs, but the tape input lacks a ‘proper’ tape monitor function. Only one pair of speakers are covered by the fitted terminals – that accept bare wire or 4mm banana plugs.

The remote supplied is a rather dated-looking affair. However, it will operate both amplifier and CD player (as well as some other MF products). Most of the higher CD-related functions are accessible only via the remote.

The M2Si makes no provision for headphones. The M2SCD CD player is as no-nonsense as its companion amplifier. It offers none of the features – MP3 compatibility, network streaming or DAC mode – that so many manufacturers deem necessary these days. Discs are loaded into a front-panel slot, rather than a tray, which precludes playback of certain discs – like the 3in. CD singles of the late 1980s, certainly if an adaptor isn’t being used. However, audio-format (i.e. Red Book) CDs on CD-R or CD-RW media are accepted.

A row of basic controls are positioned beneath the player’s LCD screen, which is capable of displaying CD-Text data as well as the usual numerical information. The remote that drives the M2Si will also control the M2SCD and it’s necessary to access more advanced playback functions such as intro-scan, shuffle, programmed playback, repeat, track-scan and section repeat. You can also dim the display backlighting, for late-night listening.

The rear panel of the player is equipped with phono-socket (unbalanced) analogue outputs. Optical and coaxial digital outputs are also provided for external DACs, providing an upgrade path.

**PERFORMANCE**

The pair gave a decent account of themselves – I tried two sets of speakers, Quadral Aurum Wotan Vills and – to represent a more compatible price-point – Rogers GSSs. QED X-Tube speaker cabling was used, in a conventional ‘monowire’ arrangement. Both sets of speakers were driven more than satisfactorily, and grip was never lost; in all, the M2Si has a tight and dry sound. Kraftwerk – notably the track ‘Etape 2’ – revealed that the system is fast and rhythmically-compliant, which has the effect of naturally-engaging the listener. For this reason, it also succeeded with Radiohead’s ‘Burn The Witch’ (from A Moon Shaped Pool) and Steve Reich’s Music for 18 Musicians (Ensemble Signal/Brad Lubman, Harmonia Mundi).

We’re not talking about particularly-expensive equipment here, and so it’s a credit to the company’s design team that the Radiohead track’s complex production sounds uncluttered and correctly-proportioned. The Reich work, meanwhile, was given urgency and ‘flow’ responsible for its unique character – the music washes over you in a compelling and enjoyable way. Another great musical character is Johnny Cash, whose closely-miked baritone in The Man Comes Around (American IV) is conveyed with its emotional charge intact. He’s accompanied by guitars, bass piano and – way back in the mix – organ. The Musical Fidelity system can comfortably-resolve these elements, without undue bias or exaggeration.

I also enjoyed a 1987 digital recording of Mussorgsky’s Pictures at

Above the slot-loading CD drive is a ‘Blue Tiger’ board, bought in from Asian Philips offshoot Stream Unlimited, that controls its laser and motors in addition to providing most of the other core functionality of a CD player. The top boards contain the DAC and linear power supply with toroidal mains transformer.
Old-school connectivity from the M2SCD – no Ethernet or USB ports here! The player has analogue unbalanced phonoS (no balanced XLRs) to feed amplifiers like the M2si directly. Standard optical and coaxial S/PDIF digital outputs will feed an external DAC.

an Exhibition (Slovak Philharmonic/ Daniel Nazareth, Naxos), and took great pleasure by being able to define specific orchestral textures.

A tad more clarity – across the board – is exposed through direct comparison with a Chord Qutest DAC (£1200) that was inserted between one of the M2SCD's digital outputs and a spare auxiliary input on the M2Si. But in all fairness, the DAC provisions of the M2SCD – a 24-bit delta-sigma dual-differential configuration with 8x oversampling, the company say – acquits itself surprisingly well. And that you can hear the difference with an amp that is modest by high-end standards deserves praise.

CONCLUSION
As a system, the M2SCD and M2Si worked very well together, and – with appropriate speakers, installed correctly – can deliver music in a manner that does not in any way shame Musical Fidelity's enviable heritage. This duo is quite old-fashioned in outlook, with no direct concessions to streaming or for that matter the vinyl revival. Such bases are however covered via the multiple line inputs.

MEASURED PERFORMANCE

M2si AMPLIFIER
The M2si integrated amplifier produced 78 Watts into 8 Ohms and 132 Watts into 4 Ohms, enough to go very loud with all loudspeakers.

Distortion levels were low at both low and high outputs at all frequencies, the critical 1W/10kHz value – a measure of crossover distortion – coming in at a very low 0.01% our analysis shows. In the midband (1kHz) distortion measured 0.003% at 1 W and 0.004% just below full output. With a high damping factor of 60 the M2 is will sound powerful but tight and very clean.

Input sensitivity was just 200mV, meaning the amplifier will work well with low output external phono stages for those who want to spin LP. There is no internal phono stage, nor a digital input.

Frequency response measured flat from 6Hz to 53kHz, unaffected by volume control position.

The M2si produced a fine set of results. It is a very low distortion design with plenty enough power for most systems and homes. NK

Power 78W
Frequency response (-1dB)6Hz-53kHz
Distortion (1kHz, 1W) 0.01%
Separation (1kHz) 92dB
Noise (IEC A) -87dB
Sensitivity 200mV
Damping factor 60

M2scCDC PLAYER
Frequency response of the M2scCD
CD player measured flat to 21kHz our

analysis shows – a normal result for CD. Distortion at peak level (0dB) measured 0.001% but at -6dB, 0.23% as our analysis shows. This is close to the 0.2% possible, set by 16bit quantisation noise and harmonic distortion from CD, resulting in an EBU Dynamic Range value of 100dB – close to the 102dB possible.

Noise is low at -113dB but this is due to infinity-zero muting; noise with a -60dB tone notched out measured -100dB.

Output measured 2V, right on CD

MUSICAL FIDELITY M2sCD
FREQUENCY RESPONSE

DISTORTION

MUSICAL FIDELITY M2scCD
FREQUENCY RESPONSE

DISTORTION

standard. There are no balanced XLR-socket outputs nor a headphone output or adjustable output level.

The M2scCD produced good if standard CD performance under measurement. NK

Frequency response 4Hz- 21kHz
Distortion (-60dB) 0.26%
Separation 95dB
Dynamic range 98dB
Noise -113dB
Headphone output none

MUSICAL FIDELITY M2SCD AND M2SI £799 EACH

EXCELLENT - extremely capable.

VALUE - keenly priced.

VERDICT
A worthwhile combo, especially if your primary music source is the humble CD. And it's free of hassle.

FOR
- six line inputs
- revealing yet musical sound
- ease of use
- remote control

AGAINST
- no XLR in/out
- no USB in
- no phono stage

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One box loudspeaker and amplifier units are becoming ever more popular. They offer some great benefits – not least of which is the convenience of being able to connect via a mobile phone, tablet or even to plug in an auxiliary source such as a CD player, with the correct cables.

And this is exactly what the new Samsung VL5 offers: simple musical convenience. It is a handsomely-finished unit featuring a wooden surround, touch controls on the top and sides, plus a handy circular puck remote control.

As ever these days there’s also a free application (Android and Apple) available for download that is an easier way to control the VL5. However, the so-called SmartThings app can take a bit of getting used to, as it can also control almost every product Samsung makes (fridges, cookers, heating controls etc).

Having none of these I headed straight to the AV option that allowed me to select between Bluetooth, wi-fi or auxiliary inputs.

Inside, the Samsung has three mid/bass units and two tweeters allied to a Class D amplifier module – and the whole package has been voiced in conjunction with headphone and microphone specialists AKG.

Power comes from a supplied outboard unit – which is where the sleek looks of this unit take a dip. Finished in bright white with a chequered-pattern lead it doesn’t match the VL5 in terms of overall design, appearing incongruous. That said most people will likely hide this unit behind furniture so it probably won’t be that much of a problem.

**SOUND QUALITY**

A big plus to the Samsung is that its sound has a solid presence. Playing John Campbell’s ‘Way Down In The Hole’ via Bluetooth from
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an iPhone X his vocals came over with presence and a great sense of realism.
The bass guitar also had real slam to it – which belied the slim size of the cabinet.
I was particularly taken by how much detail the Samsung

guitar work – coming across with excellent bite and good high-frequency definition.
For such a small unit the Samsung threw out a surprisingly wide soundstage, images established well to the left and right of the enclosure. With Pink Floyd’s 'Dark Side Of The Moon' the full panning effects could be heard as a result. Every time I tried to trip it up the VLS surprised me – even with the Jesus And Mary Chain’s feedback-drenched ‘You Trip Me Up’ where the guitars stood tall instead of collapsing into themselves.
Nor did the bass on James Blake’s ‘Limit To Your Love’ – a test of almost any loudspeaker – sound too weak. Admittedly, you will not get the sub-sonic power a large floorstander can provide but the VLS never sounded less than beefy and always made me want to

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After long discussions about cables with Kevin Kelly, MD of Atlas Cables, I visited their factory and was invited to review their new flagship loudspeaker cable, the Asimi – a cable aimed firmly at the high-end. Price is £6600 per metre. To understand why, you only have to look at its construction. While most cables use 99.999 per cent oxygen free copper, some times plated with silver, Atlas have gone the whole hog. The Asimi not only uses solid 6N-purity silver but the strands are OCC-drawn using a heated die to create one long crystal with no grain boundaries. There are six silver strands per conductor arranged in three pairs. Each strand is then wound in air-filled cotton before being wrapped in a microporous PTFE tape. All six insulated strands are then twisted together at the ideal tension to quell microphony without expelling the air.

It sounds complicated and it is a lengthy process. Added to this the conductor ends are screened with an alloy/mylar foil and tin-plated OFC braid, terminated at the amplifier-end of the cable with a flying Grun connector.

You can also choose from 4mm connectors, spade and Z-plugs to suit your equipment. Our example used standard RCAs but also came sheathed in Atlas’s stitched leather sleeve. These are produced by a specialist manufacturer in Scotland – and you can even specify your own colour. It certainly looked cool – but how does it sound?

SOUND QUALITY

Inserted between a pair of our resident Martin Logan ESL-X electrostatic loudspeakers and a Naim Supernait 2 amplifier the sheer resolution of the Asimis became clear with the Grunt cable connected to a free RCA input.

Some listeners associate silver loudspeaker cables with a degree of hardness but Atlas have avoided this. The plucked guitar on Antonio Forcione’s ‘Meet Me In London’ had improved delicacy and a little extra bite. Instruments came to the fore with enhanced clarity.

Delving a little deeper I tried The Clash’s ‘London Calling’ where Paul
Simonon’s bass had sufficient weight but a little more subtlety about it. These cables are adept at bringing out nuances in music that can often lay hidden. Dynamics and subtle shadings were laid bare but not in an overt, sharp way. So with Nick Cave’s ‘Where The Wild Roses Grow’ the piano was sweet but still carried sufficient menace. An enthralling performance.

**ASIMI LUXE INTERCONNECTS**

The Asimi loudspeaker cables are not the only Atlas product to benefit from Atlas’s new and unique topology. There’s also their Luxe interconnects. Again these use solid 6N-purity silver OCC-drawn using a heated die to create one long crystal with no grain boundaries. The Grun system is incorporated and they are again sheathed in hand-stitched leather. Plugging these into the existing system added something again. Admittedly the gains were not quite as distinct as with the speaker cables but the soundstage became a little wider with a definite increase in bass weight and top-end definition. Most noticeable was where the

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shimmering guitars on The Pixies’ 'Into The White' coalesced together instead of becoming one squall of sound I could hear two distinct instruments - one playing the melody, the other the lead line. It’s a subtle change but one for the better and helped bring the track to life in an impressive way. Furthermore, drums and bass took on more presence, each having a depth and clarity that came to the fore.

It all coalesced when listening to Billy Mackenzie’s voice on ‘Party Fears Two’ by The Associates. His baritone voice had a richer timbre to it - seeming to dig a little deeper into the register. Yet it did not dominate the rest of the track - with the backing instruments holding their own scale in the overall sound.

Switching from the Martin Logan to a pair of standmount Spendor A1s the two Asimi cables worked together to provide a seamless and smooth presentation. I couldn’t help but be impressed by just how the guitars on Lynyrd Skynyrd’s ‘Free Bird’ came across. The interplay of the guitars was excellent - but most importantly there was a rapid feel to the music and real depth to the sound. Even the applause at the start and end of the track sounded realistic - not something all cables can manage.

Listening to BBC Radio 4 I couldn’t help but notice just how rich the tones of presenters were - each taking on a stronger sense of individuality and presence.

CONCLUSION
The Atlas Asimi’s are expensive but they are superbly constructed and, most importantly, have a gravitas few others can match. They impose little of their own character on the system and allow the music to flow freely.

The bespoke leather sheaths is also something not seen elsewhere and adds to the luxury feel. Plug these into your system and you will definitely hear a difference.

The picturesque town of Kilmarnock, Scotland, is where Atlas has its base. Crucially, they told me, there is no soldering involved with their cables - MD Kevin Kelly firmly believes adding different materials adds a filter to the sound flow. They are cramped instead.

Kevin is always looking at new materials and construction techniques. One of the latest is the Grun coherent earthing system designed to combat the low levels of EMI (electro-magnetic interference) and noise on the signal ground which can subtly modulate and degrade the overall noise levels of the system. It earths the loudspeaker lead by attaching to an unused RCA socket on the amplifier.

Attaching the Grun lead to a pair of Atlas’s flagship Asimi loudspeaker cables the noise floor dropped and instruments were projected much further into the room. Acoustic guitars took on a richer timbre while the whole sound had better musical tone. It works well.

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VERDICT
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- silver conductors
- unique construction
- grounding system

AGAINST
- not cheap

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AGAINST
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A professional ADC that gained critical acclaim from the recording industry was the AD-1 from Prism Sound, a company founded in 1987 by two electronics engineers who shared “a lifelong passion for audio”. Graham Boswell and Ian Dennis met in 1981 while working on digital signal processing (DSP) technology at Rupert Neve, the world-renowned Cambridge mixing-desk manufacturer. We now take DSP for granted, but in the early eighties it was cutting-edge stuff. Six years later, Prism did the opposite of what high-tech firms tend to do these days – they switched focus from consulting to the development and manufacture of products. Professional audio was to be its focus; not only did its founders share a passion for high-quality sound, but there was an enormous public appetite for CDs. Record companies fed this boom by reissuing older albums remastered for the new format. Prism’s first product, the ‘Dream’ AD-1 16/20-bit ADC, became the “product of choice for the most critical users”. Genesis may have bought AD-1s for its studio, The Farm, to digitise the master tapes of their famous back-catalogue – but these magic boxes weren’t just being used for rock and pop. Classical producers wanted the very best resolution for their new CD releases. The list of labels that chose Prism converters included Chandos, Deutsche Grammophon and Linn. Users of the AD-1 (and its follow-up, the AD-124) were apparently impressed by the “amazing low-level detail evident between takes... when the musicians had gone to lunch and all that could be heard was birds singing outside”. These low level sounds, Prism claim, “could not be captured with the earlier generation of ADCs”. Naturally, a fine ADC needs a fine DAC for session playback. In 1995, Prism Sound launched to this end the similarly grey-fronted Dream DA-1 – as featured here. According to Graham Boswell, this £3k (in 1996) DAC was “the companion to the AD-1 and AD-124 units, designed with live-to-stereo recording (and monitoring & editing) as well as mastering in mind”. The DA-1 is, like the ADC, designed for mounting in a 19in rack and makes no pretensions to domesticity. Some might call it ugly, but to my mind industrial would be a fairer description. To me, the extensive connectivity that you’ll find opposite of what high-tech firms tend to do these days - they switched focus from consulting to the development and manufacture of products. Professional audio was to be its focus; not only did its founders share a passion for high-quality sound, but there was an enormous public appetite for CDs. Record companies fed this boom by reissuing older albums remastered for the new format. Prism’s first product, the ‘Dream’ AD-1 16/20-bit ADC, became the “product of choice for the most critical users”. Genesis may have bought AD-1s for its studio, The Farm, to digitise the master tapes of their famous back-catalogue – but these magic boxes weren’t just being used for rock and pop. Classical producers wanted the very best resolution for their new CD releases. The list of labels that chose Prism converters included Chandos, Deutsche Grammophon and Linn. Users of the AD-1 (and its follow-up, the AD-124) were apparently impressed by the “amazing low-level detail evident between takes... when the musicians had gone to lunch and all that could be heard was birds singing outside”. These low level sounds, Prism claim, “could not be captured with the earlier generation of ADCs”. Naturally, a fine ADC needs a fine DAC for session playback. In 1995, Prism Sound launched to this end the similarly grey-fronted Dream DA-1 – as featured here. According to Graham Boswell, this £3k (in 1996) DAC was “the companion to the AD-1 and AD-124 units, designed with live-to-stereo recording (and monitoring & editing) as well as mastering in mind”. The DA-1 is, like the ADC, designed for mounting in a 19in rack and makes no pretensions to domesticity. Some might call it ugly, but to my mind industrial would be a fairer description. To me, the extensive connectivity that you’ll find
The DA-1, which will work with 16-bit and 20-bit sources, has no fewer than seven inputs. In addition to three AES-EBU balanced inputs are coaxial and optical S/PDIF ports, which are about as close to the world of consumer gear as the DA-1 gets. The two remaining inputs are the complete opposite; these are three-socket SDIF (Sony Digital InterFace) connections intended for use with PCM1630, an archaic piece of studio equipment that recorded 16-bit PCM onto a U-Matic video cassette.

There are also optical, coaxial, S/PDIF and two AES/EBU digital outputs – and their purpose is interesting. They provide the same data as presently on the selected digital input, translated into the appropriate format. However, any incoming jitter is "filtered off"; Prism understood the damaging effects of jitter at an early stage. In other words, the DA-1 is not only a unit able to provide "digital to analogue conversion without sampling jitter or data truncation, regardless of the source's resolution or timing, but it's a digital audio format converter, corrector and de-jitterer too. Pretty flexible stuff, then.

Another interesting feature, albeit one unlikely to find use outside of a recording studio equipped with Prism, is accessed with a press of the front-panel 'DRE' (Dynamic Range Enhancement) button. DRE, Boswell told me, was "designed for professional use - it provided a means of achieving higher dynamic range from 16-bit sources. At Prism, we had observed that careful use of non-linear coding at higher levels could extend the headroom at the expense of small increases in distortion for the highest transients." The DRE system, Boswell explained to me, enabled studios to take advantage of standard 16-bit DAT and CD recorders, rather than the very much more expensive NAGRA-D machines.

"At that time", Boswell says, "the improvement in low-level performance that was achieved by pushing the low end of the converter range down, in both the ranging analogue to digital architecture and the DRE encoding system, was considered well worth the compromise. We had great success with the AD-1/AD-124 as a result. Lots of people loved these ADCs, but comparatively few used the DRE - which in our view was actually very good."

Similar basic techniques, fortunately enough, were used to achieve HDCC's 20-bit effective resolution.

Unlike HDCC, though, Prism's DRE was not designed for backwards-compatibility, as Boswell admits; DRE material "was not intended to be used unencoded, it could be played, but would it would be very loud and distorted". Engaging DRE with 'regular' CD material yields a terrible sound, too. With regular CD (and CD-derived) material, though, the DA-1 can be revelatory. Remember that a studio DAC must show the music being fed into it as it is, warts and all. The sound delivered by the DA-1 is incredibly detailed for 16-bit, and can be defined by its utter transparency and freedom from colouration - regardless of the music you care to put through it. The same philosophy can be found in later models - including the superb £1,500 Callia DAC/ headphone amplifier that marked...
The Aries G1 is a beautifully realised streaming platform that delivers the Auralic experience to a variety of DACs at an attractive price. If you have a DAC, this is the most transparent way to add network music streaming to your system and leads the way in this field.

ED SELLEY, ARIES G1 WIRELESS STREAMING TRANSPORT, HI-FI CHOICE
Prism’s entry into the hi-fi market. Expensive pro gear never sells in the same quantities as consumer products, and Boswell revealed that “about 200” DA-1s were made before the model was replaced by the DA-2. The latter “used the same (Philips TDA1547) converters, noise ratio and improved distortion”. Instead of the DA-1’s off-the-shelf Yamaha filter, though, the DA-2’s was implemented in DSP within an FPGA/DSP that could cope with higher sample rates (96kHz against the DA-1’s 48kHz). The DA-1 is incredibly complex inside, its slim architecture and the same analogue circuitry...we made around 250 DA-2s, which were last listed at £6995”. Thanks to the small production runs, finding used DA-1s or DA-2s is, as Boswell admits, “like looking for the proverbial rockin-horse s**t, as the people that have them generally hang on to them”.

Both DA-1 and DA-2 employed the same parallel, balanced architecture, in which “certain key low order harmonic distortion products would tend to cancel in the two halves of the balanced DAC arrangement. The benefits of the architecture were better signal-to-frame being packed with components. Most contemporary consumer DACs were much simpler, but then again they didn’t have to do as much – and could rely on off-the-shelf components. It’s amazing the DA-1 is so transparent...

Although recording studios, broadcasters and other professional users were the primary users, Prism did sell a few to audiophiles - Boswell remembers a “dentist buying one, after a late-1990s hi-fi show in New York”. Quite a few were sold to Chinese audiophiles too. Boswell also recalls that the DA-1 was used as a reference DAC for many years by major clients like “Abbey Road, Metropolis Mastering, Sterling Sound, Precision Mastering and - I think - British Grove”. If Boswell’s memory serves him, “experienced people like Tony Cousins at Metropolis still regard it as a reference unit”. The DA-1, which will work with 16-bit and 20 bit sources, has no fewer than six inputs. They are ‘cycled’ through with a front-panel button – no remote here! To save time, inputs that aren’t required can be disabled. In addition to three AES-EBU balanced inputs are coaxial and optical S/PDIF ports, which are about to close to the world of consumer gear as the DA-1 gets. The remaining input – an entirely professional proposition – is a three-socket SDI (Sony Digital Interface) connection intended for use with PCM1630, an archaic piece of studio equipment that recorded 16 bit PCM onto a U-Matic video cassette.

There are no unbalanced outputs on phono sockets of the DA-1. Instead, the outputs are professional balanced XLRs. Three AES-EBU balanced digital inputs are fitted, plus optical and coaxial and an S/PDIF input – for Sony PCM1630 processors of the sort that were fairly commonplace in 1980s studios.
Paul Young

The CBS Singles Collection 1982-1994
Edsel

A

bit of a weird one, this. Mostly because of
the name of the group itself, its evolu-
tion and how it’s viewed now by fans and
followers. Initially known as the Mission
Mountain Wood Band, this bluegrass/country rock
outfit were also known as M2WB. Hitting the scene in 1971, they
were multi-instrumental talents
keen on a multi-part harmony or
two - and very nice it was, I might
add. After releasing two albums, the
original band split and a reformed
outfit replaced it known as The
Montana Band, releasing this very
album. Then tragedy struck: two of
the original M2WB band members,
three newer The Montana Band
members plus the sound manager
were killed in a plane crash. Pilot
error was blamed as ten people
lost their lives. The surviving band
members, according to reports,
then apparently reformed as
Montana.

Originally released in 1981
on the Waterhouse label, half of
the album was penned by band
members Rob Quist and Kurt
Bergeron with the Quist-penned
single ‘The Shoe’s on the Other
Foot Tonight’ becoming a signature
tune.

The tone and presentation of
the album could be described as a
hit on the thin side with much of
the musical information living in
the midrange and upper bass areas.
This gives the music a light and
airy feeling, feet of foot you might
say too. It also betrays a strident
approach during crescendos, within
high-pitched guitar sections and
saxophone solos.

Musically, the album moves in
Eagles circles with lazy country
rock vibes and an approachable
lead vocal style with easy going
harmonic vocal backing with a
distinctly adult-oriented
arrangement made for IRS-based
AOR FM stations of the time.

H

e offered a combination of soul and pop
with an extended talent. Although he sang
many covers, he also wrote a fair
amount of his own material. Many
of you will be come across Paul
Young before you even knew
he existed. I thoroughly enjoyed the
1978 novelty hit, ‘Toast’ from his
group, the Streetband. He pulled
a few of those band members to
form a Motown-type outfit, the
Q-Tips. Signing up to CBS turned
his head to his own solo poten-
tial. This lead to his first solo out-
ing, which appears in this set, ‘Iron
Out the Rough Spots’.

This collection of singles
features nineteen facsimile replica
CDs, stored in a slipcase box
plus a signed A4 Print. That’s 108
tracks, including every b-side and
alternative mix. How thorough
is this set? Well, many of these
tracks are available on CD for the
first time. Also available within the
box is a DVD of eighteen promo
videos plus a thirty-six page book.
Then came the jaunty ‘Love of
the Common People’ and, finally,
his third attempt, which hit No.1,
‘Wherever I Lay My Hat (That’s
My Home)’.

The concept is good, so is
the packaging and the content –
but what of the sound quality?
Playing ‘Love of the Common
People’ I was impressed by the
sheer breadth of the soundstage
on this hit single, exhibiting
backing vocals far left and right.
Mids are clean, clear and detailed
but relatively balanced in terms
of compression. The latter does
exist (these are singles, after all
and singles are notorious for a
compressive presentation) to
an extent but it’s restrained and
tends to add a touch of focus
which can be heard on the
punchy percussive bass.
Fronted by keyboard wizard, Dave Greenslade, the band Greenslade was created from the remnants of another prog group, Colosseum with the help of the bassist, Tony Reeves. In fact, Greenslade was a two-keyboard group with ex-Episode Six keys man, Dave Lawson, drafted in. Mellotrons swamped their early work as they music explored rock but also some blues and jazz with delicious harmonies and counterpoint melodies poking their heads into the mix. You'd often find Lawson singing his little heart out and playing flute - so Greenslade certainly got his money from that job recruit!

Andrew McCulloch was brought in from King Crimson and then, before this, the group's third album was released, the band expanded once more to add Dave Clempson who have previously played with Humble Pie. He took the guitar cuties with Graham Smith (ex-String Driven Thing, Harry Nilsson, etc.) appearing on violin.

I list the line-up to emphasise just how talented this group was - an aspect of Greenslade that is often overlooked. Too often the band is dismissed as 'mere prog' with a wave of the hand. They were a solid creative machine.

You could make a case for this album being the creative peak of the group, but I'd also add balance. Balance in terms of instrumental finesse but also hard edged music presentation.

In terms of the mastering, I was very happy with the overall job and a commendation should be awarded to Esoteric on this one. The sense of tonal balance for a CD is there to hear in all its glory. There's a slight compression lurking but, on the hole, also a mature and rich suite of mids that blend well with a bass that sits nicely in the mix. A superb CD release.

I've been watching a few vintage episodes of 'Top of The Pops' via BBC TV's BBC Four. The time is the mid-eighties and there in all his spiky-headed glory, was Howard Jones in his synth-pop pomp. Sometimes playing one of his stack of keyboards and then whirling away to sing into his head mic, touching his ear to draw attention to it.

Jones was the epitome of the synth pop genre during this time. He was also ever-present - or so it seemed - in the charts. Always on 'TOTP'. In fact, co-presenter, John Peel, once introduced him with the free and easy "Howie" on one occasion, such was his familiarity.

This Southampton-born artiste moved to Canada as a child, joined a prog outfit called Warrior, moved back to the UK, joined college, thumbed out, played in jazz and funk bands back in Southampton and then went solo. It was John Peel who discovered the musician which lead to Jones attending one of Peel's famous radio sessions and grabbing an Elektra record deal.

"Human's Lib" (1984) is a feast of electronics but it's also much more and you'll realise this if you ever see the original music videos that accompany the singles. The album encourages the autodidact. Mostly with words of love, peace and harmony plus oodles of melodic hooks to make the medicine go down.

'Dream into Action' (1985) continues the psychology theme but moves more into self help territory (i.e. 'Things Can Only Get Better', 'Dream into Action' and 'No One Is to Blame'). In terms of synth pop! It's bit less specialist synth and a bit more specialist pop but it still has plenty going for it.

Both editions are packed with alternative tracks, remixes and a DVD of videos from each.
# Specifications

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<td><strong>Headphone Out 1</strong></td>
<td>3.5mm single-ended output</td>
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<td>Up to 36kHz</td>
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<td><strong>Output Power 1 (3.5mm)</strong></td>
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<td><strong>Gain Boost</strong></td>
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<td><strong>Power Input</strong></td>
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<td><strong>Frequency Response</strong></td>
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<td><strong>Weight</strong></td>
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<td><strong>Headphone Out 2</strong></td>
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<td><strong>Coaxial Out</strong></td>
<td>RCA for 192kHz, support DSD64 DOP</td>
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<td><strong>Drive Ability</strong></td>
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<td><strong>Output Power 2 (2.5mm)</strong></td>
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<td><strong>Bass Boost</strong></td>
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<tr>
<td><strong>Output Impedance</strong></td>
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<tr>
<td><strong>SNR</strong></td>
<td>&gt;113 dB (A-weighted)</td>
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<tr>
<td><strong>Crosstalk</strong></td>
<td>&gt;70 dB (1 kHz)</td>
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<tr>
<td><strong>MAX Output Current</strong></td>
<td>81.6 mA [1 kHz]</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>70×58×22mm</td>
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</table>

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"For me the Chord M Scaler was a digital revelation"

Noel Keywood

I didn’t know what to expect from Chord Electronics M Scaler: another device for tidying up dodgy digital perhaps. There are no end of contraptions that re-clock to reduce jitter, up-sample, filter and do the fandango – all at the same time. They offer improvement – but sufficient improvement? Debatable. M Scaler would join the debate, the cynic inside thought.

Not so it leads the debate. The shock of M Scaler is sudden revelation of what digital can sound like, which then implants into the brain the expectation of what it is meant to sound like – if you see what I mean! I thought digital sounded like exhibit-A, M Scaler says it sounds like exhibit-B. Oh.

As a reviewer I get to hear great digital from top quality DACs, nowadays preened by all sorts of mystical processing schemes.

Then there’s DSD that comes at you from another direction, barely sounding digital at all. Think open, spacious, atmospheric and analogue like.

But now, having heard M Scaler, they’re faded backwards in sonic merit.

I walked into the office on a quiet Sunday, span CD via our Audiolab M-DAC+ and heard a sound that was image vague, slightly turgid and generally imprecise. But only after hearing M Scaler. Before this experience M-DAC+ was a go-to for CD and hi-res replay. Now, suddenly, not so.

But the issue is a little more complex. M-DAC+ can be fed from M Scaler and with this happening it gets right back into the fray. I’ll need to explain why.

M Scaler is a one-million tap digital filter, not a DAC like M-DAC+ its designer, Rob Watts, feels it is a milestone in digital. Since he has been muttering darkly about digital since the early 1990s, from when I first met him, saying at least 352kHz sample rate was required when such a thing wasn’t possible, Rob’s sense of belief and determination here is undisputed – and unique.

Important too that Chord Electronics MD John Franks, similarly a skilled and experienced electronics design engineer, recognised Rob’s ability and was prepared to support it financially, leading to the company’s range of unique digital products – not available, imitated or understood elsewhere in the world.

Some may like to pass all this off as digital hocus-pocus, but you can’t in view of the class leading measured performance we confirm by measurement.

Chord Electronics face a commercial dilemma with M Scaler. They could have made it exclusive to their DACs, via DBNC connection, but they have not. It has been given digital outputs so it can be used with any DAC. This is commercially savvy because it opens up a wider potential buying audience. But perhaps not so savvy in that it also suits and cleans the sound of rival products, such as Audiolab’s M-DAC+ – and perhaps many others. Ouch.

The idea of using M Scaler with other DACs got me intrigued if, as Rob Watts claims, a one-million tap digital filter sorts out CD then this little box of tricks could be revelatory – and that’s how it turned out. I have now been re-programmed to a different expectation of quality from CD.

But, should you have a fat wallet that needs lightening and a local Chord Electronics dealer willing to help – a small warning it worked with Audiolab’s M-DAC+ but only up to 176.4kHz output; M-DAC+ fell silent with 352kHz no matter what cable I used. With Arcam’s CD550 it worked at all output sample rates, including 352.8kHz, but Arcam’s display said it was receiving 44.1kHz and I heard no subjective improvement. So the issue of DAC compatibility is fuzzy.

M Scaler with Hugo TT2 leaves the pack behind in measurement but M Scaler in itself has little measurable impact – although perhaps not with time-domain impulse response measurements I haven’t yet applied.

It is with listening that the mists – even the fog – of digital clear. M Scaler took CD and exchanged its sins. This threw light onto decades of my insistence that digital (meaning CD) was not as perfect as claimed (and widely believed) Now, in addition to all its other identified faults that degrade sound quality, M Scaler shows that more is needed to get the best from CD: proper filtering.

M Scaler cleans up PCM digital recordings by cleaning muddle and imposing focus. It also cleans and clears hi-res (24/96) to a lesser degree. It does not bring CD up to good hi-res the limitations of 16-bit code are still there. All the same CD from M Scaler was more composed and impressive than everyday hi-res not processed through M Scaler.

M Scaler processes all digital except DSD but when I listened to Diana Krall’s ‘Narrow Daylight’ in 24/96 via M Scaler and then DSD via M-DAC+ (that doesn’t turn DSD to PCM) I felt M Scaler just had it. More concise. Such a comparison is ‘interesting’ rather than definitive. But it does suggest that normal digital (PCM) can sound pretty damn immersive when well processed. For me this was a digital revelation M Scaler brings both the subject and the music into focus. I hope we get to hear more on this very soon as it comes onto the open market.
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The Reference Base range features a beautiful durable build, including scratch-resistant ebony wood grain vinyl, reinforced MDF and exposed fasteners for an industrial aesthetic.
Many of us enjoy the work of so-called "lesser" musical artists. My own collection is bulging with the work of such lost creatures.

We often look at the stars out there from the likes of The Beatles, Led Zeppelin, Queen, Elton John, Frank Sinatra, Bing Crosby, Madonna, Michael Jackson, Beyoncé and more. Then in comparison there are many other artists out there that never truly maximised the talent they had with any success. Never truly 'made it', in the classic sense. Never realised their potential because of - what - personal addictions? Trouble with the law? Mental problems?

Of course, such statements are not only sweeping but they are debatable and my comments can easily be viewed as contentious. After all, who am I to judge? How dare I call anyone's talent unfulfilled? It can be argued that the music of some such artists only appeared in the first place because they had a hard time in their lives and that, if everything was plain sailing, they would never have produced such vital music. Who knows?

It's a debatable point. Nevertheless, the following is a 'woulda-coulda-'shoulda' list. All the artists, oddly enough, have received new releases direct from the worthy Jasmine label (www.jasmine-records.co.uk), who must have a head on such people, so you can judge my comments either by listening to their respective CDs for yourself.

First up! Gordon MacRae.

Yes, yes, I know, he was a big star and appeared in two of the most successful Hollywood musicals there's ever been: 'Oklahoma' and 'Carousel'. So, what on earth am I talking about? A crazy choice, eh?

The problem with Gordon MacRae - and Gordon MacRae readily admitted this himself - was, you may be surprised to hear, Gordon MacRae. Firstly, just as he was building a tremendous film career, he quit. His voice was as good as Howard Keel's, to name one competitive example, but I (and many others) wanted him to push his talent just as far and, well, he didn't.

His problem? He was an alcoholic. 'I used to stand at the bar and try to out-drink Bogey and Errol Flynn', he said. His work on the four CD compilation, 'Lover's Gold' illustrates that talent.

A lady from Northern Ireland next, Ottolie Patterson. Never heard of her? You should have. She was a white girl that sang the blues and you can hear her on the CD, 'The First Lady of British Blues'. Married to jazz legend, Chris Barber, she shared a stage with Ronnie Donegan and she sang with legends such as Sister Rosetta Tharpe, Sonny Terry, Brownie McGhee and Big Bill Broonzy.

Muddy Waters paid Ottolie Patterson the biggest compliment when he stated, "Hey, lady, you sing real pretty. How come you sing like one of us?" George Melly compared her to Bessie Smith. Yet her talent is often forgotten. Was that because of her frequent health issues spiking her forward trajectory, perhaps?

Andy Starr had the name and should have been as big as Elvis Presley. A man initially buried in poverty, a hobo who rode the trains illegally travelling around the USA and a delinquent who pulled a gun on a teacher at the age of 14.

Starr later recorded rockabilly singles and signed with MGM who completely failed him. They didn't have a clue what to do with Starr. He grew bored, ran off to Alaska, hit the drink and the drugs, then he kicked both, became a sawmill worker, recorded some forgotten country singles, found religion, became a preacher and then - get this - found politics and ran for President of the USA... twice! His 'Rockin' Rollin' Stone: 1955-1962... Plus!' gives you an idea of this lost talent.

Ronnie Self is my last entrant. A dead cert pop star. He had talent, he was a wild child, he had looks, he sang R&B, he sang country and even rockabilly. He had an Elvis-ish, Carl Perkins-kind of voice, he was a songwriter, I mean... come on! Self initially missed a vital tour because of the birth of his son, then later his personal life deteriorated, he gained a wild man reputation, he was barred by TV because of that, then dropped by his record label (Colombia - big league stuff), he hit the drink and drugs and flailed until the end. The 'Ain't I A Dog' CD tells a story of 'what ifs'.

Fractured talents are often of more interest to music fans than established stars. Partly because their life is often laid bare on the stage. Their performances are often short-lived, raw, honest and to the point.

Production is not the focus for these people, the message is the focus. And that's the dichotomy of 'lost' talents. Often the message they push out to the world is longer lasting and more meaningful than any 'I Love You' hit from a rich megastar whose penned lyrics dissolve in the memory as quickly as sugar in your tea.

Yet, in such cases who, in artistic terms, is the success and who is the failure?"
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"...A Game Changer!"

- Matt TCG Head-fi Oct 3
I have two major passions in life — one is hi-fi and the other is watches.

So, while I was searching for one of the latter recently on a local High Street something struck me. There were no end of shops selling watches, from relatively cheap quartz models to the likes of high-end Rolex, Tudor and TAG Heuer costing an arm and a leg. I did not see one store stocked with loudspeakers, amplifiers, turntables or cables and interconnects.

Search as I did, I failed to find a single hi-fi shop. However, there were no end of specialist jewellers and the likes of Ernest Hart, Beaverbrooks, H. Samuel etc all bursting with timepieces.

Which made me think how exactly are we expected to sell good quality sound equipment to a new generation if there are no places to hear it in?

I recall my brother once asking me — long ago — why I had so much passion for hearing music through — what he perceived — as an unnecessarily expensive set-up. In truth, by today’s standards, it was nothing of the sort at the time, consisting of a Technics CD player, NAD amplifier and a pair of KEF standmount loudspeakers.

Quite a simple system then, even for the time, but as soon as he heard the sound he was taken aback and within a few weeks had gone out to buy something similar. Shortly after he started looking to upgrade. All this because he had heard a simple but good system in the flesh and realised the power of digital audio players.

He’s now significantly moved upwards in terms of his system but would never have done so without having first heard mine.

And nor would I have invested money in that initial set-up without having it demonstrated to me by a friendly dealer who took the time to explore my budget, talk to me about my room size and listening preferences and then put together a set of components that suited my needs — even down to the interconnects and loudspeaker cables.

Yet those dealers seem to be disappearing. There are, of course, many reasons for this. Maintaining a High Street presence with the rental required and size of store needed to stock the likes of loudspeakers, amplifiers and turntables is not easy. They are far larger products than watches.

Then a dedicated listening room is needed to demonstrate all this, plus expert knowledge to explain all the fine details. Not something needed to sell watches.

Watches are much easier items to stock and sell — being smaller and requiring less space to showcase. However there’s no getting away from the fact that sound quality still matters to a large amount of consumers, so hi-fi stores cannot easily ignore demo facilities, or technical abilities.

Just look at the headphone market for example. During my daily commute to work I see many people sporting £50+ in-ear monitors allied to the likes of Astell&Kern or FiIO high-resolution digital audio players.

The cost of the total package! Something in the range of £1500 — for which you could put together a rather nice home system that might sound better overall.

Take the Acoustic Audio AE 300s I review in this issue, price £599, pair them with a good amplifier and a nice set of stands and the sound quality is rather special. Sit someone down in front of this and their eyes and ears might well light up.

However, it isn’t going to happen while the bricks and mortar h-fi shops keep closing to be replaced by charity outlets and corner stores; there are ever fewer places to hear hi-fi equipment nowadays.

Is there a solution? Well, apart from me winning the National Lottery and investing some of the millions in a dedicated hi-fi store with specialists staff, then I think not. However, the first time I went into my local shop and actually listened it made me want to open my wallet; their existence is vital.

So the experience with my brother still holds true. There is no better way to demonstrate a hi-fi system and the joy it can give than have someone sit down in front of it and listen. That’s what I did, what my dealer made available to me, and it helped bring a whole new generation into hi-fi and expand musical appreciation at the time.

On a final note — I failed to buy the watch. The reason? I preferred to spend the money on a new amplifier! It was much better investment.

Jon Myles
The first thing I noticed about the WAVE STORM Reference was its bass extrusion capabilities. It has a huge bottom that protrudes into your listening space. It throws its weight outward with ease and authority. Kick drums have a chest-rattling impact (cannons from 1812 Overture) with tangible shape, tone, and tightness. Definitely the punchiest out of all the cables I’ve heard so far.

(Actions speak louder than words and after the review the reviewer bought a pair of WAVE STORM Reference Dual BNC cables for his own use.)
"I received a £20 voucher and a letter signed by the great man himself"

Many of you will have experience of the Richer Sounds chain of hi-fi shops, founded in 1978 by 19-year-old entrepreneur Julian Richer – whose parents worked for Marks and Spencer. Maybe that’s what inspired Richer junior to get into retail; in the 1970s, hi-fi was in its boom phase and a way of life for many. It almost certainly helped that he loved his music; to this day Richer plays drums in a funk style. A significant proportion of his employees are musicians in their spare time too. And he has ploughed some of the money he has made into Richer Unsigned, which aims to promote talented artists without record deals.

Famous for cut-to-the-bone pricing and heavy advertising in the mass-market What Hi-Fi, the store that he opened for business with photography retailer Vic Odden came to prominence in the 1980s. The first Richer Sounds, a tiny outlet not far from London Bridge station, achieved the Guinness record for the highest sales per square foot in a retail outlet anywhere in the world. When I visited, the tiny shop (still there, over forty years on!) was indeed packed. There was barely enough room for customers, never mind luxuries like ccm rooms. But I’d always walk out with something – if only a pack of TDK cassette tapes, which Richer always sold cheaper than anyone else!

Richer Sounds’ initial success came from snapping up the stock that manufacturers (mostly Japanese) were having trouble shifting, and flogging it quickly – and cheaply! One manufacturer privately admitted that Richer ‘bought their greatest mistakes’. Runners who would otherwise have been priced out of the hi-fi game (myself included!) could treat themselves to budget bargains, especially if they were prepared to indulge in a spot of DIY. Some tuners and cassette decks, for example, required customers to make their own power supply arrangements as the amplifiers normally performing such duties were not part of Richer’s deals with manufacturers.

I also came across damaged equipment in need of repairs (imagine retailers offering such goods now!) and even a selection of second-hand equipment at Richer Sounds stores, the number of which grew over the decades to the present tally of 53. Richer Sounds also sidestepped into areas like TV and video, using the same pie-t-high, sell-it-cheap techniques, although it has since switched to a more upmarket approach with new branding, dem rooms and home cinema/multi-room offerings.

The chain always offered to beat prices, and encouraged customers to get in touch with their suggestions. Back in 1990 I received a £20 voucher, and a letter signed by the great man himself, for mine. I can’t remember what my suggestion was, but the voucher was put towards a pair of Sennheiser HD480 headphones. Yorkshire-based Richer also has a 51% share in the Audio Partnership hi-fi manufacturer – currently responsible for brands like Mordaunt-Short (speakers), Opus (multi-room home entertainment) and (probably the best known of ‘em all) Cambridge Audio. Naturally, the latter are stocked by Richer Sounds outlets.

So what has stimulated me to write about Julian Richer? A recent (January 23rd) article in the London Evening Standard sets out his stall on various matters like tax avoidance. And it makes for riveting – and inspirational – reading. Interestingly, he used this platform to freely admit that he exploited a tax loophole. He now regrets these actions.

In the article, he states that “all of us involved in business” need to be looking at what can be done to “reduce inequality, not make it worse”. Richer Sounds – which he tries to run “in an ethical way” – is certainly doing its bit. For a start, 15% of its profits go to good causes. And “unlike certain high-street giants…” says its website, Richer is “a British company, paying British taxes and proud to be supporting the British economy and high street...with a warehouse in Manchester, not Jersey or Luxembourg”. In his article, he repeats Tax Justice UK’s “conservative” estimate that Britain could be losing £120 billion to tax dodging… just imagine how much that could help public services.

“Capitalism without checks” he explains, “is a dangerous machine which can exploit workers, rip off customers and make our societies more unequal”. Richer rejects deals like imposed zero-hours contracts. “Happy staff” – he refreshingly believes – equate to “happy customers”. To this end, he is committed to providing “employees with secure, well-paid jobs in a stimulating, equal opportunities environment”.

Richer acknowledges that staff are key to his success, unlike other entrepreneurs who “say their success is down to their great talent… they feel they don’t depend on anyone else, so are entitled to maximise profits at any cost”.

Then there are the businesses he deals with, the cash-flow of his suppliers. He claims that “every one of them” is paid an average of only 18 days – “over twice as fast”, he reckons, “as the national norm”. Post-Brexit Britain needs more entrepreneurs like Julian Richer.

Martin Pipe
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"yes I have taken on Frank Ifield on occasions"

Dave Tutt

As a child I was in the junior school choir. I got to sing all those typical school songs of the time, including hymns from a traditional Christian environment. I was also often to be found singing along to my parent’s record collection – the least said about that probably the better!

This was during the mid to late 1960s with the Beatles, Stones and Elvis in the charts, none of whom made much of a dent on my musical tastes. My dad drove an Austin A105, his first car, and of course no radio so there was little appreciation of the music of the time. I was stuck in a time warp of "The Sound of Music", "Oliver", Val Doonican or Max Bygraves! We did have those odd songs like Right said Fred by Bernard Cribbins and Come outside by Mike Sarne, some of which are of the lyrics that I could not quite get in the day now make more sense.

At that time also an American gentleman called Andy Williams appeared on the TV on the BBC, the only channel we had. He seemed to sing totally differently to what I was used to, locked in as I was to my parents 1950’s style big band crooners or music from the shows. So at the age of around 11 my musical education began.

There were only two shops in Chatham at the time that had records, I.P.S. as they were called then – Boots the chemist and a lovely little independent shop at the other end of the high street called Coopers. Boots was a combination made up of around 6 narrow shops with each department flowing into another; music was tucked into the back of one section.

It was here I found some Andy Williams which I brought with my birthday money when I was 11. It was a noisy, bustling, cramped shop and a challenge to buy anything at that age. Coopers however was different. Usually silent with very few customers and two quite stern looking staff. However, they were very helpful and knowledgeable if you knew what to ask for. This was probably my first experience of proper sound.

Coopers was equipped with a Garrard 301 and SME 3009 turntable, Quad 303 33 amplification and a huge pair of Goodmans 301 based speakers. Not only that, they had a second set up and listening booths! Browsing here was a revelation. As I got older going to Coopers looking for something specific was always great. I purchased the difficult to find albums by the Moody Blues that Boots hadn’t even heard of, and as the years went by I discovered all sorts of things there: Renaissance, Novella, brilliant! George Benson, Colin Blunstone, and many others.

By this time Woolworths in my town had records, although it was rare that anything in the shop stirred my interest. If you liked MFP compilations from singers that should have stuck to strutting their stuff with Lulu on the TV you were in heaven – but not for me thanks.

Then Our Price arrived! Wow! So much here that I had never heard of nor for that matter would I have considered buying. I have never been much into heavy metal, punk, or to a certain extent the likes of Led Zeppelin, FLP or Black Sabbath but hey each to their own. It’s much of a track pick from these sort of bands, not an entire album.

Coopers eventually closed. My last visit showed the store having tried a move into more ethnic music styles to cater for the growing market in the town, music from the Caribbean, from India and Pakistan that had never been heard here. They were also probably put in difficulties with the rise of the CD which changed the market considerably.

So for a while it was Our Price who came to monopolise sales of music in Chatham. Shelves of LPs got pushed out as more CDs arrived, as well as VHStapes. I did still manage to buy things like Oliva Newton John and John Thom’s, as well as Jean Luc Ponty and Jimmy Weh with his original 1977 album containing The Highwayman.

All this time I have still been singing, usually along with the music on the radio or playing through the system elsewhere. Every now and then I get the urge to sing something when no one is around which could be 5 O’clock in the morning by Godfrey and Cremona or Sussane on my shoulder by John Denver or even Strange way by Firefall. Sometimes it’s in the car if some particular incident has sparked random thoughts that can only be voiced by a quick tune, be it a nutty verse from something my mother would have come up with or something from the vast back catalogue of lyrics that get stuck in our heads.

I appreciate a proper singer, male or female. The ability to hold a tune is what triggers my initial interest followed by phrasing and tone. So Pink Floyd captivates me, it’s almost hypnotic. Quarterflash, Skink, the Jinx or Love should be so bad both rank as favourites.

So I must apologise to my neighbours both past, present and future who might have or will find my yodelling (yes I have taken on Frank Ifield on occasions) an annoyance. Or for that matter singing along with Oliver tunes when I was 9 or 10! @

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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.

**TURNTABLES**

**EAT FORTE** 2009 £12,500

Lavishly finished two box, two motor turntable with gorgeous looking 407 tonearm bundled. Exceptionally stable and easy to set-up with a relaxed yet highly enjoyable go-

**FUNK FIRM VECTOR II** 2009 £860

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

**REGA P2** 2008 £300

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

**MCINTOSH MT10** 2008 £8,995

BG… expensive, controversially styled and glass more than some might consider necessary, but an engineering achievement.

**REGA P3-24** 2008 £405

Super-affordable audiophile deck with fine tunable tonearm. Tweakable arm, and really configurable with optional £150 mount.

**ACOUSTIC SOLID ONYX** 2007 £4,050

Flawless turntable, built in terms of sheer mass and sonic dynamism. Fit up to these arms and enjoy, just don’t damage your back moving it.

**AVO VOLVAR SEQUL** 2007 £4,600

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

**MICHELL ORBIS** 1995 £2,500

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

**SME MODEL 10A** 1995 £4,700

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

**LINN AXLIS** 1987 £253

Call-price version of the Sondor with UK arm. Elegant and decently performing package. Later version with Akito tonearm better.

**ROKSAN KHERBS** 1984 £550

Super light and clean sound, with excellent transient. Less musical than the Sondor, but more neutral. Slinging plinth top plates make them a dubious used buy.

**DUAL CS305** 1982 £75

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

**MICHELL GYRODOMIC** 1981 £599

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

**TOWNSHEND ROCKET** 1979 N/A

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

**MARANTZ TT-1000** 1978 £N/A

Beautiful seventies high end belt drive with sweet and clean sound. Rare in Europe, but big in Japan.

**REGA PLANAR 3** 1978 £79

Brilliantly simple but clean and musical performer, completely with Aztec derived £5,000 turnarm. 1983 saw the arrival of the A2000, which added detail at the expense of warmth. Superb budget buy.

**SONY PS-R80** 1978 £195


**TUIN LP-70** 1976 £500

The best all-round turntable package ever made. Clean, powerful and three-dimensional sound, albeit limited by the tonearm.

**ADC ACCUTRAC 4030** 1975 £300

Bowsers 1970s direct drive that uses an infra red beam to allow track selection and programming. More of a visual and operational delight than a sonic daimer.

**PIONEER PL-C590** 1975 £600

Sturdy and consistent motor and 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.

**PIONEER PL-120** 1973 £36

When vinyl was the prevailing format this brought new standards of noise performance and stability to the class, prior to the Fonski S-shaped tonearm. Later PL-1123 was all the rage compared to rivals.

**TECHNICS SP10** 1973 £400

Seminal Japanese engineering. Sounds depend on plinth, but all are mounted (SP10N) will give any modern a hard time especially in respect of noise power and midrange accuracy.

**LINN SONDOR LP17** 1973 £86

For many, the first superdecks; excellent motor meant that every new sound source and drive gearless tonearm modern versions. Recono SE mods have brought it into the 21st century and still at a price.

**ARISTON R011S** 1972 £94

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

**GOLDING (FG) DC71** 1972 £115.65

S_impl and rugged electronic motor and with soft, sweet sound and reasonable transpar. Good signage and serving support even today.

**GARRARD 301/401** 1953 £19

Incredibly strong and articulate with only a slight treatment to get it down.

**THORENS TD124** 1959 £N/A

The template for virtually every 1970s superdecks, this early design was the only real competition for Garrard's 331, it was gauged and more accurate yet lighter and less expensive in the have
**TONEARMS**

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**INTEGRATED AMPLIFIERS**

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**MICHEL TECNOARM A**

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<tr>
<td>SMF SERIES III</td>
<td>1978</td>
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</table>
ROTEL RA-820BX 1983 £139
Lively and clean budget integrated that arguably started the move to minimalism.

NAO 3020 1979 £99
Brilliantly smooth, sweet and punchy at the price and even has a better phone stage than you'd expect. The architectural budget super-amp.

ROGERS A75 1978 £220
Lots of sensitive facilities, a goodly power output and nice sound in one box. The later AP75 and A100 versions offered improved sonics and were seriously sweet.

A&N 600 1977 £115
Sweet and musical feature-packed integrated: the Audiolab 8000A remains a classic.

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

PIONEER M-73 1988 £1,200
Monster stump 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 panels and black brushed aluminium completes the experience.

KRELL KMA100 II 1987 £5,750
Monoblock version of the giant KSA-100 is one of the seminal 80s transistor power amplifiers. Massive way up on clean and open Class A sound makes this one of the best amplifiers of its type.

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

QUAD 405 1978 £115
The first of the current 'dangerous' generation of transistors with tweaky offering power and a definite musical sound, 606 and 297 dominate the tone with greater detail and resolution.

HH ELECTRONICS TPA-500 AMPLIFIERS 1974 £110
Simple design with easily replaceable transistors, excellent build quality and one would again for a gain, perfectly matched hampers.

LESCON AP1 1973 £N/A
Madcap cylindrical styling alluded to its 'power of sound' pre-eminence, but a weight. Poor build, tight decibel clean sounding when working.

QUAD 303 1961 £155
Build good build, but poorly sound. Off the port, not endearing amplifiers. Some give. Excellent engineering ability by them.

LEAK STEREO 20 1958 £31
Excellent mid-scale valve amplifier with decent power and drive. Surprisingly modern sounding if not subtle sympathetically impressively musical and fluid.

LEAK STEREO 60 1954 £49
Leak's biggest valve power amp offers 35 Watts per channel and more than enough for the smaller Stereo 20. Despite concerns over reliability, value is never menor high price.

LEAK STEREO 100 1968 £39
The bi-amp classic valve amplifier, with a delicately fixed and lyrical voice. In other respects, it sounds hopelessly dated. Low power and hard to partner properly.

LEAK STEREO 101 1959 £41
Better than the 22, but Leak's first true mono block speakers - cloudy and vague sound means it's for anachronisms only.

PRE AMPLIFIERS

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

CONRAD-JOHNSON MOTIV MC-8 1986 £2,500
Minimalist FET-based preamplifier is brilliantly scaled front and back and yam in the sound of fleeting, something of a normal size within the mainstream.

AUDIO RESEARCH SP-8 1987 £1,400
Biamp design and good high end high pre-amp with demeanour front and rear sharply. Not the last word in magnificence, perhaps.

LINN LX-1 1986 £499
A brave attempt to bring remote controlled one-wire amplifiers to the mainstream. It didn't quite work, but not bad for under £100.

NAIHN NAC 32 1978 £N/A
Classic high end pin, brightly lit and packaged. Sound that is a joy with vinyl but not for digital.

LESCON AC-1 1973 £N/A
Amazing styling courtesy of Alan Boothroyd can't disguise that it isn't truly simple but a design mass-manufactured.

QUAD 11 1959 £41
The partner to the much vaunted Quad 1 monoblocks - cloudy and vague sound means it's for anachronisms only.

QUAD 22 1958 £25
The partner to the much vaunted Quad 1 monoblocks - cloudy and vague sound means it's for anachronisms only.

CLASSICS

SUGDEN C51/P51 1976 £130
Soft sounding early Sugden merits with a plethora of facilities and filters. A sweet and endearing performer but lacking in power and your head driving ability.

SUGDEN A21 1969 £N/A
Charm a transistor integrated with its uncommonly likable smoothing and musicality. Limited inputs via DIN sockets.

ROGERS CADET III 1969 £74
Sweet sounding valve integrated, uses ECC86 output valves, even has a hot sensitive phone stage, sweet, warm a good introduction to valves.

CHAPMAN 305 1969 £60
Smooth pre/power combo with a sweet and open sound. Not quite up to Leak/Goddard standards but considerably cheaper nevertheless.

POWER AMPLIFIERS

ELECTROCOMPANION NEMO 2009 £4,995
Superb power station as real as a glacier but also impresses with sheer physicality and fleetness of foot. 600W per channel.

NUFORCE REFERENCE SF20 2006 £1,570
Brilliant value for money monoblocks with massive power and super-clean, three-dimensional sound.

QUAD 11-80 2005 £6,000 PER PAIR
Quad's best ever power amplifier. Dramatic performer with silky but dark tonality, blistering dynamics, serious power and compellingly musical sound.

QUAD 909 2001 £930
Current changer has a smooth and expansive character with enough wiring to drive most loads. Not the most musical, but superb value all the same.

NAIHN MAP 500 2000 £17,950
Fragile amplifier will drive any speaker with ease. Factor in the company's trademark pace, rhythm and timing and it all adds up to one efforter, easily musical package.

LEAK STEREO 100 1968 £39
Leak's biggest valve power amp offers 35 Watts per channel and more than enough for the smaller Stereo 20. Despite concerns over reliability, value is never more high price.

LEAK STEREO 101 1959 £49
Better than the 22, but Leak's first true mono block speakers - cloudy and vague sound means it's for anachronisms only.

LEAK STEREO 102, TL10, TL12 PLUS 1949 £28
Early Scaraboots that are prices again. Duplication is the granduil belief, and original parts of function, Superslidey and linear. Definitely recommend for film input.

QUAD II 1912 £22
The bi-amp classic valve amplifier, with a delicately fixed and lyrical voice. In other respects, it sounds hopelessly dated. Low power and hard to partner properly.

LEAK STEREO 20 1958 £31
Excellent mid-scale valve amplifier with decent power and drive. Surprisingly modern sounding if not subtle sympathetically impressively musical and fluid.

LEAK STEREO 60 1954 £49
Leak's biggest valve power amp offers 35 Watts per channel and more than enough for the smaller Stereo 20. Despite concerns over reliability, value is never more high price.

LEAK STEREO 100 1968 £39
Leak's biggest valve power amp offers 35 Watts per channel and more than enough for the smaller Stereo 20. Despite concerns over reliability, value is never more high price.

LEAK STEREO 101 1959 £49
Better than the 22, but Leak's first true mono block speakers - cloudy and vague sound means it's for anachronisms only.

LEAK STEREO 102 1958 £25
The partner to the much vaunted Quad 1 monoblocks - cloudy and vague sound means it's for anachronisms only.

LEAK STEREO 103 1958 £N/A
Good for their time, but way off the pace these days. Use of E86 pentode valve for high gain rules out ultra performance. Not the highest-fi!

QUAD 22 1958 £25
The partner to the much vaunted Quad 1 monoblocks - cloudy and vague sound means it's for anachronisms only.
LOUDSPEAKERS

WHARFEDALE DIAMOND 10.3 2010 £290

Great small standmounters for audiophiles on a budget; dry punchy sound with impressive sound-staging at the price.

YAMAHA NS-AW210 2009 £3,000

Musical, transparent with impressive dynamics and cohesion. Excellent build and finish.

USHER BE-10 2009 £10,500

Clever high end moving coil design with immense speed and dizzyingly clear detail. Needs the best acoustics to fly, though...

SPENDOR A5 2009 £1,695

Multi-driver floorstanders with great range, scale and punch and Spendor’s classic mid-range detail. Deliver a sound that thoroughly engages whatever you care to play.

MONITOR AUDIO PL100 2008 £2,300

The flagship “Platinum” series standmounter has an excitingly warm and delicate sound with superb clarity.

MARTIN LOGAN SOURCE 2008 £1,600

Brilliant entry level electrostatics, giving a taste of loudspeaker esoterica for the price of most moving coil loudspeakers. Tremendous clarity, eveness and delicacy, although not the world’s most powerful sound.

PMC OB1 2008 £2,950

Cleverly updated floorstanders give scale and solidity in a slim and well finished package.

ISOPHON GALLITO 2007 £2,100

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

ONE THING AUDIO ESL57 2007 £1,450

One Thing Audio’s modifications keep the good old ESL57 at the very top of the game.

MOWAGAN AUDIO MARON 2007 £3,995

Mostly capable loudspeaker that offers dynamism, scale and finish is an elegantly simple package. Wide range of finishes, too.

RAW 686 2007 £204

Busy standmounters offer a sophisticated and mature performance that belies both their dimensions and price tag.

B&G BEOLAB 9 2007 £5,000

Technically impressive and visually striking loudspeakers with sound quality that more than matches their boxes.

ISOPHON CASSIANO 2007 £12,500

Drive units featuring exotic materials allied to superlative build quality result in an impressively capable loudspeaker. Not an easy load to drive, however.

QUAD ELS 2905 2009 £3,955

The old 869 with all the bugs taken out, this gives a brilliantly neutral and open sound like only a top electrostatic can offer. Still a valuable rock loudspeaker, though.

B&W 801D 2008 £10,500

In many respects, the ultimate studio monitor; dazzling clarity and open with compelling scale and dynamics.

REVOLVER CYGNUS 2006 £8,999

Revolver pull out all the stops and show what they can do with their magnificent flagship monitor. A superb monitor that is like a mini B&W 801D in many ways.

USHER BE-718 2006 £7,100

British bi-wire floorstanders are capable of a fast and punchy bass drive. The result is splendid, smooth and immediate.

MISSION 772 SUB 2006 £1,695

Solidly built subwoofer with high quality drive, and small size makes it ideal for sub-bass attack.

MISSION 752 2005 £495

Cracking Henry Atkinson-designed floorstanding, combined HDA drive units and metal dome tweeter with impressively warm results. Design and characterisations makes them great for values.

TANNY WESMINSTER 2005 £450

Folded horn monsters which sound good if you have the space and the loud word in a Lawless but can drive large rooms and image like few others.

CELESTION SL6 1984 £350

Smallish but only design candidate with aluminium drive system and stand mid-range and top the blueprint for nineteen eighties loudspeakers. Very good and cheaply made, although there are all sorts of better alternatives yet great with budget kit too. A classic.

QUAD ELS 63 1993 £1,250

An update of the ESL57, with subventilated cabinets. Until the 869, the best of the Quad electrostatics.

MISSION 772 1983 £375

Brilliantly designed bi-wire loudspeakers with an appealingly neutral yet delicately rich sound. Good enough to partner with very high end subwoofers, yet great with budget kit too. A classic.

ACOUSTIC RESEARCH AR195 1978 £125

Yank designed, British built loudspeakers became a budget staple for many rock fans, thanks to the great space from the larger drivers, although fragile and prone to damage.

YAMAHA NS1000 1977 £552

High performance loudspeaker with a superlative and balanced sound. A great reference tool for studio work.

ACOUSTIC ENERGY AEI CLASSIC 1976 £485

Brilliantly detailed monitor of a classic design, and, for their age one of the most respected loudspeakers ever made.

JR 49 1977 £123

Yank designed bi-wire loudspeaker was ignored by designers but is now back in fashion! Based on classic KEF T27/1110 combo as seen in the BBC LS5/5a. Doesn’t have that amazing tonal brilliance, but has clarity and imaging.

KEF R105 1977 £785

Three way bi-wire loudspeaker gives a truly wideband listen and massive (500W) power handling. A very neutral, spacious and polite sounding design, but rhythmically well off the pace.

IMF TLS80 1976 £550

Warm and powerful 1970s behemoth with transmission loading and a mixture of KEF and Celestion drive units. Impressively physical wideband sound but rhythms not a forte.
SPENDUR BCI 1976 £240

Crestron HF 1300 tweeter meets bespoke Spendur Befastre mid-bass unit. The result is a beautifully warm yet focussed sound. A little bass bloom necessitates careful low-radiation mounting.

HH ELECTRONICS TPA-500 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.

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). Come in a wide variety of views from various manufacturers building it under licence.

LEAK SANDWICH 1961 £39 EACH

Warm sounding infinite baffle that, with a reasonably powerful amplifier can sound quite stunning.

QUAD ESL57 1956 £45 EACH

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

SYSTEMS MERIDIAN SOLO/WS 2.1 2010 £6,990

Crisp stylish, bright, colourful touchscreen, plus excellent sound quality. This is not your dad’s music system with a difference sold by a designer Active loudspeaker.

NAIM UNITQUTE 2010 £995

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

ARCAM SOLO MINI 2008 £650

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

MERIDIAN F90 2007 £1,500

Fantasticly built, half-watt versions DX/DAC/DAB/FM/AM unit, designed in conjunction with Ferrari, ignore naysayers who sneer at it isn’t a “proper” hi-fi product. Just listen.

MARANTZ LEGEND! 2007 £22,000

The combination of SA-751 disc player, SC-752 preamp and MA-952 monoblocks delivers jaw-dropping performance.

SNANLING MC-3u 2007 £650

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

QUAD FM4 1963 £240

Superb electronics allied to a pleasingly rich sound with plenty of sweetness and detail made this one of the best tuners around upon its launch.

NAD 4040 1979 £79

Tremendously smooth and analytic sound allied to low prices and good availability make this budget analogue preamplifier.

MARANTZ ST-8 1978 £353

Marantz’s finest radio moment. Warm, organic sound plus an oscilloscope for checking the signal strength and multipath.

YAMAHA CT7000 1977 £444

Combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

SONY ST-9550 1977 £222

One of the first Doby FM-equipped tuners, a format that came to a halting. Still, it was Sanyo’s most expensive tuner to date, and boasted top-of-the-line quality with high-end components.

ROGERS T75 1977 £135

Superb mid-price FM/DAB all-in-one capable with integrated pre amplifiers and sound with true finessiness.

SAVEJI T1-9000 1976 £300

A flagship Japanese tuner. It boasts superlative RF performance and an extremely smooth and detailed sound.

TECHNICS ST-8080 1976 £180

Superb FM stage adding a richness and smoothness laden.

REVOX B760 1975 £520

The legendary white plastic monaural performance at the time first gained as a demigod-in-the-making, fine manufacture, and was the most durable tuner here?

SEQUERRA MODEL 1 1973 £1200

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.

LEAK TROUGHLINE 1956 £25

Single-frequency unbalanced output (limited to 68-100kHz only) and it is arguably the best-sounding tuner ever. Absolutely for aficionados who enjoy a great stereo image with true dimensionality.
HEADPHONE AMPLIFIERS

**GRAHAM SLEE NOVO 2009 £255**
A dynamic headphone amplifier with a great sense of timing, crisp, clear treble and warm midrange gives an involving sound.

**SONY MDR-J955ES 2000 £699**
The best sounding MD deck ever, thanks to awesome built in filters and DAP 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, but like a brick with a true audiophile sound and HCD compatibility.

**MARANTZ CD73 1983 £700**
A nut of gold brushed aluminium and LEDs, this distinctive machine squeezed every last ounce from its B.14x4 DAC. Supercritical.

**MERIDIAN 267 1988 £935**
Beautfully built two box pre amp stage. Very musical although not as refined as modern British gear. No digital output.

**CAMBRIDGE AUDIO CD1 1996 £1500**
Inspired Stan Curtis redesign of Philips CD104, complete with switchable digital filter. Lean but tight and musical performer.

**MERIDIAN MCD 1994 £600**
The first British audiophile machine was a sweeter, more detailed Philips CD104. 14x4 never sounded so good, until the MCD-Pro arrived a year later.

**SONY CDP-701ES 1994 £890**
Sony's first bespoke audiophile machine used a 16x2 DAC to provide a clinically incisive sound. Supreme build quality allied to the pure unadulterated quality of a paperback-sized musical control.

**YAMAHA CDX 1983 £340**
Nicer built 16x2 machine with a very sharp and detailed sound; sometimes too much so. Excellent engineers, unlike almost every other r/w of the time.

**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 get remote control!

**PIONEER CT-950 1978 £400**
Not up to modern standards sonically, but a great example of the cassette deck at its best.

**YAMAHA TC-800GL 1977 £179**
Early classic with swish styling. Ridiculous sonic by modern standards, but cool nonetheless.

**SONY TC-377 1972 N/A**
A companion to the A-60000. The machine, the Sony offered better sound quality and a still no touch by modern standards.

**REVOX A77 1968 £145**
The first domestic open r/o that the pros used at home. Superbly built, and soundly off the pace these days.

**COMPACT DISC TRANSPORTS**

**ESUTERIC P0 1997 £8000**
The best CD drive bar none. Brilliantly incise, ridiculously over engineered.

**TEAC V905-T1 1994 £600**
Warm and expansive sound; this was the mid-price hit. Well built with a slick mech.

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

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

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

**CAMBRIDGE ACOUSTIC DAC MAGIC 1995 £99**
Good value upgrade for budget CD players with extensive facilities and data-ed sounds.

**PINK TRIANGLE DACAPO 1993 £N/A**
Exquisite, the warmest and most lyrical 16x4 digital audio we have ever heard.

**QED DIGIT 1991 £190**
Budget standalone player with bespoke ample. Prismatic PSUs upgrade makes it smooth, but now past it.

**CABLES**

**MISSING LINK CRYO REFERENCE 2008 £495/0.5M**
High end interconnects, with delicate, smooth, open and subtle sound without a hint of edge.

**TECHLINK WIRES XS 2007 £20**
Highly accomplished interconnects at an absurdly low price. Stunning value for money.

**VDH ULTIMATE THE FIRST 2004 £250**
Carbon interconnects that help you forget the electronics and concentrate on the music. Miraculous transparency, Tight and tuneful bass mixed in with air and space.

**WIRFORD OASIS S 2003 £199/M**
Excellent mid-price design with a very musical, airy and well-tuned sound. Superb value for money.

**TDI CONSTRUCTION 13A 2003 £170**
Top gun’s ‘affordable’ move, subtle hint, with fine build and good tones. Well worth the extra over standard high street specials, which sound coarse and two-dimensionally by comparison.
news

THE ROLLING STONES
Look out for a special, 50th anniversary edition release of ‘Beggar’s Banquet’ (www.abkco.com) presented in a gatefold sleeve, with additionally ‘Sympathy for the Devil’ as a 45rpm 12” original mono mix with an etching of the original toilet sleeve image, plus a Japanese Flexi disc featuring a Jagger telephone interview from 1968.

WAH WAH
From the Spanish audiophile label comes ‘The Book of AM, Part V: Night’. This is a long album project from 1977 via members of the Belgium outfit, Cosmic Trip Machine (which gives you a clue to the sound here). This particular release was not included in the original release sequence which means the sequence can now be formally completed for the first time. So, a bit of a bonus then.

Also look out for Azila’s ‘Review’, the first release of this prog LP from 1978. A Spanish outfit influence by Floyd and King Crimson you’ll hear jazz/rock too. Includes an 8-page booklet.

MIKE + THE MECHANICS
Another anniversary, this time a 30th and the 1988 album ‘Living Years’ from Genesis bassist Mike Rutherford’s band. Arriving with a forty page booklet, the edition includes two vinyl discs and two CDs that hold the original album plus live tracks. That said, the second LP and CD contains the bonus tracks from the 2014 reissue edition.

BRIAN ENO
Originally released in a 1975 album, ‘Discreet Music’ is out once more. It was Eno’s first real foray into ambient music as a genre in which music is gradually layered and then changes evolve throughout. The themes include both calm and serenity while the music offers a simple beauty.

MIKE + THE MECHANICS

BRIAN ENO
**KATE MELUA**

Compiled by Melua, 'Ultimate Collection' (BMG) is a double album featuring twenty-three songs from the artist's seven LP releases. Alongside a duet with Eva Cassidy on 'What a Wonderful World' are two new covers, 'Bridge Over Troubled Water' and 'Diamonds Are Forever'. Includes a gatefold and inner sleeves featuring notes from Melua, plus photographs.

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**DEMON**

A trio of new releases from Demon (www.demosmusicgroup.co.uk) includes 'The Human League's reissue of 2001's 'Secrets' but this edition features an additional disc of B-sides and mixes.

Also look out for two snazzy compilations. 'The 70s Pop Annual' includes Bill Withers' 'Lovely Day', Sweet's 'Blockbuster' and Dolly Parton's 'Here You Come Again'.

'Disco Classics' includes Anita Ward's 'Ring My Bell', Heatwave's 'Boogie Nights' and The Hues Corporation's 'Rock the Boat'.

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**...AND FINALLY**

From Shawn Pittman & Jay Moeller comes 'Everybody Wants to Know' (CCR, www.shackmedia.de) from which comes high energy electric blues. Two white guys with a Freddie King kinda thing.

Those into original soundtracks should note the star-studded and recently released 'King Of Thieves' by Benjamin Wallfisch (www.milanmusic.fr). Think John Barry...now.

José James’ 'Lean On Me' (Blue Note) is a tribute to Bill Withers featuring 12 songs from the great man over two discs but on only three sides (Side D is blank - wat, no etching!). Lovely voice, mellow and soulful and very Bill.

Featuring a gold foil slipmat (oh, yes), the picture disc of Mr Vast's 'Touch & Go' (mrvast.bandcamp.com/track/touch-go) features foodie images on both sides: brekkieside and supperside. Limited to just 300, the featured music includes mance, unhinged and slightly bizarre funk.


J.P. Bimeni & The Black Belts’ 'Free Me' (tucxone, tucxone-records.com) A rare band name and a new album of old, old soul sounds. A clean, open sound, full of emotive power.

Death metal fans watch out for Bloodbath's 'The Arrow of Satan is Drawn' (Peaceville, www.peaceville.com). The band's fifth outing and an inhumane release is it too. Nasty, cruel and beastly - a bit of a winner, then.

The Pineapple Thief's 'Dissolution' (Kscope, kscopemusic.com) combines rather subtle indie rock with prog flavours to create a score shining the light on technology and how it can alienate and isolate. Serious stuff.


Big Brother & The Holding Company (We Are Vinyl, Swearllllvinyl.com) featuring Janis Joplin's 'Sex, Smoke & Cheap Thrills' retains the controversial original title and, instead of the original album, gives you two discs of alternative takes, thirteen previously unreleased cuts and sixteen tracks in all!


She’s still singing, folks. Marianne Faithfull's new 'Negative Capability' (BMG) featured Ed Harcourt, Mark Lanegan and Nick Cave. Full of rough-edged wisdom, she knows her way around a song, like an ageing football player, the knees might have gone but she plays the game using her head instead.

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Visit www.thevinyladventure.com
An automatic turntable that does the fiddly bits for you. Noel Keywood reviews Dual’s CS 460.

Easy Rider

Here’s a fascinating return to the past: a fully automatic turntable. Dual’s CS 460 places its arm onto the record then lifts and returns it to rest after play. All in a smooth, silent and civilised fashion – unlike units I’ve used in the distant past that clanked or even crashed their way through this mechanical ballet. You simply place the LP onto the platter and it does the rest, removing the likelihood of stylus damage from clumsy cueing. So good, this is how all turntables should work – but they don’t.

There are of course those horrible little drawbacks, like nasty little gremlins trying to wreck everything. All the extra bits in the mechanism needed to achieve
The 2M Series, named after the abbreviation of Moving Magnet (MM) technology, is an affordable range of pick-up cartridges with first-class audio design principles throughout. Featuring Ortofon’s trademarked split-pole pin technology for a flat frequency response, all 2M cartridges have a high output for easy integration into any turntable system.

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

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

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

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

**Black.Cartridges.**
The musician’s choice and flagship of the range, the 2M Black features a Nude Shibata stylus which guarantees a true-to-life sound performance.

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this add to cost and detract from performance. Autos were never – even in their heyday – considered top class.

But let’s ignore that because nowadays people may well want to play LP without being faced by its handling problems and for them Dual’s CS 460 is a sweet solution by its very nature. It just has to do a decent job by today’s standards rather than reach audiophile status – and that’s how I’m approaching it for review purposes.

The CS 460 is a belt-drive design, where a small d.c. servo-motor drives a belt wound around a plastic sub-platter. It comes with all this in place – no need to fit anything. A large metal platter fits over the sub-platter and this has to be slipped on during set-up, and two transit screws removed using a crosshead screwdriver (not supplied). Speed can be set to 33rpm or 45rpm, a small slide switch providing a 78rpm option for those wanting to spin old shellac 78s.

A lightweight moulded headshell carries a similarly light Ortofon MM cartridge.

The auto-mechanism is set to place the arm down on a 7in diameter disc with 45rpm selected, or on a 12in disc with 33rpm selected. This means that 12in 45rpm discs cannot be played automatically, nor old 10in singles. Instead, with 45rpm set, the arm must be lowered manually using a cue lever that operates a damped platform. At end of side the auto-mechanism still lifts and returns the arm to its rest, stopping the platter too. It’s very convenient; you’re not forced to get up at end-of-side to stop that relentless clicking of the locked run-out groove being played over and over.

Although the CS 460 arm actuates a mechanical auto-mechanism Dual still confidently supply it with an Ortofon OM10 cartridge tracking at a very light 1.5gms. I used 1.7gms, at the top of Ortofon’s recommended limit (1.75gms), since the cartridge has an elliptical stylus on a rondeled that are not good midband trackers and it

The moulded sub-platter is driven by belt from a d.c. servo-motor.

must actuate the auto-system as well. It managed this at 1.5gms, showing how well the system has been engineered, but I played safe all the same.

The slim arm comes with a removable headshell, but its mechanical connector is unique to Dual so universal SME-style bayonet connector headshells cannot be substituted. The removable headshell has a locking collar that is simply unscrewed for removal, making cartridge changing easy. Arm balance is set by screwing the counterweight forward or backward, and a dial conveniently sets tracking force. It can also be set but arm height is fixed. Overhang (lateral tracking angle) can be set as usual by sliding the cartridge forward or backward in its headshell.

As a traditional Dual the CS 460 looks and works much like those I have used in the past – and this means with slick ability. It is idiomatic. No one does them any more: the CS 460 harks back to the 1970s when autos were king. Rega and Audio Technica make strong alternatives at a similar price – but they lack Dual’s auto-mechanism.

Size-wise the package is normal enough at a compact 430mm wide, 385mm deep and 130mm high. The supplied acrylic dust cover that moves on sprung plastic hinges swings up to 400mm high – the clearance height needed on a shelving system. Build quality and finish are good; the solid plinth well finished in gloss black. However the turntable assembly is lightweight – as Duals always were – so the anti-skate...
Waltz Loudspeaker Cable

Waltz starts with the outstanding design of our award winning Quickstep and applies tightly braided electric field screening to reduce the effects of radio frequency interference.

For more information on Quickstep and Waltz, please contact Black Rhodium: sales@blackrhodium.co.uk

“In this price point, they are the most even-handed set of speaker cables that I have come across in a long time”.
- The Audiophile Man

Criterion Audio is a premium hi-fi dealer in Cambridge. From vinyl and valves to the latest in streaming and headphones, we can help you find the perfect audio system to suit your budget and needs. Call us on 01223 233730 to arrange a demo.

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MEASURED PERFORMANCE
The turntable ran -0.7% slow, just within the 1% limit where pitch is audible but incorrect to a trained ear. The d.c. servo-motor held this speed over a long period without any great wander from SPEED VARIATION.

ARM VIBRATION
The chart shows adequate performance, with the main arm tube mode at 15Hz and the platter vibration at 6Hz. The arm vibration behaviour is well within the standards.

CONCLUSION
In terms of sheer performance, the CS 460 shows its age. The lightweight arm rides warps well but lacks rigidity, there’s faint motor whine too – it was all a bit approximate. And Ortofon’s OM 10 rather cruelly reveals noise and harshness in odd LPs or even modern ones.

It isn’t romantic – and I can’t help feeling potential buyers may be looking for a bit of that.

All the same, the CS 460 is a delight to use and it does offer a way to let others in the household play LP without difficulty (or a bent stylus). I liked it as a well-functioning tool from the past that makes playing LP a simple and enjoyable experience for all the family.

OTHER FINISHES
- Dual CS 460 Textured Black:
  3 Speed, Fully Auto, Heavy Alu. Sandwich platter, Caran Quad Bearing Tonearm, Detachable HS, Adjustable VTF/VTA/Antiskate.
  OM10 Cartridge £599.00
- Dual CS 460 Walnut:
  3 Speed, Fully Auto, Heavy Alu. Sandwich platter, Caran Quad Bearing Tonearm, Detachable HS, Adjustable VTF/VTA/Antiskate.
  OM10 Cartridge £699.00
- Dual CS 460 Makassar:
  3 Speed, Fully Auto, Heavy Alu. Sandwich platter, Caran Quad Bearing Tonearm, Detachable HS, Adjustable VTF/VTA/Antiskate.
  OM10 Cartridge £699.00

GOOD - worth auditioning

VERDICT
A fully automatic turntable that makes playing LP easy and damage free.

FOR
- ease of use
- three speeds
- appearance

AGAINST
- bright sound
- lightweight build
- motor whine

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Discreet – and discrete!

Martin Pipe reckons that Pro-Ject's flexible Phono Box S2 Ultra punches way above its £200 price.

Over the past two decades or so, Pro-Ject has probably done more than any other hi-fi company when it comes to renewing serious interest in vinyl playback among audiophiles fettered by modest budgets. Indeed, the firm was telling us to 'go analogue' at a time when everyone else was sold on digital. And while Pro-Ject offers a worthwhile portfolio of digital products, any of its developments that happen to revolve (!) around those magical black discs will always make us sit up and take notice.

As well as their turntables, Pro-Ject also have a neat line in phono stages. When the firm started its vinyl crusade, integrated phono preamps were disappearing from amplifiers as manufacturers were under the impression that there was no longer any demand for them – in an era when CD had become the primary music carrier. If an amp had a Phono input it was a mediocre MM-only design cost-engineered around an off-the-shelf silicon chip or two.

If you're to get the best from vinyl, a properly-designed phono stage that plugs into a line input (Aux, Tuner etc) can be essential. Such devices are also useful if you envisage using a recorder or PC to archive LPs onto digital media so they can be enjoyed – for example – on the move. Whilst you can pay thousands for a phono stage, the Pro-Ject Phono Box S2 Ultra – which can be configured for MM or MC carts - can be yours for £200 or so.

Despite this, the Phono Box S2 Ultra – a cost-reduced version of the limited-edition £300 Phono Box Ultra 500, built into substantial copper metalwork (for 'heightened' screening) and supplied in a fancy wooden box – is a flexible wee beastie. Inputs and outputs are via phono sockets and there's a ground post. The S2 Ultra's small size ensures that finding a place for it – close to the turntable, maybe? – is never going to be a problem. Part of the reason for those diminutive dimensions is that the power supply is external. The 18V DC needed by the preamp is provided by a 'wall wart' that plugs into a mains socket.
The circuit board of the Phono Box S2 Ultra is busy, full of transistors instead of generic op-amps. Decent-quality passive components, like polystyrene capacitors, are also in evidence. According to Pro-Ject “the split RIAA equalization” implemented with this collection of devices “enables a pin-point accurate representation of the RIAA curve” to be achieved. The unit’s only chips are power supply components.

A secondary advantage of Pro-Ject’s design is that mains supply voltages are kept away from the sensitive electronics that work with the tiny signals from phono cartridges - improved performance should result. Another route to the best sound is ensuring that the input of your phono stage is matched to the specific characteristics of your cartridge. And this leads us to the S2 Ultra’s second concession to flexibility. On the base of the unit are two rows of DIP switches – one per channel – that alter the electrical characteristics of the inputs, so that full compatibility with any cartridge can be achieved.

The instruction sheet supplied with the unit gives the various switch permutations needed to achieve a specific resistance (10 Ohms to 47 kOhms for MM) or capacitance (100 pF to 420 pF), but falls short of providing user-friendly tables for commonly-used cartridges. The gain is also switchable between 40 dB (MM) and 60 dB (MC).

On top of this, a further 3dB of gain can be added at the flick of another tiny switch. This can be useful for lower-output cartridges, or when digitising ‘quiet’ compilation LPs with numerous tracks, meaning that your low-end can be left unimpeded if desired to get that sense of deep subsonics LP can provide. If your woofer cones are flapping alarmingly, then best to turn on the filter. All of this is achieved without an op-amp in sight, Project instead relying on discrete transistors – this was standard practice, back in vinyl’s ‘golden age’. Time moves on in other respects, though; extensive use is made of surface-mounted components. That’s how Pro-Ject have managed to make the unit so small.

SOUND QUALITY

I drove two integrated amplifiers with the Phono Box S2 Ultra – an Arcam A49 integrated amp and the Musical Fidelity M2 Si reviewed elsewhere in this magazine, in both cases driving Quadral Aurum Wotan VIII ’speakers. To put the S2 Ultra through its paces, I used two turntables fitted with very different cartridges. One was a Technics SL 1200 Mk2 Direct-Drive fitted with an Audio-Technica AT440MLb MM cartridge, the other a Systemdek IIXE900 belt-drive fitted with Alphason Opal arm and Denon DL304 MC cartridge. I matched the cartridge characteristics, as listed in spec sheets, as closely as possible to the S2 Ultra’s loading.

The first thing I heard with the Systemdek/Alphason/Denon was just
"presented with depth, dynamics and a naturally-wide soundstage"

how fulsome and well-defined the lower frequencies are. In Another One Bites The Dust, from Queen’s 1980 LP The Game, John Deacon’s Chic-influenced bass throbbed powerfully and tunefully — carrying along the track just as intended. Switching to my mid-70s CBS pressing of Simon and Garfunkel’s Bridge over Troubled Water I found that the footstomps and bass drum of Cecilia were given the room they need. Flipping the record over, the depth and definition bestowed on the bass harmonica of The Boxer was a joy to behold.

After a quick reconfiguration I found that the Technics/Audio Technica combo fared perceptibly better at the lower end of the scale. However, the reverse was true in terms of treble cleanliness and overall clarity! It is a credit to the resolving power of the Phono Box S2 Ultra that such differences are ‘air’ bare.

My ASV Digital LP of Vivaldi’s Concerto in C for Bassoon and Strings (English Chamber Orchestra/ Daniel Smith/Philip Ledger) was presented with depth, dynamics and a naturally-wide soundstage, the subtleties of Smith’s bassoon being definable without compromising the orchestral strings that back him. An even greater recording (EMI, 1958) of Dvorak’s New World Symphony (Berliner Philharmonic/Rudolf Kempe) was also a convincing listen, courtesy of the tonal range and stereo imaging that could be conveyed.

CONCLUSION

It’s difficult to find fault in a phono stage that sells for £200 and sounds wonderful. It’s sonic success is down to careful design and its ability to accommodate both MM and MC cartridges, as well as the use of discrete transistors rather than silicon chips. Fantastic sound and fantastic value!

MEASURED PERFORMANCE

Gain values were exactly as described, x100 (40dB) for MM and x1000 (60dB) for MC. The +3dB switch is a neat touch that provides exactly the right gain step for low output MMs and MCs, with MC giving a maximum gain from the unit of x1413 or 63dB, measurement showed.

Output overload measured 9.5V. That equates to 95mV input overload for MM and 9.5mV for MC, both good figures our measurements of cartridge output show; the unit will not suffer overload.

Frequency response MC measured flat from 20Hz-20kHz with the highest gain of 63dB – most challenging because inadequate gain causes bass roll off. There is some slight plateau loss of low frequencies, meaning not a bass heavy sound. Switching in the warp filter corrected this as well as attenuating deep bass very quickly. With MM equalisation was more accurate and the warp filter equally effective.

Noise measured a very low 0.15uV (input noise) for both MC and MM. With MM this is way below the thermal noise a cartridge produces. With MC the situation is different — they produce virtually no thermal noise. The 0.15uV value is low and hiss will not be audible except with very low output designs where a faint background hiss at the ‘speaker will be audible; super-low noise inputs, typically using transformers, are 6dB quieter. For a budget design however the Phono Box S2 Ultra manages very well and hiss will not be audible with most MCs.

This is a very well designed phono stage that is quiet, accommodates all phono cartridges and has an excellent warp (subsonic) filter. Superb! NK

Gain (MM, MC)

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<td>PHONO (MM/MC)</td>
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<td>Frequency response (-1dB)</td>
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<td>Separation (1kHz)</td>
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<td>Noise (IEC A)</td>
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<td>-93dB / -82dB</td>
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Gold plated phono sockets are used for signals both into and out of the Phono Box S2 Ultra. The highly-effective subsonic filter, which deals with problems like warped records, can be switched out of circuit if not required.

PRO-JECT PHONO BOX S2 ULTRA

| OUTSTANDING - amongst the best |
| VALUE - keenly priced |

VERDICT

This little phono stage does a wonderful job – Pro-Ject should be congratulated!

FOR

- excellent detail and dynamics
- very musical
- compact and practical design

AGAINST

- DIP switches can be rather fiddly
- a table' of settings for cartridges would be welcome

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Musical ending

Paul Rigby reviews a book that delves deep into the end of a music industry legend EMI.

The Final Days of EMI: Selling the Pig
Author: Eamonn Forde
Omnibus Press
Price: £20.00

I’ve been waiting for a book like this to appear for months now. Finally, here it is and it’s been written by a music business journalist – a relief because this story is largely about finance.

It’s a sorry affair and signifies the end of an era in terms of the greater music business, the dominance of the physicality of music in sales terms, the nature of major label dominance and the time when big music labels strode over the earth and controlled artists in a similar way to the old movie studio system and the Golden Age of Hollywood.

I personally feel sad that, if any of the big names was going to fall, that EMI should have been the one to go but that’s what this book details over its 358 pages.

The popular consensus is that EMI died at the hands of Hands. Guy Hands, the head of a private equity company called Terra Firma. Hands took control of EMI in 2007 and completely failed to keep control of the company which died in 2010. Long-term EMI staff pointed the finger at him and accused him of killing a 113 year old company in just three years.

Yet Forde digs further than this. He looks back at 1996 when EMI separated from its former parent Thorn and, because it lost a protective shield, one that was previously part of a multi-interest affair, became increasingly vulnerable.

What is? There’s plenty of those. EMI chairman Sir Colin Southgate could have sold EMI to Seagram’s Edgar Bronfman Jr. Instead, Bronfman bought Polygram from Philips. Then there was the European Commission’s block of the Warner merger with EMI in 2000. EMI then thought about buying BMG. But then that same European Commission said that Sony was fine to merge with BMG.

What would have ultimately happened to EMI if any one of these business moves had been completed?

Forde talks about the lead up to the laying on of Hands, as it were, and even at this early stage I was impressed by Forde’s willingness to get up off his backside and talk/track people down. There’s lots of voices here and it helps to provide comment from all sides, filling in all kinds of gaps in the picture. Sometimes the sources are anonymous but the voices also emerge, directly or indirectly, from the head of Parlophone, Miles Leonard, the co-manager of Radiohead Bryce Edge, Guy Hands himself, David Kessler (Terra Firma partner), ex-BBC head honcho John Birt who was with Terra Firma at the time, songwriter and creative advisor Billy Mann, Uli Mücke who was part of EMI Europe, Marco Alboni who was head of pop/front line music at Capitol/EMI in Italy, Daniel Miller the head of Mute Records, Roger Faxon the CEO of EMI at the time and many more.

Issues discussed include how Terra Firma were welcomed into EMI and how Terra Firma meshed with EMI... or didn’t, the growth of internal politics, Terra Firma’s friction with artists and established EMI staff members including the loss of Radiohead, its negotiations with The Rolling Stones, the digital landscape, courtroom dramas and much more.

Then we get to the final chapter entitled “Putting the Old Girl Out of Her Misery” and a final Vox Pop section where a number of voices give their opinion on the failure of EMI as an ongoing entity.

As one anonymous EMI executive has it “People say that Terra Firma killed EMI. Terra Firma did not kill EMI, one way or another, would have ended up in the hands of someone else – Warner or whoever. [Terra Firma] where the ones holding the parcel when the music stopped”.

A sad yet informative read, this is a story that had to be told. Forde has told it well. PR
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SOME artists - and that includes musicians - have as much personality as cardboard, are as dull as a blown light bulb and live a life as animated as a fridge. Not our Leo, life seems to find him.

He recently admitted that he walked past a camera scrum after spotting Lady GaGa in full regalia "I'm the mug who walked right across the line of photographers and shouted 'Hey Gaga, how ya doing?' She was so transfixed posing for photographers, she completely disssed me. A week later I got this lovely letter from her, saying 'Leo, I'm so sorry, I saw you but I couldn't change the pose'"

He's also the guy who stormed out of TV reality show 'Big Brother'. Partly because of the general toxic atmosphere but also because the show controllers wouldn't supply him with clean underwear "They offered me a record deal" he said. "I needed a deal and you've got to have publicity. I knew it was a bad decision the moment I went in - actually, I knew the week before - but there was no backing out".

His first Top Of The Pops appearance in 1973, dressed as a Pierrot clown and singing the hit single 'The Show Must Go On' was going and going fine. "Jimmy Savile introduced me" he said. "Then F*****g Savile jumps on halfway through the song and starts clowning around, so that appearance can never be shown on TV"

Then there was the experience with his original manager, ex-singing star, Adam Faith who, upon signing Sayer, immediately took him to a brothel, to knock out his innocence. "He wanted to make me a man, instantly" Faith was a "loveable rogue" yet Sayer sued Faith for mismanagement and eventually settled out of court.

Faith was managing Sayer when 'Just a Boy' was released in 1974. Sayer wrote the lyrics and his colleague, David Courtney, penned the music, achieving a Top 10 place for the track 'Long Tall Glasses (I Can Dance)'.

"Long Tall Glasses is really all about first playing in America" said Sayer. "You're playing these gigs and all your heroes are better singers than you. You get people coming to the gigs saying 'Oh you're an incredible singer' and I say 'No I'm not, I'm not Bobby Bland...come on'. It kind of got embarrassing so I was kind of saying in a way 'I can't dance'. If you say you can then we will believe you more. So I turned round in song and said 'Of course I can dance!' Then they all go 'Yeah you're great!' and suddenly it all goes on. That's very much America".

The LP also features 'Giving it All Away' and 'One Man Band'. What hits you when you listen to this album is the lack of artifice. If Faith's brothel idea was supposed to remove Sayer's innocence then I reckon that idea bombed. And thank goodness it failed. There's plenty of that on this LP and I'm all for it. There's a sense of the geek from Sayer on this project, someone who may be just a little bit awkward. There's also plenty of charm here with a suite of songs that are delightful in their basic approach. The lack of complex production is a big plus point.

More than that, there's plenty of song writing nous here with considered lyrics, a passionate series of vocal performances that often have Sayer's vocal chords on the verge of breaking point (witness the later parts of 'When I Came Home This Morning') and music that merges musical hooks with a mature and rich rhythmic content.

Also, at this point in their career, in song-writing terms both Sayer and David Courtney were on a roll. As he told the website, Super Deluxe Edition (www.superduluxeedition.com) "One Man Band has Ry Cooder playing acoustic guitar on it. So that's pretty cool. But that's Adam (Faith) again, you see. He'd go to Warners and say 'I want your best guitarist, we're doing a session for Leo'. He had clout and persuasion"

For many music fans, the peak of Sayer's creative output were his first three albums: 'Silverbird' (1973), 'Another Year' (1975) and this release. Now you can own all three in pristine condition because Demon has released the lot under the title of 'Leo Sayer - The London Years' as a slipcase box set including a signed photo, the new releases have been well mastered. PR
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