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It's been said many times that loudspeakers are all the same – and going nowhere. Two or three Rice Kellogg drivers in a box that date in concept from 1925. Not a lot has changed in the last 95 years! Yep, it's all been refined and computerised, but multiple Rice Kellogg drivers in a box is one old idea with lots of weaknesses, most of which are little discussed. Reason being their manufacturers would rather not talk about what's wrong with multiple drivers in a box, or worse they don't even know.

Bringing me to our lead review this month of the fascinating Magnepan/loar LRS loudspeaker, that you can read about on p10. This flat open panel has no box and no Rice Kellogg drivers. It throws the whole design proposition out of the window. So if you are a conscientious objector to modern loudspeakers, as some are, try this one! We'd like to know what you think, as would readers, so write in if you get to hear them.

The sound of valves is always bubbling under, Pro-Ject's Pre Box Ultra RS2 on p17, reviewed by Chris Frankland, has no fewer than four of them inside to offer the unique valve sound, as a switchable alternative to pesky transistors. As a reviewer who has drifted into valves almost by accident and has become a convert, Chris grapples with modern complexity and "old fashioned" sound in this review.

Valves get another nod with iFi's iPhono3 Black Label phono stage, that you'll find on p83. No valves inside, but they allude to "tube state" circuitry (valves / tubes being the same). I'm a deep sceptic here, but the iPhono3 did indeed have some of the loveliness of valve sound – an easy natural quality – that eludes most silicon chip based phono stages.

Since better fundamental design techniques and resultant circuitry, lost to chip designers surrounded by application notes, give improved sound, there's hope yet for transistors, as there is for loudspeakers when they finally get to break away from 95 year old technologies. I see – potentially – a bright future for musical enjoyment and this issue captures some of the ways we might get there.
LOUDSPEAKERS

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ENJOY PRACTICAL SOLUTIONS FOR ELEGANT STORAGE

Glorious provide practical storage solutions for records and CDs, which can be easily integrated at home or in the studio, offering optimal access to your entire music collection. Our carefully designed furniture is based on a modular concept and can be assembled fast and easily. Sturdy constructions and robust surfaces are essential for our durable products constructed using high quality MDF that meet the high demands of music enthusiasts to offer the highest standard of care when storing a beloved collection, old or new. Storage solutions starting from as little as £23.00.
RETRO REVIVAL

The most ancient and venerable brand name in high fidelity sound reproduction – Leak – is going to be revived by the International Audio Group (IAG). This has been on the cards for some time but likely the success of their Wharfedale Linton loudspeaker has made revival of Leak seem a viable proposition today. First product up is a Leak Stereo 130 amplifier, based on Quad Vena 2 circuitry we are told. It is accompanied by CDT CD transport.

As the pictures show, for Leak IAG have pursued serious retro. design. The Teak sleeves and stylistically ancient front and rear panels make little concession to modern design practice. Even if, inside, the new Stereo 130 has a digital section based around the ESS ES9018 Sabre32 DAC chip, Bluetooth for wireless playback from a ‘phone, an MM phono stage to cater for LP, tone controls (that can be switched out), USB for computer connection, plus headphone output. The amplifier is classic Class A/B fed by a linear power supply, power 45W per channel. There is remote control too.

The CDT transport also has remote control and a front mounted USB socket able to read music from a solid-state flash-drive (memory stick). It is a slot-loader.

Prices are just £699 for the Stereo 130 without Teak sleeve or £799 with it. The CDT comes in at £499 or £549 with Teak sleeve. We hope to be reviewing both items in our next (October 20) issue.

For further details see: www.leak-hifi.co.uk.
Tel. +44 (0)1480 447700.

LET’S PUT OUR DACS TOGETHER

Pitched at those who appreciate state-of-the-art mobile music playback is Astell & Kern’s SE200, billed as “the world’s first DAP with two types of DAC”. Under the firm’s recent division of its products into three distinct (and oddly-named!) categories (“A&ultima”, “A&norma” and “A&futura”), the £1,799 SE200 slots firmly into the A&futura class on account of “the advanced audio chip they are using”. This is the ES9068AS (more accurately, two of them in a dual-differential DAC arrangement), and Astell&Kern reckon they’re the first manufacturer to use this chipset - which boasts an “industry-leading specification”.

The second DAC is a AK4499EQ, which is provided so that users get “the best of both chips, in one player”. The 274g SE200 is, according to A&K, “super-analytical and delivers even the faintest of details with little to no effort at all... the insane level of detail retrieval from both chips is truly incredible”.

Their wonderfully-OTT engineering doesn’t stop there. Two sets of headphone amps allow you to “plug your headphones into either the ESS or the AKM output - both of which are available in 2.5mm balanced and 3.5mm unbalanced form”. That’s right folks, this baby sports four headphone sockets!

Other features of this hi-res marvel include 256GB of inbuilt storage (plus up to 1TB via microSD card), Bluetooth, an 8-core CPU, wide codec support, a friendly user-interface, up to 14 hours of continuous playback, USB DAC mode, manually-selectable digital filters, a 5-inch screen, and a machined-aluminium case with ceramic covers. Look out for our review in next month’s issue.

Further details: www.astellinkern.com. UK distributor: www.audioconcierge.co.uk
GOFIGURE IT OUT
A free app from Chord Electronics, which configures and manages the powerful music player you get when a Poly joins forces with a Mojo DAC (or a 2go if used with a Hugo 2) has received a major update. The new version of ‘Gofigure’ (Android 1.2.90, or 2.05 if you’re an Apple iOS loyalist) provides “better performance across a number of key areas”. These include playlists, battery-status and network switching as well as enhancements to AirPlay, Wi-Fi and MPD (microSD card playback). 2go users, in particular, are strongly-advised to update to the latest Gofigure from the relevant portals - so their devices are optimised for an imminent firmware upgrade (the first since launch). Chord Electronics recommends a fresh install, and that your devices are running - at the very least - Android 7 or iOS 13.
Further details: Chord Electronics, Tel: +44 (0)1622 721444. www.chordelectronics.co.uk

NEWS FROM B&W
Like so many iconic hi-fi brands in recent years, Bowers & Wilkins could soon become a part of global multinational American Sound United LLC concern that owns the likes of Denon, Polk Audio, Marantz, Definitive Technology, HEOS, Classé and Boston Acoustics.
What this means for British jobs and manufacturing (there’s still a B&W factory in Worthing) is unclear. Note however that Bowers & Wilkins hasn’t been truly British since 2016, when it was sold to another American firm – Silicon Valley start-up Eva Automation, founded by a former Facebook CEO.
Irrespective, B&W has announced premium ‘Signature’ versions of the 703 (£2699, 2-way) and 702 (£4499, 3-way) vented-box speakers. As with previous Signatures, these new models are “carefully-upgraded and lavishly-finished loudspeakers representing the apex of B&W design, engineering and manufacturing”.
As well as new cabinet finishes, the 703 & 702 Signatures have improved performance courtesy of technologies borrowed from the exotic 800 Series Diamonds. Among these are solid-body (carbon-domed) ‘tweeter-on-top’ assemblies and high-grade crossovers. The pricier 702 also boasts ‘Continuum’ coned midrange-drivers and aerofoil-profile woofers.
Further details: Bowers & Wilkins, Tel +44 (0)800 2321513. www.bowerswilkins.com

REELING ‘EM IN EARLY
We’ve seen all manner of items sold in the name of hi-fi... but an illustrated children’s book? Yes, and it’s from Sweden - with more than a little help from Russ Andrews, which is selling ‘The Buzz Trolls’ for £10.95.
The book, written by hi-fi retailing couple Andreas and Emma Svalander, charmingly recounts the steps taken by a family’s Bjork-loving children to catch the eponymous cable-chewing nasties they hold responsible for the interference that spoils Dad’s musical enjoyment. The artwork was created by Emma, who also happens to be a professional illustrator.
Russ Andrews’ MD John Armer explained that it was “refreshing” to see something so perfectly-timed emerge from the imagination of someone right at the heart of an industry that can sometimes take itself a little too seriously”.
PLAY IT AGAIN...

Audiolab is encouraging us to save space and money with its new £799 6000A Play, which combines the functionality of the £599 6000A stereo amplifier and £449 6000N Play streamer in a single chassis. Although the 6000A Play will start playing music after hooking up speakers, mains and network (Ethernet or Wi-fi), it can do a lot more.

There are three inputs for line-level analogue sources and a specially-developed low-noise MM phono stage, as well as four digital inputs – two optical and two coaxial – for CD transports, DAB tuners and the like. The latter drive an ES9018K2M DAC, which caters for hi-res (up to 192/24) playback and has three user-selectable digital filters.

This circuitry is also available to the ‘Play’ streaming functionality, which can be controlled by a free Play-Fi app (Andro/d/iOS). The latter supports streaming services including Spotify, Tidal, Amazon Music and TuneIn – as well as playback of music stored on a local DLNA-compatible server in (amongst others) WAV/AIFF, FLAC, MP3 and AAC formats. DSD has, for some reason, been left off the list.

Other features include aptX Bluetooth, 50 Watts per channel of solid-state amplification, DTS Play-Fi, Alexa compatibility, current-feedback headphone amp, binding-post speaker terminals, 60,000uF of reservoir capacitance in the power supply and the ability to act as a preamp or power-amp as well as an integrated unit.

Further details: Audiolab, Tel: +44 (0)1480 452361, www.audiolab.co.uk

COVID SNIPPETS

The Covid-19 pandemic has affected the hi-fi industry as much as anyone else. One casualty is the Tonbridge Audiojumble that was scheduled for September 27th 2020. The next event will – infection spikes permitting – be on 21st February 2021.

But there have also been positive developments. UK hi-fi industry trade association Clarity told us that “100% of surveyed hi-fi retailers” confirmed they will be “open for business” following the easing of lockdown rules. Clarity reports that during lockdown a “big switch to online selling and click-and-collect” helped to mitigate the effects of retail suspension. It will be supporting the trade with an advertising campaign, informing the hi-fi buying public that customers are welcome again.

One Clarity member, the East Anglian family business Martins Hi-Fi, celebrated this partial return to normal by stocking products from Welsh hi-fi brand Leema Acoustics.

And new music to play while confined to your home! As soon as the lockdown was announced, Bandcamp waived its fees to help artists and labels – meanwhile listeners played their part by spending considerably more than usual on music and merchandise.


A TALE OF THREE BUDS

Electronics giant Panasonic has, with uncharacteristic tardiness, finally stepped into the “true” wireless headphone market with two new Bluetooth earbud sets – the £169 RZ-S500W, which boasts what is claimed to be “industry-leading noise-cancellation” and the compact (approx 17mm in diameter) £109 RZ-S300W. Both models, Panasonic is keen to stress, have been designed with “an extra focus on stable connectivity and excellent call quality... no matter what the occasion”.

What apparently makes the RZ-S500W so great is its “dual hybrid noise-cancelling technology” that captures the noise both outside and inside the headphones before using “analogue and digital processing, to block out the world”. Both are compatible with Siri and Google Assistant voice-control, with support for Amazon Alexa to follow.

Too cheap for your liking? Well, there’s always the flagship Blue Dragon from Chinese IEM specialist QDC. Its “ergonomically-shaped” enclosures, blinged-up by 800 sapphire (hence the name), are fashioned from gold-fused titanium for lightness and “complete in-earness to both drivers and the outside world”. Each enclosure contains no fewer than ten drivers for a “seamless, ultra-high bandwidth soundstage”. They cost £12,199, aren’t even wireless (although those wires are gold-plated silver) and there’s a three month wait.

At just £995 Magneplanar’s new LRS (Little Ribbon Speaker) is going to have a lot of other loudspeaker manufacturers very worried – but you possibly amazed. I say “possibly” because there are those inevitable negatives I’ll make quite clear that could result in 95% amazement. But the positives of this new panel are so obvious and attractive I suspect a lot of people will be convinced by its charms.

The first positive is price. Panel loudspeakers are at the exotic end of the hi-fi spectrum. I don’t recall any panel coming in at under £1k, although someone might want to tell me what Gilbert Briggs, founder of Wharfedale, asked for his SFB3 (sand filled baffle) open panel loudspeaker, marketed in the 1950s. Otherwise, you pay good money for an open panel. Martin Logan’s electrostatic panels coming in at more than a few £k. Up till now they have set the standard – and I use one.

Looks like Magnepan would like to change things. I’m taken aback that they should decide to again attempt to make the open baffle loudspeaker popular by slashing price to under the crucial £1000 mark.

But there’s far more to the LRS. It is not just a cabinet-less open baffle loudspeaker measuring 1in (2.54cm) thick, but uses Magnepan’s own magnetic-planar drive units. The whole surface of the loudspeaker moves air, not just one small cone drive unit (or many of them). Increasing radiation area reduces distortion; look at Concorde’s small engine nozzles versus a modern high surface area Trent engine – and hear the difference! The LRS has a wide surface area radiator and you’ll hear how it sounds easier and more relaxed moving air than a small area cone.

To be more specific, what you get in the LRS are two planar (flat) drive units. Each comprises a Mylar film with aluminium conductors on it; you can see them as vertical lines in our pictures. Electrical current passes through these conductors and the resultant magnetic field acts against fixed bar magnets. Sorry for the lecture, but it’s all quite different to the norm and may well become more common in our homes, especially since with a flat panel like the LRS you get something just 1in thick.

To throw in a bit more history, Wharfedale produced an isodynamic (magnetic planar) headphone in 1972 (check out Wharfedale isodynamic at the Victoria & Albert museum) and nowadays everyone is at it, Audeze making good examples. Interestingly, Magnepan’s first loudspeaker, the MG-1, was also released 1972. So the LRS I’m reviewing here has history behind it. Until recently, and with headphones, magnetic planars have met no great success in the market place but...
perhaps the LRS could change things.

A great advantage of any open panel is there’s no box to trap the rear sound. What happens in all box loudspeakers (and is never talked about) is that this sound travels back out through the cones. It’s very easy to measure with an impulse, sound decaying for up to 0.3 seconds or so our measurements show — a long time in acoustic terms. You don’t suffer this with an open panel — and you can plainly hear how clean the LRS sounds as a result.

The main disadvantage of any open panel is lack of bass, especially low bass — the rumbly subsonic bits that add underlying weight. The specific disadvantage of magnetic planar drive units is they need a lot of power. The LRS will go loud with 60 Watts but really you need 100 Watts. Happily, 100 Watts comes cheap and good nowadays.

Physically, the LRS is very similar to the .7 and most of my comments in our May 2020 issue review apply. Although delivered in handed (left / right) pairs it’s difficult to distinguish one from the other — and there’s no name / model badge on the front, which borders on weird, why wouldn’t you want to display your name? Obviously, a stick-on badge could be used to identify the tweeter side, solving both problems. As things stand the vertical line tweeter can be identified from front through the grille cloth by its narrower tracks. The LRS lacks the patch beneath the tweeter just visible from front on the .7 and useful for identification.

Size wise and in Imperial measure, this is a U.S. product, the LRS is 4ft tall, 14in wide and 1in deep. If that means nothing to you then make it 122 cm high, 36 cm wide and 2.5 cm deep. However, the feet extend backwards 1ft (31 cm). Ideally, it should have a few feet (let’s say 60 cm) of real space to ‘breathe’ and, preferably, some sound absorption / diffusion on a wall, examples being a curtain for absorption or a bookshelf for diffusion (dispersion). You can buy acoustic absorption and diffusion panels from StudioSpares for less than £100 but such tweaks are not essential, especially if there’s more than 2ft of clear air behind.

Magneplanar fit their own slightly unusual connection panel that accepts 4mm banana plugs and bare wire but you need an adaptor for spades. A removable shorting link can be replaced with a resistor to lower treble, using multiples of 0.47 Ohm I’d suggest (5W carbon film). After a while I did begin to wonder whether some might want to do this with the LRS: it radiates quite a lot of treble power (radiating area, front and rear) and can be a tad forceful up top.

There are funnies like the bent iron bendy feet and flippers to sit the panel upright. An option pack with cast alloy brackets and adjustable spikes/floor pads is needed. I was also a bit intrigued by three damping ‘buttons’ on one speaker but just one on the other. This was a little alarming — left and right looked different — but both were the same in performance, in fact closely matched measurement showed.

If all this seems to make the LRS seem a bit exotic, in use it is not. There are no external power supplies, nor any other challenge. They come in a flat box; attach feet, plug-in and go. It’s as simple as that.

**SOUND QUALITY**

To drive the LRS I used our trusty Creek Evolution 100A (100W) amplifier connected through Chord Company Signature Reference cables. Feeding it was a Chord Electronics Hugo 2 DAC, CDs being spun by our Oppo BDP-205D universal player.

There’s no sound trapped in a rear cabinet to bounce back out through the loudspeaker drive unit and the LRS revealed this with The Pink Panther Theme, where the laconic saxophone introduction crused in its own nice dark space, free from subliminal background muddle. So think: darkness between notes and a sense of sudden surprise as a riff suddenly comes out of nowhere.

This track also highlighted almost definitive timbral resolution of the sax body, which had a frutitly brassy sound that I suspect its makers had spent enormous effort perfecting, only for it to be lost through most loudspeakers, or even hi-fi systems. Not here: the LRS told me straight away that this sax had body and timbre, with quite a lot of light on it too, to reveal fine nuances. Like listening to a big instrument with the best sighted by a spotlight.

With Nils Lofgren’s Keith Don’t Go – a test of any loudspeaker – his acoustic guitar strings were

**Superficially — a picture of nothing. No box, no fancy bits, not even a name badge. The LRS offers little visually. Yet internally it is both different and complex.**

The unusual connecting panel of the LRS. It accepts 4mm plugs or bare wires of 4mm diameter, secured by a hex-key grub screw. The Tweeter/Attenuator link can be replaced by a resistor to reduce treble.
bitingly fast I have to say, but with an easy quality my ears did not shrink from. There was also masses of fine internal detail that was almost a shock; this is quite a dramatic loudspeaker if you turn the volume up – as I suspect most will. If too many bats fall dead in your living room (dare I mention them?) then treble level can be reduced with a resistor.

"masses of fine internal detail that was almost a shock"

As Sinead O’Connor drops into barren lament at the end of Foggy Dew her stark, unaccompanied vocal was eerily present against the background acoustic of the studio being picked up by the mic. It made for dramatic listening, the LRS doing not just a fine job here but one notches above all else – except Martin Logan’s XStat electrostatic panel.

A big no-no with open panel loudspeakers like the LRS is they don’t deliver deep bass. Magneplanar have twiddled the LRS to sound full-bodied and bass rich, but when I span Loreena McKennitt’s ‘Gates of Istanbul’ the opening bass line lacked deep rumble. The LRS has a hard cut-off of deep notes so it sounds big and warm – but won’t be shaking the foundations. Smaller rooms than ours will however give stronger deep bass. A room around 16ft long would be ideal.

Imaging across the sound stage was fabulous. Oiuwa singing Cantor Story hovered clearly centre stage. The sax in the Pink Panther theme similarly had position chiselled in stone.

Downsides? Yes, they are always there. Being totally absorbed by the LRS I used it hard. After a while some understanding emerged as to the difference between it and an electrostatic panel. The LRS has a slight metallic colour, reminiscent of a metal cone loudspeaker, that contributes to its sense of speed and hardness. An electrostatic like Martin Logan’s XStat panel has a lighter, more ethereal sound. I suspect the LRS will appeal to those who want ‘fast’ Rock, rather than those demanding absolute tonal purity from Classical instruments.

CONCLUSION
What a proposition! A small panel loudspeaker for under £1000. And with magnetic planar drive units. Totally different to all else at this price and quite radical in its sound, the new Magneplanar LRS or Little Ribbon Speaker, from Magneplanar (USA), is in many areas streets ahead of conventional box loudspeakers. Cleaner by far and with superb sound staging and imaging, also far more coherent so singers and instruments are more “one of a piece”.

There was some warmth, strong upper treble (but this is adjustable) and good if not deep bass, at least in our large listening room. In smaller rooms (circa 16ft long) bass would likely be stronger.

With a different sonic to all else, the LRS I found riveting. Very, very worth hearing Try and get a demo.

**Supplied are two fuses, plus a Hex key and four resistors, 2 x 1.2Ω, 2 x 2Ω, for reducing treble level. They are 10W wirewounds.**

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**MEASURED PERFORMANCE**

Frequency response of the Magneplanar LRS measured reasonably flat in overall trend across most forward measuring-microphone positions. Our third-octave analysis of pink noise shown here was made centrally on-axis, in front of a small disc visible behind the front grille cloth, approximately ear height with the feet ‘flippers’ down to make the panel stand upright.

There is some emphasis of low frequencies, as there needs to be in a panel loudspeaker to add a sense of body to the sound. The vertical ribbon tweeter extends smoothly to 16kHz and the mid-range dip seen here all but disappeared with the microphone moved to the side opposite to the tweeter, suggesting the ribbon tweeter should be on the outside of what are hand-pair loudspeakers (i.e. left and right), unlike the .7 reviewed in our May 2020 issue.

Bass extends down to 50Hz so the LRS reproduces low frequencies in spite of its limited width. The bass panel works up to 800Hz, measurement showed, leaving the ribbon tweeter to cover a lot of the audio band (800Hz-16kHz).

At rear a removable link couples the treble unit. It can be replaced by a 0.47 Ohm or 1 Ohm resistor to pull down high frequency output if desired.

As an amplifier load the LRS is effectively a 3.5 Ohm resistor, our impedance plot shows. In spite of this low value the speaker is insensitive, producing just 80dB sound pressure level (SPL) at one metre; it needs an amplifier of 80 Watts to go reasonably loud and 100 Watts is probably a better choice.

The LRS has a reasonably accurate tonal balance with quite strong upper treble. It will sound a tad warmer than many modern box speakers and needs a powerful amplifier for high volume. **NK**

---

**FREQUENCY RESPONSE**

**IMPEDANCE**
The First Word in Music Streaming.

Music. Literally the first word in ‘music streaming’, and always our top priority. Our network players feature cutting-edge technology – developed over 3 years by 25 expert engineers at our Salisbury HQ – but more importantly stay true to our founding mission, to take you closer to the authentic emotion of the music you love.

So, whether you’re listening to your own digital library, commercial music services such as TIDAL and Spotify, internet radio, or exploring the world of Roon, you’ll enjoy music streamed with our signature pace, rhythm and timing. Handmade here in England, the slimline ND5 XS 2, Classic superstar NDX 2 (pictured) and flagship ND 555 players are winning Awards around the world. Hear the difference with your favourite music at your local Naim specialist retailer.

naimaudio.com/streaming

Awards for NDX 2

[Images of award logos]
Here’s your chance to win a superb iBasso DX160 portable hi-res player, reviewed in our March 2020 issue. Read the review excerpt below and answer the questions.

“Style and facility wise, this player is right up to date and lacks little. It has a lovely Sin Sharp capacitive 1080P resolution touch screen with clear graphics: I had no trouble except with some legends greying out when inactive, becoming faint in sunlight.

At heart lies an Arm Cortex 8-core processor with 2GB RAM – making it fast – running Android. There is 32GB of shared storage, on our player 7GB consumed by the system, leaving 25GB for music. That’s enough for 400 CD tracks but not so useful for DSD tracks that come in at 500MB or more, meaning 50 in total. To cope, there is a single microSD card slot of unspecified maximum capacity. It’s a push-to-fit type; there’s no card loading tray.

Alternative music inputs are wi-fi (5G) connection to the internet for music streaming. Amazon HD now being incorporated in the firmware. Bluetooth 5 connection allows incoming data so the unit acts as a DAC / headphone amplifier, and outgoing Bluetooth so it acts as a wireless music source to a hi-fi system.

For wired connection to the hi-fi the 3.5mm stereo headphone output can be set to Line out for analogue linking, or to S/PDIF for digital linking – electrical not optical. There’s also a 4.4mm fully balanced output that delivers 64V, but no 2.5mm alternative for those that may have such (barely usable) cables.

The 4.4mm plug is quite sturdy, giving the DX160 a chunky balanced output socket next to the conventional unbalanced headphone output.

iBasso use two Cirrus CS43198 digital-to-analogue (DAC) chips, one per channel – and these I have not come across before. To date ESS, followed by AKM have dominated the DAC space. Cirrus Logic popping up in such a rarefied market was a surprise. This is a brand new design, relatively speaking. Cirrus claim 130dB dynamic and we measured an amazing 127dB from the DX160.”

For a chance to win this great prize, just answer the four easy questions at right. Send your entries on a postcard only, by 8th September 2020, to:

September 2020 Competition, HI-FI World magazine, Studio 204, Buspace Studio, Conlan Street, Notting Hill, London W10 5AP

QUESTIONS
[1] The touch screen is from -
[a] Sennheiser
[b] Sony
[c] Sharp
[d] Southern Rail

[2] The processor is from -
[a] Artix
[b] ARM
[c] IBM
[d] Intel

[3] S/PDIF digital link is -
[a] electrical
[b] carrier pigeon
[c] optical
[d] AES/EBU

[4] DAC chips are from -
[a] ESS
[b] AKM
[c] Wolfson
[d] Cirrus

RULES AND CONDITIONS OF ENTRY
- Only one entry per household
- Multiple entries will be automatically disqualified
- Purchase of the magazine is not a pre-condition of entry
- No correspondence will be entered into
- The editor’s decision is final
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April 2020 Winner: Blue Aura’s Blackline Home Audio System
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- Bluetooth, Airable (internet radio), DAB/FM
- Wide-ranging analogue I/O including phono stage***

*HD implementation due early 2020
** Excludes N15D. app/webinterface control only
***Phono stage on X35, X45, X45Pro

Now shipping with MusicX NEO
Remote control app compatible with iOS and Android
Chris Frankland checks out Pro-ject’s CD Box RS2 silver disc spinner and accompanying Pre Box RS2 Digital convertor (with valves).

Boxing clever

Pro-ject’s Pre Box RS2 Digital (£1750) and CD Box RS2 T (£2199) units were introduced last year. The Pre Box RS2 Digital headphone amp/ DAC/preamp is the bigger brother of Pro-ject’s existing Pre Box S2 Digital, using the same top quality ESS ESS9038 Q2M DAC chip. There’s one per channel, each chip strapped for mono (single channel use) to give highest quality. These highly-regarded chips allow it to support file resolutions up to 768kHz/32-bit in PCM and DSD (up to DSD512) formats.

The RS2 Digital is all solid-state, but a valve output stage employing 6922 twin triodes has also been fitted and can be optionally switched in for a bit of thermionic loveliness. The front panel of this compact unit (72mm high by 206mm wide by 222mm deep) is minimal with
a volume control, LCD display and four control buttons, although most will use the remote control which allows certain functions to be directly accessed.

On the rear there are balanced and unbalanced analogue inputs and outputs, with digital inputs in the form of two optical, one coax, an AES/EBU balanced input and an I2S differential bus via HDMI – the last being for the CD Box. The RS2 provides a master clock signal at 16.9344MHz to the transport through the I2S link, via the HDMI cable link (I2S keeps data and clock separate, but it is an internal protocol; there is no cable purpose for external transmission; HDMI here is an ad-hoc choice). Pro-Ject says that the Pre Box RS2 also supports MQA playback.

The headphone amplifier is, they claim, direct coupled, having no coupling capacitors in the signal path.

Pro-Ject describe the CD Box RS2 T as “revolutionary”. Heinz Lichtenegger, Pro-Ject founder and MD, says that most players are so bad they only manage to resolve 10 bits rather than the 16 bits they should. So he decided to create “the perfect transport”. To help achieve this, he went to Stream Unlimited in Vienna, founded by former members of the Philips CD R&D department. They provided the CD Box RS2 T with their top-of-the-line Blue Tiger CD Pro 8 top-loading module, suspension system and CD-84 servo board, which Henley told me is used in some very high-end players.

The player has a chassis milled from a solid block of aluminium and the whole assembly is isolated from the outside world on an anti-vibration platform. The suspension, cover and turntable platter are all made of 100% carbon fibre, while the turntable is machined from steel and chrome-plated.

And by leaving out the DAC and preamp, Pro-Ject says they have ensured these circuits do not interfere with the perfect reading of the CD. All of which makes CD Box RS2 T more than it seems; this is a hi-tech CD transport replete with an external I2S clock link – rare. But it is expensive as a result.

Each unit has its own remote control and external switch-mode power supply, accepting 110V-240V input, with 20V 3A output.

**SOUND QUALITY**

So what does this diminutive duo deliver in terms of sound quality? To kick off, I started with the Pre Box set with oversampling off, tube amplifier off, upsampling off and reclocking off, with the digital filter set to "linear phase slow" (one of eight options!), as generally I find the slow filters sound better. The units were played through an Audio Note Tonmeister integrated valve amplifier and AN-J LX Hemp speakers.

First impressions on sax player Dave Koz’s The Bright Side were very good. Percussion and drums were detailed and dynamic and his sax had good presence and bite. Jonathan Butler’s backing guitar was well captured and differentiated in the mix.

On Days Like This by Van Morrison, the track held together well with good definition on his tricky vocals and good detail and dynamics to the horn section. Could the horn section have had better presence? Probably. Could the track have been pacier? Probably. But at the price, I wasn’t complaining.

Ben Sidran’s Sunny Side of the Street confirmed good vocal rendition, solid and tuneful bass lines and sparkling percussion. Overall the sound was very good and the CD player and Pre Box would more than hold their own at the price.

So how did the valve stage sound? On the title track from guitarist Larry Carlton’s Sleepwalk CD, bass lines were a bit fuller, guitar a bit mellower, but the Fender Rhodes was perhaps a bit too mellow. Not a huge difference, though. On Never Too Fall to Fall by George Benson, the bass line moved...
The new Spendor D-Line loudspeakers reveal every nuance of the performance with absolute clarity and realism. With their transparent, superbly natural sound and extraordinary resolution, they create an airy, spacious soundscape, then invite you in to explore it, uncovering new depths, textures and definition in your music.

MADE FOR MUSIC. DESIGNED FOR YOU.
Pre Box RS2 has balanced and unbalanced analogue inputs and outputs, digital inputs in the form of two optical, one coax, an AES/EBU balanced input and an I2S differential bus via HDMI.

MEASURED PERFORMANCE

With 24/36 digital distortion (-60dB) from XLR out measured a low 0.03%—good if not 0.01% of the best, including other converters with the ES9038Q2M DAC chip. Dynamic range (EIAJ) came out at 117 dB USB in and a tad less (115.4 dB) from AES/EBU in, again good but the ES9038 can manage better – the 124 dB value quoted in Pro-Ject’s spec.

With a digital SPI/DIF input via optical cable (TOSLINK) feeding a phono socket analogue outputs, the figures degraded to 113 dB dynamic range and 0.04% distortion.

Changing filters had minimal affect, but switching in valve output introduced thermal noise that degraded dynamic range to 94 dB (RCA phono analogue output) or 103 dB (XLR analogue output).

Used as a pre-amplifier gain from XLR in/out measured a useful x3.65 (11dB), falling to x2.2 (RCA phono in/out) or 1.7 (4.6dB) with Valve switched in. These are useful if not high gain values, just enough to drive a 1V input power amplifier from an external source like a phono stage.

Frequency response extended to 96 kHz with 192 kHz sample rate digital (1dB at 58 kHz) and to above 100 kHz via the analogue preamp. The digital filters had little affect upon response, but the analogue 25kHz filter rolled off output fast above 25kHz.

The headphone output gave worse results than Line. Dynamic range at full volume (5V out) was a low 103dB, falling to 80dB with volume set for 1V out for headphones, due to noise in the output stage after the volume control. There was distortion too.

The Pre Box RS2 measured below expected from an ES9038Q2M DAC chip, likely due to slight noise in the output amplifiers. Very low noise circuits must be used from this chip's balanced output to a balanced XLR output (unbalanced being a derivation) and I suspect this unit’s complexity (switchable analogue filter etc) gets in the way a bit. However, there is still an ES9038 and 6922 in there, so sonics may not firmly link to measurement. The headphone output was mediocre.

ANALOGUE
Frequency response (-1dB)
5Hz-100kHz
Distortion (-60dB, 24bit) 0.002%
Noise (line/h'phone) -107/ -87dB
Max output (RCA/XLR) 10.5V / 21V
Gain (RCA/XLR) x2.2, x3.65

DIGITAL
Frequency response (192kHz,-1dB)
5Hz-58kHz
Distortion (-60dB, 24bit) 0.03%
Dynamic Range (EIAJ) 115dB
Output (0dB, XLR) 4.2V

CONCLUSION

On balance, these two boxes from Pro-Ject performed very well. The CD player sounded good and the Pre Box was versatile and offered good performance at the price, only let down by its performance on headphones.

well, percussion was delicate and vocals slickly handled, but the track may have lost some of its impetus and life. The valve stage had great warmth and weight, but solid state moved things along more pacy.

I quickly raced through the eight digital filters and decided I definitely disliked ‘oversampling bypass’ and ‘brickwall’, but of the others my vote was still in favour of Linear Phase Slow, which gave a generally better integrated and more musical performance. Similarly, I found I preferred oversampling and reclocking switched off.

Next, I tried the Pre Box on Bluetooth. It was easy to pair up if you follow the instructions and sounded good. Streaming through USB was also excellent, but users can only use an Apple Mac, PC or Pro-Ject’s own Stream Box.

But what of the DAC? Those ES9038s give it street cred, but how good was it? I compared it with the built-in DAC in a well-respected, good-sounding CD player that sells for around £4,000 to check this out. On Van Morrison’s Days Like This, the Pro-Ject DAC definitely made his voice marginally more intelligible, separated backing vocals better and gave the horn section more bite. Not a huge difference, but the Pro-Ject was better. On So Amazing by Luther Vandross, again the Pro-Ject impressed with its vocal presence and articulation, tight tuneful bass lines and great backing vocal separation.

On the headphone output and to do this I hooked up a pair of Focal Stellias.

At first I thought the Pro-Ject sounded quite dynamic. It had good bass weight and instrumental separation, but at times vocals could get a bit shouty and I felt the sound seemed a bit compressed and lacking the compsure of some of its competitors. Its added bass weight did not seem to compensate for that. I must admit to some reservations.

PRO-JEKT PRE BOX RS2 DIGITAL £1,750
EXCELLENT - extremely capable.
VALUE - keenly priced.
VERDICT
Good sound and easy to use.
FOR 
- ESS sound quality
- versatile
- optional valve output
- I2S digital link to CD
AGAINST
- mediocre sound with headphones

PRO-JEKT CD BOX RS2 T £2,199
EXCELLENT - extremely capable.
VALUE - keenly priced.
VERDICT
Quality CD transport.
FOR
- top quality transport
- comes with own puck
- easy to use
- digital I2S clock link
AGAINST
- top loading restricts siting

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Quality time with your X

ClearwayX, from Chord, is a pretty damn fine budget speaker cable reckons Martin Pipe.

For several years, Chord Company’s Clearway was the ‘go-to’ speaker cable for the audiophile on a budget. For £10 per metre, it performed better than some cables selling for several times the price. You can’t stop progress, though, and the original cable has just been displaced by the ClearwayX.

The new product is 50% more expensive, at £15 per metre. That’s quite a leap, and so I pestered Chord for an explanation. “The price had to increase for a number of reasons” I was told. “Clearway was selling for the same amount since it was launched in 2015, meaning that for five years Chord absorbed the effects of inflation on labour, materials and shipping – as well as a weakening pound.”
With this budget and affordable new cable Chord has made improvements. The ClearwayX has a new and more expensive XLPE (cross-linked polyethylene) insulation, replacing the original’s FEP (fluorinated ethylene propylene) that Chord used because it had the “same electrical characteristics” as the PTFE found in costlier cables. The two conductors, built from multiple strands of high-purity oxygen-free copper are arranged in a twisted-pair configuration; this, say Chord, will “reduce interference.”

The 14 AWG conductors are “big enough to bring control and definition to both bookshelf and floorstanding speakers”. They are covered by a soft PVC internal jacket, over which twin foil shields that reduce radio frequency interference pickup are contra-wound. The internal jacket will also, it is said, minimise any “mechanically-induced noise”. Finally, there is a tough outer protective covering of 10.5mm overall diameter.

In all, Chord’s construction is carefully-considered. If you buy ClearwayX cables professionally-terminated (standard lengths of 1.5, 2m, 3m and 5m are available) then you get substantial shrouds that cover the 90mm of so of wiring that splits from the cable’s body and goes to the plugs. These shrouds look good – and the “ChordChmic” 4mm banana plugs (spades can be specified as an alternative) are of a high standard. They are silver-plated, and their colour-coded bodies are ribbed for ease of handling.

However, termination adds significantly to the cost. The 3m pair I tested would set you back £210 – comprising £90 for the cable (2x 3x £15), plus £120 for the plugs (or spades). However, Chord told us that you can buy “off the reel” if you’re prepared to attach bare wire directly to the binding posts of your amp and speakers. This is worth considering – avoid stray strands, and tighten those terminals!

We were also told that Chord – and its dealers – would “always be able to help with custom lengths and configurations for customers”. If you want cables of specified length – and professionally-terminated at either or both ends – Chord dealers are equipped with the special tools needed to do this properly.

I tried the 3m ClearwayX review samples with a variety of equipment – the Cambridge AXX100D receiver and Q Acoustics 1030 speakers featured in this issue, as well as vastly more expensive Cambridge gear (the Edge NQ streamer and W amp) driving Quadrair Aurum Watan VIII speakers.

I compared ClearwayX with 2-core mains flex, of the sort you can buy at DIY stores. It is typically sold for wiring indoor-lighting to mains plugs and covered by a white jacket. I chose it, because it’s cheap – just over 50p a metre – and I’ve actually witnessed some people use it in their budget hi-fi systems! So do the audible benefits justify splashing out an extra £87 for 3m lengths of ClearwayX?

The improvements were ‘night and day’, especially with the higher-end Cambridge kit and speakers. Bass was more revealing and bestowed with tangible solidity, a sonic looseness of the cheaper wire disappearing altogether. Midrange clarity – strings and vocals in particular – was better, while previously-elusive treble details now burst out of the mix. The system also conveyed dynamic swings with greater ease, but the biggest advantage is that everything just sounds...more musical. Even with the cheaper system, many of these improvements could be heard – albeit to a lesser degree. If you’re still using bell-wire, give your ears a treat and ride the ClearwayX to better listening.

CONCLUSION

Despite the higher price relative to its predecessor, the Chord ClearwayX is still something of a bargain – especially if you’re prepared to use bare wire attached to binding posts. A fine budget cable that is sophisticated in construction and auditorily excellent.

CHORD CLEARWAYX
£15 PER METRE
(£210 FOR TERMINATED 3M PAIR TESTED)

OUTSTANDING - amongst the best.

VERDICT

A technically sophisticated budget cable with fine sound.

FOR
- audible improvements across the spectrum
- musical involvement
- well thought-out design, impeccably-executed

AGAINST
- terminations add significantly to cost

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Visit our website at www.hi-fiworld.co.uk or send your emails to letters@hi-fiworld.co.uk. Letter of the month wins a pair of KEF Q150 bookshelf speaker

Answers by: NK - Noel Keywood; CF - Chris Frankland; PR - Paul Rigby; MP - Martin Pipe.

LETTER OF THE MONTH PRIZE

KEF Q150 BOOKSHELF SPEAKER
https://uk.kef.com/products/q150-bookshelf-speaker
(subject to availability - Satin Black / Satin White)

A PAIR KEF Q150 LOUDSPEAKERS are on their way to PHIL CHARLES, Letter of the Month winner in our August 2020 issue.

Letter of the Month

DIGITALLY COPYING LP

Like your correspondent Phil Charles (Letters August 2020 issue) I decided to use some of my lockdown time to begin converting my vinyl collection to digital files. I have wanted to do this for several years but had not taken the plunge. I have been a vinyl collector for over 50 years and have amassed more LPs than I care to count and a good number of singles and EPs from the 1960s.

Vinyl is still my preferred medium and I listen, regularly, to many of my LPs. As I have already converted most of my CDs to FLAC files on a large hard drive which is connected, via Bluetooth, to a Yamaha WXAD-10 streaming adapter, it seemed logical to do the same with my vinyl collection. This will also allow me to have digital copies for my portable devices.

I am also thinking that I may sell some of my more valuable and less played records. Having considered my options, I decided to purchase a Rega Fono Mini A2D, that has a USB output but only has an MM cartridge input. Had I checked back into old copies of Hi-Fi World (or waited for the August edition) I would probably have been drawn to the Furutech ADL GT40a which has an MC input.

"I decided to purchase a Rega Fono Mini A2D, that has a USB output but only has an MM cartridge input" says Colin Topping. This £90 phono stage is likely 16bit for CD quality we suggest.

What the hell, the Rega was cheap and I could sell it on, having used it to gain experience of the digitisation process. Out of the cupboard came a long abandoned, but still viable, Roksan Corsi Black MM cartridge. I set it up in my Origin Live Silver arm on my Garrard 401, listened to a few LPs and made some minor adjustments.

I was quite surprised by the quality of the sound. For a cheap item, the Rega offers very good sound quality. Not as good as my EAR valve phono stage and modified Denon DL304, but closer than I had expected. The suggested recording software for use in conjunction with the Rega is Audacity which I downloaded (for free) and read the relevant tutorials. I decided it would be prudent to follow the advice and thoroughly clean the records before attempting to record. I do have, and use, a KAB-EV1 cleaner. For those not familiar with this device, it is essentially a Nitty Gritty cleaner without the built in vacuum motor and is attached to your domestic vacuum cleaner. This has worked well for many years but, latterly, has been leaving a deposit in the grooves that collects on
the stylus. I considered buying some new cleaning fluid but was seduced by the idea of immersion and groove-scrubbing offered by the Disco-antistat Sadly, after cleaning with this, a deposit still remained both on air drying (6hrs) and using the KAB-EV1 to dry the LPs.

Internet searches led me to Mark Fletcher (highqual.co.uk), a hi-fi enthusiast and ex KEF man, who offers his own accessories and cleaning fluids, at very reasonable cost, for the Disco-antistat. To cut a long story short, I now have two Disco-antistat baths, the first using the provided cleaning fluid and the second using Mark Fletcher’s HQ3 fluid (a quick drying cleaner/rinse with reduced surfactant) which is based on ethanol as opposed to the less volatile isopropanol. It also acts as a single cleaner on less contaminated records.

The results – beautifully clean grooves and no deposit left on the stylus on either air or vacuum drying. The sound is, also, much improved, with more detail and air and very little surface noise.

I also purchased one of Mark’s filter systems to ensure that the cleaning fluids were returned to the bottles free of dirt when the cleaning baths were emptied.

Back to Audacity. Thus far, I have followed their Sample workflow for LP digitisation tutorial, which is pretty clear and straightforward, with excellent results. Admittedly, the process is time consuming and, for the perfectionist, could be very time consuming, but the results have been very worthwhile and, certainly, of very good CD quality. The benefits of 96kHz and 192kHz are not on offer here, but the Rega is less than 1/5 the price of the Furutech and I am sure that all but the perfectionists would be happy with the results.

Colin Topping

Hi Colin. Rega carefully avoid specifying the bit depth of the Fono Mini A2D but at its low price of around £90 it can only be a 16-bit CD quality converter. These come from a factory in China – I can identify them by low MM gain and the presence of a warp filter of identifiable characteristics. They do a good enough job as a starter unit but you need to move up to the Furutech that has 24bit resolution.

There is a clear difference: 16bit gives a simulacrum complete with 16bit sound as we know it from CD, a tad coarse and dynamically un-engaging, where the digitisation process gets in the way of analogue sound. With 24bit from the Furutech you will clearly hear the qualities of analogue LP, rather than the qualities of old-tech digital.

Hope you enjoyed reading up about recording LP in Audacity! It’s a bit challenging all-round but Audacity does give superb results – and it’s free, as you say.

Fascinating to hear about Mark Fletcher’s LP cleaning fluid and its effectiveness. I’m sure other readers will value your experience here, as I do, having some embarrassingly dirty LPs from my mis-spent youth in the 1960s! NK

MAGGIE MISTAKE

In the August Hi-Fi World you announce that you will be highlighting the Magneplanar LRS panel speakers in the September magazine. Is this a new and different speaker to the Magneplanar MG 0.7 LRS reviewed in your May 2020 issue?

If so I look forward to another review. I very much enjoy their sound but they are quite intrusive in a typical size room!

Yours faithfully,
Colin Alford.

Hi Colin. I made a blooper: the Magneplanar .7 and LRS are different if similar loudspeakers. Basically, the .7 is around one year old I was told, and with a price of £11995. The LRS is a slightly smaller speaker, although you’d hardly know it, and half the price – strategically just under £1000. Looks to me like Magneplan have decided to enter the UK market with a critically priced panel loudspeaker with the LRS, to grab market share and build the brand. Martin Logan have done just that over the last decade with their hybrid electrostatic panels and they have made it work. Their big demo room at The Bristol Show this year (2020) I dropped into

For high resolution 24bit digital from LP, Furutech’s ADL GT40a preamplifier is a top choice.
many times and it was consistently packed – all seats taken, people standing around the sides.

I suspect Magnepan are aware of this and using the same strategy. The UK market isn’t big for hi-fi, but historically it is seminal for panel loudspeakers – Quad ESL57 and Wharfedale SFB3 – so potentially fertile territory.

The loudspeaker I reviewed in our May 2020 issue was the .7 and the one I am reviewing in this issue is the LRS – to be quite clear about it. If you have enjoyed the sound, then please let us and readers know what you liked (or disliked!). NK

**ARCAM, QUAD, PRIMA LUNA**

I have spent a lot of time during lockdown listening to my new Richer Sounds ‘discontinued bargain’ Arcam SR 250 amplifier. I have also compared the Arcam Sound to the ‘valve sound’ of a Prisma Luna amplifier and the ‘Quad Sound’ of an Artera power amplifier. I cannot add much to the forever ongoing valves v transistors debate. They are all comparable in overall sound quality with different strengths and weaknesses. Each in their own way are totally absorbing when listening carefully via each individual amplifier.

But there is one aspect of the Arcam SR250 which stands out when used with Monitor Audio Gold 200 speakers. They hold everything together when the going gets tough.

I will use just one example: a DXD download (352/24) of Beethoven’s 7th Symphony second movement played by Pittsburg SO and conducted by Manfred Honeck. The CD version is available on Amazon, see Beethoven-PITTSBURG-ORCHESTRA-REFERENCE-RECORDINGS/dp/ B01SOP47GD

Gramophone noted of this recording that: “Honeck’s approach to Beethoven’s music is no less forensic but for more robust than that of the new-age authentics – more Prometheus, you might say. In the Seventh Symphony, he tells us, it is essential to have everything played with the biggest possible impetus and pent-up power. It’s what he calls taking the music to the edge, which is very much what he does in this astonishing live performance”.

This sublime music is known for repeatedly rising from delicate quiet woodwind to huge orchestral crescendos. With the Arcam as the music rises in volume and increases in the complexity of orchestration nothing is lost. All instruments remain locked in position and with full power. So often the bass seems to get lost as the higher instruments take over and the location of instruments becomes a bit vague. With the Arcam the bass just keeps on going and is easily heard even at full volume. This adds enormously in creating a realistic scale to orchestral music.

I have to record that the Arcam has...
Hi Mike. Yes, that is an eternal problem with making subjective assessments in audio. Two amplifiers can sound quite different but which is the best really comes down to a matter of taste. I tend to veer away from a sound that’s mechanistic, shall I say. Quad’s “closest approach to the original sound” slogan (of long ago) still strikes me as a valid guide. No screaming treble for artificially enhanced ‘detail’, and some sense of three-dimensional space, that a microphone is able to capture. Valves still manage to convey this better than transistors in my experience, but the latter are getting closer.

Component quality has a big influence: valve amps are simple and necessarily have few but specialist components; transistor amps are commonly jammed with cheap op amps not designed for high quality audio, and smaller parts that are cheap rather than good. Add in noisy switch-mode power supplies and it is hardly surprising that so many transistor products are sonically deficient.

Your Arcam SR250 likely has a linear power supply in keeping with the company’s heritage and this will help with those crescendos, since linear supplies by their nature have massive energy storage, in their transformer fields and in their smoothing capacitors.

In the end though, it is best just to listen to an orchestra, as you do, and come to your own conclusions. Reviews can (with measurement) pinpoint deficiencies but cannot describe sound quality except through personal listening experience – the reviewer’s opinion. If the reviewer has no experience or sensitivity to the sound of unamplified musical instruments, rather than synthesised ones, then this falls apart too. Readers often implore us to listen to classical in addition to Rock – and rightly so. So have fun and hopefully enjoy with your Arcam bargain and Prima Luna amplifiers. NK

**CHOOSING A CARTRIDGE**

It’s always difficult when considering purchasing a new cartridge, whatever they sound like in the shop or whatever is said in a review in a magazine, you are always worried that your setup at home will not be the same and get the same results.

After much reading of reviews from many magazine articles I had narrowed the choice down to two possible, both had good reviews and both were about the same cost. I decided to write into Hi Fi World to get your opinion (as you listen to many more model of cartridges than I could ever do) but then came Covid and the stalling of Hi Fi World publications.

So, doing what any impatient Hi Fi purchaser would do I picked one and ordered it. I have now had the Hana ML installed and playing well for about two months and am most definitely not disappointed, it is brilliant, a considerable improvement over my previous cartridge. While running it in I have been going through some old albums I have not played for ages, expecting more clicks & pops than listening to Rice Crispies! but no, silence reigned. Even though some of those albums were played on my parents old radiogram with a needle the size of a six-inch nail, they play perfectly.

Listening to old Beatles albums through the Hana I can now realise how good George Martin’s production was, superb and even a very old and cheap copy of Credence Clearwater Revival sounds excellent.

Hana’s ML moving coil cartridge (Japan) gives a smooth sound and is great value.

I know all the reviewers tell us purchasers to go out and listen to products before ordering and I agree but cartridges prove very hard to do this with so the only other option is to read all articles on your prospective purchase, with a good dose of scepticism and try to glean an overall picture of what that cartridge will give you. If all reviews of a cartridge, from all over the world, say it is good then there must be something inherently good about it.

Anyway, I am going back to a long listening session now, rather than writing about it, keep up the honest reviews of the equipment you get in, its very important to us potential purchasers.

**Andrew Burtchaell**

Hi Andrew. Hana cartridges are wonderfully smooth and svelte. They have no technical weaknesses, which helps toward their sense of assured ability. Their lack of “obvious” treble makes ticks, pops and noise less apparent, leaving you to get on with
enjoying the music. I tend toward the deeply analytical Shibata and Super Line Contact tips of our Audio Technica VM750/760 MM cartridges, and the Shibata OCFX but they can be fiercely revealing with old and damaged records. The Hanna cartridges are altogether a gentler experience that suits these with big collections full of oldies, rather than the preened new LPs I must use for review purposes. Glad you are enjoying the Hanna ML; it really is a fine cartridge, one I enjoyed too. NK

I BOUGHT STAX

Firstly, thank you for the Letter of the Month KEF Q150 loudspeakers prize. As you can see, I acquired a pair of stands, along with some Morrow audio speaker cables and a Quad Vena 2 Play amplifier for use in France. I seem to have got the streaming to work with Amazon but not Spotify.

This got me thinking, all too complicated and I ended up plugging an Astell&Kern AK100 Mk2 portable player via Audioquest cable into Aux... much easier. I do think the whole streaming thing is great when it works but overall the use of CD or vinyl is simpler and quality is pretty good – if not often better.

Anyway, on headphones, thank you for the help published in August 2020 Letters. I ended up buying a pair of Stax 700 Mk2 and these arrived just before holiday. Initial impressions are positive and looking forward to using in the coming months. I am also taking back to UK an old Eclipse amp and speakers to use with Mac Pro, looking forward to seeing how these sound.

John Speight

STAX REPAIR

As a Stax user, John Speight’s letter on the repair of the SR-507 headset reminded me of my Stax experience a while ago. If, as Dave Tutt says, that the repair would be north of £600, and if John is prepared to pay that type of money, he would be better to get in touch with Philip at Cheshire Audio https://www.cheshireaudio.co.uk/index.html and discuss the Stax options on a replacement. Cheshire Audio are an excellent company to deal with, and I’m sure that Philip will come up with something beneficial to John.

Mike Bickley.

BIG BANDS

I finally surrendered to your repeated recommendations and bought the Syd Lawrence Orchestra Big Band Spectacular album. In fairness, I already knew the power of a jazz big band – when I was growing up jazz was dad’s music until Sunday afternoon I heard a 20-piece jazz band upstairs in a Glasgow pub and thought – Ahh, now I understand.

As anyone who has seen Jools Holland’s Rhythm & Blues Orchestra live will know, when a jazz big band starts to blow it is a veritable force of nature. So it is with this record – the all-analogue tape recording sounds fantastic and the direct to disc recording is beyond fantastic, it’s like being there.

When I played it, there was only one thing to do fish out dad’s old 1962 stereo recording of Frank Sinatra and the Count Basie Orchestra and turn it up. Anyone who has this record will know what I mean.

I also succumbed to another of your recommendations: the Origin Live Cartridge Isolator. Flying in the face of 50 years of hi-fi orthodoxy, instead of torqued fixing screws etc. this device sets out to isolate the cartridge from the arm and headshell. Aside from your enthusiastic review, it comes from a company known for some of the finest arms and turntables on the market, and it is hard to believe they would lend their name to such a cheap upgrade unless there was something in it.

I confess to being sceptical but with the device installed as instructed, I breathed in, suspended disbelief and listened. Instead of the expected soggy, muffled sound, everything remained nicely crisp and clear but any hints of high frequency haze and resonance had disappeared and it sounded, well... like an improvement. I’m afraid that you (and Origin Lives Mark Baker) are right - the damned thing works. So, on your recommendation I have spent a modest amount of money and only had pleasure as recompense.

I then had a rush of blood to the head and bought an upgrade which has not been mentioned so far in your pages. The Vinyl Adventure in Huddersfield advertise their Pressure Points as an alternative to conventional turntable mats: instead of a mat of felt, rubber, cork or other exotic materials, the record rests only on 8 tiny plastic points placed around the turntable perimeter. They confidently claim that this will upgrade the sound of most turntables, including the Garrard 401, Technics SL1200, Project Classic and many others. I bought a set, fitted them to my (excellent) Analogue Works Zero turntable and... wow! Better bass and treble detail, better midrange projection, better overall coherence. Even the PRAT (Pace Rhythm And Timing) that hi-fi buffs used to bang on about was improved – the turntable just sounds right.

If this sound quality upgrade had resulted from several hundred pounds spent on a turntable, cartridge, or preamp upgrade it would have counted as good value. However the cost is only £15. Try it and see what you think?

Yours sincerely,

Alasdair Beal
Leeds

If you are interested in Stax headphones, “get in touch with Philip at Cheshire Audio https://www.cheshireaudio.co.uk/index.html " says Mike Bickley.
I suspect this is a loudspeaker that won’t be easily spotted for the fine proposition it is, amongst a herd of rivals that swarm around its low £330 price point. Not easy to make a small two-way loudspeaker stand out, visually or sonically – but that’s the point with Q Acoustics 3030i. Rather than stand out as an acoustic hooligan, it’s a model of poise and correctness.

The design approach used by Q Acoustics is entirely conventional, mounting a bass/midrange unit and tweeter in a compact cabinet measuring 200mm wide, 320mm high and 313mm deep, the grille and rear terminals adding 16mm. With spade or bare wire connection depth is unaltered, but 4mm banana plugs protrude rearwards as always. With a rear port a small amount of room needs to be left behind in any case, but not much – a few inches or centimetres will do.

I liked the smooth Graphite Grey finish of our samples and the neat, polished alloy trims around the drive units when the grille, held by invisible magnets, is removed. The grille affects frequency response little, just a tad more treble is available with grille off. Measurement showed the 3030i has broad dispersion so the cabinet can be pointed straight down a room or toed-in toward the listening position without obvious difference between the two.

The 165mm bass/midrange unit has an impregnated and coated paper cone, Q Acoustics say, and closely above it sits a 22mm tweeter that looks like a cloth dome to me. I thought it was ring-dome, but perhaps not. All the same, measurement showed it has a smooth response and wide dispersion for even tonal balance. No sharpness here.

The cabinet is sturdy, weighing 6.4kgs. In addition to the Graphite Grey of our review samples, Arctic White, English Walnut or Carbon Black are available.

**SOUND QUALITY**

I drove the 3030is from our Creek Evolution 100A amplifier, connected by Chord Company Signature Reference cables. CDs were spun by our Oppo BDP-205D Universal player connected direct by XLR.
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cables. Also, I brought in a Chord Electronics Dave DAC to play CD, the Oppo acting as a transport in this case.

Reason for Dave? Primarily because Chord Electronics DACs are more vivid than the ESS ES9018 DAC in our Oppo player, appropriate when reviewing “darker sounding” loudspeakers like the 3030is. The Oppo is a very safe player to use for review purposes; it is smooth, minimising digital nasties, suit modern loudspeakers because most come with raised upper mid-band and treble.

I felt Dave would better suit the 3030is that are not artificially enhanced – but I was not exactly right. Our Oppo represents today’s sound as far as CD is concerned, ESS DACs being dominant and it was used mostly.

Just about whatever I spun, the overall impression was the same. Holly Cole sang laconically against a dark background, in the Train Song, is if the recording was made at night. There was a comforting warmth yet no lack of detail. In fact, her voice was sharply clear, stable and well etched as an image. The slow bass line was fulsome, even in our large listening room (6550 cu ft) where small loudspeakers can sound lean. This surprised me; the 3030is came over as big bodied and obvious in the bass, even though measurement suggested otherwise.

As CDs slipped by I latched onto the consistency of this big-bodied sound. Bass lines were large and almost plummy with the Oppo, where Dave pulled back, tightened them up and added in detail. With a dry sounding CD player, as older ones are, the 3030is suit, but perhaps less so with a CD player like the Oppo that has its own version of warmth. With Willy DeVille singing Spanish Harlem the 3030is showed their poise and sophistication however: I could hear the sibillants coming from his close-miked vocals, which I know are in this live recording, but they were just there, rather than offensive.

The 3030i sound has depth to it, making the choir and soloists in Beethoven’s Missa Soennnis seeming stretch far back. The various solos were well identified on the stage too; again I enjoyed very stable and assured imaging.

Whilst these ‘speakers sound big bodied and bass strong, the low-end rumblings at the start of Loreena McKennitt’s Gates of Istanbul were not so rumbly – we’re not taking Tannoy’s here – but I didn’t feel robbed. The effect was still well conveyed.

With heavy bass lines, such as Flur Feat ‘You and I’, the 3030is became a tad plummy and box bound, in their enthusiasm to convey low end weight. But at least I heard the effect and felt it where most other speakers of the size would just lose.

Q Acoustics 3030is were smooth and poised, dark sounding and deep. They take a different approach to many – no shrill treble, no inaccurate emphases. What you get here is a well honed performance with excellent imaging, cuddles of detail and a sense of weight that adds to visceral impact. Their sonic size is far greater than their physical size. I found them thoroughly enjoyable – and more than a little impressive for just £330.

**MEASURED PERFORMANCE**

Frequency response of Q Acoustics 3030i closely followed the 0dB datum across the audio band, our third-octave analysis of pink noise shows, extending from 100Hz up to 20kHz (grille on).

Removing the grille brought a small 1dB lift in upper treble, barely enough to be audible, but the front panel has been well finished to look good without the grille.

The tweeter works from 2kHz upward our impedance trace shows, and it had wide dispersion, frequency response changing little from on-axis to off-axis. The tweeter has been placed very close to the bass/midrange to improve vertical phase alignment.

Below 100Hz output rolls down progressively to measure -5dB at 40Hz, below which output drops rapidly. This is a response tailored for near-wall mounting in a small-to-medium room, up to approximately 15ft long. The port is tuned to 45Hz, the dip in the impedance trace shows, and it extends output down to a low 30Hz, applying good bass damping, as the breadth of the red port output trace shows.

Sensitivity was fairly typical for a small loudspeaker, measuring 86dB from one nominal Watt of input (2.8V), impedance measuring 8.5 Ohms with pink noise, 4.2 Ohms (d.c.) being the minimum. Amplifiers of 60 Watts will be sufficient for high volume, but 40 Watts will still go loud.

Q Acoustics 3030i is notably smoother in response than most and will likely sound even and refined. With good sensitivity and no weaknesses, plus well damped bass suited to small-ish rooms, it measured well all round. NK

**CONCLUSION**

Q Acoustics 3030is were smooth and poised, dark sounding and deep. They take a different approach to many – no shrill treble, no inaccurate emphases. What you get here is a well honed performance with excellent imaging, cuddles of detail and a sense of weight that adds to visceral impact. Their sonic size is far greater than their physical size. I found them thoroughly enjoyable – and more than a little impressive for just £330.

**Q ACOUSTICS**

3030i £329

OUTSTANDING - amongst the best.

VALUE - keenly priced.

VERDICT

A small loudspeaker with a large, smooth and accurate sound. Lovely.

FOR

- big, deep sound
- smooth and accurate
- well finished

AGAINST

- plummy bass at high vol
- a little box bound

Q Acoustics

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A neat little 22mm fabric dome tweeter with good dispersion.

It gave smooth treble.

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For What We Are About To Receive
Martin Pipe tunes into the Cambridge Audio AXR100D that combines potent budget amplification with FM/DAB radio, Bluetooth and a hi-res DAC.

During the 1970s, when hi-fi was mass-market, the receiver – a tuner and amplifier in the same box – was at the heart of many a system. Recently, UK brand Cambridge Audio introduced the AXR85 and AXR100 FM/AM receivers. Now there’s a new version of the AXR100 which complements it – the £499 AXR100D I’m reviewing here.

This new variant loses AM steam radio and in its place you get a DAB/DAB+ tuner and VHF/FM tuner that takes advantage of SDR (Software Defined Radio) techniques. Presets, accessible from the remote or front-panel, are assignable to 15 FM and 15 DAB stations (as opposed to the AXR100’s FM and AM ‘favourites’).

A common rear-panel aerial input, for both FM/VHF and DAB, is provided – interesting, given that two different sets of frequencies are involved. A piece of wire, masquerading as an aerial, is supplied; for best results, an external aerial is essential.

And digital alternatives to DAB? There’s no Wi-Fi or Ethernet for internet radio but – as with the AXR100 – Bluetooth can fill in the gap, courtesy of a suitable smartphone app.

In analogue terms, the AXR100D is well-stocked. You get three line-level inputs plus a ‘rec out’ or record output, which is in effect a preamplifier output. Next to these is an output for an active (powered) subwoofer, which may appeal to those using small bookshelf speakers for the same space-saving reasons that led to a receiver being chosen in the first place.

Other than that, the connectors are RCA phono input sockets (plus earth terminal) for a turntable, an IEC inlet (so you can experiment with mains leads) and two sets of ‘speaker terminals. The AXR100D’s are of high quality, and will accept bare wire as well as 4mm banana plugs.

The final part of the package is a rather uninspiring remote control. Although it will control other Cambridge products (notably AXC CD players), the tiny buttons aren’t backlit. They’re hard to identify, on account of the manufacturer’s use of tiny lettering. Familiarity will, I’m sure, help.

The AXR100D is a bit clunky operationally – accessing preset stations from the front panel can be a tad laborious. There’s a two-line fluorescent dot-matrix display on the front panel (the review sample’s stopped working...and then mysteriously restored itself a day
At left is the hefty toroidal mains transformer of the linear power supply and — running vertically down the middle — the heatsink to which the output transistors are bolted. At the top of the heatsink is the somewhat-eager cooling fan that was on the noisy side. Digital sources, including the Bluetooth receiver and Colin’s SDR module, are mounted on the rear panel.

later, before extinguishing again) and various front-panel buttons for setting stations, adjusting tone controls and so on. The display also shows volume/treble/bass levels, as well as FM RDS and DAB station info.

SOUND QUALITY
I used the AXR100D with a rooftop Band II aerial, although a wire aerial was necessary for DAB as this uses different frequencies. Other equipment included a Cambridge CXN v2 streamer fed via coaxial digital, a Technics SL1200 Mk3 with AT440MLb MM cartridge and two pairs of speakers — Q Acoustics 1030s and Quadral Aurum Wotan Vlls. For Bluetooth, my trusty Google Pixel 3a (which runs VLC Media Player for music) was once again pressed into service. A selection of hi-res and CD-derived lossless material was available on the ’phone, and via a networked library made accessible from the CXN.

The Bluetooth feature worked pretty well. It eludes the finer details that make decent recordings convince, but the sound was nevertheless enjoyable with no tonal inadequacies or obvious audible artifacting. It’s certainly more than good enough for background listening, and will be handy for house-parties (when we’re allowed to have those again!). Likewise, radio — FM and DAB alike — left me no reason to complain.

I would say that the shortcomings of the source material (overly-compressed ‘FM stations, low DAB bitrates) are probably going to be more of a limitation than the AXR100D’s innate qualities. Radio 3’s evening concerts were a joy to listen to, even on DAB — although I could definitely hear a subtle improvement in terms of space and resolution after tuning into the same service’s 320kbps AAC stream via the CXN. All power to the AXR100D’s DACs and amplification for revealing them, though.

FM also fared well. It’s sensitive — no background ‘mush’ on Radio 3, and weaker stations could be heard; I seldom had a need to use the mono override function to reduce hiss. Note that the very weakest and most distant of FM stations alarming (and loudly) ‘crack’ like gunshot, which is worse for speaker welfare than analogue noise. On the plus side, selectivity was also good; lesser stations close in frequency to more powerful ones can at least be listened to! Tonal the AXR100D is even with no untoward emphases — but there’s a lack of upper-treble detailing compared to the AAC streams. That’s more down to ancient broadcast technology than anything.

The phono stage is optimised for the majority of MM cartridges in

Plenty of connectivity here – three line-level analogue sources, plus MM phono. There’s a mono subwoofer and recording output, but no tape loop. A single aerial socket is used for both VHF/FM and DAB. Four external digital sources – two optical, one coaxial and Bluetooth – are catered for. Bluetooth is built in, not reliant on a USB dongle (there is a USB port, but it’s for service purposes). For the output, Cambridge has specified decent terminals – bare wire or banana plugs – for two pairs of speakers.
terms of gain and input characteristics. A Deutsche Grammophon recording of von Karajan conducting the Berlin Philharmonic in a performance of Chopin’s Les Sylphides was satisfyingly open, tonally-balanced and well-communicated here. Some infrasonic filtering appears to be permanently in-circuit – there’s a notable absence of loudspeaker cone-flap – but John Deacon’s throbbing bassline propelled Queen’s Another One Bites The Dust (The Game LP) with impact as well as articulation.

The sheer power reserves the AXR100D can draw upon definitely help. But there’s a downside, at least with the review sample. A fan, bolted to the output stage’s heatsink, whirred constantly – and annoyingly. The noise was sufficient to distract from quiet passages when sitting close, in a small room. But that very amp muscle aided my digital music – amongst other things, a fairly obscure track by Royksopp. Keyboard Milk, which you’ll find on the 2011 CD single Forsaken Cowboy, is an outstanding piece of what can only be described as ‘progressive electronics’, with mood-shifting between melancholy and euphoria. The AXR100D did justice to the piece’s deep and brooding sequenced low-end, the organic timbres of the synthesizers and the drums that roll from one channel to the other.

Detailing was good, rather than excellent; one of my references (a 24/48 Nosed/LSO Live recording of Britten’s War Requem) may have been enjoyable to listen to, but it seemed to miss out on the space and scale that hi-res can bring into the home. But this is a £500 receiver... not superfi.

**CONCLUSION**

Once again, Cambridge shows it still has its finger on the pulse of the mass-market – by bringing a product of the 70s high-volume hi-fi heyday bang up to date. The AXR100D is meaty and fan to listen to, like those Pioneers and Kenwoods of the disco era, but it isn’t short of refinement either. Add all the features and gizmos, and you have the makings of a bargain. I can only hope that the noisy fan and temperamental display were peculiar to the review sample. Steer clear of very weak FM stations, though, if you value your speakers.

**MEASURED PERFORMANCE**

Power measured 128 Watts into 8 Ohms and 116 Watts into 4 Ohms, making the AXR100D massively powerful. The cooling fan worked strongly even at low power levels and was audibly obvious: not a silent fan by current standards. Distortion levels were very low, at low and high output powers – and at high frequencies too, a very good (Class A/B) amp. Noise was very low too.

Dynamic Range (EIAJ) of the digital section was compromised by noise, measuring a low 103dB with hi-res (24bit) and with CD (16bit) this fell slightly to 100dB, both offering CD quality. Around 112dB or more is needed for hi-res benefit to be apparent; this is a CD quality receiver in its digital stages. The DAC was limited in ability. The optical (TOSLINK) input socket accepted 24/192 PCM where some still do not – a plus point.

The Phono input had accurate RIAA equalisation and flat frequency response as a result. A warp filter suppressed subsonic signals below 20Hz, providing useful -9dB attenuation at 5 Hz to lessen loudspeaker cone flap. Noise was low and sensitivity high at 3.5mV. Curiously, when the input overload limit of 50mV was reached the receiver’s protection circuits triggered, with volume at zero and no output. This is not a feasible real-life situation but it does suggest uneen and comprehensive protection circuitry. VHF/FM performance showed this is a Software Defined Radio receiver. Distortion levels were unchanged from low to high modulation levels, and at 100% mod, the figure was an extraordinarily low 0.1%. At 50% mod. the distortion harmonics were low-order and benign. Frequency response measured flat to 11kHz (-1dB), rolling down fast to the pilot tone filter at 19kHz. Excellent results...

As always with Cambridge products, the AXR100D receiver produced a fine measured performance, except the digital section that was restricted to CD quality and no better. **NK**

**ANALOGUE**

Power 128W

Frequency response (-1dB) 5Hz-100kHz

Distortion (1W, 10kHz) 0.03%

Noise -103dB

Sensitivity 300mV

**DIGITAL**

Frequency response (192kHz, -1dB) 5Hz-62kHz

Distortion (-60dB, 24bit) 0.1%

Dynamic Range (EIAJ) 103dB

**PHONO**

Frequency response (-1dB) 20Hz-20kHz

Distortion (-60dB, 24bit) 0.2%

**Sensitivity** 3.5mV

**Overload** 40mV

**Noise** -78dB

VHF/FM

**Frequency response** 20Hz-11kHz

**Distortion** (-60dB, 24bit) 0.1%

**Noise** -65dB

**FREQUENCY RESPONSE**

**DIGITAL S/PDIF 24bit**

**ANALOGUE**

Power 128W

Frequency response (-1dB) 5Hz-100kHz

Distortion (1W, 10kHz) 0.03%

Noise -103dB

Sensitivity 300mV

**DIGITAL**

Frequency response (192kHz, -1dB) 5Hz-62kHz

Distortion (-60dB, 24bit) 0.1%

Dynamic Range (EIAJ) 103dB

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Frequency response (-1dB) 20Hz-20kHz

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Living the stream

They say good things come in small packages. But will Chris Frankland think so in the case of Project’s Stream Box S2 Ultra?

When I first clapped eyes on Pro-ject’s tiny Stream Box S2 Ultra streamer, I thought it underwhelming. Not the kind of product to impress your friends. No big displays or flashing lights. But I found it big on performance.

Inside, this tiny (37mm high x 103mm wide x 115mm deep) high-resolution network bridge is based on a processor running a tailor-made version of the Volumio OS. It supports DLNA, Streamport (Apple AirPlay) and RAAT data protocols, runs Shoutcast for internet radio and supports audio formats up to PCM 32bit/352.8kHz and DCD256. Importer Henley Audio says the Stream Box uses only top-quality “audiophile-grade” components throughout.

The front panel is minimal, sporting just a power button, a USB/PC button, LEDs for power, network and the Detox function (of which more later), plus an additional USB input for a NAS drive, server or USB stick. On the rear panel is a USB output for an external DAC, a Boot button that allows “experienced users” to install a different operating system, another USB input for a network server or NAS drive and an HDMI socket for a TV or touch-screen monitor to control the device. Finally, there is a microUSB input for the Detox function.

The first step was to plug in an Ethernet network cable from a wireless router (you can also connect to it via Bluetooth or wi-fi) and then install the Pro-ject Play app; it runs on a phone or tablet.

My app quickly found the Stream Box, but one odd quirk was that when it came to play from Tidal or Qobuz, I had to log in through the Pro-ject Play App, not the Tidal app.
I could also access the Stream Box using Roon, but I stuck with the Pro-Ject Play app, which additionally provided access to a wide variety of UK and worldwide internet radio stations, as well playback of music files through the Music Library button.

You can also plug in a CD drive with a USB output, such as Pro-Ject’s CD Box S2 T, and use the Stream Box to rip CDs either to its internal 16GB drive or to a drive of your choice.

I decided to start by looking at its rather intriguing “Detox” function. This is said to clean up the signal from a computer before passing it on to the DAC. Henley tells me the circuit was designed by renowned John Westlake, who also designed Audiolab’s M-DAC. It is said to clean up the power supply and relock the signal, filtering out the noise generated by the computer.

**SOUND QUALITY**

I admit I was sceptical, so I sat down for a critical listen. First I fed my Apple MacBook Pro straight into the USB input on the Pre Box RS2 Digital (see pages 41-43). Then I compared that with the signal fed through the Detox circuit on the Stream Box.

On Ben Sidran’s Broad Daylight from The Doctor is In, my jaw hit the floor as Sidran’s voice was more open with ‘Detox’, the bass line was fuller and more tuneful and percussion more detailed. His piano runs were more fluid and the instrument had more body. Hmmm...

Next I tried Days Like This from Van Morrison. Again I was amazed to find that with Detox his vocals were more ‘human’, more intelligible, the horns were less glaring and the bass line tighter and more tuneful. Backing vocals were better separated and the whole thing simply flowed better.

On balance, I have to say that the Detox function worked superbly well. But better to stream directly from the Stream Box itself.

Streaming The Bright Side from Dave Koz’s The Dance from Tidal, the direct stream won the day with a more realistically voiced sax, fuller and

**CONCLUSION**

Don’t let the diminutive proportions of the Stream Box S2 Ultra fool you. It packs in lots of useful features, which work superbly well, and delivers great sound quality. It gets an unequivocal recommendation from me.

This compact streamer packs a lot of tech in a small box.

Stream Box Ultra has Ethernet and USB inputs, an HDMI socket for a touch-screen monitor, a USB output to a DAC and a microUSB input for the detox function.
Chinese Q

Martin Pipe discusses China’s growing dominance of globalisation – and the role it played in Q Acoustics 1030 speakers.

By the mid-2000s, the importance of China as a manufacturing base had become only too apparent...especially when it came to cheap, disposable consumer goods – and their impact on the planet. Western consumers, it seemed, were happy to overlook environmental concerns in their quest for ever-lower prices. How, I wonder, did that ‘chase-to-the-bottom’ trend square with a constant claim of contemporary economists: that everybody’s wealth was rising? Some it would seem were struggling.

In 2006, you could buy a ‘no-brand’ Chinese-made DVD player in a supermarket for £10 - the same price as a disc to play on it. Like the countless microwave ovens, toasters, inkjet printers, toys, midi stereos, TV set-top boxes,
vacuum cleaners, el-cheapo HDTVs, personal CD players and other junk that shared space in shipping containers bound for British ports, they barely lasted beyond the guarantee period. Uneconomic (or downright impossible!) to repair, they were left out with the other trash or joined piles of similar goods building up in local ‘recycling centres’.

But decent stuff was being made in Chinese factories too. One thinks of FiIO, Shanling, and Consonance...and the list of Chinese ‘quality’ brands is continuing to grow.

Some more recent hi-fi brands have never manufactured in their native countries. Research, design, sales/marketing and admin may be carried out ‘at home’, but production takes place in China.

One such company is Q Acoustics, which in 2006 joined the established Goldring (of cartridge fame) and cable specialist QED as part of the Armour Home group. Unlike Wharfedale and Quad, Q Acoustics was a completely-new operation that had to start from scratch. In its own words, Q Acoustics “assembled a design team from the world’s most experienced and successful loudspeaker designers...and then challenged them to design and produce the very best affordable loudspeakers the world has ever known”.

Instead of buying-in drive units, crossovers, cabinetry and so on from third-party suppliers, they designed “bespoke” components that were optimised specifically for each new model. Said components were made in Chinese factories, from CAD data wired across by the Q Acoustics designers. They were then assembled into finished speakers, by other Chinese teams. And when the products found their way here, they offered remarkable value for money. Take the 1030 “compact floorstanding speakers” featured here. Part of Q Acoustics initial “1000 Series” range of hi-fi and home-cinema ‘speakers’ (the top model of which, the 1050, sold for £330), the 1030 looks like a grand’s worth of ‘speaker.

They actually sold for a mere £230 – bookshelf territory, in other words. A bass-reflex design with front-mounted port and 100 Watt handling capability, the 1030 features a long-throw 165mm bass/mid driver with doped-paper cone and a 25mm woven-fabric dome tweeter. They are fed by an “advanced, fourth-order Linkwitz-Riley crossover”, which ensures the “smoothest response” and a nominal 6 Ohm impedance.

Stringent quality-control, Q Acoustics assured us, required “every drive unit to be torque-mounted into the front baffles... rigid, low resonance, multi-radial designs up to 32mm thick”. The drivers are hidden behind a slim fabric-covered grille, which is held to the front baffles by magnets.

Interestingly, the 17.7-litre 15.5kg cabinet features a compartment that can be filled with sand – 5kg of dry ‘play’ sand is recommended – to increase rigidity

Expensive speakers use real wood veneer – not so the 1030s. Superficially, they look like models that sell for four times the price. Look closer, though, and you’ll see that the 1030s are instead finished with vinyl.

Like most of the competition, the 1030 is a bass-reflex design – as the presence of this flared-exit 50mm port proves. The ‘hole’ is covered – along with the two drive units – by a fabric covered grille that’s held in place by magnets

"I was very impressed with the natural stereo image that the 1030s could deliver"
Introducing the M8xi, a high quality musical fidelity amplifier that combines separate preamp with two monobloc power amps combined. Each has its own heat sink and separate transformer. The preamp has its own dedicated power supply that is mounted close to the input sockets; consequently, PCB tracks are very short. This elegant idea ensures that both channels signals are ultra low impedance the instant they get into the amplifier.

Finishes Available:  

Distributed by Henley Audio  
T: +44 (0) 1235 511 166 | E: sales@henleyaudio.co.uk | W: www.henleyaudio.co.uk |  HenleyAudioUK | HenleyAudio
and “dampen acoustic vibration”.

The cabinet sits on a stylish aluminium plinth that makes provision for spikes.

Incredibly, given their price, the 1030s can be bi-wired; the terminals that connect the treble and bass sections of the speakers to the outside world are, under normal circumstances, interconnected by stylish bridging-plates.

Look closely, though, and you’ll see where production costs have been shaved off. The veneer (cherry, beech or graphite-black) is plastic, not wood! Q Acoustics’ achievement is nevertheless pretty significant, and demonstrates the upside of globalisation.

And they don’t sound half bad even today, driven by a Marantz PM-66SE Ki integrated amp and a Cambridge CXN v2 source in my case. In order to avoid boom, Q Acoustics recommended they be positioned at least 200mm from the back of the room, and 500mm from the side walls. ‘Toeing them in’ towards the listening position is also suggested in the manual.

These guidelines followed, I was very impressed with the natural stereo image that the 1030s could deliver – it’s comparable with much more expensive speakers, and very engaging. The all-important midband communicates reasonably well, being free of the noticeable colouration that some cheap speakers impart to speech and vocal performances. However, it can be restrained at times.

Another criticism is that the treble is a little reticent and lacks ‘bite’ – the 1030s would complement a bright amp or source.

And if you think big floorstanders mean ‘big bass’, you’re in for a bit of a disappointment here. Admittedly, the 1030’s bass is not without musical charm but a lack of weight, coupled with occasional traces of thickness, means you could do better for rock, electronic dance and organ works (I note, in passing, that the 1000 Series included an active sub!).

Let’s put it in context, though; today, you can pick up pairs of 1030s for less than £50 – even less, for specimens with tatty grilles or peeling veneer. For that sort of money, the ‘starter’ or budget-constrained audiophile is unlikely to do much better. As they sold quite well at the time – thanks in part to some positive reviews – they’re not uncommon. You’ll often find 1030s on eBay, at second-hand events… and if you happen to be in the right place at the right time (as I was!), you might chance on a pair that had been left out for the dustman…

Unusually, given the price, the 1030s can be bi-wired (or bi-amped) since the LF and HF sections of the crossover are electrically-separable. Normally interconnected by bridging plates, these terminals are of decent quality and will accept either bare wire or 4mm banana plugs.

"Q Acoustics “assembled a design team from the world’s most experienced and successful loudspeaker designers”

The 1030’s 25mm tweeter – like the woofer, developed especially for the range of which the 1030 is part – has a woven-polyester dome. Although acceptable low-level musical treble detail is apparent, the 1030 is far from ‘bright’ in character. Working in conjunction with the woofer, an excellent stereo image is created across the speakers.
REVIEW

Num r Uno in Heaven

Martin Pipe’s ears are lent to the Rai Solo IEMs from Meze.

Last year, I reviewed the £2,699 Empyrean headphones from the Stratocaster-playing Romanian industrial designer Antonio Meze. Most of Meze’s other offerings are aimed at the more affordable end of the ear-transducer market. But there’s more to Meze than full-sized ‘phones. The Baia Mare-based firm also sells two pairs of Chinese-made IEMs (in-ear monitors), the £949 Rai Penta and £229 Rai Solo I am reviewing here. Those names hint to the number of individual driver elements in each IEM — five in the Penta, and one in the Solo. And ‘Rai’? It’s the Romanian word for ‘heaven’. You’ll however have to wait until next month to find out just how heavenly the Pentas are – for this review, my attention is focused on the Solo – described by its maker as an “entry-level audiophile IEM”.

The Solo, like its bigger brother, is built into a specially-shaped body that has been in development since 2015. Meze wanted to achieve a good anatomic fit. To realise its complex shape with the desired degree of accuracy, Meze turned to a mass-production process known as metal injection-moulding. Here, a heated mix of finely-powdered stainless-steel and a binder material is injected into a precision-machined mould. Form follows function – those rounded edges are designed to accommodate the natural curves of the ear, thereby achieving a good fit. The use of steel and Meze’s internal structure are also claimed to dampen unwanted resonances, so there’s “minimum interference to the vibration created by the driver”. In terms of audio performance, these characteristics are said to translate to “a clean and dark background, with well-defined imaging”.

The 9.2mm UPM (unified pistonic motion) driver that lives inside each Uno body is no less innovative. “In a traditional earphone driver” Meze told us “the lead-in wires of the 16 Ohm voice-coil are glued to the rear of the membrane”. This is responsible for “unbalanced vibration”. In the Uno’s driver, the 9µm-thick membrane is electrically-
conductive so there's no need for those wires. Benefits, according to the Meze website, include low distortion, mid-range clarity and "outstanding reproduction of low frequencies".

Meze, which guarantees its products for two years, pays plenty of other attention to detail. The nozzles that channel the drivers' output are colour-coded — blue is left, and red right. To them are mated the tips that snugly fit into your ear canals. The review pair was supplied with a bag containing three pairs of soft silicone ear-tips, and two pairs of deep-insertion double-flanged ear-tips. I preferred the latter as they stayed put, especially when I was on the move!

To protect them, Meze has included an unusually-styled ethylene-vinyl acetate (EVA) protective case. This has sufficient room for the detachable cables, that mate with the Unos via industry-standard MMCX socketry. Supplied is a braided 1.3m cable, terminated in a standard unbalanced 3.5mm plug (no 6.3mm adaptor is provided). Meze also offer upgrade cables with silver-plated copper conductors and rhodium-plated plugs. Balanced (2.5mm and 3.5mm) and unbalanced (3.5mm) versions of these are available.

**SOUND QUALITY**
I tried the Rai Unos with a FiiO K5 Pro (reviewed last issue) and a Prism Callia, both of which were driven by a Cambridge CXN CD that had access to a library of lossless CD rips and hi-res material. Also pressed into service was my trusty X3 Fiio player, and a Google Pixel 3a 'phone — the headphone output of which, if nothing else, substantiated Meze's claim that the "Rai Solo works effortlessly with any device, due to its low impedance and high sensitivity". The results may not be hi-fi as we know it, but the 'phone didn't audibly-struggle to drive these IEMs.

With more capable devices, such as the X3 player, the impression I got was of fine stereo imaging with my hi-res LSO/Noseda/Requiem performance of Britten's War Requiem and a tonal character that to my ears seemed rather forward.

This had a positive upshot for the intelligibility of vocals. With The Buggles' new album A Steady Drip, Drip, Drip, every word of Russell Mael's intense and fast vocal was clearly heard — the sax benefited too.

Percussion had plenty of energy and precision, but an obvious drawback was distinct lack of bass. This was also noticed with London Grammar's Hey Now (If You Wait, CD), which has a prominent bassline in places. Don't get me wrong — what there is of it is well-defined and musically-adapt. It's just that there should really be more of it. More positively, the Solos did justice to Hannah Reid's vocal. But if you listen to bass-heavy electronic dance music, the Unos probably aren't for you.

Next came a CD rip of the second Buggles album — Adventures in Modern Recording. Released just before Trevor Horn turned his talents to Yes and production.

Towards the end of Vermillion Sands the electronic-drum parts of a synthesised big-band are out of step with each other in places. With the Solo it was possible to distinguish between those clashing percussive flows. The sightly-forward nature of these IEMs tends to emphasise certain elements of the mix.

In the case of Lenny — another track off the Buggles album — the rhythm guitar, and its sustained interplay with a piano buried within the busy mix, were laid bare in a revealing yet enjoyable manner.

**CONCLUSION**
There's much to be said in favour of the Rai Solo IEMs. They're thoughtfully-designed, very comfortable to wear, offer an upgrade path and are immaculately-presented. I'm also impressed with the musicality of the drivers; Meze are onto something here. In this regard the Solos are, quite frankly, hard to beat in their price-range.

But their downside is a lack of guts at the lower end of the spectrum. Furthermore, some might not appreciate the intimacy imparted by that midrange emphasis.

£229 buys a comprehensive package — a detachable 1.3m unbalanced cable with 3.5mm stereo plug (but no 6.3mm adaptor), a series of tips to suit different ears, a hard zip-up carrying case and even a tool to remove wax and gunk from them.

With MMCX socketry, the Solos can accept aftermarket cables. Meze offer upgrade cables too.

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**MEZE RAI SOLO**

**£229**

**EXCELLENT** - extremely capable.

**VERDICT**
Distinctive-sounding and fairly-priced IEMs, with plenty going for them.

**FOR**
- well packaged
- revealing mid-band
- comfortable fit

**AGAINST**
- midrange emphasis
- bass-shy

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WORLD STANDARDS

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

TURNTABLES

AVID INGENIUM  £800
Great bass response and upper midrange detail allied to clarity makes this a must have at its price-point.

CLEARAUDIO INNOVATION  £6400
Expensive, but offers great results from a finely honed and beautifully finished belt drive turntable, with servo control from the platter to keep a grip on tempo like few others. Can be fitted with a Clearaudio tangential arm, or any conventional design. Awesome.

INSPIRE MONARCH  £4,350
A reboot from the ground up Technics Direct Drive, having blistering pace and dynamics allied with smoothness, sophistication and purity of tone. A true reference.

LINN LP12SE  £3,600
The UK’s most iconic turntable, the legendary Sondek goes from strength to strength. New Kee sub-chassis and Radikal DC motor add precision and grip to one of the world’s most musical disc spinners. Expensive though.

MICHELL GYRO DEC  £1700
Wonderful styling coupled with great build and finish make this turntable a delight for friends and family. It has an attractive clear acrylic dust cover, and can mount just about any arm. A current design standard.

PROJECT ESSENTIAL DIGITAL  £300
A budget turntable that turns in a great analogue performance, but also has a hi-res digital output. Send 24/96 across your lounge via optical cable to a DAC and get great audio quality. Or record LP to your laptop.

REGA RP3  £550
The first of the super-quality Regas, little compromised by price and featuring Rega’s outstanding RB303 tonearm, suitable for MM and MC cartridges. A standard at the price-point.

TIMESTEP EVO  £2100
The famous Technics SL-1210 MkII Direct Drive but with improved print, isolation, main bearing and power supply, plus an SME arm (add 1500). DD convenience, rack steady pitch and low sound at a great price. Our in-house reference.

REGA RB303  £300
A one piece tapered casting makes this arm’s structure almost unrivalled. Great dynamics and superb imaging, for MM and MC Reference quality for peanuts.

SME 312S  £1,600
Twelve inch magnesium alloy tapered armature plus SME V bearings. An insight, yet smooth and relaxed sound. Superlative build completes the package. Our Editor’s steed.

SME 309  £1500
A one-piece tapered arm finished like a camera and sick to use. Superlative SME quality and sound at affordable price.

SME V  £3000
Offers rapid fire timing and a sense of precision, plus rack solid dynamics. Too dear for deep pockets.

CARTRIDGES

AUDIO TECHNICA AT-OC9 MM/L MC  £420
A fine sounding MC with strong bass and super fine treble from a great stylus – yet inexpensive.

AUDIO TECHNICA AT-FS311 MC  £150
Great value entry level moving coil with detail and grip you just can’t get from similarly priced moving magnets.

BENZ MICRO ACE SL/MC  £956
Smooth, lucid and full bodied, award winning, hand-made cartridge from Switzerland.

BENZ MICRO WOOD SL JAC £945
Highly fontSizeed Swiss moving coil that plays music with reflective precision.

DENON DL-103  £180
A popular and much loved budget MC with big bass, smooth treble and deep sound stage. Fantastic value.
LYRA TITAN I MC £3,500
Breathtaking speed and dynamics from LP helped by diamond coated, boron rod cantilever.

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

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

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

ORTOFON Cadenza Black MC £1,800
Ultra smooth and dimensional moving coil with bass and punch aplenty. Lovely styline.

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

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

PRO-JECT TUBE BOX DS £425
Compact MM and MC phono stage with valve output circuit and a big sound.

LEINAX EQ-500 PHONOSTAGE £4,495
A fully equipped phono stage from Japanese manufacturer Lexman that offers comprehensive cartridge matching and led to superb sound.

LUXMAN MC £1,199
Dynamic, clear and balanced sound from a high end phono stage.

SHURE M97XE £80
A gloriously sounding cartridge with solid bass and strong dynamic punch, plus excellent treble from its Fritz Giger stylus. Fun and affordable.

PREAMPLIFIERS

ICDN AUDIO LA-4 MKIII £1,400
Uses early SNE7 transistors for liquid sound. Has plenty of gain and a remote control into the bargain.

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

MING DA MD-7SE £1,520
A valve preamplifier with an open, effortless sound and a big soundstage. It has plenty of gain so will accept any source and drive any power amp. A real beauty.

INTEGRATED AMPLIFIERS

ARIA PRO845SE £1,499
Pure single-ended valve magic. Low powered but immediately gorgeous, easy going yet forcibly dynamic at the same time.

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

CAMSIDE AZUR 651A £350
Dual mono construction and gutsy toroidal power supply combine to produce a solid and stable sound with soundstage far beyond its price point.

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CAMSIDE AZUR 651A £350
Dual mono construction and gutsy toroidal power supply combine to produce a solid and stable sound with soundstage far beyond its price point.
WORLD STANDARDS

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

NAIM NAIT 5S £925
Naim’s fabulous entry-level integrated amplifier is updated to Si status. Derows Naim’s superbly muscular sound at entry level.

SUDBEN A21SE £2,460
Class A amp with fantastic sound quality producing hard, sculpted images, deep detail and tight bass. Just don’t expect disco-like sound levels!

POWER AMPLIFIERS

AUDIO RESEARCH VS175 £1,498
Powerful, fast valve sound that makes everything else look weak at times. Needs careful matching but well worth the effort.

AUDIO RESEARCH VS115 £5,000
Oodles of power with enormous punch. Rafael Todes said it provided “smack and awe” while retaining incredible smoothness and texture.

ICON AUDIO MB04S MKII £7,600
With 120W from big B45 valves right down to low frequencies, this power amplifier has massive dynamics and bass swing, yet is easy on the ear.

ICON AUDIO MB81PP £15,000
Big Russian transmitter valves deliver 200W from these massive monoblock amplifiers. Frightening in every sense.

MCINTOSH MC-152 £3,995
Stunningly insightful sound with enormous bass punch from a uniquely designed transistor amp. Amazing audio, a league up, if expensive.

QUAD II-EIGHTY MONOBLOCKS £6,000 PR
Powerful and expansive sound from modern design monoblocks that also look lovely. Superb – used by us as a reference.

QUADRAL ORKAN V/1 AKT/US £6,200
Active loudspeaker with light, powerful bass, perfect accuracy and detailed treble from a rib-cage tweeter.

LOUDSPEAKER FLOORSTANDER

B&W 803 D3 £12,500
B&W’s updated statement floorstanders deliver depth and definition with breathtaking speed and authority, aided by a diamond coated tweeter. Expensive – but enormously impressive.

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

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

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

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

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

QUADRAL CHROMIUM STYLE 8 £1,700
A supremely smooth yet open sounding loudspeaker. Clean and detailed treble from a fine ribbon tweeter. Accurate yet informative and enjoyable. Pure class.

MCINTOSH MC352 £5,000
Power amplifiers with clean and detailed sound. The MC352 is a great pick for those looking for a reference sound.

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

ACOUSTIC ENERGY NEO 1 V2 £225
Ovoidal sounding speaker with fast and tuneful bass.
ELAC BS243 £1,000
More transparent and spacious than they’ve a right to be at this price, these refined mid-price standmounters represent top value.

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

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

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

WHARFEDALE DENTON £500
A beguiling mixture of retro looks with modern, high-technology drive units. The Denton has an easy-going, big-hearted sound with a touch of trad warmth that should appeal to many.

HEADPHONE AMPLIFIERS

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

CHORD MOJO £380
Class leading portable DAC and headphone amp with ability beyond all else. Big, open spacious sound.

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

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

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

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

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

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

CD PLAYERS

AU301 LAB 8220DC £949
Inspired CD player and DAC with price-performance ratio like no other. Capable of matching designs costing much more.

CAMBRIDGE AUDIO AZUR 651C £1,410
Snazzy modern presentation from this budget CD player.Cracking audible entry point for any digital fan.

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

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

EXPOSURE 101 £395
Detailed player with fine sense of timing should be an automatic entry on any demo list at this price.
WORLD STANDARDS

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

OPPO BDP-1050 £1,200
Universal player and DAC that makes CD and Blu-ray (+DVD) sound deep, spacious and full bodied. Reference quality that's affordable.

REGA APOLLO-R £550
Rega comes up with a fine CD player again. Tremendous detail and an easy, unforced sound at all times. Few rivals and what's out there doesn't come close.

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

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

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

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

DACS
AUDIOLAB M-DAC £600
Excellent sound from ESS Sabre32 DAC and impressive flexibility with a unique range of filter options make this a stand-out product. Low price is the icing on the cake.

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

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

CHORD Q2UTE HD £990
Superb build quality and exceptional sound from this compact unit. Boasts the ability to handle DSD direct via USB and has an exceptional soundstage. One of the best DACs you can buy.

DCS DEBUSSY £8,000
DCS’s bespoke “Ring DAC” circuit gives a beautifully fluid, almost analogue sound that encourages long listening sessions. Not cheap but worth every penny.

NORTHERN FIDELITY DAC £650
Packed full of features, including Bluetooth and USB, this ESS Sabre32 equipped DAC offers crisp, insightful sound at low price.

METRUM OCTAVE £729
Unique two box digital to analogue converter with great sound at a great price. Cuts upper treble, though.

Chord's proprietary DAC circuit shines in their top-of-the-range streamer. Hear-through clarity with a sound rich in detail, dynamics and soundstage.

CAMBRIDGE AUDIO NP30 £390
Budget offering from Cambridge offers a great introduction to network streaming.

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

CONVERT TECHNOLOGIES PLATO £2999.00
A network player with amplifier that does it all, including turn LP to hi-resolution digital, and add cover artwork from the ‘net.

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

NAIM NDXSE £2,175
Great sound quality with traditional Naim soft. A wonderful DAC with full 24/192 handling. Only the display could be better.
PORTABLE SPEAKERS

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

INIVER IBA-50 £99
Big, warm sound with plenty of volume and clean at high levels. Muscular sound compared to many rivals.

CABLES

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

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

CHORD SIGNATURE REFERENCE £390
Majors on timing, detail and openness. Capable of getting the best from most systems and a recommended upgrade.

HEADPHONES

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

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

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

CABLES

RHODIUM TWIST £71/3M


NAIM NAC-N172 XS £1,650
A pre-amp/DAC/streamer package provides a taught, rock-solid presentation with a tonally rich midband and a superior sense of rhythm.

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

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

DIGITAL SOURCES

ASTELL&KERN AK100 MKII £599
Portable high-definition digital player with superb sound quality. Punchy and fast.

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

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

NAIM HDX £4,465
Interesting one-box network-enabled hard-disk music system that gives superb sound together with impressive ease of use.

NAIM UNIUTLITE £1,995
A 50W amplifier with traditional Naim left, a CD player and wireless radio, plus network input and Bluetooth make this a great all-in-one.

Tellurium Q Black £280-3M
A deep, dark, velvety performer that’s nevertheless agile music, it represents excellent value as mid-price cables go.

Tellurium Q Silver Diamond £80/M
An open, natural and transparent sound that is difficult to beat, from these gilded loudspeaker cables.

Chord Signature Reference £390
Majors on timing, detail and openness. Capable of getting the best from most systems and a recommended upgrade.

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

Oppo PM-1 £950
Planar magnetic ‘phones with a warm, easy but big bodied sound that draws you in. Need a lot of drive but deliver superb bass.

Tellurium Q Silver Diamond £80/M
An open, natural and transparent sound that is difficult to beat, from these gilded loudspeaker cables.

Yamaha HPH-MT220 £150
Purpose’d for studio monitoring yet light and comfortable enough to be used on the move. Excellent sound quality married only by a slight warmth to vocals.

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Purpose’d for studio monitoring yet light and comfortable enough to be used on the move. Excellent sound quality married only by a slight warmth to vocals.
Hugo 2 has taken one giant leap: with a new addition of the 2go streamer/server device, which brings wireless and wired streaming, up to 4TB of storage, plus auto source-switching for seamless music playback between playback applications. Hugo 2 with 2go is now a DAC, preamp, headphone amp, streamer and digital music library, all in one class-leading British-built device.
Choral Ensemble

The new Chora 816 from Focal is a lot of entry-level speaker for the money. But will it win the heart of Chris Frankland?

The Chora 816 from Focal is a lot of 'speaker for £1,099. It is well presented and finished and would give an owner confidence in having purchased a quality product. This 2.5-way reflex-loaded floorstander from France measures 303mm high by 388mm wide by 102.3mm deep. It also comes with its own floor stands, each with four spiked feet, that bolt to the bottom of the handsome dark wood veneered cabinets.

Focal may be a relative newcomer to the UK, but it was founded in France in 1979 and is a significant player in the European market. It designs its speakers in-house and has its own manufacturing and cabinet making facility (although the Chora cabinets are not made there). It sprang to prominence in the UK when merging in 2011 with UK hi-fi legend Naim Audio. After, in 2014, Focal and Naim were acquired by French investment group Naxicap Partners and private equity company Aquasourca and are now part of holding company The Ventent Group.

The Chora range was unveiled in late 2019. In the middle is the 816 I'm reviewing here; at the top is the three-way 826 at £1,200 and there is an entry-level 806 two-way bookshelf for £599. All are bass-reflex designs and feature a 25mm aluminium/magnesium tweeter and Focal's newly-developed Slatefiber-coned bass and midrange drivers. These cones are made from a composite of recycled non-woven carbon fibres and thermoplastic polymer. The carbon fibres in the cone are said to improve rigidity and are bound together by the thermoplastic polymer to increase damping.

The cones are claimed to be very light in order to optimise sensitivity. Delivering a loud 90dB from one Watt (at 1m) they need little power, so are an easy match to all amplifiers, including those with valves.

The 165mm bass driver crosses over at 270Hz to a 165mm midrange cone, which in turn hands over to the 25mm tweeter at 2.7kHz. This uses a memory foam material called Poron for the surround, which is derived from the beryllium tweeter used in the Utopia range. It is said to reduce distortion between 2kHz and 3kHz.

The new Chora range replaces Focal's old Chorus range and is intended to offer high quality sound at an accessible price point.

**SOUND QUALITY**

With their stands bolted in place, I placed the 816 speakers around 9in from the rear wall of my listening room and about 12in from the corners. This usually proves the best place in my room and the focal Chora 816 was no exception.

My new Audio Note Tonmeister valve amplifier was on hand, which I thought would be a suitable partner.
Featuring groundbreaking circum-aural technology and a new generation of exclusive electro-dynamic speaker drivers, Stellia closed-back headphones are capable of offering outstanding performance and an extensive frequency response in any environment.

Arche is an ideal all-in-one DAC and headphone amplifier solution, also equipped with the capability to integrate with your home Hi-Fi system. Offering presets for every set of Focal Premium headphones, Arche ensures you get the absolute best result from this ultimate combination, every time.

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I also used a Naim NAIT XS2, which seemed a logical partner as the two products are stablemates. Sources were an Audio Note 4.1x CD player and TT3 turntable with Arm2 and lo! cartridge through an S9 transformer.

I kicked off with the Tonmeister driving the 816s, reaching for Dave Koz’s The Dance to spin up The Bright Side. Immediately, I was impressed by the life and dynamics of the 816s, their detail and control on sax and their exuberance and detail on percussion. The track hung together well and there seemed little to seriously criticise for a ‘speaker at the price. But was that percussion at times a little over-exuberant? Certainly revealing.

Next up was Ben Sidran’s wonderful rendition of On the Sunny Side of the Street. Bass was tight and tuneful without being boomy. Vocals were very good – articulate and detailed, while dynamics were excellent and percussion really sparkled.

Next, I brought the Naim NAIT XS2 into play. On Van Morrison’s Days Like This, his vocals were well handled, backing singers nicely separated and detailed and the horn section dynamic. But would that horn section prove a little tiring over time? They have a vivid sound.

‘On Labi Siffre’s It Must Be Love, his ukulele intro was beautifully handled, his guitar solo detailed and well voiced with good insight into his playing, but was his voice could be a little shouty at times. Again, forward and vivid.

**CONCLUSION**

The Focal Chora 816 is a very capable performer – uncoloured, dynamic, detailed and able to convey the life and impetus of music well, from both a Naim Nait XS2 and Audio Note Tonmeister. It has many fine qualities but some may find the top end lively. There’s plenty of treble sparkle – that’s for sure – and good bass also. This is a lively loudspeaker and fine value. Worth auditioning at your local retailer.

---

**MEASURED PERFORMANCE**

Frequency response of the Chora 816 was at its flatest when measured 20 degrees off-axis, as shown, where there is still treble lift. Measured on-axis, this lift was pronounced at +2dB, sufficient to make the Chora sound bright. The grille does not cover the tweeter and made no difference to these results. So the Chora 816 is best aligned to point straight down a room, not at

**FREQUENCY RESPONSE**

Green - driver output
Red - port output

**IMPEDANCE**
<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Price</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>McIntosh C47</td>
<td>Solid State Preampifer</td>
<td>£4,995</td>
<td>36 Months</td>
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<tr>
<td>§ McIntosh C47</td>
<td>• 7 analogue &amp; 5 digital inputs</td>
<td></td>
<td></td>
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<tr>
<td>§ McIntosh C47</td>
<td>• Decode &amp; play back high fidelity DSD files via USB</td>
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<tr>
<td>§ McIntosh C47</td>
<td>• Limited stock at this price</td>
<td></td>
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<tr>
<td>§ McIntosh C47</td>
<td><strong>SAVE 40%</strong></td>
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<tr>
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<td>Stereo Integrated Amplifier</td>
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<td>36 Months</td>
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<tr>
<td>McIntosh MA252</td>
<td>• 160 watts per channel</td>
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<tr>
<td>McIntosh MA252</td>
<td>• Hybrid design: vacuum tube preamp and solid state power amp</td>
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<tr>
<td>McIntosh C53</td>
<td>Solid State Preampifer</td>
<td>£9,995</td>
<td>36 Months</td>
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<tr>
<td>McIntosh MA252</td>
<td>• DA2 digital audio module</td>
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<tr>
<td>McIntosh C53</td>
<td>• Supports up to DSD512 files</td>
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<tr>
<td>McIntosh C53</td>
<td>• 8 band analog equalizer</td>
<td></td>
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<tr>
<td>McIntosh C53</td>
<td>• 9 analogue &amp; 7 digital inputs</td>
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<tr>
<td>McIntosh MA252</td>
<td>• 600 watt quad balanced</td>
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<tr>
<td>McIntosh C611</td>
<td>• Eco-friendly power management</td>
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<tr>
<td>McIntosh C611</td>
<td>• 2, 4 and 8Ω2 outputs</td>
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<tr>
<td>McIntosh C611</td>
<td>• 55% increase in dynamic headroom compared to previous model</td>
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<td>SME Tonearms</td>
<td>Series 309</td>
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<td>24 Months</td>
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<td>£7,550</td>
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<tr>
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<td></td>
<td></td>
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<tr>
<td>SME Tonearms</td>
<td>Series V-12</td>
<td>£112.90</td>
<td>24 Months</td>
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**New Products**

- **70th Anniversary McIntosh MC2152**
  - 2-Channel Vacuum Tube Amplifier
  - With matching serial numbers
  - 150 watts x 2 channels
  - (8) KT88, (4) 12AX7A and (4) 12AX7E vacuum tubes
  - MM & MC phono inputs
  - Includes McIntosh History Book
  - Price: £25,000

- **70th Anniversary McIntosh C70**
  - 2-Channel Vacuum Tube Preampifier
  - Price: £2,995

- **70th Anniversary McIntosh MA9000**
  - 300 watts per channel
  - 8-band tone control
  - DA1 digital audio module
  - Price: £12,995

- **70th Anniversary McIntosh MA9000**
  - 200 Watt per channel
  - 94% increase in dynamic headroom
  - Quiet fanless design
  - Can be used in 5.1 home theaters
  - Price: £12,995

- **70th Anniversary McIntosh MC257**
  - 200 Watt per channel
  - 94% increase in dynamic headroom
  - Quiet fanless design
  - Can be used in 5.1 home theaters
  - Price: £12,995

- **70th Anniversary McIntosh MA252**
  - 200 watt per channel
  - All analog design and a retro look
  - Price: £8,495
### Audio-Technica Cartridges

**AT-OC9X Series**
- Moving coil
- 24 Months Warranty

**AT-ART1000**
- Moving coil
- Available in-store only
- 24 Months Warranty

### SME Turntable

**Synergy + Series IV Arm**
- Built-in NAGRA phono stage
- Ortofon’s ‘exclusive series’ MC Windfeld Ti cartridge
- Internal crystal cables

### Technics Direct Drive Turntable

**SL-1000R** / **SP-10R**
- Coreless direct drive
- Separate control unit
- Probably the best DD turntables in the world
- 24 Months Warranty

**SL-1200G** / **1200GR** / **1210GR**
- The legendary turntable reborn
- Coreless direct drive
- Free Ortofon 2M blue cartridge
- 24 Months Warranty

**SL-1210G**
- 24 Months Warranty

### JBL Passive Loudspeakers

**L100 Classic**
- Classic 70s look
- Frequency response 40Hz – 40kHz
- Vintage Quadrex foam grille
- JBL JS-120 floor stands available at £235.00

### Avantgarde Speakers

**UNO XD**
- 2-way hornsystem speakers
- 18 Ohm high-impedance voice coil design, efficiency of 107 dB
- Active crossover programmable by built-in DSP
- 36 Months Warranty

**DUO XD**
- 2-way hornsystem speakers
- Powerful SUB231 XD subwoofer module
- Various colour combinations available
- Why not book an in-store demo today?

### Belt Drive Turntable

**Valore 425 Plus**
- 9" tonearm derived from B-5.1 model
- Available in acrylic, black, white, walnut or black leather

### JBL Speakers

**Victor**
- Probably the best floorstanding speakers
- 24 Months Warranty

**Stage II**
- 24 Months Warranty

**UNO XD**
- 36 Months Warranty

### NAGRA Dacs

**DACs**
- In-store programmable DACs
- In-Store

### McIntosh Reference Dealer

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- Over 1,000,000 records in stock

### Mytek Brooklyn Bridge

- WiFi Streamer / DAC / Preamp all-in-one
- Reference headphone & phono stage
- Includes remote control
- Also available in silver
- 24 Months Warranty

### Manhattan & Brooklyn Dacs

- In our opinion, the best digital-to-analogue converters on the market
- 24 Months Warranty

### SME Turntable

**Model 10**
- Ltd. Edition Black comes with free Ortofon Cadenza cartridge
- 24 Months Warranty

**With 309 Arm**
- Ltd. Edition Black

### Audio-Technica Turntable

**AT-OC9XEN**
- New

### Avantgarde Speakers

**PSU-10**
- Worldwide voltage
- Optional external power supply for Gold Note PH-10
- 24 Months Warranty

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I have to apologise for my late review on this one. This debut vinyl LP has been sitting in a tower of ‘I’ll get around to it tomorrow’ for about six months. But I got there and thank goodness I did! 

A New Zealand band spouting a recipe of genres and sub-genres into a gumbo of hard rock and metal. Ultimately, I’d call this melodic rock or pop/rock but with thrash and metal grammar and classic rock and synth sprinklings, plus hair metal chrome bits on the front and back.

And then there’s the high production values, the well constructed songs and the hooks. Ahh, the hooks. I was humming along with ‘Better Luck Next Time’ and doing a little boogie in my listening chair in a few minutes of studious listening. This LP is – how do I put this – funnn.

Well fun, yes but there’s also some introspection and self awareness here. The album is not a party LP. On ‘Tell Me What You’re Running From’ for example “If I keep running from this, this is not gonna get better, I’m not gonna fix this” said the band. “Whist the short-term gain of running away might be great for a while, there’s a realisation that if I don’t be honest with myself, then it’s never gonna change”.

Ignore the horrendous vocal introduction on track one though, which sounds like the first few minutes of a bad Cher song, draped in exuberant vocal processing in the worst pop-R&B, hit-by-numbers tradition. If I could cut this one out with my Stanley knife, I would.

Apart from that car crash, the rest of the album is truly excellent. High energy, full of life and free from any restraint, this is melodic rock at its very best.

Recorded live at the Marquee Club on 7 August 1964 and featuring Eric Clapton (this was Clapton’s first ever recorded album) this recording shows the band at their early peak and represents one of the most important British rock releases of the early 60s Blues & R&B standards abound, of course.

You might be interested to know that the same night of this recording, other artists also featured. The audience would have also enjoyed the talents of Long John Baldry and the Hoochie Coochie Men (featuring Rod Stewart) plus American blues legend Sonny Boy Williamson, who a few months later invited The Yardbirds to support him on a UK and German summer tour.

This edition has been nicely and newly remastered by Eroc and includes liner notes written by Ugly Things magazine founder Mike Stax with contributions from surviving band members.

The full line-up features Eric Clapton on lead guitar, Chris Dreja on rhythm guitar, Paul Samwell-Smith on bass, Jim McCarty on drums and Keith Reif on vocals and harmonica.

It includes Chuck Berry’s Too Much Monkey Business, Howlin’ Wolf’s Smokestack Lightning, Sonny Boy Williamson’s Good Morning Little Schoolgirl and, as the saying goes, much more!

One of the charms of this release is the between-song banter which adds atmosphere and the sense that you’re part of an occasion. This rather relaxed element of the production is a welcome one. A live album should be all about the moment in time. And not a Spotify playlist.

This album production got it right.
The lady released her solo album, Penelope Two, a wee while ago. This release, Redex, is a contemplative pause in her career path as she looks again at her past work, with the aid of a number of artist friends who’ve contributed their reworking skills to the original music.

The idea was actually broached by her label, Houndstooth, “...to get a couple of remixes of ‘Penelope Two’ which I took as an exciting opportunity to find a way to express my ideas about what I feel a ‘remix’ can be. I have always loved when artists really stretch their own creativity with their own reinterpretation of other people’s songs, whether as a cover or as a remix. I knew I would be looking for a very unique take on Penelope Two” said the Aussie.

One of the important parts of this project was there to be a balanced mix of artists in regard to gender and genre.

So there’s a host of names here that will be imminently familiar. I’m talking about people like Mogwai, Cosey Fanni Tutti and Nik Colk Void. Shelter Press label founder, Felicia Atkinson, adds to this list alongside Houndstooth label chum, Throwing Snow, plus JFDR, Aasthma, Jonny Hostile, Poppy Ackroyd and Paul Corley.

This electronics is moody, full or dark portent and industrial ambience, driven by deep throbbing beats but, because these works are bounced off the atmosphere of each newly introduced personality, the music takes on a slightly more individualistic suite of styles.

Fascinating, stuff. Penny fans should investigate toute suite.

As for the mastering? Gawd knows. I reviewed this off a CD-R so no conclusions can be drawn (never trust a man who offers mastering comments from a CD-R).

S

imon represents a time and a place in popular music. She has a signature position as a singer-songwriter in the 70s. But there is more to her musical output than her hit single You’re So Vain.

Released in 1972, this LP features that very single, helping this album to hit Gold status in five minutes flat. Her autobiographical honesty had a lot to do with that because this album certainly has that atmosphere. That hit single was reputedly all about her relationship with actor Warren Beatty while the song, The Right Thing To Do, laid her relationship with James Taylor open to public scrutiny.

Friends and family must have kept their lips firmly sealed when Carly came over for tea, just in case. That honesty was also turned inwards, though. She was never afraid to admit to her own failings.

Many forget how many friends and guests joined Simon on this release. Jagger sang with her on You’re So Vain, for example. Also, on James Taylor’s Night Owl, which is a rock outing in a blues frame of mind, you’ll find session musician extraordinary Nicky Hopkins, friend of The Beatles, Klaus Voormann and sax player Bobby Keys who knew everyone and appeared on all of their albums, plus vocals from Bonnie Bramlett (of Delaney & Bonnie fame), Doris Troy who was a famed soul singer with hits under her belt but was also one of the famed voiced on Floyd’s ‘Dark Side of the Moon’. The track even saw an appearance from a pair of McCartneys, for goodness sake! This LP was name drop city, and no mistake.

That the heartfelt lyrics and delivery were wrapped up in a digestible commercial rock and pop presentation sealed its success.

As for the mastering? Typically excellent from Speakers Corner.
All cables obey the Laws of Physics. Some just sound infinitely better.

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"Old products look to be value beyond modern conception"

My column this month is rubbish – or about it. Contributors Dave Tutt and Martin Pipe get worked up over rubbish. The UN agrees with them, issuing a report recently that puts figures onto the amount of electronic rubbish we produce nowadays – all those old TVs, phones and – perhaps – hi-fi amplifiers that we so casually discard. In my view inevitably discard because there is no worked out way to efficiently re-cycle electronics rubbish.

There’s strange amnesia about this. I live in London where the amount of electronic product being discarded, replete with precious metals such as gold, copper, silver, nickel and much else lurking in a circuit board, turns up on the street as battered and damaged domestic refuse sitting at the base of a tree, awaiting collection from the binmen, namely a constant stream of heavy Veolia trucks that patrol the streets to keep them clear of such rubbish.

The noise from these monsters goes on all day, Sundays included, just to keep up with this torrent. But they crush what is thrown in, for landfill; re-cycling isn’t involved. There is nowhere in Westminster to deposit such equipment. A few miserable local bins accept hair dryers, but you won’t get your old Samsung TV, whose switch-mode power supply has failed (as they do), in there.

This is my experience of trying to discard unwanted electronic product in a city. If you live somewhere with a local tip that has the ability to properly re-cycle such electrical waste – or rescue potentially valuable products that can be restored to full working order – then you are in a better place than I.

And as for old computers, rendered useless automatically by software updates that do not read old code, this is another world again, one of built-in obsolescence that goes unchallenged.

We had WEE regulations from the EU in 2008 that were meant to deal with electronic waste but the solution, implemented at huge cost to everyone, where the supplier from which you bought the product (termed the “polluter” no less) was responsible for its re-cycling – was a bureaucratic nonsense, proving completely impracticable in real life. Leaving us with piles of uncollected electronic rubbish and piles of EU regulation unfit for purpose.

A Press Release of the UN report I mentioned earlier, excitingly titled ‘Chemicals & Waste’, dated Jan 2019, says “as much as 50 million tonnes of electronic and electrical waste is produced a year, more than all the commercial airliners ever made, and only 20% is efficiently recycled”. It’s worth over $62.5 billion and there is 100 times more gold in there than a tonne of gold ore, they say. Other valuable elements are platinum, cobalt and rare earth elements. Interesting that the UN report talks vaguely about “buy back and return” as a solution, but omits to mention WEE. So we’ll forget about that then.

That the EU WEE directive of 2008 should be ignored by the UN report just 11 years later shows how ineffective both agencies are in offering any useful solutions to this global problem.

Our columnist Dave Tutt deals with this at ground level, as a repairer of hi-fi and electronics. A long, tortuous e-mail from him on the subject of just how bad things are out there with regard to reliability, repairability and disposability fits neatly into the problem of electronic rubbish. In a nutshell, Dave explains that much modern equipment is effectively unrepairable. Built by robots using micro-miniature surface mount devices (SMDs) that humans cannot easily manipulate, if it goes wrong it is scrap.

And it does go wrong, repeatedly and consistently with switch-mode power supplies, one reason they have such a bad reputation. I had a close look at a Samsung TV that died on me a few years ago and the power supply was a wreck. No point in ordering a new board, this TV was fit only to be thrown out next to my local tree. I didn’t do that of course (even though WEE says “kerbside waste collection” is valid) and could not get it into my local waste electrical bin purposed for hair dryers, so it went into a general waste bin – which wasn’t right. Some practicable way of dealing with waste electronic product like this is needed.

The sheer simplicty of old analogue equipment, especially when hard wired, makes it an easy and quick service proposition. Factor in great sound quality and all of a sudden old products look to be value beyond modern conception. But I’ll not ignore modern products here either.

A good modern valve amplifier like the simple Icon Audio Stereo 30 SE I use is an interesting example. I have built more valve amps than I care to think about, becoming accustomed to the whole push-pull thing. But – hey! – it does not now need to be like this. With KT 150s there’s enough power from just one output valve per channel – and no crossover distortion. Ultimate simplicity, giving great reliability and sound. Repairable and not destined to be abandoned beneath a tree.

A reminder to me about purist fundamentalism. Let it be simple and pure, easily repairable and not a piece of rubbish.

Noel Keywood
The EVO and the new EVOke

Now you have a choice of any SL-1200!
The new EVOke has world beating performance figures that are comparable with the world's most expensive turntables. The ability to fit any arm or cartridge to any SL-1200 new or old means you can now have the EVO that you want at the price you want.

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

We have worked with direct drive turntables and moving coil cartridges for nearly 40 years. We can supply completely new units with 5 year guarantees, used ones with 5 year guarantees, or we can convert your own.

Technics SP-10R & SL-1000R

Many combinations available

Hi Fi World said:
This is a spinner of vinyl for the serious, where you just want to punch a button and get on with it. It offers a degree of unarguable perfection for professional studios and anyone working with vinyl. If you want such unerring focus on the basics of playing LP it’s time to check the piggy bank.

Hi Fi News said:
Any great turntable gives you a certain frisson when you hear it. It’s that old shivers down the spine feeling, a sense of being let into a world to which you had previously not been privy. This is a remarkable turntable, and arguably the apex of vinyl playback. It’s difficult to see how the SP-10R motor unit can be improved upon. It is a definitive statement of engineering prowess, and marks the return of direct drive to the top tier of turntables.

Miyajima - Stereo - Mono - Denon DL-103 - Audio Technica AT33 & OC9
Turntables & Tonearms - Technics SL-1200 & SP-10R - Furutech - Klipsch - 78rpm - SL1200 Mods

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"Go analogue. Take a digital album and put it on cassette"  

Paul Rigby

I f there’s one thing about content that really winds me up – and when I say content I mean everything from books, computer games, film, music and more – it’s the corporate wish to digitise the lot and to feed it to us on a strictly rental basis.

Ever since downloads appeared illegally as MP3s on Napster and then legally via the likes of iTunes, physical formats have been an endangered species.

In the USA, last year, only 17% of all computer games were sold in a physical format and, judging by many YouTube channels I’ve seen, lots of gaming fans are not happy and sense that they’re losing something important.

Because of a lack of shelf space, I have a Kindle with around 1,000 books on it but I don’t feel that I actually own any of them. I rent them. After the first flush of novelty, my time in between reading a Kindle-based book, grows. I read physical books, principally. I appreciate the fact that I actually own the things.

Film of all types is streamed into our homes. I have Netflix and Amazon and I used to have Sky at (thankfully) binned that. Now? Apart from YouTube watching, most of my TV watching is done via DVD and Blu-ray. I feel all the better for it too.

In hi-fi, music is streamed from Tidal, Spotify and the rest. Even when I do manage to grab a file, I don’t see it. I see the container, the hard disk say, but not the actual content. I feel more at one with my music when I handle vinyl. Even CD makes me feel better than hitting a stream button.

The problem I’m alluding to is not that streaming and digital formats exist. I actually like streaming and digital and find them useful. It’s the opposite. It’s my right to choose that is being eroded. I feel that choice is being taken away from me. Slowly and steadily.

This comment space is too small to properly examine all corners of the issue and to offer considered conclusions and so I won’t be doing that here.

The reason I bring up the above relates to a disturbing side effect. That’s the phenomenon of exclusive digital content. That is, content we would like to consume that cannot be bought in a physical format.

There are thousands of computer games out there that fit this spec. There are fewer Kindle-only books but they do exist. Film too. Many superb documentaries, for example. And there’s more music now being produced that is digital only. It worries me because, if this music was, as it were, switched off, it would disappear into the ether, possibly never to be heard again. With, who knows, no backup to record its existence. That possibility is there and it’s real.

But is it our fault? Or rather, are the lovers of physical formats, those that actually care, just too small in number to influence the market any more? Are we actually a dying breed. Do we matter?

One notable electronic/triphop-esque artist of long experience whom I respect, Steve Cobby, possibly better known to you as Solid Doctor or Fila Brazilia, views physical formats with mistrust. He tried selling his own work physically but “...the move was a disaster. Stock was over-pressed with higher manufacturing and printing costs plus I was paying storage on unsold stock...it was not the way to go”.

For Cobby, digital appears to be the prime format with the possibility of crowd funding offering the chance appearance of a physical version.

How long will it be before crowd-funding becomes a chore? I say this because I have three or four favoured artists, all of whom have a residence on the online music site Bandcamp, whose work can only now be purchased in a digital form.

So, what to do? Well, I’ve decided that if I want a physical format, I must produce it myself and produce it to the audiophile standards that I expect. I’ve decided to take a DIY approach to the physicality of media. Well, to music at least.

My solution? Go analogue. Take a digital only album and put it on cassette. Daft? Not from my point of view. There’s plenty of high quality cassettes still around and I can manipulate both bias and level to taste.

Many of the digital-only source options are of CD quality or higher. If I can push that through my reference hi-fi and then record it using a quality cassette deck (and I am fortunate to have the choice of a very nice Yamaha or a Nakamichi or even a Studer) and save that to a high quality chrome, cobalt-doped ferric or metal tape, adorned with a suitable cover, then I have a physical version of that digital-only album and in a form that I am very happy to listen to.

More to the point. I also have a variant of the album that is going absolutely nowhere.

The future of physical formats then? DIY. You read it here first.
ALL NEW | THE FIVES
POWERED MONITORS

THE FIVES are the first powered monitors on the market with HDMI-ARC to connect directly to a TV for high resolution, discrete 2-channel TV sound. Immensely improve your TV's sound with THE FIVES - easy-to-use, powered, high def speakers that connect directly to your TV - and virtually anything...
"it’s the quality of the stereo sound that really impresses"

Martin Pipe

Being confined to home, courtesy of the Covid-19 ‘lockdown’, gave me an opportunity to attack those jobs (large and small) that have been accumulating, judging by the numerous skips I’ve seen around my neighbourhood, the clearing of lofts and outbuildings has been a popular task.

Personally I’d rather fix than chuck, and have been tending to a number of repair jobs – ranging from a Walkman Professional and a Revox G36 tape deck (destined for Olice World), to various items of test kit.

Among these was a 1960s-vintage Radiometer SMG1 stereo FM generator, donated by our own Noel Keywood. Built in Denmark, its raison d’etre was to check and align Zenith/GE-standard ‘multiplex’ stereo decoders.

Stereo FM broadcasting in the UK officially began in 1966; following a series of BBC trials, the BBC’s Third Programme (Radio 3) was radiated from Wrotham.

As well as aiding manufacturers, generators like the SMG1 allowed service departments to check and set up receiving gear in readiness for the ‘big day’ – when the VHF transmitters serving their areas went stereo.

Audio-frequency oscillators within these units modulate either one or both stereo channels in various ways, the multiplex signal being fed to a low-power VHF/FM transmitter with accurate output-attenuation facility. The latter’s output, usually a ‘spot’ frequency that could be shifted either way by 1MHz or thereabouts, would drive the aerial input of the receiver being investigated. Those test tones could, for example, verify the separation between left and right channels.

The SMG1 is particularly interesting because it accepts external audio from line-level sources like tape machines and phono stages. Voila! My own ‘closed-circuit’ stereo FM station! Useful if I need to review tuners and receivers, needing a known audio source to assess their relative sonic virtues.

The SMG1’s front panel, dominated by a wonderfully old-school level-meter, also has an input marked ‘SCA’ for a 67kHz subcarrier modulated by narrow-band audio. SCA didn’t take off here, although it distributed Muzak and talking books throughout North America. You could presumably inject RDS data (also modulated onto a subcarrier; here, 57kHz) into this socket. Available cheaply are programmable RDS-encoders based around PICs – tiny single-chip computers with various ‘real-world’ interfaces. While I still have spare time, I plan to experiment with one.

This particular SMG1 wasn’t working. Noel had rebuilt its power supply with more modern components, but a short-circuit tantalum capacitor had taken out a voltage regulator. There were also problems with the internal timing-chains. Here, the output of a 76kHz crystal oscillator is divided by two to get 38kHz (at which rate the left and right channels are switched, thereby forming a suppressed-subcarrier AM signal containing the L-R ‘difference’ information). That 38kHz is, in turn, divided by two, deriving the 19kHz pilot tone that a radio uses to detect the presence of a stereo broadcast and decode it i.e. demodulate the 38kHz subcarrier and (using a ‘matrix’) reconstitute the stereo channels from the difference and the ‘sum’ (L+R, or the ‘compatible’ mono audio) that the SMG1 also throws into the ‘mux’.

It’s all implemented with ancient germanium PNP transistors, so I was taken aback by just how well it performed. For a start, the VHF oscillator is surprisingly free from drift, certainly after an hour’s warm-up. However, it’s the quality of the stereo sound that really impresses. Fed from a CD source and in turn feeding a decent FM tuner, it trounced most of the overcompressed garbage that pollutes today’s broadcast band. It’s warm and musical in presentation, far more detailed than I expected it to be and free of objectionable background noise. Remember: this test gear’s older than I am, and using techniques even older than that. Those analogue guys knew what they were doing...

The rejuvenated Radiometer proved handy when focusing my attention on a fully-featured Pioneer QX-949 quadrophonic receiver with a duff tuner. Its IF amplifier/FM demodulator chip had partially-failed and an electrolytic coupling capacitor had risen in value. Furthermore, the RF stage and FM discriminator tuning were way out of alignment (had a ‘twiddler’ been at work?) and the 8V miniature bulb that indicates ‘stereo’ broadcasts had failed.

People moan that equipment designers spare little thought for repairers. That’s as true then as it is now; the Pioneer and Radiometer were difficult to work on. In both cases, getting to ‘hard-wired’ circuit-boards involved considerable disassembly. The Pioneer board, which the firm also used in some contemporary AM/FM tuners, had to be lifted out so I could make a discriminator-coil adjustment on the board’s track side.

All the same, being locked down gave me the time to repair for reuse these items. Old gear isn’t so easy to work on, but with a little time and effort the rewards are worthwhile.

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CHROMIUM STYLE

CHROMIUM STYLE unites form and function in to an incredibly convincing sound experience. The elegant cabinet fulfils highest design standards and their rounded sides reduce sound divergence through the sound conduction.

„Verdict:
A refined sound from a sophisticated product.
Superb!“

"that a cleaner or brighter sound is closer to hi-fi many of
my customers would dispute"

I f you are looking for a decent
sound on the cheap then
some of the second hand
equipment out there can be a
brilliant solution.

So what have I been
playing with this month? I had a
request for a hi-fi for less than £300,
for use when away from home. He
was using a Sony stacking system
at home which he obviously loved.
He had been to a number of outlets
but not seen anything that suited his
wish for what I can only call a non
hi-fi warm and sort of muggy sound
– yet an upgrade at the same time!

On my list of equipment for him
to try was a Rotel RA921 which I
have to say, from my point of view,
is a cracking little amplifier. Simple in
that it isn’t festedooned with gadgets,
not even a tone defeat switch.
Decent components and enough
power to drive an average room
perfectly loud enough. This one had
obviously suffered from shorted
speaker wires as it had blown its
right channel fuse but a replacement
and a clean up made it sing.

I also had a Marantz PM4200
that I purchased from eBay as
faulty – it just needed a clean of
the volume control so was ready in
minutes.

Both of these amps had MM
phone inputs – with a customer
who might like to add a turntable
this was another plus.

Then there was a Cambridge
Audio A5 amplifier still in its box
but with one channel blown that,
due to the very expensive output
transistors, was not a cheap repair
but is an easy amp to fix all the
same. Most Cambridge Audio amps
sound pretty clean and hi-fi-ish,
getting better as you get higher up
the price range.

More bottom end thump
can be gained by power supply upgrades
but given his ‘speakers it was
doubtful this would be necessary.

Finally on the amp front was
something a little different, an
NAD 712 receiver which has that
great NAD sound that I thought
was more in keeping with what
he wanted. The benefit of having
a tuner might just clinch the deal
– and again there was an MM phono
stage.

Next for him was a CD. I had
a Tec, three Sony’s, a beaten up
Marantz and a couple of Cambridge
Audios in stock but an older more
substantially built Sony CDP-777
seemed ideal. Its slightly warmer
presentation would be a plus even if
its ultimate sound might be a little
dated now.

‘Speakers were a problem
though, I had some compact
Denons that got dragged around
the workshop to test things. Although
they work well for tiny speakers
they were in too much of a state to
sell. Then there were a pair of Eltax
floor standers with grills that are
a bit dirty – and baby Celestions with
different tweeters and no grills!

So, doing a demo, I connected
up the NAD 712 receiver, the
Sony CDP 777 CD player and the
Eltax Symphony floor standers that
together made a really nice sound.
The Eltax only have tiny bass drivers,
around 4.5 inches, so they are never
going to rattle the windows but are
perfectly adequate in a home. For
more bass there are any number
of subs out there that could be
added on – or alternatively bigger
‘speakers of course.

My customer took the NAD,
Eltax and Sony solution and was
happy with it until the CD started
doing odd things; I swapped it for
one of the others for him.

So in this instance I charged
£200, plus taking the Yamaha CD
player he had that was having disk
read issues. It seemed to have been
a good solution for him.

The Marantz PM4200 was
sold the following day to another
customer so my stock is diminishing
again.

I am a little wary of the Marantz
PM4200 as I have had three in the
workshop with open circuit mains
transformers, most probably with
the thermal fuse fitted internally
having blown. This isn’t repairable
I found after a dig through
the windings of a faulty transformer
did not reveal the fuse – so there was
no way provide a fix.

Fusible transformers are a safety
component (preventing fire) so it
would have to be replaced with an
identical one. Of course, finding a
replacement would have been far
too expensive, rendering the amp
beyond economic repair.

A much earlier Marantz PM1072
that arrived in the workshop with
just a loud hum needed new power
supply smoothing capacitors. Once
repaired it had a warmer sound
than the PM4200. Given the 30 year
age difference I guess that is taste
and perhaps progress in electronic
design.

To some extent the idea that
a cleaner or brighter sound in
amplifiers might actually be closer to
hi-fi, which many of my customers
would dispute, is something that
could be discussed for many hours.

The PM1072 went back to
its owner within 24 hours, after a
further strip down to remove the
years of nicotine ground into the
case.

There is so much equipment out
there to try and once it has had its
quirks and age related issues dealt
with is far better than any nasty
stacking system. I am sure there are
many real gems hidden in lofts and
cupboards that, with a bit of work,
would be great today. Trouble is finding
them before they get binned.
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.

**EAT FORTE**
2009 £12,500
Lavishly finished two box, two motor turntable with gorgeous Ikeda 407 tonearm bundled. Exceptionally stable and unfussy performer with a relaxed but highly enjoyable gait.

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

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

**MCINTOSH MT10**
2008 £8,995
Big, expensive, controversially styled and gives more than some might consider necessary, but an astonishingly good performer.

**REX P3-24**
2008 £405
Semi-affordable apodemic deck with fine bundled tonearm. Tweakable, and really sings with optional £130 outboard power supply.

**ACOUSTIC SOLID ONE**
2007 £4,050
Huge turntable, both in terms of sheer mass and sonic dynamics. Fit up to three arms and enjoy, just don’t damage your back moving it...

**AVIO VOLVERE SEQUEL**
2007 £4,600
Stylish high end vinyl spinner with industrial strength build quality and a sound to match. Sound is edge of the seat stuff.

**MICHELL GYRODEC SE**
2005 £1,115
Design can with superlative build. Sound is beautifully smooth, effortless and exceptionally expansive.

**MARANTZ TT-1551**
2005 £1,299
Cracking all in one deck/arm/tonearm bundle, this must surely be the best sound/pag and play package at this price point.

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

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

**SME MODEL 10A**
1995 £4,700
Exquisitely engineered deck and SME V tonearm combo that’s an extremely accomplished performer with classical music.

**LINN AXXIS**
1987 £253
Cut-price version of the Sondex with UK arm. Elegant and decently performing package. Later versions with Akito tonearm better.

**ROKsan XERIES**
1984 £950
Superb and clean sound, with excellent transients. Less musical than the Sondex, but more neutral. Sagging pinnings top-plates make them a dubious used buy.

**DUAL CS550**
1982 £75
Simple high quality engineering and a respectable low mass tonearm made for a brilliant budget buy. Polished, smooth and slightly brand sound.

**MICHELL GYRODEC**
1981 £999
Thanks to its stunning visuals, this bod design wasn’t accorded the respect it deserved. Clean, solid and architectural sound.

**TOWNSEND ROCK**
1979 £N/A
Novel machine has extremely clean and fluid sound. Substantially modified through the years, and capable of superb results even today.

**MARANTZ TT1000**
1978 £N/A
Remarkably 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, complete with Acorn derived 3-shaped tonearm 1983 saw the arrival of the R9000, which added dub to the expense of warmth. Superb budget buy.

**SONY PS-B80**
1978 £800
First outing for Sony’s more accessible ‘Botrack’ electronic tonearms. Slept like a tank with a clean and tidy sound, albeit lacking in engineering. Slightly compromised and with no spares support. Buy with caution.

**TRIO TD-70**
1978 £600
The best ‘all-in-one’ package ever made. Clean, powerful and three dimensional sound, ultimately limited by the tonearm.

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

**PIONEER PLC-590**
1976 £690
Sturdy and competent 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 PL120**
1973 £36
When vinyl was the leading source. This bought new standards of noise performance and stability to the class, plus a low friction S-shaped tonearm. Later PL1120 was off the pace compared to rivals.

**TECHNICS SP10**
1973 £400
Seminai Japanese engineering. Sonics depend on pinnae, but a well mounted SP10 will give any modern a hard time, especially a respect for bass power and midband accuracy.

**LINN SONDEN LP12**
1973 £59
For many, the LP superdeck; constant mods meant that early ones sound warmer and more lyrical than modern versions. Recent SE mods have brought it into the 21st century, albeit at a price.

**ARISTON RD11S**
1972 £94
Modern evolvement of Thorens’ original belt drive paradigm. Scotland’s original super-deck was warm and musical; albeit soft. 300lb capacity of fine results today.

**GOLDRING LECNO GL73**
1970 £15.65
Simple well engineered motor unit with soft, sweet sound and reasonable tonearm. Good sounds and servicing support ever today.

**GARRARD 301/401**
1953 £19
Tremendously strong and articulate with only a veiled treble to set it down.

**THORENS TD124**
1959 £N/A
The template for virtually every 1970s ‘superdeck’. This iconic design was the only real competition for Garrard’s 301. It was sweeter and more lyrical yet lighter and less impactful in the bass.
TONEARMS

RECA RB251 2009 £136
Capable way past its price point, the new 9 point mount version of the classic RB250 serves up a taut and detailed sound. A little lean for some tastes, but responds well to reworking and counterweight modification.

HELIX OMEGA 2008 £1,595
Stylish and tidy line of arm with fabulous build quality, that turns in a dynamic and weighty performance.

AUDIO ORIGAMI PU7 2007 £1,300
The classic Syrix PUS 13 updated to spectacular effect. Hand made to order, with any mass, length and colour you care for. Fit, finish and sound truly impressive.

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

TRI-PLANAR PRECISION 2006 £3,600
Immaculate build, exquisite design and one of the most naturally musical and tractable sounds around.

MICHILL TECNOARM A 2003 £442
Clever reworking of the Rega theme, using blasting, drilling and reworking!

SME 309 1989 £767
Mic price SME comes complete with cost cut aluminium arm tube and detachable headshell. Tight, neutral sound with good tonality, but lacks the V's pace and precision.

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

SME SERIES V 1987 £2,390
Vice like bass with incredible weight, ultra clear midband and treble quality, although some can't like its matter of factness!

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

ALPHASON HR1005 1981 £150
First class arm, practically up to present day standards. Buy carefully though, as there is no service available now. Totally under price when new, exceptional.

SME SERIES III 1978 £113
Clever variable mass design complete with Titanium Nitride tube tried to be all things to all men, and failed. Charming nonetheless, with a warm and inoffensive sound.

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

LINN ITOKO LVII 1978 £253
Japanese design to Linn specs made for a musical, rhythmic sound with real dynamics. The final LVII version worth seeking out.

AUDIO TECHNICA AT 1120 1978 £75
Fine finish can't compensate for this ultra low mass arm's limited sonic - a good starter arm if you've only got a few quid to spend.

HADDOK GH2B 1976 £46
Evergreen unipivot with lovely sweet, fluid sound. Excellent service backup.

ACOS LUSTRE GST-1 1975 £46
The archetypal S-shaped sevenes arm; good, prosaic and involving sound in its day, but rugged and undramatic now.

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

PHONO STAGES

CREEK CUBE-8 SE 1996 £180
Punchy, rhythmic character with oodles of detail makes this a great budget audiophile classic. Partner with a Goldring G1047 for an unbeatable budget combination.

MICHILL ISO 1968 £N/A
This Tom Evans designed black box started the trend for high performance offboard phono stages. Charismatic, musical and punchy - if lacking in finesse.

LINN LINNK 1964 £149
Naim designed MC phono stage built to partner the original Naim NAIT - yes, really! Fine sound, although off the pace these days.

INTEGRATED AMPLIFIERS

NAIM NAIT XII 2009 £1,250
With much of the sound of the Superat of all. The price, is this powerful, articulate and smooth beyond class expectations.

MUSICAL FIDELITY PRIMO 2009 £7,900
Serious lympo, but one; only explains why. Wonderfully exuberant sound that can only come from a top quality tube design.

SUGDEN A21A S2 2008 £1,469
Crystaline clarity, dizzying speed and forensic detailing. Power limited so needs sensitive speakers.

CREEK CBE-22 2008 £250
Brilliant value budget passive, with remote control, mute and input switching, plus an easy, neutral sound.

CAMBRIDGE 4040 V2 2007 £750
Version 2 addresses version 1's weaknesses to turn in a mightily accomplished performance, offering power, finesse and detail.

SUGDEN I4A 2007 £3,650
Groady amount of Class A power, icy clarity and a breathtakingly fast, musical sound make this one of the very best super-integrals.

NUFORCE P-8 2007 £2,200
Impeccable big preamp with superb intermodulation and an engaging sound.

MELODY PURE BLACK 1010 2007 £3,295
The clarity and openness of waves plus firm grip and fine detail; make this a preamplifier masterpiece.

AUDIOLAB 8000S 2006 £400
In another life, this sold for three times the price, making it a stand-out bargain now. Very clean, powerful and tidy sound.

MCINTOSH MA6800 1995 £3,735
Effortlessly strong, strong and powerful with seminal styling to match.

DELTEC 2007 £1900
Fast, dry and with excellent transients, this first BFA integrated is the real deal for eighties obsessives. Ridiculously punchy 80W per channel from a tiny, half-size box. Radical, cool and more than a little strange.

EXPOSURE VI/VIII 1985 £625
Semi-integrated pre-amp, offering most of what Naim amps did with just that little bit extra smoothness. Lean, punchy and musical.

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

VTL MINIMAL/50W MONGBLOCK 1985 £1,300
Rugged, professional build and finish aimed at a lively and punchy sound (apart from the limited power) make them an excellent used buy.

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

MISSION CYRUS 2 1984 £299
Classic 1980s minimalism combines reassuring styling with clean, open, lively sound. Further upgradeable with PSX power supply.

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

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

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

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

NAD 3020 1976 £69
Brilliantly smooth, sweet and punchy at the price and even has a better phone stage than you’d expect. The archetypal budget super-amp.

ROGERS A75 1978 £220
Lots of sensible facilities, a goodly power output and nice sound in one box. The later A75i and A100 versions offered improved sonic and were seriously sweet.

A&R A60 1977 £115
Sweet and musical feature-packed integrated; the Audiolab 8000A remains a classic.

SUGDEN CS1/PS1 1976 £130
Soft sounding early Sychne combo with a plethora of facilities and faders. A sweet and endearing performer but lacking in power and poor load driving ability.

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

ROGERS CADET III 1965 £34
Sweet sounding valve integrated, uses EL86 output valves, even has a flat usable phone stage, sweet, warm a good introduction to valves.

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

POWER AMPLIFIERS

ELECTROCOMPANIET NEMO 2009 £9,985 (EACH)
Norwegian power station as cool as a grape tonally, yet impresses with sheer physicality and fleetness of foot. 6000W per channel.

NUFORCE REFERENCE SEP V2 2006 £1,750
Brilliant value for money monoblock with massive power and superb clean, three dimensional sound.

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

MUSICAL FIENDHOOD XA200 1996 £1000
200W of sweet smooth transistor stuff in a grooved cabinet. Under-rated oddity.

PIONEER M-73 1986 £1,200
Monster stomp from this seminal Japanese power amplifier, complete with switchable Class A and Class B operation. Clean, open and assured sounding, it’s a tad behind the price on high scored dance music. Rosewood side cheeks and black brushed aluminium completes the experience.

KRELL KM100 II 1987 £5,750
Monoblock version of the giant KSA-100 is one of the seminal British transistor power amplifiers. Massive wasp tail to clean and open Class A sound makes this one of the best amplifiers of its type.

RARDON STA25 RENAISSANCE 1996 £987
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 dummies is a capable design with smooth, effortless power and a decently musical sound. 550 and 750 continues the theme with greater detail and incision.

HH ELECTRONICS TPA-500 AMPLIFIERS 1973 £110
Simple design with easily available components, solid build quality and fine sound make for a surprisingly clever package.

LESCON AP1 1973 £N/A
Madcap cylindrical styling alluded to its ‘power of power’ pretensions, but it wasn’t poor built, but decently clean sounding when working.

QUAD 303 1968 £55
Ballet proof build, but weakly sound. Off the pace but ending nonetheless. Some pockeopacking seems better in this bag of tricks.

LEAK STEREO 20 1958 £31
Excellent workaday classic valve amplifier with decent power and drive. Surprisingly modern sound if rebuilt sympathetically, impressively musically and fluid.

LEAK STEREO 60 1956 £N/A
Leak’s biggest valve power amp offers 35 Watts per channel and more low end wattiness than the smaller Stereo 20. Discrete concerns over reliability and value means means high once.

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

LEAK POINT ONE STEREO 1958 £N/A
Good for their time, but way off the pace these days. Use of E88 preamplifier for high gain rules out ultra performance. Not the highest fi.

LEAK STEREO 10 1968 £43
Better than the 22, but Quad’s first tranny pre isn’t outstanding. Responds well to tweaking but rebuilding.

LEAK POINT ONE STEREO 1958 £N/A
The partner to the much vaunted Quad mono-blocks - cloudy and vague sound means it’s for anachronies only.

PRE AMPLIFIERS

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

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

CONRAD JOHNSON MOTIV MC-8 1986 £2,500
Minimalist FET-based preamplifier is brilliantly neutral and smooths with a super-lightweight look in the mould of Sugden. Something of a cult but worth the while nonetheless.

AUDIO RESEARCH SP-8 1982 £1,400
Beautifully designed and built high end tube pre-amplifier with deliciously sweet and smooth sound. Not like last word in modernity or grip.

LINN LK-1 1985 £499
A brave attempt to bring remote controlled user-friendliness to an aesthetically Made-in-Mid. Didn’t quite work, but not bad under £100.

NAIM NAC 32.5 1978 £N/A
Classic high end pre. Brilliantly fast and involving sound that’s a joy with vinyl but a tad forward for digital.

LESCON CA-1 1975 £N/A
Amazing styling courtesy of Allan Boothroyd can’t disguise its rather clunky sound but a design classic nonetheless.

QUAD 33 1968 £43
The partner to the much vaunted Quad mono-blocks - cloudy and vague sound means it’s for anachronies only.

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LOUDSPEAKERS

WHARFEDALE DIAMOND 10.3 2018 £590
Great small standmounters for audiophiles on a budget, dry punchy sound with impressive soundstaging at the price.

YAMAHA SDA-V1 1.1 2009 £3,000
Musical, transparent with impressive dynamics and coherency. Excellent build and finish.

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

SPENDOR A5 2008 £1,695
Multi-talented loudspeakers with generous scale and punch and Spendor's classic mid-range detail. Deliver a sound that thoroughly engages whatever you care to play.

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

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

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

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

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

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

B&W DB1 2007 £799
Baby standmounters of a sophisticated and mature performance that belies both their dimensions and price tag.

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

ISOPHON CASSIANO 2007 £12,900
Drive units featuring exotic materials allied to superlative build quality result in an immensely capable loudspeaker. Not an easy load to drive, however.

QUAD ESL-2905 2006 £9,995
The old 998 with all the bugs taken out, this gives a brilliantly neutral and open sound like only a top electrostatic can, still not a natural rock loudspeaker, though.

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

REVOLVER CYGNUS 2006 £9,999
Revolver pull out all the stops and show what they can do with this magnificent Magico loudspeaker. A superb monitor that is like a mini B&W 801D in many ways.

USHER BE-718 2007 £1,600
Beryllium tweeters work superbly, allied to a fast and punchy bass driver. The result is sublime, smooth and intimate.

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

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

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

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

CELESTION SL6 1984 £350
Small pair two way design complete with aluminium dome tweeter and die-cast bass and midrange. Blueprint for nineteen eighties loudspeakers. Very open and clean sounding. All the drivers at high frequencies and clean in the bass. Speakers would never be the same again...

HEYWOOD HBI 1982 £130
Peter Heywood-designed standmounters with an unmistakably lyrical yet delicately refined sound. Good enough to partner with very high and allayables yet great with budget kit!

QUAD ESL63 1989 £1230
An update of the ESL57, with stiffer cabinets. Until the 998, the best of the Quad electrostats.

MISSION 770 1980 £375
Back in its day, it was an innovative product and one of the first of the paradigmatic designs, warm, smooth, clean and powerful sound.

ACOUSTIC RESEARCH AR18S 1978 £125
York designed, British built loudspeaker became a budget staple for many rock fans, thanks to the great sound from the paper drivers. Although far-noise was definitely not their forte...

YAMAHA NS1000 1977 £532
High tech Beryllium midband and Lewittes' drivers and brutish 12" woofers in massive sealed mirror image cabinets equals stunning transients, sound and wallah allied to superb transparency and ultra low distortion. Pure classic.

JR 149 1977 £120
Cylindrical speaker was ignored for decades but now back in fashion based on classic KEF T27/ B110 combo as seen in the BBC. Loudspeaker doesn't really need a powerful transistor amplifier, but has clarity and imaging.

KEF R105 1977 £785
The real British loudspeaker that gives a truly widespread 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 widespread sound but rhythm not a forte.

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CLASSICS

SPENDOR BC1 1976 £240
Celestion HF1300 tweeter meets bespoke Spendor Boxtrene mid-bass unit. The result is a beautifully warm yet focussed sound. A little bass bloom necessitates careful low-level mounting.

SHANLING MC-30 2007 £650
Quite possibly the cutest all-in-one around with fine performance from the CD player, tuner and MP3 player input. Very low power, through.

QUAD F44 1963 £240
Superb ergonomics allied to a pleasingly lyrical sound with plenty of sweetness and detail; made one of the best brands around again its launch.

AMARC 2006 £1,100
Excellent all-in-one system, with a warm, smooth and balanced sound to match the features and style. Perfectly sounding.

ARCTIC CRYSTAL 2000 £300
One of the first fully Ortofon-equipped systems, with detailed, close-grained sound.

HARMAN KARDON MADONNA 1976 £444
One of the most expensive brands of the day, it boasted sound quality with brilliant ergonomics.

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HEADPHONE AMPLIFIERS

GRAHAM SLEE NOVO 2008 £255
Dynamics headphone amplifier with a great sense of timing. Crisp, clear treble and warm midrange gives an involving sound.

MUSICAL FIDELITY X-CAN V8 2008 £350
Open and explicitly detailed sound plus serious bass wallop. A great partner for most mid-to-high end headphones.

CD PLAYER/RECORDERS

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

MARANTZ SA-1 2000 £5000
The greatest argument for SACD. This sublime Ken Ishiwata engine is utterly musically convincing with both CD and SACD, beating most audiophile CD spinners hands down.

SONY MDS-JE550ES 2000 £900
The best sounding MD deck ever, thanks to awe-some build and heroic ATRAC DSD Type R coding.

PIONEER PDR-555RW 1999 £480
For a moment, this was the CD recorder to have. Clean and detailed.

MARANTZ DR-17 1999 £1100
Probably the best sounding CD recorder made, built like a brick with a true audiophile sound and HDCD compatibility.

CAMBRIDGE AUDIO CD550 1998 £200
A touch soft in the treble and tonally light, but outstanding in every other respect.

SONY TC-D 8 BATMAN 1996 £999
Super clean sound makes this an amazing portable, but fragile.

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

NAJM CD5 1990 £N/A
Classic Philips 16x4 chiped with serious attention to power supplies equals grime inducing sonic.

TECHNICS SL-P1200 1987 £1300
CD version of the Technics SL-1000 turntable. Massive build to withstand the rigours of pro use and laden with features - a great eighties con.

SONY CDP-R1/DA R1 1987 £3200
Sony's first two boxers was right first time. Tonaly lean, but probably the most detailed and architectural sounding machine of the eighties.

MARANTZ CD73 1983 £700
A not of cold brushed aluminium and LEDs, this distinctive machine squeezed every last ounce from its 14x4 DAC - super musical.

MERIDIAN 267 1988 £995
Beautifully built dual two box with pre-amp stage. Very much oil although not as refined as modern Braintrust gear. No digital output.

CAMBRIDGE AUDIO CD1 1996 £1500
Inspired Stan Curtis redesign of Philips CD 04, complete with switchable digital filter. Lean but tight and musical performer.

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

SONY CDP-701ES 1984 £280
SONY's first bespoke audiophile machine used a 16x2 DAC to provide a clinically incisive sound; supreme build quality allied to the pure unfiltered luxury of a paperback-sized remote control.

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

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

PIONEER CT-F950 1978 £400
Not up to modern standards sonically, but a great symbol of the cassette deck at Art nothingless.

YAMAHA TC-800GL 1977 £179
Early classic with ski-slope styling. Middling sonics by modern standards, but cool nonetheless.

SONY TC-377 1972 £N/A
A competitor to the Aca: 4000D open reel machine, the Sony offered better sound quality and is still no slouch by modern standards.

REVOX A77 1968 £145
The first domestic open reel that the pros used at home. Superbly made, but sonically off the pace these days.

COMPACT DISC TRANSPORTS

ESTERIC PS 1997 £8000
The best CD drive bar none. Brilliantly incise, ridiculously over engineered.

TEAC VDRS-T1 1994 £600
Warm and expansive sound made this a 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.

DACs

ISCELGAR 1997 £8500
Extremely open and natural performer, albeit extremely pricey - superb.

DPA LITTLE BIT 3 1996 £290
Rich, clean, rhythmic and punchy sound transforms budget CD players.

CAMBRIDGE AUDIO DAC MAGIC 1995 £99
Good value upgrade for budget CD players with extensive fac-ties and detailed sound.

PINK TRIANGLE DACHAP 1993 £N/A
Exquisite, the warmest and most lyrical 16-bit digital audio we have ever heard.

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

CABLES

MISSING LINK CRYO REFERENCE 2008 £495/0.5M
High end' interconnects, with deliciously 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.

VON ULTIMATE THE FIRST 2004 £250
Carbon interconnects that help you forget the elec-tronics and concentrate on the music. Miraculous transparency. Tight and tuneful bass mixed with air and space.

WIREWORLD OASIS 5 2003 £99/M
Excellent mid-price design with a very neutral, silky and self-effacing sound. Superb value for money.

TICI CONSTRUCTOR 13A-6 BLOCK 2003 £120
Top quality 'affordable' mains outlet block, with fine build and good tonics. We think the extra over standard high street specials, which sound coarse and two dimensional by comparison.
vinyl section

the Distractions

If you like Factory, the legendary Manchester-based record label, then check out this vinyl release. Heavily influenced by The Buzzcocks and guided – in some respects – by them, the songs sound distinctly 60s in nature. Late beat era, perhaps?

Some tracks also add classic R&B/garage overtones to that mix.

‘Nobody’s Perfect 2020’ (Man in the Moon) deserves more attention because they knew the band way around a groove. If you like your rock laced with retro adornments then check this one out.

Seth Lakeman

His new release, ‘A Pilgrim Tale’ (BMG), sees the man produce an album as the result of his involvement in a theatrical production called The Land, a tale of The Pilgrims and their journey from Plymouth to America (ready for the 400th anniversary in September).

A folk outing, this is a full-on musical appreciation of the events with Lakeman giving his all in fiddle and vocals, actor Paul McGann adding a spoken narrative ‘tween the songs.

Seu Jorge & Rogê

Seu Jorge & Rogê’s self-title LP (Night Dreamer) was recorded direct-to-disc. Featuring both Seu Jorge and Rogê on guitar and vocals it also includes percussionists, Peu Meuray and Pretinho da Sarrinha.

The seven original songs vary in tempo and style but the direct-to-disc vinyl recording method not only allows you to get to the core of the songs and their attendant performances but it offers a naturalistic presentation.

Demon

Strutt were a disco-funk outfit from New Jersey. Signed up to the Brunswick label, they produced ‘Time Moves On’ (www.demonmusicgroup.co.uk), a 9-tracker, back in 1976. The title track and ‘Funky Sign’ are the best known tracks from this release before the outfit slipped back into the mists of time and out of the business. It offers lots of energy and effort and solid performances. It never truly stands out but it will be of great interest as a rarity buy for fans of the genre.

Gary’s Gang’s ‘Keep on Dancin’’ was released on the Sam label in 1978. This disco/R&B band is repetitive and derivative – so a great party record. That’s why you should buy this vinyl release (or as a sampling source).
THIRD MAN
Broken Social Scene ‘Live at Third Man Records’ (Third Man) was recorded at Third Man and direct to disc too.

This multi-layered, multi-peopled indie rock outfit from Canada started in 1999 and has seen many band members come and go – and hey, if you don’t like one song, a new style will be around in a few minutes.

AXEL RUDI PELL
From SPV, Sign of the Times presents Pell’s work in classic heavy rock terms. Anyone who loves AC/DC, Iron Maiden and the like will love Pell – although his more recent outings are slightly harder and the ‘frantic’ level has been edged up a tad. Lots of energy and flailing hair yes, but there’s plenty of melodic intent here and hooks to pull you along from track to bass thumping track. And then there’s the guitar, of course.

Pell is more than ready to stand up and whisk off a quick guitar melange of supreme skill.

BRENDAN BENSON
One Mississippi (Virgin) is an intriguing one. Benson was co-leader of the band, The Raconteurs (along with ex-White Stripes man, Jack White). This power pop outing, the man’s solo debut album, was released in 1996.

Well, I say power pop but it’s more rock than pop. Benson was brought up through the rock filter of Detroit.

This LP doesn’t represent the happiest times for Benson, who experienced ructions with his record label. The album is solid, a little workman like but it has its moments. Sitin’ Pretty being one such track that adds swagger to Bowie/glam-like vocalisations.

...AND FINALLY
From Timo Lassy ‘Big Brass’ (Must Have Jazz) is subtitled ‘...With Ricky-Tick Big Band Brass Live at Savoy Theatre Helsinki’. Spanning two slabs of vinyl, combining a mixture of soul and free jazz, tradition and innovation, this is a well mastered release packed with quality jazz.

‘Beats’ is an Original Motion Picture release (Republic of Music) that focuses on the 1994 dance scene. Including Orbital’s Belfast, Model 500’s The Chase, and Leftfield’s Song of Life, see this release as a good retro-dance collection and you won’t go far wrong.

Clarence Jensen’s The Experience of Repetition as Death (Fat Cat) may relate to looking after her terminally ill mother and the nature of care, the concept of repetition in care and the looping structures that such care can form if looked at as a whole. Meditative neo-classical.

From Ian William Craig’s Red Sun Through Smoke’ (130701) arrives on vivid red vinyl. This experimental outing combines both authority with simplicity, even if this music sometimes sounds like it’s hanging on by its fingertips.

From Eivind Aarset & Jan Bang Snow Catches on her Eyelashes (jazzland), think avant-garde electronics. Of a Norwegian stripe. This down tempo vinyl album provides intriguing rhythms and contemplative tones.
The Songbird line represents the penultimate step in SUMIKO’S cartridge series, elevating overall performance and expectation firmly into the high end arena.

From the Songbird with its exceptional tracking ability and wide compatibility, through to the long-standing Blackbird and its exceedingly low noise levels and wide dynamic range, up to our reference open architecture design, Starling, with its microridge stylus on a Boron cantilever; each model promises to sing as beautifully as its name suggests.

SONGBIRD
The sophisticated and smart Songbird design with its open architecture construction, new aluminium mounting body, low mass elliptical stylus and Alu coated cantilever results in a high end cartridge that lives up to its name.

BLACKBIRD
The classic Blackbird design has a level of performance and clarity that competes with cartridges twice its price. It’s been designed for exceedingly low noise levels exceptionally wide dynamic range and the highest possible fidelity.

STARLING
No aspect of the Starling’s design was left to chance. Our flagship open architecture cartridge renders the grandeur of an orchestra while still preserving air and space, also delivering responsive dynamics and deep silences.
Black On Black

Noel Keywood enjoys the darkness of iFi’s iPhono3 Black Label phono preamplifier.

When a small three-way toggle switch selects between these differing equalisations (EQs) and is easily accessible, iFi also includes other variants on the underside – and these are not easily accessible, being pre-set by miniature in-line DIP switches that are best set with a small jewellers’ screwdriver.

I’m not convinced these EQs are especially valuable. There is a warp filter to cut out subsonics, but unfortunately it is an IEC warp filter – and they aren’t very clever. This filter reduces loudspeaker cone flaps with warped records alright – but it audibly lightens bass too. Nowadays it is easy enough to design and implement a high-pass filter better than this one dreamt up long ago. So the iPhono 3 has a warp filter, but not a good one.

There is also another little tweak called enhanced RIAA that, I recall, has something to do with correcting cutting laths. iFi bill it as a default setting in the iPhono3, so they prefer it, but I find this little tweak, when it occasionally appears, makes little subjective difference. It slightly raises treble above 10kHz but whether you like this will depend upon your cartridge and its stylus. The deeply analytical Shibata and SLC (super line contact) tips I use don’t benefit since they are forthinight up top in any case, throwing out information without any need of assistance from twiddled EQ. Cooking conical stylus in budget cartridges will be subtly livened up however, so how useful eRIAA is will depend much upon the cartridge being used. It’s all good fun and there if you like it.

As you can see from our pictures, there are myriads of settings that can be made on the underside DIP switches. I’ll break them down for easy understanding. There are normal and high gain values for both MM and MC cartridges. The ‘high gains’ are for low output types. The use of low (normal) gain is preferred because it reduces the possibility of overload, but the amplifier’s volume control will have to be wound up a little to compensate. Because the iPhono3 overloads at a low 6V out – 10V being common nowadays – there is not a lot of leeway here, but overload in real
“Tellurium Q’s Ultra Black II’s can be seen as one of the best loudspeaker cables on the market at their price”

- John Moyles, HiFi World

“Tellurium Q Ultra Black II is a remarkably coherent and “well-timed” cable”

- Jason Kennedy, HiFi Plus

“The differences were stunning.....What I can state is that the Ultra Black II cables are currently the best I have heard in my system”

- Ian Ringstead, HiFi Pig

“I have yet to hear a speaker cable which delivers timing like this one”

- Chris Kelly, The Ear

Tellurium Q

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life is not an issue; music peaks from LP rarely get close to causing overload I’ve found from measurement.

In addition to the left and right channel gain setting DIP switches, there are also plenty of DIP switches to set cartridge loading. Again, no big issues here, so much as fine tweaks. The 100pF - 500pF capacitance options for MM are a tad historical. Long ago MM’s sounded warm and adding capacitance could correct this, raising the mid-band/lowering upper treble, but nowadays most MM’s are best left alone, since they are not warm sounding anymore (due to more efficient generators).

With MC loading the picture is different. The standard load value is 100 Ohms, ten times the generator resistance of 10 Ohms (a rule of thumb to minimise losses) and the iPhono3 has this value. But some MCs (e.g. Clearaudio) need at least 300 Ohms and the iPhono3 covers this too, with settings up to 1000 Ohms, plus a 47kΩ option on MC.

It also goes the other way – down to 22 Ohms and this invokes other issues, offering better damping at the possible expense of tracking. But whilst I can see differences under test, I’m unsure I can hear any great differences in use. So again, it’s all there if you want to twiddle!

Size wise the iPhono3 measures 170mm long, 64mm wide and 25mm deep. Weight on our scales was 254gm. It can stand on its side next to a turntable to take up just 25mm of shelf space. The package includes an iPowerX super-silent switch-mode wall-wart style power supply that delivers 15V (1.5A) through a cable.

The ‘front’ of the case – or is it the back? Outputs and a small three-way toggle switch to select standard RIAA, Decca or Columbia playback EQs.

A compact circuit board populated with tiny surface mount devices (SMDs), plus larger cylindrical capacitors of audiophile quality iFi say.

Arrays of tiny slide switches, known as DIP switches, set gain, MM input loading and MC input loading, through various permutations shown in the charts. Also selected here are eRIAA and IEC equalisations, both variants of RIAA. Note black text on black background!

studies; this is not the easiest phono stage to set up – or change. It is also awkward in layout, with inputs and outputs at opposite ends, and the power plug on what is effectively the front, since it carries the EQ switch. The earth terminal is miserably small too, but because the unit floats electrically there may be no need to use it (depending upon the earthing arrangements in your system). I did not need it. However, some hum floated in when placed on a shelf below the Creek’s mains transformer, but re-positioning cured this.

SOUND QUALITY

The iPhono3 was connected up to our Timestep Evo modified Technics SL-1210 Mk2 turntable, fitted with SME309 arm and Audio-Technica VM750 SH MM cartridge with Shibata tip, as well as an Audio Technica OC9X SH MC also with Shibata tip. Downstream was a Creek Evolution 100A amplifier driving Martin Logan ESL-X hybrid electrostatic loudspeakers.

I ran through modern LPs first,
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gusto, making them sound big bodied behind Masekela’s wailing trumpet. For this performance the iPhone 3 shot right up my personal preference scale, where 10 is our Icon Audio PS3 MkII valve phono stage with input transformers for MC. The iPhone barged up to 9 pretty fast! Not only did it have stage depth and an organic quality that made humans sound human, but there was no hiss – none. I have never heard an MC preamp so quiet, even with full volume applied.

Across a broad range of LPs the iPhone 3 maintained its sense of sonic space, with no top end sharpness, a wonderfully clear midband and an almost honey sweet analogue quality. There was no forced detail, just great natural insight, bringing Jackie Leven’s big voice out fully in front of me, singing Young Man Suicide, a song by Invisible Woman, where echoes enveloping the invisible woman ran eerily deep. The next track, Some Ancient Misty Morning had a firm bass line and captured Jackie’s plaintive tones.

Now on to Decca. My use of Decca equalisation was, I admit, fun but inconclusive. For this it meant ferreting through the record collection to find Blues Breakers (1963 Wikipedia, 1966 on my disc), featuring John Mayall with Eric Clapton. The quality was so shaly I could not really form any conclusion here. It was with The World of Blues Power (1966) and the wonderfully atmospheric recording of Peter Green’s Out of Reach, of excellent quality, that switching in Decca moved vocals and guitar back a bit, slightly softening the sound. I could say there was “less shout” but quite frankly I don’t mind at all hearing Peter Green moved toward me. So I won’t wave my arms about here and declare Decca EQ a “must have” – but perhaps those sheltering old classical recordings a little less – er – fundamental than my early British Blues, will be delighted at the difference it makes. This is an issue for buffs.

CONCLUSION
On mechanical layout and ease of setting the iPhono3 Black Label is not the greatest. iFi even use back text on a back background that required a spotlight and magnifying glass to interpret. The range of input settings is a good one though.

MEASURED PERFORMANCE
Frequency response with RIAA equalisation – that normally used – was flat, as our MM response analysis shows. There is however slight plateau lift at low frequencies, just enough to ensure some weight in the sound. The MC response was also flat, even at full gain (72dB) where some stages run out of puff.

Switching in eRIAA (enhanced RIAA) raised treble above 10kHz slightly and will change little subjectively.

The IEC warp filter is true IEC, cutting bass strongly below 100Hz, the

The back of the case, or perhaps the front. Separate MM and MC phone socket inputs plus a tiny earth terminal barely able to clamp a large earth tag.

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reason this filter is rarely used since subjectively it is obvious.

The Columbia and Decca equalisation curves are very different to RIAA and should be used only with old LPs that need such EQ.

Gain values were as quoted, the maximum being a massive x3660 or 71.3dB for low output moving coil (MC) cartridges. However, with a low-ish output swing of 6V from iPhone 3 this gave an input overload value of just 1.6mV. Best to use the conventional gain value of 60dB (x1000) for MC where overload is then 6mV.

MM similarly has a normal gain (36dB, x6.3) and a high gain setting (40dB, x250) and the former is best used for highest overload ceiling.

Noise (equivalent input noise, or e.i.n.) measured 0.04µV which is extremely low, making this a super-quiet preamplifier suitable for the lowest output MC cartridges.

Very low noise, but also low overload margins, so gain is best set low.

Frequency response 20Hz-20kHz Separation 68dB Noise (e.i.n.) 0.04µV Distortion 0.1% Gain (MM, MC) 48dB / 72dB Overload 6V out

The back of the case, or perhaps the front. Separate MM and MC phone socket inputs plus a tiny earth terminal barely able to clamp a large earth tag.
Detroit punk band, The Pathetx were a five-piece bundle of energy consisting of Mark Leavitt on vocals, Greg Katcher on lead guitar who was joined by Tom McHenry on rhythm (joining after being discovered at a local community college) and Mick Goldwater on bass (aka Fibby McNasty who tried out for the band at a local music store). Drums were handled by the late Ted Meek (or 'Iggy Moon', found via a local listings service of the Detroit News).

So then, you've got a punk crum hardcore band. And they stand there. And they play 'Climb Every Mountain' from the Sound of Music? Oh yes. And let's not forget 'It's Fun to be Clean' by the Human Beinz. Neither of which are on this Third Man LP release. A sad fact but 'tis so.

In fact, if you take a look at Discogs, you won't find much else. Well, anything else. This is the first release by the band and spans a whopping great eighteen minutes. And sixteen seconds. Seconds really do count on an eighteen minute album.

So, you have to ask, why? Because a multi-track tape recording was made at the Reel Sound Studio, late 1981. Which was then promptly lost. Band manager Steve Shaw did have a master in his possession for over three decades. Which is why, after more than thirty-eight years, this LP has hit the shelves.

The label call this music 'fast and unhinged' and I wouldn't disagree. There's a distinct classic three-chord, late-70s punk attitude and presentation here with the uncontrolled, controlled vocals ranging across the scale backed by a wall of guitar sound.

This is an album crammed with energy so that eighteen minutes or so will seem like a lot longer, to be frank. The guys pack in about 48 hours worth of energy and passion into this brief time.

---

This is an interesting album but maybe not for the reason you expect. Why? Because it represented their decline after many years of success at the Atlantic label. For the first eight or so albums, despite a hiccup here and there, the band persisted in producing quality music.

One of the very few white bands of the time that produced quality funk, well-received by all too. Funk that seemingly had absolutely nothing to do with their Scottish roots. Music that seemed at odds with the same, in fact.

Alan Gorrie on bass and vocals teamed with guitarists Hamish Stuart and Onnie McIntyre, plus the sax of Malcolm Duncan, Roger Ball on keys and sax and drummer Robbie McIntosh.

Once the Arif Mardin-produced instrumental 'Pick Up the Pieces' hit the public, the band was secured in place and received many plaudits and success.

Another Top 10 hit followed in 1975 via the title track from the album, 'Cut the Cake', amongst other well received singles with their final Top 40 hit being the single 'Queen of My Soul'.

And then this one appeared in 1979. It wasn't well received by the public, at least compared to earlier releases and failed to gain the then usual gold or better sales status.

It was also the first album that wasn't produced by the genius of Arif Mardin. This self-produced outing is good, don't get me wrong. There's plenty to like here. The issue is that the band play within themselves. They 'make do'. They're comfortable. They're in a rut. For some fans, of course, that 'rut' will be enough.

This reissue is rather nice from the UK audiophile outfit Demon. Presented in a gatefold sleeve, the vinyl has been pressed upon clear wax.
Ahh, rock bands an umlauts, eh? Someone could write a book on that phenomenon alone.

You could call this LP release a turning point. A birthing of the loins. An album where the band woke up from their reverie, pulled themselves together, raised their socks to acceptable levels, dug deep into the bucket of creativity, pulled out a finger, mace...well you get the idea.

This one was released in 1981. Before its release, fans had clamped their eyes and ears on two earlier releases of contrasting quality. In 1979, ‘Mirrors’ produced chin scratching and casts of ‘Hmmm...’ while ‘Cultosaurus Erectus’ (1980) certainly had its fans but the catcalls could still be heard.

This release seemed to lift the group back on its pedestal.

Maybe the producer Sandy Pearlman, Richard Meltzer, and Patti Smith who all helped to pen lyrics, helped to strengthen the bedrock of the LP while science-fiction writer Michael Moorcock also helped out.

You could say that the core songwriting quality was the reason this LP found success. Tracks like ‘Heavy Metal: The Black and the Silver’, ‘Burning For You’ (which became a Top 40 hit) and the wonderfully named ‘Joan Crawford’ were just some of the highlights.

The keyboard work was also magnificent while the back-up guitars really added strength and a sense of forward motion to the entire album.

The LP featuring Eric Bloom (vocals), Albert Bouchard (drums), Joe Bouchard (bass), Allen Lanier (keys), Buck Dharma (Guitar) remains a little cracker and should be sought out by both fans and those looking to investigate BOC’s work.

Fire of the Unknown Origin
Music on Vinyl

“Ah, all the way from Israel...!” Isn’t that the sort of thing they say when introducing an artist on stage? Well Cohen is certainly that and this is his fourth outing for the German label. The band he offers for your entertainment here is actually one that had its roots in 2013 because they met back then in Israel. So I’m talking about Uzi Ramirez on guitar and Yonatan Albalak on electric bass. There are drummers. Plural. They are Aviv Cohen and Ziv Ravitz. Ravitz also dabbles in sampling.

The music here is nicely accessible but don’t let that term put you off if you’re looking for complex, supremely played and arranged jazz. There’s that too. What Cohen does here is to combine both complexity and skill and forge that lot into a palatable dish. Hence, even music fans who don’t normally like jazz will find something of interest here.

The rhythmic nature of a track like Teardrop means that it’s easy for the ear to become lost in the sweep and the ambience of the arrangement. The purity of the Cohen trumpet flies across the soundstage with effortless ease, extends the range in musical and also dynamic terms while minor chords add emotion and richness to the story.

‘Honey Fountain’ is almost two tracks in one where the backing band noodle away in a gentle jazz rock reverie while Cohen hovers over them all in a trumpet-powered drone, flying smoothly over the music, observing rather than interfering.

The band seemingly proceeding on their own course while Cohen almost makes notes about the progress below.
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Hi-Fi+ ISSUE 172 REVIEW, HANA ML/MH

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A n unusual book about an unusual archive of music that flew underneath the radar of public awareness for many years. Even this book, sub-titled ‘The Hidden History of Library Music’ seems, at times, reluctant to pass on too many secrets. The cover is low key and stylistic in a nondescript manner. You don’t know who has even written the thing until you open the cover and flip over the page, whereupon Hollander’s name is there, at the bottom of the page, in the corner.

The book is, therefore, symptomatic of the entire genre. Library Music was never meant to be consumed by the public. At least not directly. Indirectly, yes – and from that direction library music will not only be familiar but, at times, wholly iconic.

As Hollander himself states, Library Music was created to serve as incidental music for TV, film and radio either to run alongside or completely replace an original musical score.

Library Music you might know includes famous TV themes such as the former BBC Saturday sports programme ‘Grandstand’ and its ITV competitor ‘World of Sport’, the football programme ‘The Big Match’, the ‘Wimbledon’ tennis TV theme, a heap of music including the UK cop show ‘The Sweeney’, ‘The Two Ronnies’, the detective show ‘Van der Valk’, ‘People’s Court’ in the USA and their ‘Monday Night Football’ programme, Australia’s ‘World Series Cricket’ plus many films and TV advertisements.

Library Music was popular to film makers because it was cheap. Original scores cost a packet, Library Music could be had for a fraction of the price.

Cult horror fans of George Romero’s ‘Night of the Living Dead’ will have heard lots of library music, for example because he had almost no budget.

Europe was king in Library Music terms. Britain produced many libraries including KPM, Themes and Amphion and featured talents such as Ron Geesin (who worked with Pink Floyd), BBC Radiophonic workshop lady and creator of the ‘Dr Who’ theme Delia Derbyshire, plus stalwarts Keith Mansfield, Alan Hawkshaw, Alan Parker and ex-Shadows man, Brian Bennett.

Europe had many music libraries too, Germany (Sonoton, Coloursound, Gerhard Narholz, etc), Italy (CAM, Omicron, Flippper, etc), France (Montparnasse 2000, Tele Music, Yan Tregger, etc) while the USA also had a few. Top stars also produced Library Music, the late Ennio Morricone being one of the most notable.

Library music ranged from orchestral music to electronic. Much of it was instrumental but vocals appeared now and again. Before 1959 that music appeared on 78rpm LP but afterward on vinyl – and generally in sleeves sporting standardised or stylistic covers. KPM, for example, featured the same green cover for many years with only minor text information betraying the actual content.

Why? Well again, this was music for an industry. Not the public. They didn’t have to sell it in shops.

The quality of the music itself though is quite sublime. Library music featured some of the most talented musicians the world has ever seen – at any time and in any format.

This book is a textual and visual history of the genre split into national origin, and then companies within each. It arrives as a soft back, spans 332 pages in a relatively large 265 x 205mm format and is packed with both textual history and glorious images of well over 400 LP sleeves, studio images and mug shots.

On that basis, the history turns into an art book with attendant captions because the sleeves provide a sumptuous array of styles, but there is plenty of insight from the people who were there and involved in the day-to-day production. Most of the insights tend to come from surviving UK artists although there are European contributions too. The rest features interesting company and personal histories from the author.

A wonderful tome to read, to admire and gaze at, it also provides a perfect companion for any aspiring collector. PR
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