Hi-Fi World

MARCH 1998 £2.30

THE STYLE ISSUE

A whole issue of great hi-fi with looks to match

CHORD CPA 1800 PRE AND SPM 400 POWER AMPS

COMPETITION - WIN WILSON BENESCH’S £2000 FULL CIRCLE TURNTABLE

CLASSIFIED ADS - 8 PAGES OF HI-FI BARGAINS
The perfect ‘point source’ has been sought for over 50 years.

KEF patented it.

The acoustic ‘point source’ has long been the Holy Grail of loudspeaker design. Ever since the early days of high fidelity, audio engineers have sought this elusive ideal. Some have come close, but none have succeeded.

Except for KEF - and KEF alone. UK patent 2 236929 and US patent 5,548,657 are the proof.

KEF’s revolutionary Uni-Q drive unit configuration is acknowledged as one of the great breakthroughs of modern high-end loudspeaker design.

The single coincident point source is achieved by placing the tweeter at the exact acoustic centre of the mid-range cone. With identical directivity and dispersion characteristics, this unique configuration creates an immaculate stereo image over a far wider listening area than is possible with any conventional speaker.

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Progressively refined by Reference Series engineers, KEF’s patented Uni-Q technology is what makes the new Monitor Series the ideal solution for studio professionals and serious audiophiles alike.

After more than 50 years the perfect point source has arrived.
• The Italian company Unison Research has an illustrious tradition of producing fine valve amplifiers such as the Simply 2 and Simply 4 integrateds. They continue this with the new £3000 Simply 845 which combines luxury looks with fine sonics.

• Wilson Benesch has built up a reputation for fine equipment built from carbon fibre. The Circle turntable package is their first attempt to bring this technology to the middle market. Jon Marks thinks their reputation is safe.

• A half-width, champagne-coloured, top-loading CD player with a choice of four output filters is hardly what you’d expect from Sony. But at £500, Leo Lam feels they could be on to a winner.

• Mission is no newcomer to the budget end of the 'speaker market, but in the 750LE they combine an Aerogel mid/bass unit, transverse-folded cabinet and stunning styling all for £250.

One of the phrases that crops up most consistently in the letters you send us asking for hi-fi advice is, “... and it must look good too”. So to help you in your quest for equipment whose looks will complement rather than shame your listening room, we’ve brought together an issue of nothing but stylish components.

As this line-up demonstrates, there’s nothing to stop imaginative designers from clothing their electronics in captivating casework. Hopefully this message will spread further afield as manufacturers realise that many more people would be tempted from cheap, plastic Midi and Mini systems into the world of decent hi-fi separates if they looked better.

Style doesn’t have to carry a large price tag either. Mission’s 750LEs are light on your pocket at £250 and Sony’s gorgeous CDP-X3000ES CD player is only £500. So here’s to the day when all hi-fi looks like it has come from a studio instead of a metalworks.

Jon Marks, Editor
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Making up this tasty £2000 turntable are the Circle deck, 0.5 carbon-fibre arm and Matrix MC cartridge. Jon Marks joins the Circle fan club.

MINIDISC

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Music on the move, Minidisc sound quality and recordability come together in Kenwood's DMC-G7R portable MD machine. Andrew Harrison gets moving.

WORLD VERDICT

OUTSTANDING - Superb sound, something we'd use ourselves.

GOOD - Has strong merit. Well worth an audition.

ADEQUATE - Mediocre in several areas. May be worth auditioning.

NEXT ISSUE
If you want a peek at what we'll be unveiling in our April issue, have a look here.

NEWS
The best and freshest news distilled from all the latest information pouring into Hi-Fi World towers.

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HI-FI WORLD LIBRARY
Not perhaps the fountain of all knowledge, but about as close as you can get in the world of high fidelity.

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Ketan Bharadia gets hooked on three £60-£90 interconnects from Audioquest, Roksan and Kimber.

HI-FI IS LIKE A TOOLBOX...
78
Boring black boxes have long ruled the racks in this country and many others. But as David Price reveals, it doesn't have to be that way.

COMPETITION - PAGE 34
If the old black disc sets your heart racing then this month's competition is for you. We're giving away one of Wilson Benesch's superb £2000 Full Circle turntable/arm/cartridge combos.

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Every loudspeaker manufacturer has the basics. The cones, coils, crossovers and cabinets. The woofers, tweeters, magnets and faceplates. But only one really knows how to put them together. The proof, Celestion’s new i Series.

Built with 70 years experience of pioneering development in loudspeaker technology, this range blows your mind. It combines the highest level of audio fidelity with outstanding dynamic range. So you fully enjoy the true power of contemporary music and film recordings. Time and time again.

But don’t just take our word for it. Take it from Hi-fi World. "Powerful, dynamic, musical and convincing", the i Series "shows just how strong British loudspeaker engineering really is".

Spectacular praise, you might think. But where Celestion’s involved, it’s almost predictable.
SOUND AND VISION '97
Keen audiophiles wanting to stay abreast of all that’s fresh and innovative in hi-fi can sate their curiosity at Bristol Sound And Vision ’97. The show opens at the Marriott Hotel with a trade day on Friday 20th February from 11am until 6pm and runs through to Sunday 22nd. Opening times on the Saturday and Sunday are 10am to 5pm.

The show will be the first opportunity to audition some of the latest and greatest from a host of manufacturers. Hi-Fi World will be there in full force too, demonstrating a range of our amplifiers and loudspeakers, including KLS3 Gold Dome MkII and KLS10. This compact stand mounter boasts Audax’s Gold Dome Piezo-electric tweeter allied to a 6.5in. carbon-fibre mid/bass unit for a deliciously smooth, sweet sound. We’ll also be able to help you with general system and DIY queries.

Getting through the front door will set you back £5 for adults and £3 for students and concessions. Accompanied youngsters under 16 are admitted free. For more details contact Tony Revelle at Audio Excellence on tel: 01222 228565 or Jerry Lewin at Audio T on tel: 01865 760844.

SONY’S CO-FOUNDER DIES
Tokyo Tsushin Kogyo K.K. and its English equivalent of Tokyo Telecommunications Engineering Corporation are not names that many people will recognise. In 1958 though the company changed its name to the Sony Corporation (derived from the Latin ‘sonus’, meaning ‘sound’) and went on to become famous the world over.

On December 19th 1997, Sony announced the sad news of the death of Masaru Ibuka, the company’s founder and chief advisor at the age of 89. Along with his co-founder in 1946, Akio Morita (responsible for marketing), he conducted early research into magnetic tape media. The following year they put on sale the first tape recorder in Japan.

By 1952, Ibuka-san had obtained the license from Western Electric Co. for the commercial use of transistors. This led to the development, in 1955, of Japan’s first transistor radio and, five years later, of the world’s first transistor television. Other major innovations include the personal Walkman, Compact Disc, and MiniDisc. Ibuka-san himself was involved with the development of the first two.

Decorated with an impressive array of awards and merits for his services to his country and industry, Masaru Ibuka remained Sony’s Chief Advisor until his death.

TGI’S LUCRATIVE LOUDSPEAKERS
The TGI Group, owners of Tannoy, Mordant-Short, Epos, Goodmans Loudspeakers and Martin Audio, have announced their pre-tax profits for the first half of 1997. Unaudited accounts show profits are up 12.5% from the same time last year, to £1.135m. Total turnover remained little changed at £25.2m. Tannoy in particular have enjoyed a successful period, with their £25000 Kingdom speakers selling well in the Far East and the Mercury range doing well in the European and domestic market.
The Caspian System by Roksan

ROK SAN

tel: 07000 Roksan
fax: 070001 Roksan
email: info@roksan.co.uk
Fans of the BBC monitor sound will be happy to hear that Ethos Acoustics have updated their LS 5/12A mini-monitor to 'B' status. Like its 'A'-suffixed predecessor, the Ethos 5/I2B is a compact two-way loudspeaker, similar in size to the famous LS 3/5A. The new version sports a revised 150mm polypropylene mid/bass driver said to provide a more consistent response, especially in the demanding environment of Outside Broadcast work. There's also a change to a more conventional impedance of 8ohms from the 3/5A's 11 ohms, and an increased power handling of 130watts. The deeper 'B' cabinet is reflex-ported at the rear, augmenting the low frequencies and the new drive unit helps improve sensitivity to 84dB/watt. To maintain an even tonal balance, the bi-wireable first-order crossover has been breathed on too. Prices for the LS 5/12B start at £1495 for the Cherry or Oak finishes and run up to £1895 for Piano Black.

Ethos Acoustics
Unit 15,
Rainbow Estate,
Trout Road,
Yiewsley,
Middx. UB7 7XT
Tel: 01895 441177

KOPPERAE FOR COPPER TWEAKERY
The fact that Radio Frequency Interference generated by a lot of digital electronics these days has an effect on your hi-fi sound is well known. Kopperae can supply the copper sheet necessary to construct IC chip shields and line the chassis of CD players, DACs and pre-amplifiers. They also make the £50 CD Roof, a sandwich of MDF, copper and foam which sits on the lid of a CD player and damps out vibration and RFI, according to Kopperae. For more details of the range of copper products for customising your hi-fi, contact Nick Kopp at Kopperae.

Kopperae
PO Box 6894,
Dundee,
DD5 7FB
Tel: 01977 654358

Trade winds

DOUBLE X-RATED
Ever wonder if you're seeing double? Musical Fidelity are expanding - literally sideways this time, with the launch of the X-A1 integrated. With its stretched casework that's twice as wide as other X series components, the X-A1 is a six-input line-level amplifier. Power output, claimed as 50watts into 8ohms and 100watts into 4ohms, has been maximised by locating the power supply outboard. PSU connection is via a Neutrik XLR socket.

Upgrading the PSU is one way to raise sound quality, as is bi-amping through the Pre-Amp Out socket. Available from March, the X-A1 is priced at £479.

Another new arrival on the scene are the X-A200 monoblocs, which join the 50watt X-A50s. These 200watters will retail for £1000 per pair.

Musical Fidelity
15/16 Olympic Trading Estate,
Putnam Road,
Wembley,
HA9 7FF
Tel: 0181 900 2866

ANOTHER SUPERIOR SEQUEL
Joining the ever lengthening list of hi-fi whose name includes the initials 'SE' is Arcam's Alpha 8. The Special Edition model differs significantly in its DAC module, one of Pacific Microsonics' increasingly popular HDCD decoders and digital filters. This not only reaps benefits from HDCD-encoded discs but works well with conventional CDs as well. A new data re-clocking circuit has also been added to reduce jitter.

Owners of the standard Alpha 8 will be reassured to hear that these 'SE' upgrades are retrofittable by an Arcam dealer in a £299 kit. The Alpha 8SE sells for £599.90, £150 more than its standard counterpart.

Arcam
Pembroke Avenue,
Denny Industrial Centre,
Waterbeach,
Cambs. CB5 9PB
Tel: 01223 203203

Arcam
Pembroke Avenue,
Denny Industrial Centre,
Waterbeach,
Cambs. CB5 9PB
Tel: 01223 203203
It was 20 years ago today....

In November '77, the design team of Bob Stuart and Allen Boothroyd launched their first Meridian product, an active loudspeaker of course! Since then, Meridian Audio has continued to pioneer advanced audio design in products such as the first high end CD player, the first CD transport, the first DSP domestic loudspeaker, the first digital home theatre and now, high end DVD.

Safeguard your investment, trust Meridian - the real leaders in audio and video

Meridian Audio Limited
Stonehill, Stukeley Meadows, Huntingdon, PE18 6ED
Tel (0) 1480 434334 Fax (0) 1480 432948
http://www.meridian-audio.com
**MARCH 1998**

**BEESTARAY**
A new horn loudspeaker from B'ta (formerly known as Bravura) has entered the loudspeaker fray - the Virtuoso Reference. A very high sensitivity design (106dB), this speaker, with its single Lowther DX3 full-range drive unit, aims to build on the merits of the Virtuoso Gold. By horn loudspeaker standards the Reference is relatively compact, standing just over one metre tall. Rated at 70 watts with an 8 ohm impedance, the Virtuoso References weigh in at £3995 per pair.

**BIGGER AND WIDER FROM B&W**
The boffins at Bowers and Wilkins have just unveiled a set of modifications to their award-winning £600 CDM1 stand mounters that raise them to 'SE' status. Technology derived from the high-end £6995 Signature 30 means the CDM1's conventional dust cap has been ousted in favour of a bullet-shaped dispersion modifier (phase plug) in the centre of the voice coil. Intended to provide better integration with the metal-dome tweeter, the end result, say B&W, is a more expansive stereo sound stage and increased scale and detail.

The crossover has been reworked as well, to give a more precise phase and amplitude match between the two drivers. Additionally, the original electrolytic crossover capacitors feeding the tweeter have been replaced with polypropylenes. In spite of these gains, the CDM1SEs remain at the same £599.99 price as their CDM1 predecessors.

**IMAGE CONSCIOUS**
A versatile interconnect cable called the Image 5.1 has been introduced by Insert Audio. Although designed primarily for analogue signal duty, Insert state that this co-axial cable lends itself to digital duties between CD transport and DAC as well.

The 75 ohm Image features a central conductor of silver-plated OFC inside a dual-layer shield of wrapped foil and copper braiding. A one-metre stereo pair will cost you £84.95, while a single half-metre run is priced at £29.95. Terminations other than RCA phono can be dealt with too.

**KING CONES**
The dinky £495 Concept 100 loudspeakers from Blackshore Acoustics eschew conventional powersapping crossovers by utilising a pair of full-range 100mm drivers. These metal-cone units, mounted in 315mm high prism-shaped cabinets, operate from 100Hz to 20kHz. To flesh out the bottom end there's the complementary £395 Bass Enhancer with its 280mm metal-cone driver bolted into a reflex-ported cabinet.

Both the Concept 100 and Bass Enhancer can handle up to 50 watts and come finished as standard in a triple-sprayed piano black lacquer, with other colours available to special order.

**Glaive**
Unit 7, Wren Industrial Estate, Coldred Road, Maidstone, Kent ME15 9XN
Tel: 01622 664070

**Blackshore Acoustics**
St. Osythe, North Road, Southwold, Suffolk IP18 6BH
Tel: 01502 724301

**B&W Loudspeakers**
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Tel: 01903 750750
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Ken Kessler - Hi-Fi News & Record Review August '94

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7 Fairmont Crescent, Scunthorpe
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TEL/FAX (+44) 01724 - 870432
Jon Marks is seduced by Unison Research's new Simply 845 valve integrated.

The process of turning Europe into a single market may be mired in legalistic and administrative red tape but there's still evidence for stronger trading ties between EC countries. One sure clue is the wording on hi-fi. No longer do some Italian components, like Unison Research's Simply 845 valve integrated, come with wording splashed across them that you'll need an Italian dictionary to decipher. Now, Unison Research's polyglot owner Dr. Ambrosino is relying on a kind of pan-European English: "845 tubes are shock sensitive when hot. Absolutely (sic) avoid to expose them to any shock or vibration while working."

Apart from this caveat on the curved panel the valves sprout from, this line-level single-ended amplifier is...
100% Italian all the way through. Cherry-wood front and side cheeks give it that 'only in Italy' look and the chassis dimensions (600mm by 390mm by 260mm) demonstrate a certain penchant for the non-conformist. What you also get is 35kg of unimpeachable construction with that air of quality that only comes from careful hand assembly.

These virtues can make it hard to find a suitable platform for the Simply 845 to reside on. We opted for Elemental Audio's Monoplinth (reviewed last month). As well as matching the amp's aesthetics, the Monoplinth firmed up its bass and improved its image focus.

Remove the bottom plate and you'll be greeted by four main Printed Circuit Boards. Nestling directly behind the Alps Blue potentiometer is a PCB that links the six sets of line-level sockets (four sources and one tape loop) to the input selector and source/monitor switch. Thence the signal travels to the input and driver PCB, populated by four ECC82 twin-triodes and their associated capacitors and resistors. Forming the final stage are the 845 power triodes themselves, which twist into their ceramic bases with gold-plated contacts.

Two other PCBs hold the bank of low-voltage caps that smooth the supply to the valves' heaters and those under the cover at the rear of the amp that handle the HT. The only other socket on the back panel apart from those for loudspeakers and mains is marked Phono Power Supply. Using the appropriate umbilical cable, Unison Research's matching Simply Phono, reviewed in March 1996, can be powered from the Simply 845.

If you're looking for standard EI core output transformers on the Simply 845 you'll draw a blank. The two grey cylinders behind the curved heatshield contain toroidal output transformers. While these are compact and can work very well at high frequencies, they often don't reach as low as EI alternatives because of the limited amount of iron in their ring core. The Simply 845 still managed to hit 40Hz at full power though, even if some third-harmonic distortion, which tends to add sharpness to the sound, appeared on our oscillogram.

The 24watts that Unison Research claim for the Simply 845 turned out to be rather closer to 18watts on measurement (will single-ended valve amp manufacturers please stop quoting such optimistic output figures!) That's still twice as much as a lone 300B sweating hard. This makes the Simply 845 an attractive proposition, if you don't happen to possess a pair of loudspeakers that require a little current.

In that case, I thought, let's see what this amp is made of straight away. I set the light load of the Heybrook Sextets to one side and reached for Jamo's Concert 8s. And the first disc into the Teac P-30 transport wasn't chamber music or Jazz either, but the bass-fest of Serialement Votre, a collection of 1960s and 1970s theme tunes given the 1990s drum-machine treatment. Surely, even with 18watts on tap, the 845 and its zero-feedback design would run out of grunt trying to pass the 'whisper' volume level? Nope.

Musically, everything in the tunes on this album happens below 100Hz where single-ended valve amps often start to run into problems. Setting itself apart from the norm, the Simply 845 kept the tracks rolling along with a rare expressive flair, even on recordings as processed as mushy peas. Slightly blurred edges to bass notes didn't slow the pace of basslines in the least. Considering the Jamos weren't under the control of a solid-state brick capable of dumping plentiful current into their voice coils, there was much...
The left-hand side of the Simply 845 bears the phono input sockets. Four line sources can be plugged in and there's a tape loop too. For vinyl replay you'll need Unison Research's matching Simply phono equaliser.

more drive to the music than you'd expect. Wonderfully-extended decay played a part here, linking consecutive notes together fluidly and giving even these wholly artificial recordings a decent sense of atmosphere.

The 845 puts its money where its mouth is when it comes to grunt, but does this Italian have subtlety? 'Yes indeed' is the answer to that question. With minimally-mic'd acoustic recordings the Unison Research revealed an aptitude for golden cymbal shimmers, rich string tones and vocals to swoon to. Whilst this is what you get from most single-ended 300Bs, irrespective of whether it's Mozart or Megadeath, the 845, like the 211, can kick hard when necessary.

It was time for a change of 'speakers, so in came Heybrook's Sextets and Kelly's KT3 floor standers (which will be reviewed in next month's issue). Into these higher-efficiency transducers the Simply 845 sounded more dynamic and more commanding. The Swedish Jazz Kings on an Opus 3 HDCD rattled happily through their repertoire. Crisp tuba notes proved the 845 was having an easier time of it. As with the Jamos, imaging and sound staging were precise and three-dimensional.

Beyond these technical factors of its presentation was the 'musical monosodium glutamate' the Simply seemed to add to what it was playing - tearing myself away from listening to this amp was always difficult. And the smoothness and colourful tonality it enjoys will persuade you to spend long hours burning the midnight oil to the favourites in your disc collection. £3000 for a total of 18watts might not represent the best pound-to-power ratio in hi-fi but it's enough to go loud with a wider range of 'speakers than most single-ended amps. PA-style volume levels aren't what the Simply 845 is about anyway. Partner it with a pair of sympathetic and sensitive 'speakers and you'll discover this Italian is a true musician.

Simply 845
£2950

UK Distribution
23 Richings way,
Ivor,
Bucks. SL0 9DA
Tel: 01753 652669

WORLD VERDICT
The Simply 845 allied to the right 'speakers handles all musical genres with smoothness and power.

Measured Performance
see P111
Rumours of vinyl's death have indeed been greatly exaggerated. When sales headed for the floorboards in 1992 pundits climbed onto their soap boxes to preach sermons of irrevocable demise and the righteous rise of digital. While the high-end with its dedicated fans of price-no-object turntables, arms and cartridges seemed safe, it looked like sub-£1000 LP equipment was going to suffer most. Six years on though and mid-price components like Wilson Benesch’s £795 Circle deck, £795 A.C.T. 0.5 arm and £668 (with 15% trade-in) Matrix Moving-Coil cartridge are still alive and kicking.

What helps keep turntables at this sort of price selling is that they sonically outstrip what has gone before. Most claims that this year’s hi-fi beats last year’s is empty marketing mumbo jumbo. In the analogue disc scene there’s some truth in those words as this Wilson Benesch grouping and the likes of Pink Triangle’s £575 Tarantella/£180 Rega RB300 incontestably prove.

Adding further momentum is the use of materials like perspex and carbon fibre which have tended in the past to put in appearances above the three-figure price mark. The Circle, 0.5 and Matrix are a perfect case in point. Perspex figures in the Circle’s platter as it does in the Pink Triangle’s. But where PT leave theirs bald, WB told us they prefer to top it off with felt due to its “broad-band attenuation” of noise. The platter rotates upon a precision non-inverted bearing manufactured from phosphor bronze and tool steel, its design derived from the more expensive Wilson Benesch Turntable reviewed in July 1996.

Peek at the squat aluminium cylinder that makes up the sub-chassis and you won’t see any traditional metal coil springs. Three thin carbon-fibre rods decouple the arm and platter from the outside world; thicker, more rigid counterparts link armboard to sub-chassis as well. Extra isolation is provided by the urethane feet between the two black MDF discs which form the base of the deck.

It is to the lower slab of MDF that the AC synchronous motor is attached, leaving the upper to support the sub-chassis. Drive is achieved via a round-section belt (a flat belt would have necessitated a tall pulley to give 33rpm/45rpm speeds and wouldn’t have fitted neatly under the platter, according to WB). Finally, the power supply is the simplest possible, just a resistor and a pair of capacitors run direct from the mains.

If the unipivot A.C.T. 0.5 tone-arm is familiar that’s because it's based closely on the now discontinued A.C.T. 2. Costs have been pared by building the arm tube from a less expensive variety of carbon fibre and not vacuum-hardening the tool steel arm pillar, amongst other things.

Making up the £2000 ‘Full Circle’ bundle is the Circle deck, 0.5 arm and Ply MC cartridge. This last is a Matrix (which we bolted into the end of the 0.5) without the trimmings and can only be bought as part of the Full Circle.

Downwind of the Matrix MC came first the Audio Analogue Puccini SE integrated for a brief spell (the Moving-Coil stage on this integrated is every bit as good as its line stages) and then
Sonic Frontiers' £2000 valve Phono 1 backed up by the Chord pre/power combo reviewed on p31. Jamo's Concert 8 loudspeakers on Elemental Audio's very expensive but eminently solid stands rounded out the system.

In spite of the WB lacking the sort of fiddly suspension that can take weeks to optimise before going out of alignment if you so much as look at it the wrong way, it does involve quite a lot of effort to get the best out of it. The company also say the Circle, compared to other decks with non-compliant suspension, is not unduly critical as to what it's sited on. You should still aim for a dedicated platform rather than an MDF slab on a common-or-garden rack.

Positioning the arm and mains leads, while not as crucial to sound quality as it was with Pink Triangle's Tarantella, has an influence too - a loose loop between the deck and some sort of mounting point is wiser than cables simply dangling down.

One potentially problematic item is the supplied alignment gauge. Writ large on this 12in. paper disc are instructions which include the words, "Check the cartridge body is parallel with the printed lines." For a start, the Matrix on our Circle had no body, so sighting along a straight line apart from the front of the headshell was somewhat difficult. And alignment carried out this way didn't give particularly good results. Instead, making sure the Matrix's cantilever was parallel with the central line on the gauge turned out to be the way to go.

**SOUND QUALITY**

If you're thinking this rigmarole is too much hassle to go through for the joys of vinyl replay, a couple of bars from your favourite LP on the Circle will swiftly persuade you otherwise. One record that never fails to shine on a capable turntable is Nimbus Records' SuperCut audiophile pressing of Joan Armatrading's eponymous album. The grooves on this disc contain all the dynamics, speed and involvement vinyl is famous for and the Benesch let them through loud and clear. There's precious few times I've heard 'Join The Boys' meaner and funkier, or 'People' crisper and faster.

In the same manner as the Tarantella, this player turns its nose up at groove noise and just gets on with weaving the music into a near life-size sound stage. This in spite of a poor set of measurements from the Matrix. Tracking was occasionally insecure and separation differed between channels, suggesting the generator hadn't been accurately mounted in the vertical plane on the cartridge.

As far as tonal balance goes, the Circle/0.5/MATRIX have an air of dry coolness to them, like the last day of an Indian summer. The two extremes the WB falls between are the occasionally clinical Roksan Xerxes/Artemiz and, say, the rich Kuzma Stabi/Stogi arm and turntable partnerships. For this reason, it suited the Sonic Frontiers Phono 1 with its warm valve signature rather well.

A spin through a range of Classical LPs showed how much detail the WB could resolve without assaulting your ears with information. All the acoustic cues fell neatly into place in the sound stage to give a very natural, cohesive and atmospheric rendition. One of the combo's aces in this respect was stage depth of the kind that most non-mortgage-inducing CD players can only dream about.

The sole niggle I had with the sound was a light sheen applied to strings which gave them a slightly artificial edge. Bolting the Matrix into a Technics SL-1000 MkII/SME V had me pointing the finger in the direction of the MC as the source of this coloration.

So, what about the competition? The Circle looks like great value in terms of sound and construction at £795, but Pink Triangle's Tarantella isn't short of ability and costs over £200 less. It may not be as lashingly finished but I suspect the Tarantella with an arm like the A.C.T. 0.5 on board would give its carbon-loving counterpart a run for its money. There's little else out there though which would challenge the WB - the Full Circle threesome deserve full credit for doing what they do at the price.

Wilson Benesch Circle
A.C.T. 0.5
Matrix
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Full Circle (as above with Ply MC)
£2000

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<td>Audiolab 8000Q Pre-Amplifier</td>
<td>As new.</td>
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<td>Quad 405 pre-amplifier</td>
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<td>Sugden PS1 pre-amplifier</td>
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SPEAKERS

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<td>Monitor audio M3</td>
<td>mini-boned &amp; stands</td>
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<td>Kevins Audio Volume in cherry box</td>
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<td>Triangle Titan Black ex demo Boxed</td>
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<td>Television Dixon 53.5 in condition</td>
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David Price sizes up the new Anthem CD1 CD player from Sonic Frontiers of Canada.

If you'd never heard of Anthem before you turned this page, then don't worry - I hadn't either until a giant box arrived on my doorstep bearing that very name. In fact, it's Sonic Frontiers' new 'entry level audiophile' brand. Yes, I did say 'entry level'. Strange, because a £1600 CD-playing behemoth complete with 'tube' output buffer is hardly the stuff of budget hi-fi. But then the CD1 hails from Canada, don't you know, where men are men and grizzlies are worried!

The story goes like this. Back in 1989, Chris Johnson and Chris Jensen sensed a gap in the market for an audiophile components supplier and set up The Parts Connection. The next step was to put the bits together themselves, and the Sonic Frontiers SFM-75 amplifier was the result.

The guys got more and more into valves and were soon manufacturing high-end tube-powered esoterica, with the likes of conrad-johnson and Audio Research firmly in their sights.

Sonic Frontiers describe themselves as being 'a Lexus of the hi-fi world', with their Anthem brand likened to Toyota. Well, in Britain at least, Toyota-sized CD players aren't usually quite as big as the Anthem! And to my eyes the build quality is closer to Mercedes Benz - very sturdily and beautifully finished with a vast expanse of silver anodised aluminium for the front panel. (Black is a no-cost option, or can be retro-fitted for £100).

The story's the same inside - a pair of the latest Burr-Brown PCM1702P 20-bit DACs, the respected Pacific Microsonics PMD-100 HDCD filter and an oversize frame-type power transformer are but a start. Then there's the Sovtek 6922/E88CC valve output buffer which glows discreetly from the back of the PCB, fitted in the name of "eliminating digital edginess" (or so it says here). There's also a choice of S/PDIF and AES/EBU digital outputs. Oh, and I nearly forgot the Sony Musicbank transport. No proprietary CDM12 mechanisms from Philips here, because the Anthem is in fact a multi-disc player!

There was I thinking multi-disc machines were the exclusive province of Mini systems in teenagers' bedrooms, but the Anthem has proved me wrong! It has a six-disc bay fed via the standard drawer, with front-panel disc-switching duplicated on the remote. In use it's surprisingly quick and devoid of fuss. True, there is some whirring from inside when you change from one disc to another, but it's a small price to pay for having over 450 minutes of music on tap.
SOUND QUALITY
The Anthem has a very distinct sound which some will love, and others may not. How would you imagine a hulking, North American 'tube' CD player sounds? That's right - big, bold, smooth and powerful all spring to mind, but fast, lithe, incisive and dynamic do not. Give the CD I the right music and it's one of the best listens around - mellow Jazz, power Pop and laid-back Soul grooves are all genres this player warms to superbly. Try high-energy Dance, crashing Rock or crisp Classical and it's a different story.

I kicked off with Suede's 'Trash', a nightmare of a recording which is about as thin and forward as you'll find. What greeted me wasn't the ear-bashing I'd expected but a curiously smooth and easy-going sound. Those wailing guitars, doused as they are in every digital effects pedal known to humankind, were strangely muted and sedate. Singer Brett Anderson's voice, rather than sounding like he was singing down a dodgy telephone line, actually had depth and colour. And the song's bassline; well, there was one! Through dryer designs like Linn's Karik you'd be left thinking the band had forgotten to get the bass player out of bed that day.

808 State's 'Ancordia', another mediocre recording which sounds like it was mastered on an old dog-eared DAT machine, also assumed new life. Gone was the anaemic tonal balance and imaging, in their place a rich acoustic with cinematic sound staging, lush basslines, sumptuous midband and silky highs. Very nice, but I couldn't help noticing all was not quite right. The bass, although warm, fruity and possessed of real slam, sounded a touch too loose. Other players at the Anthem's price may lack its last degree of window-rattling subsonics but are definitely capable of starting and stopping faster. The Anthem adds this 'oomph' to everything it touches, an unlikely strength considering it's quite a lot less dynamic than a Karik or Da Capo; the Anthem just seems to steamroller things along in a relaxed but authoritative manner.

There's also more detail than you might at first think. Unlike similarly-priced Japanese players like Teac's VRDS-25, the Anthem doesn't spit every last piano creak and studio cough at you, but simply lets instruments play independently but cohesively with each other. In short, the CD I makes music. Last, but by no means least, the Anthem is HDCD equipped, and this is where it really shines. Pacific Microsonics' system may have its detractors, but I for one reckon it's well worth having - especially with more and more HDCD titles coming out every month. My Reference Recordings test disc has rarely sounded as sweet, the Anthem lending its characteristic bloom to everything it played.

Downsides? Apart from that treble brightness and loose bass, very little. You could say the CD I's tonal palette isn't the broadest - it can't really convey a recording's subtler tonal shadings because everything sounds warm. Still, that's not such a bad thing with CD.

It's thumbs aloft overall for the Anthem. It's not perfect - nothing is - but it has a warm musicality that gives it an analogue feel. Factor in those stylish looks, fine build, multi-disc convenience and HDCD compatibility and it's a lot of CD player for the money. I just wish it wasn't quite so big - Canada must get a different kind of Toyota from us Brits!

Anthem CD I £1595

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WORLD VERDICT
Sweet sound and numerous features make the CD I fine value for money.

Measured Performance
see p11
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Jon Marks finds out how DIY fans can enhance their home-made hi-fi with help from carbon fibre.

There's a legion of eager constructors out there, soldering irons and wood glue at the ready. A fair majority will already have put together a lot of what sits in their equipment racks from kits offered by a range of companies and will be enjoying the fruits of their labour. Trouble is, for many the time comes when you want to go it alone - the urge to design and construct something wholly your own from scratch starts to take a hold. Now if it's fairly standard loudspeakers or amplifiers you decide on, then no problem - getting local carpenters and sheet metal workers to sort out the cabinets shouldn't be difficult. But if high-tech materials like carbon fibre and Kevlar are tugging at your heart strings, that's another matter.

Companies that deal with advanced composites aren't exactly as numerous as the pigeons in Trafalgar Square. And, as many have found from past experience, most are too busy with large-quantity specialist work (automotive and aerospace, for instance) to be able to help out home constructors with one-off prototypes or short production runs. On top of that, very few are likely to have any experience of hi-fi components. However, there is one company that has handled hi-fi designs in carbon and Kevlar which is happy to turn out single items for DIYers - East Midlands Composites (tel: 01773 530190).

Steve Millward has long had a passion for hi-fi, which eventually saw E.M.C. making components like cartridge bodies for Wilson Benesch. From this collaboration they've gained valuable insights into how advanced fibre technology can best be applied to audio. We decided to investigate how a DIY system with a high-fibre content could sound by auditioning E.M.C.'s set-up.

THE SHAPE OF THINGS TO COME

The turntable front end might ring a few bells even though it's wearing some rather modern garb. It began life as a trusty Thorens TD150 belt-drive deck but has metamorphosed into something special. First in the bin was the original steel top-plate. Steel weighs five times as much as the same volume of carbon fibre and has an annoying habit of ringing like a bell, as you'll discover if you tap most of the metal racks relied on to house hi-fi. In came a 3mm thick carbon-fibre top-plate from which the three-point sprung sub-chassis hangs. Carbon fibre is stiffer and better self-damped than steel, two properties vital to decent vinyl replay.

Talking of the sub-chassis, that was next for replacement. Again, out went steel and in came carbon fibre. In this case, instead of opting for a plain slab, E.M.C. chose a carbon honeycomb sandwiched between upper and lower sheets. This is a carbon fibre version of the aluminium Aerolam Celestion fashioned the enclosures of their SL600 loudspeakers from and which Pink Triangle employ as the sub-chassis of the Export turntable.

The modified Thorens TD150 uses the original platter, bearing and motor but everything else has been changed.
Bolted to the honeycomb are the TD150's bearing and a new carbon-fibre armboard. Mounted firmly on this is the jewel in the crown of the system, E.M.C.'s own tone-arm. The Wilson Benesch influence is particularly strong here as you can see from the picture. The arm tube is tapered to minimise resonance, as are those on WB's new 0.5 (reviewed on p16), SME's Series V and Rega's RB300. At the narrow end you'll find a headshell bonded on to take a cartridge (here WB's 'Carbon', naturally!) while at the other there's a simple cup-and-spike unipivot bearing. The counterweight is a WB-style low-slung device with two steel cylinders which project forward. This effectively allows the counterweight to come in closer to the pivot point and thereby reduces its moment of inertia, giving a cleaner, clearer sound and tighter bass than a standard counterweight.

Rounding out the turntable package is the TD150's own motor driven by a Linn Valhalla power supply. This arrangement isn't perfect because the Valhalla is not optimised for the Thorens motor, so E.M.C. are planning to fit an Airpax DC motor in the near future.

One thing you realise as a result of all these modifications is how good carbon fibre can look. The Thorens has gone from being a slightly dumpy, old-fashioned deck to a sleek, contemporary LP spinner.

ABLE AMPLIFICATION

Not only are E.M.C. fibre fans, they're loyal members of the battery brigade too. The solid-state phono stage which boosts the Carbon MC's output is run from Nickel/Cadmium rechargeable cells to make sure noise is kept low. Then comes the valve line-level pre-amp. This contains a pair of ECC88 double-triodes running on low-voltage supply rails of +/- 30V and coupled to Ansar polypropylene input and output capacitors. These drive the active crossover which splits the signal into high and low frequency parts ready to go on to the two power amps.

Here again E.M.C. have mixed solid-state and thermionic worlds. A 100watt MOSFET power amp with regulated power supply provides the current to take care of the bottom end, leaving the rest to what is basically Mullard's 5-20 valve power amp. The stylish carbon chassis here keeps down the amount of vibration that reaches the ECC83, 7025 and EL34 valves, which, like all valves, are microphonic.

Last link in the chain are the loudspeakers. Open-baffle is the order of the day, Steve Millward swearing this is the only way to get tuneful bass from a 'speaker. Tweeter (1in. fabric-dome) and midrange (5in. paper and carbon fibre) come courtesy of Scanspeak and are linked together by a passive crossover connected to the valve amp, making this a kind of pseudo-active system. The Audax 10in. paper-cone woofer is driven direct by the MOSFET amp and is a reworking of the boxless subwoofer we printed in April 1996.

But where are the pure carbon-fibre driver cones? Well, in these 'speakers carbon fibre has been put more to decorative than structural use. The large MDF panels have a layer of carbon-fibre mat attached to their
At the rear of the loudspeakers are two binding trays. The one on the left runs direct to the woofer while the one on the right feeds the tweeter/midrange passive crossover.

fronts to give them that 'space-age' look.

**SOUND QUALITY**

Setting up open-baffle loudspeakers is never a swift, easy task. Due to the way they interact with the room, getting an evenly-balanced response can take a lot repositioning; a strong friend who enjoys an afternoon of exertion in the name of hi-fi is a great asset.

The experience we gained with the dipole subwoofer in April 1996 suggested the best arrangement was to have the two bass drivers facing out towards the side walls. Since E.M.C.'s drivers are all fixed to the same baffle this limited the placement options somewhat but we still managed to get a very lucid, open sound.

The turntable has certainly cleaned its act up compared to the original, with a much less woolly and coloured character. It played basslines on albums like Grace Jones' Nightclubbing with confidence and power. Midrange and treble were clean and crisp too. With a good DC motor or a standard Airpax AC synchronous motor driven from a PSU like a Linn Lingo this turntable with its carbon-fibre arm would be capable of embarrassing some expensive commercial decks.

The good news for dedicated home designers is that the arm tube can be had for around £25 from E.M.C. The headshell would cost around £5, a simple unipivot bearing and housing around £30, and a counterweight £20. The only part outstanding is the arm pillar - E.M.C.'s own arm uses one scavenged from an old Linn tone-arm. However, by the time you read this, they should have a complete kit ready for sale. And they're also happy to build to your own design, although one-offs like this would be more expensive.

With Teac's P-30 transport and Pink Triangle's Da Capo DAC feeding the pre-amp the system proved equally capable. Imaging wasn't as pinpoint as that of the best small stand mounters but then the open baffles are rather large and reflect quite a lot of sound from around the tweeter and mid/bass units. The breadth and depth of the sound stage amply compensated, as did the bass with its lack of boxy coloration and dynamic slurring.

Emerging as another star of the carbon-fibre road show was that valve power amp. You could hear the quality of the carbon chassis in the punch and slam of the bass and the general focus and detail to the sound. Working into a pair of Jamo's relatively current-hungry Concert 8s the 20watt E.M.C. sounded as taut and effortless as the 100watt Chord solid-state power amp reviewed on p31. There was no sign of it wilting or straining in the way many of the valve amps previously hooked up to the Jamos have.

If you'd like to try out a moulded chassis like this on your own amp project, it'll cost somewhere between £250-£400 depending on size and whether or not it's pre-drilled. A cheaper alternative would be a carbon-fibre top-plate on sides of either wood or marble, for instance. Here your fibre finances would be looking at approximately £80-£100. Carbon, Kevlar and glass fibre, all of which E.M.C. work with, have been put to commercial use in loudspeaker cones and tone-arms. Now the potential benefits of these materials are available to DIYers.

**East Midlands Composites can be contacted at tel: 01773 530190.**

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As a celebration of two decades of hi-fi success, Mission have released the 750LE.

Can you believe Mission are only 20 years old? Because they built up a following so quickly it seems as though they've been a stalwart of the British speaker industry for far longer. That success was partly down to the widespread use of polypropylene cones in their mid/bass drivers, which really did make audiophiles around the world sit up and take notice.

It's therefore rather ironic that the loudspeaker chosen to mark this anniversary, the 750LE, uses a reflex-loaded 130mm mid/bass driver of Aerogel rather than polypropylene. This can hardly be a bad thing as Aerogel, with its carefully-proportioned mix of carbon and Kevlar fibres embedded in an acrylic polymer gel, has a very clean, neutral sound. This is due to its inherent self-damping properties which make it less prone to break-up and roughness in its response than paper and plastic cones.

Aerogel drivers in the rest of the 75 range have been well received, especially when partnered with Mission's own 25mm silk-dome tweeter. The 750LE doesn't have this particular unit, but then for £250 you can't have everything. Instead it uses a conventional fabric-dome unit with a low-profile neodymium magnet.

The cabinet construction takes a leaf out of the 75-Series text book. Two Medium Density Fibreboard 'U' sections, one consisting of the front, back and bottom, the other of the sides and top, are glued together to form a rigid box. The inner surfaces of the upper 'U' are routed to help dissipate standing waves inside the enclosure. Adding the final touches are a choice of wood veneers, gold-plated bi-wiring posts and a rather flash, gold-plated phase plug at the centre of the Aerogel cone. All of which make the 750LE the tastiest looking budget loudspeaker around.

At this price there's a daunting range of excellent competitors up against the 750LE, from the JPVV ML710 (£230) and Eltax Symphony 6 (£240) floor standers down to similar sized minis like Acoustic Energy's 100i and even Mission's own capable 7321, both at £200.

I partnered the 750LEs with my Thule IA100 100watt integrated amp and sat back to sample Rockin' Jimmy's 'Why You Doin' What You Do?' Without beating about the bush, the Missions had me immediately rocking, such was their sense of immediacy and coherence - everything gelled. The piano was timbrally accurate, vocals expressive and well projected, and the bass punchy and surprisingly weighty for such a small cabinet.

The treble wasn't in quite the same league as the midrange and bass. It was smooth and reasonably detailed but couldn't match the refinement of the silk dome, which left percussion occasionally sounding a little splashy.

Where the baby Missions' pedigree
review

SCORE

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The 750LEs are hard to resist with their combination of Aerogel clarity and budget costs.

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It's not every hi-fi company that can boast an order book containing names like the BBC, Abbey Road Studios and the Royal Opera House. But Chord electronics can, which isn't bad going for a company that has only been in existence for 16 years. Take a look and a listen to the CPA 1800/SPM 400 pre/power combination and you begin to understand why Chord have some rather famous customers.

The feature which sets Chord's amplifiers apart from those of most other manufacturers is the use of switch-mode power supplies. These endow the power amps with high power outputs without the need for transformers the size of a tractor tyre.

The design of the switch-mode power supply is common to all Chord amplifiers. First, the mains supply goes through a three-stage Radio Frequency Interference filter before it's rectified. This high-voltage DC is then stored in a bank of capacitors. Next, ultra-low-loss MOSFET transistors switching at 80kHz chop this DC up and the subsequent waveform passes through a custom-made ceramic-cored high-frequency transformer.

From here the voltage is rectified again and passed on to a 'Dynamic Coupling' system where the positive and negative supply rails are coupled together by a strong magnetic flux. Thus, if a high power demand is made on one rail, the required energy will actually be drawn from both, keeping the ground reference clean. All that remains after the 'Dynamic Coupling' is a final bank of storage capacitors which feed the audio circuitry itself.

The 100 watt SPM 400 power amp is a perfect example of the size benefits of switch-mode. It measures a shoe-box 300mm by 355mm by 88mm and weighs a mere 4.5kg, which is less than most budget amplifiers. But don't make the mistake of equating weight with quality - both the CPA 1800 pre and the SPM 400 power rank among the most professionally-built components I've seen.

The CPA 1800 is Chord's base pre-amp, though £1774 is hardly a base price. Six line-level inputs and two tape outputs are catered for, hence the A/B buttons on the fascia - A is Tape 1, B Tape 2. On the rear there are sturdy phono connectors to all the inputs and two pre-amp outputs, one set fully-balanced XLR and the other RCA.

The power amp is even simpler. Built into a matching case, this £1325 unit displays just a Power On button and a bi-colour LED which shines red for standby and green for ready. Between switching the amp on and music emerging from your 'speakers there's a 12-second gap that gives the circuitry time to stabilise. Round the back there are standard RCA inputs (strangely no balanced XLRs) and two pairs of binding posts.

Only here does the SPM 400 look less than ideal. Because of the heatsink fins on the back panel there's very little space around the terminals which can make it quite awkward when the interconnects and speaker cables are of the chunky variety.

Mike Gregory of Chord told me that this partnership, and especially the power amp, would take at least four days of continuous music to reach peak performance. Sandwiching the Chords between our standard CD front end of Tecac P-30 transport/Pink Triangle Da Capo DAC and the Jamo Concert 8 stand mounters initially proved disappointing. The sound was dynamic and detailed but also rather grainy and monochromatic. It lacked expression and had a mild hardness in the lower treble that emphasised the Jamos' weakness in this area.

Chord's 'budget' CPA 1800 pre and SPM 400 power combination cost over £3000. Ketan Bhadadia starts saving.
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During the next couple of weeks the Chords burned in to become sweeter, smoother and more natural. The final results were well worth the wait.

The SPM 400 worked into a variety of speakers including Heybrook's Sextets, our own KLS3 Gold MkIs and even Castle's little Kendals. The best match turned out to be the Jamos simply because in terms of detail, coherence and dynamics they suited the Chords perfectly.

**SOUND QUALITY**

The first thing that strikes you when listening to the Chords is just how transparent they are without being bright or forward. The 1800/400 are uncommon components because they give you that feeling of listening straight through the electronics and deep into the recording. For this to be the case you need outstanding resolution of detail. Excellent though they are in information retrieval it's not this alone that makes the Chords special. What does is a mix of abilities unmatched by anything I've heard at this price or quite a lot more.

So what are these abilities? Detail is one. Then there's the natural, unforced clarity which enables you to concentrate on the musical piece as a whole. Imaging precision and stability is another, as I found with Hideko Udagawa and the London Symphony orchestra playing Brahms Violin Concerto, Op.77.

The next enviable string to these amps' bow is their dynamic power and transient speed - crescendos don't have their peaks rounded off as happens with so many amplifiers. This makes the music much more invigorating and involving. Instruments in the orchestra such as triangles aren't modulated by timpani and stay sharply focused - control is close to absolute. Even so, the 1800/400 serve the music, not vice versa.

Looking for some sort of chink in the Chords' armour I linet them up with some funky Soul in the form of En Vogue's EV3 album. The amps handled this as if reproducing a multitude of sledgehammer drum machines and synthesisers was the most natural thing in the world. There was as much slam as the hardest of bass heads could wish for without the delicacy of vocal harmonies suffering in the least.

Switching genres to Jazz and Reggae didn't make any difference - the Chords impressed with them all.

There are certain areas where you could split hairs. Compared to something like the Unison Research Simply 845 on p13 the Chords are less fluid and tonally lush. Swapping around with the £4000 Etalon pre/power reviewed last month revealed the Chords to be slightly on the leaner side of neutral too.

In spite of this there's no doubt the CPA 1800/SPM 400 combination is special. Its strength is that it imposes so little character of its own on music - it won't turn relaxed tempos up-beat nor will it add sweetness to what isn't sweet. This is as honest and truthful a pair of amplifiers as I've heard in a long time. If your musical tastes are broad and you prize neutrality, very few competitors at this price come close.

**Chord CPA 1800** £1774

**Chord SPM 400** £1325

**Chord Electronics**

The Pump House, Bridge Court, East Farleigh, Kent ME16 9NB

Tel: 01622 721444

**WORLD VERDICT**

Amplifiers which leave it all - detail, transparency, slam and rhythm. In a word, excellent.

**Measured Performance**

see P111
This month's competition prize is one for the analogue disc fans among you, a top-class combination of Wilson Benesch's Circle turntable, A.C.T. 0.5 tone-arm and Matrix Moving-Coil cartridge as reviewed on p16.

There are two traits you'll never fail to find in Wilson Benesch components - solid engineering and carbon fibre. Each part of this front end demonstrates these virtues.

The £795 Circle turntable is an elegant device with a functional, minimalist look. As its base it uses two circular MDF slabs over an inch thick and 12 inches in diameter. The motor (where 33rpm/45rpm speed change is accomplished by moving the round belt on the pulley) is mounted on the lower of these while the upper supports and isolates the sub-chassis. The bearing and armboard sit on three carbon-fibre rods, each of which is 3mm in diameter. The platter itself is a chunky acrylic affair which Wilson Benesch say works best when it's clothed with the supplied mat of felt.

The £795 A.C.T. 0.5 unipivot tone-arm could well be the true bargain of the three. It's a less expensive version of Wilson Benesch's A.C.T. 2 and is manufactured in the same way but has simplified connectors and no presentation case to keep the price down.

Final link, the Matrix cartridge is worth a hefty £786. This open-body design uses a carbon-fibre base and its inherent self-damping to reduce resonances in the generator assembly, supplied by Benz-Micro.

Add these three ingredients together and you'll realise that the Circle set-up is very neutral. Gone are the slightly fluffy bass and treble that tainted many turntables of yore. Instead, music has solidity, control and detail without sounding in the least sterile. Rhythm is in safe hands as well, as attested by numerous driving Rock tracks and permanently tapping feet.

With its precision main bearing and faultless finish the WB is going to keep your LPs turning for a very long time to come too. And where most other decks could hardly be called attractive, the Circle and co. ooze more style than the average classy-label boutique.

If you would like to win this great prize, all you have to do is answer the following questions and complete the tie breaker. Send in the entry form on the back of a sealed envelope or post card to reach us by March 6th to:

Wilson Benesch Competition
Hi-Fi World Magazine,
64 Castellain Road,
Maida Vale,
London W9 1EX

Don't forget to include your name, address and telephone number so that we can contact the winner promptly.
COMPETITION ENTRY QUESTIONS

1) Which hi-tech material is Wilson Benesch famous for using?
   A. Kevlar B. Carbon Fibre C. Nylon D. Titanium

2) What kind of cartridge is the Matrix?
   A. Moving Magnet B. Moving Coil C. Crystal D. Toner

3) What speeds does the Circle cater to?
   A. 33rpm/45rpm B. 78rpm/60rpm C. 50rpm/100rpm D. 8rpm/16rpm

4) What is the base of the Circle made of?
   A. Plywood B. Aluminium C. Plastic D. MDF

5) How many carbon-fibre rods support the sub-chassis?
   A. 1 B. 5 C. 3 D. 10

TIE BREAKER (obligatory)

Complete the following in less than 30 words

Carbon fibre is the order of the day.
As it helps play music in an uncommon way,
Wilson Benesch duly realised this fact,
And created the Circle, Matrix and A.C.T.

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COMPETITION RULES AND CONDITIONS

[1] Only one entry per household. Multiple entries will be automatically disqualified.
[2] In the event of more than one entrant submitting all-correct answers, the winner will be picked from the tie-breaker by the Editor. We will endeavour to publish the results in the second issue following the closing date.
[3] Purchase of the magazine is not a precondition of entry.
[4] No correspondence will be entered into; the Editor's decision is final.
[5] No employees of Audio Publishing Ltd. or of any companies associated with the production or distribution of the prizes may enter.

COMPETITION WINNERS

JANUARY ISSUE COMPETITION

Now it's time to reveal the many winners in our bumper January competition where every component reviewed was up for grabs.

ALAN ALDERSON of Co. Durham wins the JPW M510 loudspeakers. J. HERMELE of London wins the Mission 731 loudspeakers. J. CAMERON of Rosshire wins the Eltax Liberty 3+ loudspeakers. JOHN COLLINS of Bristol wins the Tannoy Mercury m2 loudspeakers. PAUL SZYszko of London wins the Mordaunt-Short MS10i Pearl loudspeakers. JASON PARKES of Dudley wins the Kenwood DM-9090 MiniDisc recorder. JUSTIN HOLMES of Epsom wins the Roksan Ojan 3 loudspeakers. STEVE BROOKS of Northants wins the Musical Fidelity X-Pre and X-A50 amplifiers. JOHN BOYD of Nottingham wins the DPA White Slink interconnect.

TIM HAMLYN of Norfolk wins the Pentacone Plain Soft Copper interconnect. JAMES MCPHIE of South Lanarkshire wins the Prowire Silver interconnect. DAVE EDMONDSON of Lancashire, I. ADAMS of East Sussex, PAUL KILLICK of Guernsey, MARK HILLIER of Suffolk, KEITH HODGKINSON of Manchester, BRIAN CHURCHILL of Kent, PHIL GATES of Southampton, ELIZABETH AVELING of Bradford, TINA NEWMAN of Hampshire and D. L. MURPHY of Kent all win a Ringmat Statmat each. NEIL REEVES of Warwickshire and A. GILYEAD of Solihull both win a bottle of Licon each. HAZEL EVERTT of Cleethorpes wins the Philips CDR 870 CD recorder. ADRIAN BUCKMASTER of Middlesex wins the GATE Troughline decoder.

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EXTRA SPECIAL?
Is it a case of beautiful looks partnering sweet sounds in Sony’s CDP-X3000ES CD player? Leo Lam investigates.

The first time I met Sony’s CDP-X3000ES CD player was a year ago in Hong Kong where it was sitting pretty alongside its matching amplifier. I was simply stunned by its looks. Displayed between some Krell, Mark Levinson and high-end Japanese players it didn’t seem even marginally out of place, despite costing a paltry £500. A quick listen told me it was a promising design but I had no chance then to really get to know its sound.

My second encounter with the ‘3000ES afforded me the time I hadn’t had before. The Sony is a joy to use, with its acrylic cover that slides elegantly backwards as you place your CD in the machine, and drew many an admiring comment. “Beautiful, I’d buy it for the looks alone,” was the general verdict, particularly from female friends who came to observe the most recent review addition to my rack. Stylish in spades the Sony may be on the outside, but do the electronics on the inside match up?

THE TECHNOLOGY
Without a doubt they do. In fact, the build and component quality are little short of amazing at this price. Opening the glamorous case revealed an array of very expensive, audio-grade capacitors, from Elna Silmic (as used by Ken Ishiwata in certain ‘SE’ version Marantz CD players) to Nichicon Muses, an industry favourite in the upper echelons of equipment. Also spotted were two of Sony’s proprietary Current Pulse D/A convertors and a fully Japanese troop of semiconductor devices. A Lexus under the skin of a Mini Cooper!

Fancy, but this isn’t the only eye-catching feature in the CDP-X3000ES. Sony has discarded its traditional transport, which features in many CD players, like those from Onkyo and Arcam (the Alpha 1). The same optical pick-up head is retained but the rest of the transport has been completely redesigned. Where traditional transports move the pick-up across the disc to read the data, the Sony’s fixes the pick-up and moves the transport horizontally for tracking. Sony claim this radical departure from the norm provides better overall stability and therefore sound quality than a conventional transport.

And the list of Unique Selling Points lengthens with the four variable-coefficient digital filters. Unlike the user-changeable filters in the Da Capo, which were wholly different ICs, the Sony uses the same IC - it’s just the rates of roll-off and their effect on the response that change. Though more of a marketing gimmick than an advance in technology, since implementing multiple digital low-pass filters for a CD player is simple, I’m surprised it’s only now, nearly 15 years after CD’s introduction, that the idea has been put into practice.

The filters are located before the D/A conversion and filter out the digital signal’s high-frequency components, which are created during sampling. So the frequency spectrum is shaped in the digital domain and you can choose which of the four you prefer.

The standard filter is a brick-wall type chopping in at around 24kHz, with a claimed attenuation of 120dB, which causes some response ripples near the cut-off frequency as our measurements show. Filter No1 has a slow roll-off which cures the ripples to give a flatter response. Filter No2 is a combination of the standard and No1 filters. Finally, the last setting, No3, is a simulation of a seventh-order Butterworth filter. Selecting a filter is as easy as pressing a button on the remote handset.

The controls on the player’s fascia are minimal since all the usual functions like programming, display dimming and the various play modes can be found on the remote. Also featured is a switchable digital output where both Toslink and co-axial are supported.

SOUND QUALITY
After perusing the CDP-X3000ES’s innards I was expecting a class-beating performance. Raising your hopes too
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TIMES

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high is always dangerous. I played a mix of discs as soon as I’d plugged the player in and the smile slipped from my face - the Sony sounded like a poor example from the dawn of digital replay. Treble was hard and bright, and the bass loose whichever filter I opted for. Fine, so it obviously needed a warm-up. It turned out that nearly a week, on constantly repeat all day was what the doctor ordered.

During that week, the Sony went from strength to strength, the high-frequency aberrations fading away and the whole presentation snapping into focus. It was duly connected to Roksan’s Caspian amplifier and a pair of Seas Mighty Mini stand mounters from Wilmslow Audio, picked for their revealing clarity. The Castle Kendal floor standers reviewed on p57 were pressed into service as well. Cables interconnect and ‘speaker included Kimber, Audioquest and DNM, and the final ingredient was Musical Fidelity’s X10-D buffer.

STANDARD FILTER
A clean, open sound emerged from my Super Minis as the Sony spun the Albert Cello Concerto with Yo-Yo Ma (Sony SK 57961). The CDP-X3000ES’s sense of scale was exemplary considering its price and, when compared with the Marantz CD-63 mkII KI-Signature or even an Arcam Alpha 8, it put greater dynamics and punchier drive into the music. The sound stage was fairly wide and stable, although it has to be said it could have been deeper. Ma’s cello was appropriately rich for a Stradivarius and the delicate moments in this work were portrayed with grace and subtlety.

This goes to show how tonally faithful to the music this player is - it relayed whatever was in the recording without adding its own opinion. What prevented an even better score was a shortfall in detail, especially when you remember the expensive components under that desirable lid.

The timpani hit hard as the second movement arrived and the Sony came up with the goods again. As the music became more complicated, the resolution and grip in the bass end decreased while the midrange and the treble remained intact. However, that didn’t detract from the Sony’s natural musicality.

FILTER NO1
There was a shrinking in the sound stage’s width and depth followed by a more rounded string tone here. Noticeable now by its absence was that feeling with the Standard filter that if the musicians really did pull out every last stop there might be trouble. Filter No1 removed that tiny hint of insecurity and made for a slightly more involving listening experience. Dietrich Fischer Dieskau’s voice in Die Schone Mullerin (EMI 7471732) gained more focus with this filter too.

FILTER NO2
This setting produced a drier balance that lacked the richness of its two antecedents. Fischer Dieskau’s sonorous voice took on a leaner tenor, as if he hadn’t drunk enough water before the recording session. String tone grew thinner with Brahms Symphony No4 conducted by Sir Georg Solti (Decca 436614-2) and the whole orchestra moved back by a few feet. It is true that single acoustic instruments like the guitar on Eric Clapton’s Unplugged album sounded sharper because their decay was curtailed but this left the music sounding a touch lifeless.

FILTER NO3
This filter was a mix of the characteristics of the others in that the whole sound stage moved further behind that of No2 while tonal colour was as smooth and rounded as the standard. Yo-Yo Ma’s cello regained its mellow resonance and Fischer Dieskau’s old recording was vocally warmer and more sensual.

Of all the filters the standard strikes the best balance for me. It has a combined spaciousness and tonal range the others miss out on and I can’t see there being many discs that would have me reaching for Nos1-3.

CONCLUSION
Leaving to one side the stylish appearance, filter settings and unique transport that mark this player out and going purely on sound quality, the Sony is a very well engineered player. It may not manage that trick of high-end sound on a shoestring but it holds its ground in the £500 battle field. Factor in the looks and the tweaky filters and perhaps the CDP-X3000ES could be that extra-special, long-sought addition to your system.

Sony CDP-X3000ES £499.99

Sony
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Brooklands,
Weybridge,
Surrey KT13 0XW
Tel: 01932 816000

WORLD VERDICT
An unusual player with a neutral, dynamic character and decor-friendly casework that will grace any living room.

Measured Performance see p111
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Jimmy Hughes  (Hi-Fi Choice, December 1997)

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Ketan Bharadia takes a listen to three £60-£90 interconnects from Audioquest, Kimber and Roksan in the search for an audiophile wonderwire.

**KIMBER PBJ**
£68/1m.
The PBJ is the entry-level interconnect in Kimber's extensive range and uses a braid geometry for its woven conductors to reduce the effects of electromagnetic and radio frequency interference.

Carrying 'Viola Fora De Moda' (by Ana Caram from a Chesky Jazz sampler CD) the PBJ proved to be an extremely fast sounding cable. It had the ability to track musical dynamics very accurately, lending the sound an open, uncompressed feel. And the good news didn't stop there. The cable also proved natural and very transparent - the various bells and triangles on this track were easily discernible and well separated.

At the other end of the spectrum, drum beats had great impact and speed which helped the PBJ to sound rhythmic and involving.

There is a negative side to the performance which was obvious on large scale Classical pieces. The Kimber possesses a certain thinness which aids the cable's agility at the expense of tonal richness. Highlighting this shortcoming is a forwardness to the treble which benefits detail and stereo imaging but can become fatiguing in a system already slightly bright.

Providing it's hooked up to evenly-balanced or warmish ancillaries the Kimber nonetheless gives an outstanding account of itself at the price.

**ROKSAN HDC-01A**
£89.95/1m.
Roksan are well known for manufacturing turntables, amplifiers, CD players and 'speakers, but interconnects? Well, they make those too and they've come up trumps with the HDC-01A. This cable is a shielded, twisted pair of multi-strand copper conductors covered in a flexible blue sheath.

The HDC-01A has a very controlled sound which is packed full of detail and tonal colour. Weightier and more full-bodied than the Kimber it remains neutral overall and scores well on dynamics, though crescendos weren't quite given the free rein that the Kimber provided. On most music the sense of order the Roksan brings is welcome, allowing you to differentiate the instruments in an orchestra or hear subtle production effects on a Pop recording.

Erykah Badu's Baduizm album proved engrossing, the outrageously heavy basslines relayed with genuine power and articulation. The way the various percussion instruments and Erykah's vocals were sharply etched and occupied their own space in a well focused sound stage emphasised the Roksan's pedigree.

The HDC-01A is capable of fitting into most systems without upsetting the applecart. With a bit more exuberance it would be excellent.

**AUDIOQUEST TOPAZ**
£59.95/1m.
This is the only cable on test to use oxygen-free copper solid-core conductors and this gives it a less flexible feel than the others. The Topaz is also the cheapest interconnect on test, which obviously didn't hamper it.

The Audioquest has an even character which treads a path between the Kimber and Roksan in terms of presentation - it's livelier than the Roksan but doesn't suffer from the thinness of the Kimber.

Detail retrieval isn't quite up to the standards of its pricier rivals and this affects areas such as expressiveness, sound staging and tonal colour. This comes to the fore when listening to Classical pieces, but even here the deficiencies aren't going to stop you enjoying the music.

On smaller-scale recordings such as that by Ana Caram, the Topaz coped better. The addictive drum rhythms and interplay between the instruments were precisely conveyed even if the heaviest drum beats lacked that last smidgen of weight. Up against pricier competition the Topaz didn't disgrace itself and at £60 is definitely worth a listen.

---

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MARCH 1998

ANGLE WRANGLE
Is it true that the V.T.A. (Vertical Tracking Angle, diagram No1) of phono cartridges changed from circa 15 degrees to circa 20 degrees in the late '60s and early '70s? If so, then presumably the S.R.A. (Stylus Rake Angle, diagram No2) would have been adjusted as well? Also, I've heard that the lacquer-cutting process changed around this time, which begs the question, is there a relationship between the change in V.T.A. and the cutting process?

The reason I ask these questions is that I notice a great and consistent difference between '60s and '70s pressings. The former are always more textured, ambient and 'breathy', but less clean. I mostly listen to orchestral, chamber and vocal music. Now the ultimate point is, how to design/tailor my system such that my '70s pressings retain as much of the character of their '60s counterparts as possible? Any light that you could shed on this subject would be greatly appreciated.

G. Burns
London.

LETTER OF THE MONTH

HOLEY CD!
Do you know which side your CDs are buttered on?! My two-year-old son, who is fascinated by anything which turns, recently waded through my CD collection. To my dismay I found him happily spinning the silvery discs in their cases and thereby scratching neat concentric circles on their playing surfaces. I later discovered that my Chandos copy of Dvorak's Symphony No9 skipped at exactly 42 mins and 30 secs. Examination of the surface revealed a curved scratch which, having nothing to lose, I began to polish out.

After a while I found that, having scoured and polished the surface back to a mirror finish, the scratch remained unchanged. I then discovered that the blemish was not on the playing side but showing through from the printed label side! Shining a bright lamp through this disc and others I found that apart from scratches there were also pin-size holes piercing the reflective surface. Is this normal? Do holes have a part to play in sound quality and should I return discs that have these pin-hole punctures? For now, I resolve to take extra care of the printed surface.

According to a technical spokesman at Polygram, Philips' music arm, they conducted listening tests into the effect of pin-holes on sound quality in the 1980s and came to the conclusion that they didn't have any impact on it at all. The error-correction circuitry inside your player will have no difficulty at all coping with such small amounts of missing data. On the other hand, as you've noticed, a large chunk of missing data in the

Vinyl compounds and pressing specifications changed substantially in the early '70s. A decade previously, most LPs were pressed onto 160g virgin vinyl discs, which took higher modulation levels (hence the different look of the grooves). By the late '70s, most LPs were cut on 120g recycled plastic at lower levels and with tighter groove spacing, in an attempt to squeeze long playing times onto single albums – probably at the behest of Yes and Genesis fans! I'm afraid
A wide range of Vertical Modulation Angles, which a cartridge's Vertical Tracking Angle has to be adjusted to mimic, was found in cutting lathe heads for stereo recordings across Europe and America. A V.T.A. figure of 15 degrees was adopted in the States while 20 degrees with a tolerance of +/- 5 degrees was written into the guidelines in Europe in 1972. Many cartridge manufacturers changed the geometry of their cartridges in line with the recommendations but not all. A modern example is the DNM Aciore, which has a V.T.A. of 30 degrees that gives higher second harmonic distortion on left and right images than the more normal V.T.A. of around 20 degrees. As you surmise, Stylus Rake Angle changes with V.T.A. to maintain the correct stylus/groove relationship.

Another reason for variations in sound quality from different pressings is the character of the cutting lathes themselves. According to Sean Davies, an expert on cutting lathes who has sat on British Standards Authority committees for audio, The American Westrex cutting heads of the early '60s had a relatively high mass which meant only lowish levels of motional feedback (up to a frequency of 9kHz) could be applied to control their movement. This resulted in the kind of hard, powerful midrange they were cut at half-speed because the company's engineers didn't think the lathes of the day were really up to the job when working at normal speed.

A wide range of Vertical Tracking Angles, which a cartridge's Vertical Tracking Angle has to be adjusted to mimic, was found in cutting lathe heads for stereo recordings across Europe and America (0 degrees and 23 degrees in the case of the two main cutting systems in the States, for example) after the widespread introduction of stereo in 1957. There was a variety of Vertical Tracking Angles in cartridges too, from as little as 10 degrees to as much as 40 degrees. Therefore, in 1961, the Recording Industry Association of America (R.I.A.A.) recommended that 15 degrees be the standard for cutting lathes and cartridges.

V.T.A. of around 20 degrees. As you surmise, Stylus Rake Angle changes with V.T.A. to maintain the correct stylus/groove relationship.

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There's a 1.2mm clear polycarbonate layer protecting the side of the CD that the laser reads, but only about 20 microns (20 thousandths of a millimetre) of hardened lacquer between the aluminium layer and the outside world on the label side.

As to the concentric arc on your Chandos copy of Dvorak, it has most likely been scratched in from the label side, either by your son or your CD player's clamping mechanism. There's a 1.2mm clear polycarbonate layer protecting the side of the CD that the laser reads, but only about 20 microns (20 thousandths of a millimetre) of hardened lacquer between the aluminium layer and the outside world on the label side. JM

LETTER OF THE MONTH (CONT.)

form of an arc cut into the reflective part of the disc will cause skipping.

Pin-holes are caused when tiny dust particles adhere to the aluminised layer in the CD during production and then drop off before the protective layer is added. With modern-day clean-room conditions in CD plants, pin-holes are a rarity.

As to the concentric arc on your Chandos copy of Dvorak, it has most likely been scratched in from the label side, either by your son or your CD player's clamping mechanism. There's a 1.2mm clear polycarbonate layer protecting the side of the CD that the laser reads, but only about 20 microns (20 thousandths of a millimetre) of hardened lacquer between the aluminium layer and the outside world on the label side.

Save your stylus having to plough through a dusty groove with one of Decca's 2+2 record brushes.

THE BENEFITS OF AGE

I have a NAD 502 CD player, Harman Kardon 1400 amplifier and Mission 700 loudspeakers with Cable Talk Monitor 2 interconnects and QED Qudos 'speaker cable. My room is about 24ft. by 10ft. My faithful old NAD 3020 amp has just been replaced by the Harman Kardon because I thought it was time to put the old girl out to pasture.

However, instead of improving the sound of my system, I have made it almost unlistenable. Sure, the HK has a bigger sound and is able to produce violins and guitars in a more life-like manner, but I find it tiring to listen to for more than 20 minutes. What have I done wrong here? I suspect that perhaps the weak link in this case might be the Missions and that now the NAD 3020 has been replaced, they have to go as well because the system has become unbalanced.

Am I right? And could you suggest suitable replacements in the £150-£250 area?

Paul Fitzgerald
Moseley, Birmingham.

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A HEAVY METAL FAN WRITES...

One of my friends is a gifted electronics engineer and a heavy duty hi-fi nut who’s built his own DAC, spending more than £800 on components and using only the best he could find. I guess a commercial equivalent would probably cost over £3000.

We haven’t compared it to everything on the market but reckon it would be hard to find better, except the megabucks offerings from Krell, Mark Levinson, Wadia et al. Alas, he’s still using it with an ageing Pioneer player as a transport. To exploit its qualities to the full he definitely needs something better, which is the problem.

Who on earth is willing to pay £4000 for transports from top American manufacturers? And look at the cheaper alternatives - Stable Platter Pioneers? Clever idea but flimsy build, even on non-budget players. Teac’s V.R.D.S. Nice design, but only properly executed on machines costing £2000+. Those £750 to £1900 transports from British manufacturers! Some of them are well designed, but look at those plastic disc trays - shame! If I’m not mistaken, only the Audiolab transport has the Philips CDM 9 Pro mechanism with a metal tray. Where are the good, affordable CD transports?

Remember the first CD players? Many were built like battleships. If older players had really good transports, why not today’s? And is it worth trying to find a second-hand high-end player of yore and use it with one of today’s finest DACs? Don’t tell me it’s impossible and that I’m the only one who hates those nasty plasticky things - there are times where heavy metal is better for music lovers!

Christian Roiseux Brussels, Belgium.

Early CD players were so well constructed because they were expensive and not built down to a price. The manufacturers also knew they had to get CD right first time so they deliberately over-engineered the players to withstand more than they had to. On top of this, the disc quality control wasn’t as good as it is now, and hardware manufacturers had to compensate for this fact. The results were metal die-cast transports and sturdy metal disc trays, plus generous case construction, power supplies and the like. These days, manufacturers are much better at building CD players down to a cost, but haven’t made such advances when cost is no object.

You’d be forgiven for thinking that all CD transports should sound the same given that they retrieve the same data. Jitter is the key. Although the same data is read, some transports get the timing spot on and some don’t. Here, construction quality, accurate clocking, etc seems to reap dividends.

As an aside, don’t confuse the disc tray with the actual transport mechanism which comprises the laser assembly and running gear. Although the two usually go together, a metal disc tray doesn’t mean a metal transport. And by the way, the Audiolab 8000CDM has a plastic disc tray.

As for your friend’s problem, Teac’s V.R.D.S. TI transport is a great budget buy not too far behind top stuff like Pink Triangle’s Cardinal but much cheaper. If money’s no object, consider Linn’s superb Karik 3, which not only has the slickest and fastest metal disc tray you’ll find, but a fantastically tight, punchy, rhythmic sound, plus a built-in DAC should you ever need it.

Alternatively, go for a second-hand early Nineties high-end Japanese one-box player with a co-axial output, like Marantz’s CD-94, replace its digital output stage, with one from Trichord say (tel: 01684 573524) and use it as a transport. DP
CASH INJECTION

Please could you give me some advice. I currently have a Rotel RCD-956BX CD player, Thorens TD 160 turntable and SME 3009 arm with Linn K5 cartridge, Meridian 551 amp and Tannoy 611 ' speakers bi-wired with Heybrook Heywire cable.

In a nutshell the sound has no bite, it appears too laid back. My musical tastes are varied (Rock, Jazz, Classical). I am thinking of buying a Linn LP 12 (second-hand). My budget will be in the region of £ 1000 upwards. This is a long-term project for me.

Andrew McDonald 101332.3458@compuserve.com

One immediate way to get quite a lot more from your system would be to change your loudspeaker cable - DNM's Mica MM will easily outstrip Linn's K5 in an LP12.

MEGA UPGRADE PROBLEMS

My system comprises a Micromega T-Drive and T-DAC, Audiolab 8000A integrated and Arcam Delta 290P power amps, driving respectively tweeter and bass units of a pair of Ruark Rhapsody loudspeakers. I'm tempted to get a second 290P and use them as monoblocks, dividing the amplification between the 'speakers rather than the drivers as at present, and use the Audiolab as a pre-amp until funds allow an upgrade. Arcams appear to be available for about £250 second-hand at present. Do you think this would make a worthwhile upgrade, and what pre-amp would you recommend for later?

Richard Dixon RV Dixon@aol.com

Your source and 'speakers are both good, so you're right to concentrate on amplification. I agree that another Arcam 290P would be just the job, but your system could still work best bi-amped rather than monoblocked - you'd have to try that one out for yourself.

Next, upgrade to a decent pre-amp - if you want warmth and musicality, LFD's Mistral or Cyrus's Pre are good budget choices. But you may find the slightly leaner Audiolab 8000Q works nicely with your sumptuous sounding Arcams - it's a fine second-hand buy for around £650.

DP

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SIMPLE REALY

My room size is 15.5ft. by 11.0ft. What kind of 'speaker would suit it? At present I don't own any system as such as I plan to start from scratch. My budget is £7000 not including cables, just the CD player, amp and 'speakers. Anything you suggest should be solidly built. My musical diet mainly consists of Classical and chamber music with other types thrown in occasionally.

One thing that is especially important is sound staging, which must have good depth, width and height. Am I asking too much for my money? This is going to be my last system, so any help would be much appreciated.

Jaleel (surname not supplied) jaleel@ibm.net

For £7000 it's difficult to imagine asking too much for your money! One combination which positively leaps to mind is Pink Triangle's new Litaural CD player (£2100 and sonically outstanding, although the build doesn't exactly rate as 'hewn from stone'), Unison Research's £3000 Simply 845 integrated valve amp (apparently constructed to induce hernia in whoever has to position it) and ProAc's Response 25 stand mounters (£1800, easy to
TURNTABLE TEASER

If you have a record player which you are rather fond of as a motor unit but you do not care much for its (non-removable) tone-arm, is there anything wrong with fitting a better tone-arm on a separate plinth, for example at right angles with the original tone-arm, provided the external dimensions of the record player plinth allow this?

Dr Alexandros A. Lavdas
a.lavdas@ucl.ac.uk

If you can get your hands on a Kenwood KD-7010 direct-drive turntable (not too expensive second-hand), you can remove its plinth to make fitting a second tone-arm easier.

Interesting idea! Providing you get the geometry spot on and you attach your plinth properly it should work. How you attach your plinth depends on whether it's a suspended sub-chassis deck or not. If it is, rather than attaching another plinth, try glueing or bolting a custom armboard made from, say, MDF to the existing sub-chassis. This would involve extensive surgery to the deck's plinth, so as to let the new armboard attach to the sub-chassis without stopping it from bouncing freely inside the plinth, coupled to the main bearing and platter but decoupled from the plinth. If it's a non-suspended, Rega-type deck, you could simply fabricate an armboard and glue it to the plinth in exactly the right place. Providing your geometry's okay and everything's rigid, it should work perfectly well, and could look drop-dead cool (I've always wanted a two-armed turntable, but that's enough of my fetishes!)

One of those old quartz-lock Japanese direct drives with good motor units and bearings but rubbishy automated tone-arms could be the ideal testbed - send us a photo when you've done it! DP

CORNERED

I was wondering if you could give me some advice. My current system consists of a Linn Basik/Iittok/K5 turntable, a Sugden SDT-1SE CD player, and a Sugden A21a integrated amplifier. I have been using sensitive Lowther Classic 400 'speakers which worked well with the 30watt Sugden.

I have recently moved house and the room the system is in measures 10ft by 16ft by 7.5ft high. Due to the arrangement of the room the 'speakers have to be in the back corners of the 10ft wall. The Lowthers have been damaged during the move and are too big for the room anyway. I am trying to find a suitable pair of 'speakers to match the system and the room size. My local specialist has recommended the Castle Harlechs. However, I have read that they need to be free standing which is a bit of a problem with the room. I listen to a wide range of music, particularly Country, Rock and Blues. Any advice would be greatly appreciated.

Chris Griffiths
CGriff664@aol.com

There's a couple of potential drawbacks with the Harlechs (reviewed in August 1996) in your system. The first is their low sensitivity (84.5dB). Yours is a medium-size room, and given your musical preferences, I can see the Sugden running out of steam at times, in spite of the Castles' high 110hm impedance which will draw little current from the amp.

The second is where they're likely to be positioned. The Harlechs
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7ohm load. The Sugden’s warmth and smoothness will help take the edge off their metal-dome tweeters to give a fast, open and detailed sound. If there’s still a bit of bass boom, try some long-haired wool in the CDM1s’ ports. JM

If your Isobariks are past their sell-by date, try a pair of Epos’ ES30s.

Take a look at what makes ‘speakers, amps and sources tick with John Linsley Hood’s Audio Electronics.

'BARIK BLUES

I’d welcome your advice on replacing my ageing passive Isobarik loudspeakers. My present system is: Naim 82, SuperCap, 135s, current-spec Linn Sondek, Ekos, Arkiv, Prefix, Hi-Cap, Lingo, plus a Micromega Duo CD 2 player and Duo Pro DAC with Theta TLC. Ideas so far are the KEF Model 4, Celestion A3, Epos ES30, ProAc 2.5 and Monitor Audio 20SE. I am also interested in adding a subwoofer, but not with the Model 4s which are at the top of my price range. Musical tastes are mainly Rock and Country. Room size is 8m. by 4m.

John Hill
Wilmington@compuserve.com

What kind of improvement do you want? If you’re into the Linn/Naim sound, my first choice of Quad ESL63s and a large REL sub perhaps wouldn’t be appropriate - you’d get a massive increase in clarity and speed but they wouldn’t quite have the weight of your Isobariks. KEF Reference Series 4s have enough grunt and also bring far superior imaging, a sweet treble and fine clarity - but may lack the speed you desire.

So my hunch would be that the Epos ES30s would be right up your street, with their dry, fast, rhythmic sound - or even passive Linn Kabers which you could later activate. When you’re spending this much money the only answer is to audition as many ‘speakers as you can at home - find a good dealer and start listening!

DP

CARTRIDGE TIPS

I have been a music nut for some thirty years. I prefer the live variety but unfortunately cannot get to concerts as often as I’d like. I have had many systems over the years and have found hi-fi a very frustrating ‘black art’ - on step forward two steps back! I have finally recognised that there’s no perfect solution and that the real answer is to find the best compromise.

My musical tastes are wide though I listen mainly Classical - orchestral, choral, organ and chamber music. Musicality and an ability to create a realistic acoustic and ‘real’ performance are very important. My system consists of the ubiquitous Linn Sondek LP12, Ittok and Asaka, feeding Michell Iso, Unison Research Mystery I pre-amplifier, Meridian 508 20-bit CD player, Quad FM4 tuner and Art Audio Quintet monoblocks driving a pair of Klipsch Klipschorns.

The Asaka cartridge is unfortunately nearing the end of its life and I am therefore now considering potential replacements. I have spoken to several dealers and have found them pretty unhelpful. They seem to expect me to buy blind on their recommendation and are unwilling to demonstrate in the shop let alone in my system. The budget for the new cartridge is £500 and names like Ortofon, Lyra or perhaps your own favoured Goldring 1042 come to mind.

I would also appreciate any advice on cables and system tuning. I have recently installed DNM Reson interconnect and ‘speaker cable and whilst it is excellent it does seem a touch bass light at times. I would appreciate your comments.

Many thanks for an excellent magazine.

David King
David.L.King@btinternet.com

I’d go for a Goldring 1042 or DNM Mica which will bring more smoothness, fluidity and bass power than your old Asaka, at the expense of a little treble detail. Then, invest your next £300 on a Cirkus upgrade for your LP12 - an absolute must for owners of older Lins! This done, you’ll have a bigger, more confident and rhythmic sound with far better imaging and dynamics - plus the improved bass you crave. In the long term, I’d think about upgrading your old tic-toc to a Naim ARO, which is stunningly fluid and musical on a Sondek, and Linn’s latest top MC, the Arkiv. DP

Treat your Micromega to one of Ringmat’s Statmats.

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No this isn’t a reprint of the Musical Fidelity X-DAC convertor (November 1997) or X-Pre pre-amp (Jan 1998) although it might look like it. It’s just that there’s a certain family resemblance that unites MF’s X Series of ‘hi-fi in a can’ components. The word ‘can’ is especially apt here as the little silver cylinder of the X-Cans is a headphone amplifier. Featuring a valve output stage, it’s designed for use with amps that either don’t have a headphone socket or possess one of dubious ability.

Shaping up against the £130 X-Cans was the headphone output of an NAD M1300 pre-amp and two sets of ‘phones, Beyer Dynamic’s DT41 Is and Jecklin’s Floats. Initial musical fare consisted of Richard Thompson’s ‘Calvary Cross’, a live recording with attacking drums and vocals, and searing guitar offset against mellow bass and accordion.

The X-Cans definitely shares that Musical Fidelity trait of smooth warmth which makes long periods of listening pass by without ear ache - the valve output stage allows the music to ebb and flow with the minimum of fatigue. A warm presentation shouldn’t be interpreted as a lack of detail or dynamic contrast though. Cymbals might not have enjoyed that last degree of finely etched detail that an electrostatic headphone like the Jecklin can depict, but they shimmered and crashed in a manner the NAD couldn’t hope to replicate. The only ‘snag’, if you can call it that, was that the X-Cans could show up the rather soft bass response of the Beyers. Clearly, if the matching headphones have any weaknesses, then the MF will expose them.

The rather more professional production on Finlay Quaye’s ‘Sweet And Loving Man’ put this transparency to better use. Vocals were fuller-bodied and the layering of backing vocals was more convincingly structured than with Richard Thompson’s album. The percussion snapped into sharper focus too, and the sound as a whole was less mechanical.

To see if complex Classical music would trip the X-Cans up I plied it with an LP of Schubert’s Symphony No8 (Unfinished). There was certainly a mass of detail but this had its downside. Surface noise from the record was more prominent than it had been through the NAD during quieter passages. This wasn’t hard to forgive given the separation which enabled the X-Cans to unravel trying pieces without fuss. Timbral reproduction, particularly of strings, had an enviable harmonic richness, and the entire work was imbued with a sense of tension that’s rarely achieved in most amp/headphone combinations.

Gregson and Collister’s ‘The Most Beguiling Eyes’ proved the Musical Fidelity had a way with female vocals. Their emotion and vivacity through the X-Cans couldn’t be equalled by the NAD’s solid-state offering.

In answer to the question, "Is the Musical Fidelity X-Cans worth £130?" I would say resoundingly yes. Provided you match it with a decent pair of headphones (I’d recommend spending a minimum of £100) it represents excellent value for money. Even if you already have an amp with a headphone socket you’ll probably notice big gains in terms of depth of sound, control, timbre and musicality.

If you use headphones as your sole output, then you may find something like the Sennheiser HE60/HEV70 (£1000) or a pair of Stax more rewarding due to the remarkable insight into the music they are capable of. But for a much, much smaller impact on your wallet and use accompanying loudspeakers, the X-Cans partnered with a decent set of Sennheisers, Beyers, Grados or the like could prove an enlightening experience.

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Whichever report you read, the story on DVD is different: nobody even knows what the initials stand for! I believe I am right in saying that developer Toshiba called it Digital Video Disc, but somewhere along the line it picked up a peculiarly vague alternative title, Digital Versatile Disc. Whatever, the format and future of DVD is as confused as its nomenclature.

DVD is, for the moment at least, thought of as the successor to CD. However, current standards mayhem is encouraging others to consider launching alternatives. But that's another story.

A DVD disc in today's form will hold 4.7GB of information, seven times as much as a CD, yet it's the same size and, the industry thinks, more acceptable in the eyes of buyers because of it. The one thing no one wants to introduce is a wholly new format because too many have failed before. This fear affects a lot of thinking.

Although early DVD discs will hold the aforementioned 4.7GB (Gigabytes), dual-layer, double-sided versions will reach 17GBs. The original idea behind DVD was to make a 'CD' that could oust Laserdisc, CDV (CD Video) and the VHS cassette as storage media for films. To that end Toshiba and the DVD consortium first started talks with Hollywood's film studios and promptly got themselves entangled in a web of protectionist issues, such as world-wide zoning, that hampers and still hampers the global availability of DVD. Asia has it, but Europe does not, for example.

Like a CD, a DVD can be stamped out, facilitating mass production. However, because the pits are then permanent, such a disc can only be used for replay. Toshiba et al. had to come up with recordable DVD if it was to compete against the recordable video cassette, as well as CD-R and its successor, CD-RW. It looks as if they made a serious, perhaps fatal mistake here, adding greatly to their woes.

Recordable DVD was put in a caddy for protection. But Philips believe the caddy system is unpopular with users, I have been told by someone who knows, and it is confusing, and it raises their cost and complexity. Disc price is a crucial factor and a caddy is expensive. Storage space and shipping weight also increase, adding to background costs. Early DVD players will not play these caddy discs apparently and, also annoying for Philips I am told, current DVD players are not sensitive enough to read the low reflectivity of CD-RW discs. This means DVD at present is not fully compatible with all media, including CD-RW.

I note that Philips' press releases talk darkly about "incompatibility" without being specific about precisely what is incompatible with DVD as originally proposed. As a result, every article I have read on DVD has failed to mention either this topic or why Philips and others decided to break away from the DVD consortium. So I'll speculate a little, drawing on what I have recently been told about the situation from sources close to Philips.

I suspect Philips are not being specific for the following reasons. I cannot see why recordable DVD (DVD-RAM), in its latest form, is incompatible with anything in theory. Even if it cannot read CD-RW discs now, and cannot be read by old DVD drives, it can be made to do so. The disc tray of a DVD player will carry normal CDs and ones in a caddy, so there is no physical incompatibility here. Philips are unable to make any allegation of incompatibility, over and above those I have described here, that cannot be refuted, I suspect. Licence fees might also have something to do with it. The original DVD consortium was big, so royalty fee income from discs and players would be spread thinly amongst the participants. The breakaway group comprises Philips, Sony, Hewlett-Packard, Mitsubishi Chemical, Ricoh and Yamaha. This is a smaller group so each will receive a bigger slice of the cake.

Finally, Philips are making big bucks today from their involvement with computers. Technologically, computers are the Wild West - standards, products and technologies come and go virtually overnight. And remember Philips was almost going bankrupt a decade ago. The bickering, protectionist attitude and delays imposed by Hollywood on DVD have brought back memories to Philips executives of their problems with the music business and DAT, I have been told. They have been dismayed by it all and don't want to know.

So it looks as if we will shortly be presented with both DVD-RAM (recordable CD in a caddy) and DVD+RW (recordable CD not in a caddy)! Even though I'm not convinced by Philips' arguments I still understand their viewpoint. My feeling is DVD+RW will walk it, mainly because of lower disc cost. Expect to see this 3GB recordable disc by late 1998. By 1999 I suspect it will be storing 24-bit at 96kHz audio, amongst other things.

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MARCH 1998
FIBRE fortified

Castle's latest, the £450 Kendals, boast advanced carbon-fibre drivers and lavish cabinets. Leo Lam enjoys.

Castle has managed to build up a respectable reputation since its birth in 1973. This comes as no surprise if you have ever laid eyes and ears on any of their 'speakers like the new Kendal floor standers. Their immaculately-finished cabinets, competent engineering and impressive sound are a potent combination.

Compare the £450 Kendals' stature to that of Castle's other floor standers and you might come to the conclusion someone's been getting trigger-happy with the magic shrinking raygun at the factory - these are small floor standers! But then they've been designed with the average space-challenged British domestic environment very much in mind.

The Kendals differ from the rest of Castle's range for another reason - they lack reflex loading. This, according to Research and Development Director Fred Clayton, was because putting in a port would create bass boom in the small rooms where the bi-wireable Kendals will find their abode. Instead, the 130mm woven carbon-fibre mid/bass driver and 25mm polyamide-dome tweeter are bolted to an infinite baffle enclosure of 18mm MDF.

I decided to set the drive units in motion with the very capable Roksan Caspian and Aura VA 80 amplifiers fed from a modified Arcam Alpha 1 CD player and Musical Fidelity X10-D. I followed Castle's recommendations and pushed the Kendals close to the rear wall and toed them slightly inwards.

After the superb midrange lucidity bass was most noteworthy. Instead of being deep and thunderous, it was clear and taut in a way that recalls the much more expensive Chario Academy 2 or classic LS3/5a. Though some might condemn the Kendals as 'bassless', it is more a case of quality over quantity. Like a bottle of ripe and dry white wine, the bottom end is not quite full-bodied but indisputably mouth watering. Only those who seek an extended synthesised low-end to bolster Dance tracks should look elsewhere.

The natural presentation of these 'speakers left a lasting impression with jazz recordings from the renowned Chesky Records - the artists seemed to have jumped out of the cabinets to play in front of me. The recording venue's far wall extended 'into' my neighbour's flat and, with the lights dimmed, I could lose myself in the music.

Turning to Classical, I dipped into the Orpheus Chamber Orchestra's A Little Light Music (DG 429783), which contains some well written yet not widely-known pieces by Mozart. The orchestra was accurately located in the sound stage, something of a holy grail to a lot of Classical listeners since it gives a real sense of presence. It was more obvious here that the Kendals' tonality tends to the drier side of neutral though. Overstep the mark with the volume and the upper midrange will start to dominate events.

Mahler's grand Titan Symphony with Claudio Abbado and the Chicago Symphony (DG 445565) revealed another minor flaw. In the second movement, the timpani begin rumbling along after a brief rhythmic development by the cellos and double-bass. There was a lack of real low-end definition to the timpani, which sounded quite woolly down at the limit of the Castle's response.

The Kendals are appealing little loudspeakers. True, their midrange and slightly blurred bottom octave may not be to everyone's taste but, if you treasure clarity and an open sound stage more than warmth and outright bass extension, there are many worse ways to spend £450.

Castle Kendal

£450

Castle Acoustics
Shortbank Road,
Skipton,
North Yorks. BD23 2TT
Tel: 01756 795333

World Verdict

The Kendals have great clarity but need coupling to warm ancillaries.

Measured Performance

see p11

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How do you know when an audio format has really arrived? When eager buyers start flocking into their local electrical retailers for it? When every forward-thinking manufacturer has a couple of models in their line-up? Or maybe it's when the format receives its paternal blessing from the hi-fi press? Perhaps it's one or all of these, but love it or loathe it, MiniDisc and machinery like Kenwood's DMC-G7R portable recorder have definitely arrived.

You couldn't exactly describe MD's progress as lightning - better late than never would be more appropriate. And now it's finally here, where does a portable MD recorder fit into the musical life of hi-fi enthusiasts?

A lot of people enjoy music on the move, whether it be commuting, walking the dog or jogging around the park - the huge success of portable cassette players testifies to that much. And since MiniDisc equipment is still a not-inconsiderable investment it makes sense to combine a mobile player with a home recorder, which is what Kenwood amongst others have decided to do.

The DMC-G7R with ATRAC 4 measures a pocket-friendly 108mm by 78mm by 27mm. Power comes from a dedicated rechargeable Lithium battery, supplied along with its charger and in-ear headphones with detachable remote control for the sum of £330. The competition isn't weak though - Sony's MZ-R30 records too but costs £30 less. Listening to the Kenwood in the context of a domestic hi-fi system was a mixed experience. The sound was crisp and even, images occupying their own spaces. Dynamics swung easily from the tiniest triangle strikes to the most thunderous of timpanic onslaugths and silences were just that. In every area where cassette has been faulted, the little Kenwood excelled. Track access was rapid, and MD's editing and naming facilities formed the icing on the cake once I'd mastered the little multi-function buttons.

Cassette, in the form of Sony's WM-D6C professional Walkman, showed there was still a lot of fight left in the old format yet. For example, the DMC-G7R's stage width was limited to strict boundaries - through headphones there was an absence of that out-of-head sound where recording venue acoustics or engineers' trickery can widen the scale of presentation. It also had what could be termed an 'understated' bass response which took some of the warmth from music.

The D6 turned out to be more of a communicator as well. Given a metal tape to keep down noise and extend dynamics, it captured the speed and drive of Rock in addition to the delicacy of Classical music. Played on the Kenwood tunes lacked that vital fluidity and pace because of a perceptible loss of sustain, especially on piano.

In day-to-day use the DMC-G7R is a pleasant travelling companion that provides fuss-free listening in a very small package. Navigating your way around functions other than simple playback requires some patience initially and the format is not as resistant to bumps as the advertising suggests. This MD portable uses a ten-second memory-buffer for shock protection but continuous agitation from purposeful walking caused it to trip up on occasions.

As a maintenance-free pocket-sized portable with good battery life that doesn't resemble a housebrick like the Sony WM-D6C, the DMC-G7R scores well. And even if it fails to better analogue alternatives, it'll still please ears attuned to the crispness of digital home recordings.

Kenwood DMC-G7R £329.95

Kenwood Dwight Road, Watford, Herts. WD1 8EB
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By this time next year, several important issues will have been settled. Questions ranging from, "Is the Millennium Dome a complete waste of space?" to "Will MiniDisc survive?" will be resolved. But the answer I most want concerns the great super-CD debate. The scuffles going on over competing systems (DVD audio, Direct Stream Digital (Philips and Sony) will hopefully be history, and the new high-resolution digital audio disc well on its way to the High Street.

With every photo of Japanese DVD machines published we contemplate the heady prospect of an audio disc so advanced it makes existing CD look positively Neanderthal. Hi-fi magazines world-wide are beginning to get questions like, "Should I buy a new CD player, or wait a year for super-CD?" The idea of affordable, top-quality digital audio is tantalising, that's for sure.

But aren't we missing something here? Haven't we forgotten to ask the most basic question of all - whether this new generation of 'uber-player' will actually sound any better than current, bog-standard Compact Disc? With such a dramatic technical superiority over CD it might seem stupid, but as CD itself proved with LP, paper specs don't always mean better sound. Surely we should have learned that the latest isn't necessarily the greatest?

In truth, those who reckon super-CD will automatically better our current, cooking 16-bit CD are ignoring a critical factor in the equation; development. What these people are really asking is, "Is a theoretically superior but unrefined technology better in practice than an inferior one with countless years of development behind it?" Put like this the promise of all those extra digital bits isn't quite so great.

Think about it like this: we've now got transports optimised for reading 16-bit CDs superbly - any keen audiophile can tell you which players have the best transports, and which good ones work best with which DACs. We've also got 16-bit DACs that sound far better than they've any right to, considering the paucity of digital data they have to work with. This comes not from fancy, state-of-the-art digital technology but painstaking research and development. Everything from power-supply regulation and internal earthing to digital filters and analogue output stages are meticulously fettled to sound right.

This takes literally years and years to do, which is why high-end CD players aren't changed every six months like their budget brethren.

Along comes super-CD with theoretically superior resolution, but it's likely that most of the development work will have been done by big corporations more attuned to NICAM and Dolby Digital than hi-fi. In five to ten years, super-CD will doubtless be a knock-out, but industry professionals whose judgement I know and respect say that at the moment, our current high-resolution digital audio is dramatically better than they've any right to.

"Rather than blaming the technology itself, the problem with CD sound lies in our hitherto inadequate digital engineering."

A number of hi-fi luminaries, including Linn's Ivar Tiefenbrun and Naim's Julian Vereker, have recently intimated that in their opinion standard 16-bit still has a long way to go. Rather than blaming the technology itself, the problem with CD sound lies in our hitherto inadequate digital engineering. Interestingly, this is precisely what they were saying about vinyl as recently as five years ago, and they were right about that too.

We know CD can sound dynamic and rhythmic - witness Linn and Naim's own range-topping players. We know it can communicate emotionally like DPA's Enlightenment. We know CD can sound effortlessly musical, like the best Pink Triangle players. And we know it can give tuneful, powerful bass like those first-generation Philips designs. The task is to get the best of all worlds, and then ratchet down the price with mass production.

Until recently, CD player manufacturers have majored on getting costs down rather than quality up. Contrary to what some mags tell you, high-end players from a decade ago really aren't that far behind modern equivalents. (This was brought into sharp relief when I heard a 1984 Philips CD202 - its superb die-cast metal CDM1 mechanism driving that crude 14-bit four-times oversampling DAC was still amazingly musical.) Only now are high-end players really beginning to outclass the early machines comprehensively. If super-CD simply means switching to a higher digital specification but continuing with flimsy transports, poor power supplies, bargain-basement DACs and nasty op-amp output devices, we'll be nowhere closer to nirvana.

This is what worries me. It would be so easy to rush out the new super-discs and players, advertise them as 'technically perfect' (sound familiar?) and then sit back and let the cash roll in. Once again, buyers would snap them up expecting great things, and be disappointed. Let's hope history doesn't repeat itself.
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HI-FI WORLD
The Denon TU-S10 is one of those rare products in hi-fi that just exudes class. On first inspection I guessed £600 would be the minimum necessary to take it off Denon's corporate hands such is the quality of the champagne-gold casework. I'd have been seriously wrong though, as the TU-S10 sells for a solitary penny under £400.

Despite its uncluttered fascia this tuner isn't short of features: AM/FM bands, 40 presets, Radio Data Systems, two aerial inputs and a remote control. On the other hand, obvious by their strange absences are a mono switch and a signal strength meter, both useful facilities.

The TU-S10's quality image is helped by an 8mm-thick aluminium front panel and a copper-plated steel chassis which helps shield the innards from extraneous electrical noise. The control buttons work in a slick, positive manner which only goes to reinforce the Denon's 'feel good' factor.

Rolling across the airwaves I paid a visit to Radio 3 and a Joan Bakewell interview with Dame Joan Sutherland. Through the Denon it was readily apparent that the interview was taking place in a cramped studio. A small amount of sibilance to the two Joans' voices didn't prove distracting as I was drawn away from the cosmetics of the sound and into their conversation.

There followed one of Joan Sutherland's performances of Bellini's Norma in which she duets with Marilyn Horne. It wasn't difficult to imagine myself in a large concert hall so well defined was the acoustic of the venue. Tonally the Denon erred on the bright side of neutral as our measurements suggested. This served to highlight detail at the expense of relaxed long-term listening in systems that are themselves a tad bright.

The backing orchestra for Norma had impressive scale and instruments were clearly discernible - deep double-bass notes were controlled though the actual detail rated as satisfactory rather than great. Of greater significance was a lack of solidity and weight which left the TU-S10 sounding a little thin and insubstantial. Vocals showed the Denon in a better light with their easy articulation and expression.

The Denon was rhythmically adept as a switch to Virgin FM and George Michael's 'Faith' proved. None of the song's zest had been leached out and there was an unstoppable drive which kept me listening. And despite that lift in the upper regions the guitar solo didn't end up sounding sharp or unpleasant.

Bass was once again impressive not so much for its weight and slam but definition and tunefulness - Denon have got the balance right here since heavy, loose bass soon becomes tiring. Male newscasters, the classic bugbear of most tuners, were reproduced with only small traces of the chestiness and sibilance that is normally apparent.

Classical music failed to trip the Denon up, its detail retrieval coming to the fore in realistic instrumental harmonics and textures. Only that treble thinness stopped it cleaning up in the £400 price bracket.

Denon's TU-S10 certainly looks like it should cost a lot more than it does, designed as it is to fit in with the rest of the company's flagship components. It almost manages the same feat with the way it sounds, but it can't quite conjure up the warmth and colour of something like the Cyrus FM7 for the same money or Naim's NAT03 at £595.

**Denon TU-S10**

£399.99

Hayden Laboratories
Chiltern Hill,
Chalfont St. Peter,
Bucks. SL9 9UG
Tel: 01753 888447

**WORLD VERDICT**

The TU-S10 is a stylish tuner which has a detailed sound but needs careful system matching for best results.

**Measured Performance**

see P111
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Along with the Rogers Cadet Mk11 and the Quad II, there can be no other valve amplifier as popular in the 1960s as the Leak Stereo 20. Introduced in 1958, the Stereo 20 used the same basic circuits as all of Harold Leak's 'Point One' power amplifiers. The first of these was the classic mono TL12 Point One, the second an economy version, the TL10, which could only lay claim to 'Point One' percent distortion up to five watts rather than its full output. There was also a 'Public Address' TL25A, although this wasn't a member of the 'Point One' family.

At the end of the 1950s, Leak redesigned the range and added to it. There was the TL12+ with its EL84s, the TL25+ with the larger EL34s, and the most powerful of the three, the TL50+ which used a pair of KT88s. No prizes for guessing the output power of each! The sad thing is, the bigger they get, the worse they sound. The TL12+ is the best of the bunch, the '50 the worst by far. As for the TL25+, it has the same basic output transformer as the TL12 and sounds hardly any more powerful.

At the same time in 1958, Leak launched two stereo amplifier chassis, the Stereo 20 (EL84) and the Stereo 50 (EL34). The same sonic rule applies here - the smaller '20 floors the larger '50 and is far more reliable to boot.

In the Sixties, Leak revamped the Stereo 50 and turned it into a Stereo 60, which is even less reliable and uses strange dual wire-wound resistors which are impossible to obtain these days. (The same items can be found on the TL50+ and some TL25s). The later models are finished in a Charcoal grey and date from roughly the same period in the mid-1960s as the Garrard 401. These stereo amplifiers had pretty much the same circuit as the monoblocs but used ECC83s throughout the driver stages where the monoblocs used EF86s and ECC81s.

Out of the entire range, in standard form, the Stereo 20 has the best sound, followed by the TL12+. There are a couple of potential problems in the Stereo 20 - the mains transformer is a little marginal although it's fine in normal operation, and, as was usual for the time, the input sensitivity is very high at 100mV for 10 watts output. On the whole however, the Stereo 20 is an excellent design well executed.

In standard, untouched form, the '20 is very sweet. The midrange is quite
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Unless your Stereo 20 is a mint original sample, the best bet is to rebuild it with modern components like Elna electrolytics and metallised-polypropylene coupling caps.

lucid while bass and treble are a little rolled off, but then that's all part of the 'vintage' experience. More to its credit is the way the amp reveals those little instrumental and vocal details that make all the difference. In comparison to a new, modern amp of about £500 though, the Stereo 20 is amazing. The solid-state competitor obviously has more power and will play much louder but, like most valve amplifiers, the '20 has a real musical heart. Unfortunately, that's something that most transistor amplifiers, regardless of price, just don't possess.

A few words of warning on the service side. The mains transformer, as mentioned earlier, can be problematic. If you're thinking of purchasing a Stereo 20, check the underside for large amounts of wax which may have run out of the transformer if it's been overheating. More importantly, check the 100ohm, three-watt safety resistor (normally green in colour) is still fitted at the base of the board near the transformers.

As the amplifier ages, old EL84 valves pass more current than the 48mA specified and coupling capacitors 'leak' electrically with age, which means the output valves will pull even more current. It is extremely likely the main electrolytic reservoir capacitors will be leaky too.

With the three-watt resistor fitted and the amplifier operating normally (ie, capacitors and valves in good condition), this resistor dissipates two-and-a-half watts and therefore runs pretty hot. Do not be tempted to change it - it is supposed to run hot. If a coupling capacitor fails and puts a positive voltage onto the control grid of the output valve, it will pass more current and may eventually go virtual short circuit. The resistor will then get extremely hot, and, if fitted correctly, will de-solder itself from the board, thus protecting the mains transformer from damage.

The quality of the passive components in the Stereo 20 wasn't great but they do sound nice. Those that invariably need to go are the coupling capacitors, the output valve cathode resistors (use 270ohm at two-watts), the output valve cathode resistor bypass capacitors and the two electrolytic 'can' capacitors. These last two can be troublesome - there's a lot of ancient 'new old stock' floating around, most of which is probably worse than what you're trying to replace!

An easier option is to buy tiny switch-mode power supply capacitors (47uF, 400V) and mount them on the base of the old capacitor. To do this, leave the earth tag on the can connected and then cut off the two positive terminals. The earth tag anchors the new caps which can be secured in position with a dab of silicon adhesive.

To be honest, unless you have a totally mint, original amplifier, the best idea is to strip and rebuild it completely - just remember that three-watt 100ohm resistor. Caution should be exercised when it comes to the GZ34 rectifier as well. Never replace this with solid-state diodes - their performance from an audio point of view is inferior and they stress the mains transformer heavily.

Leak’s power amps may be great at their best but the same can’t be said of the matching pre-amplifiers, the Point One and the Varislope. They might suffice as a stop-gap to partner CD players, but they are members of that select breed of British pre-amps that have an output signal substantially smaller than the line-level input. To top that, the phono stage is poor and the controls are noisy. The best thing you could say about the earlier versions is that they look nice.

But the main thing is the great sound of the Stereo 20. The quality of its output transformers was impressive, and due to this the performance considering its price in standard form is excellent. Pay about £200 for an un-modded Stereo 20, less for a non-mint example and up to about £350 for a fully rebuilt and modified version.
B uilt-in obsolescence. Anyone who's purchased a computer at some point will know exactly what I'm talking about. No sooner have you purchased your 'cutting-edge' number-crunching marvel than something more powerful comes along in a matter of months. The same is true of hi-fi, only on a rather less frenetic time scale. It happens with individual components. For example, when CD was originally introduced all you could buy were multi-bit DACs. These then gave way to single-bit, or Bit-stream, designs. Whether they were any better didn't seem to matter - Bit-stream was supposedly what people wanted. Now anyone in the market for a quality CD player has to decide whether to go for HDCD (High Definition Compatible Digital) or not.

This is all well and good when we're merely talking about technological advances within specific formats. When the entire format is under threat it becomes a different matter.

In the 1960s we saw valves making way for transistors. During the 1970s it was the turn of Compact Cassette to close the door on reel-to-reel (and the various other recording formats that had been launched with little success). The last decade saw the rise of CD over vinyl, whose sales plummeted.

What about the 1990s then? Well, since the beginning of the decade there has been much speculation as to the fate of the Compact Cassette and its eventual replacement. Last year looks to have been a turning point in the fortunes of a technology that was never intended for high-fidelity use anyway.

Over five years ago the battle between DCC (Philips) and MiniDisc (Sony) began. Although it was generally agreed that the Philips format sounded better, the Sony system offered the most potential for high-fidelity use with fast access times and a plethora of editing features. Despite this, neither really caught on. Up until this time last year it seemed both were dead in the water. Then Sony launched a new marketing offensive with a revised machine that actually sounded decent and cost under £300.

The clumsily-titled MDS-JE500 began a price war in the High Street that raged on right through the summer, autumn and winter of last year. This model and its predecessor, the MDS-JE510, were selling for as little as half-price as the major hi-fi retailers battled it out for volume sales and image enhancement. The result was that tens of thousands were sold and they're still selling at a prodigious rate. So much so that not only was DCC firmly knocked back to those former faithfuls. Last year, Philips brought the price of a recordable/re-recordable CD player down to around £500 with the CDR 870. Blank CD-R discs also came down to around £3 while CD-rewritables were rather more costly at £16 a hit. Most reviewers agreed the system outperformed MiniDisc. Round two to Philips then, perhaps? Philips face several rather severe barriers to success. The first is the development of Digital Video/Versatile Disc (DVD) which is capable of holding far more information than CD although it lacks the ability to record at present. Second, Philips has to market the thing properly. This is an area where they have a patchy record. Sony may have been rather peevish to see their pride and joy involved in a High-Street format war with DCC but they can't deny it did MD a world of good. Philips might benefit from the same scenario.

Finally, as we saw with the VHS/Betamax clash, it doesn't matter if one format is technically better than the other. What counts is price, availability and marketing. There's enough people out there with MiniDiscs already who are unlikely to be ready to switch to another format. Instead, they're telling friends how good MiniDisc is, and believe me, word is spreading rapidly amongst even those with very little (or no) interest in hi-fi.

The fate of MD and CD-R/CD-RW is going to be the talk of the pundits this year but, whatever happens, I don't think there's going to be room for both. It's ironic looking back to those former format losers - valves, reel-to-reel and vinyl have all acquired cult status and loyal followings. Perhaps the hardy Compact Cassette will have the last laugh after all.
This man can’t believe what he’s hearing...
...But it’s true.

Peter J Comeau is no ordinary reviewer. As designer of the only product to win the coveted What Hi-fi Best Loudspeaker Award three times in succession, he’s generally regarded as the guru of small speakers. With 30 years’ experience as a specialist hi-fi retailer, co-founder of a highly respected UK hi-fi manufacturer and one of the ‘terrible three’ who pioneered subjective reviewing in the staid hi-fi press of the 1970s, his opinion carries formidable weight.

Seasoned hi-fi critics are notoriously hard to impress. So how come we weren’t surprised when Peter J Comeau enthused so fulsomely about our new 12i?

“They sound like a grand’s worth of exotic compact,” he wrote in October’s Hi-Fi News. “If Celestion can achieve this sort of performance for a miserly figure, why are most of the speakers that arrive on the market so poor in comparison?”

Well, we can’t speak for anyone else – but we know what makes the 12i such a remarkable performer.

The smooth, natural-sounding vocals? Celestion’s 19mm tweeter, whose neodymium magnet is ferrofluid-cooled for improved power handling.

The phenomenal bass response? 130mm long throw bass drivers, which allow the cone extended movement without removing the HF coil from the magnetic gap where energy is most concentrated.

The acoustic purity and lack of distortion? The use of laser interferometry to tune out the response peaks of conventional speakers. Celestion crossovers to ensure seamlessly smooth transitions. Mounting the drivers and reflex port in a dense one-piece composite baffle to minimise resonance. Cabinets computer-designed to eliminate box coloration.

In the words of the Hi-Fi News lab report, “the horizontal off-axis trace is brilliantly managed.” To the listener, that means the same seductive audio experience wherever you sit in the room.

No wonder the 12i reproduces the most demanding material with such accuracy...
and emotional depth.

“Nothing prepares you for the sound of this new model. Ask listeners to guess the price, I guarantee an answer closer to £500 than the spare change you have to sprinkle on the counter to own a pair.”

...At only £119, no wonder he couldn’t believe his ears.

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Until recently, hi-fi styling was fast losing the plot. The once weird and wonderful world of design was becoming sanitised, uniform and deathly dull. Gone were the crazy wedge-shaped cassette decks and mad, cylindrical loudspeakers of the Seventies, and in their place arrived tedious black boxes. Where had all the excitement gone, the ideas, imagination and inspiration that should come standard with every hi-fi separate?

Of course, sound quality and reliability should always be primary concerns, but they’re not the only ones. Hi-fi should seduce the eye and pull on the heartstrings as much as it gratifies the ears. What’s wrong with audio that sounds superb as well as looking and feeling the part too? Was it a design-by-committee approach that resulted in hi-fi with all the aesthetic appeal of a toolbox? Like military intelligence, the concept of ‘hi-fi styling’ was becoming a contradiction in terms.

Fortunately, things are now taking a turn for the better. After more than a decade the tyranny of the ‘minimalist’ black box is being overturned, and manufacturers are realising that hi-fi should be life-enhancing, with aesthetics and ergonomics to match its sound. The reason? Could it be the Midi system?

So they finally had to take a good look at what buyers really wanted.

**FORM OR FUNCTION?**

While sonics and reliability are commonly-agreed engineering aims, a product’s look and feel has been neglected by too many designers for far too long. Only now are manufacturers realising how important this is, along with the fact that what you house your circuits in actually affects the sound of the finished product.

Because electronic components are microphonic, the best thing to put them in is some form of casework resistant to vibration from within and without the component. Unfortunately, the cheapo, thin-gauge pressed-steel affairs of most separates do neither.

Cyrus was one of the first to appreciate this, and almost a decade ago their designers began using light, rigid die-cast alloy casings which not only look great but sound better. Meridian, makers of some beautiful miniature pre and power amps during the Seventies, opted for rigid plastic mouldings topped with glass, which damps vibrations, to house their latest 500 series separates. Michell Engineering has long used acrylic (aka perspex) for its excellent vibration-reducing properties. Although it’s very expensive, it looks gorgeous, is easy to work with and sounds superb - ideal for hi-fi applications. Others agree, and acrylic now surfaces in everything from Pink Triangle Tarantella bases and Audiovalve valve amplifier cases to Thorens Consequence CD players.

Once a designer has chosen the right material to house the electronics, size is the next decision. Before integrated circuits and surface-mount components, a product’s size was determined pretty much by what was inside it, but nowadays it’s more of a marketing decision. Rose’s Sean Sedwards says the standard 430mm width is de rigueur in Asia-Pacific markets, but Europe prefers more petite products. Certainly, ‘midi’ is now the size of choice for British favourites like Quad, Linn, Meridian and AVI. The States though, with Japan obediently following, remains committed to the ‘bigger is better’ aesthetic - rest assured, Krell and Audio Research will never go midi.

But maybe the biggest variable for the designer is finish. LFD Audio’s Dr Richard Bews believes it to be, "very market-dependent", with the UK still "notoriously conservative" in its penchant for black boxes. But abroad he says, "it’s easier to be a bit more individualistic", with mainland Europe, and in particular Belgium and Germany, going for black fascias and gold detailing. By contrast, Far East markets want bright stainless steel or brushed...
aluminium finishes with gold detailing. SME’s Graham Whitley concurs, saying their biggest export market is Germany, which can’t get enough of the company’s classic Series 2 tone-arms - finished in black and gold!

In Japan, champagne gold is the order of the day whether you like it or not. This means that imported British kit, much of which comes in black, stands out from the crowd. Japan’s hardcore hi-fi nuts like this, and it’s certainly added to the appeal of UK components. Remember, this is where people buy left-hand-drive foreign cars (even though they drive on the left like Britain) to emphasise their cars’ foreign origins! Aura’s Japanese importer knows this, and despite the fact that the electronics are available in beautiful polished chrome, advertises under the slogan ‘UK Blacks’!

STYLE WARS
Eighties hi-fi was all about awkward, unreliable, minimalist boxes, but today’s designers are coming up with some attractive, fine sounding, user-friendly creations. Mission’s Henry Azima says his latest Cyrus range was a result of, “questioning the validity of all the tin boxes, and asking why can’t we do something different?” Other designers also asking this question include Alchemist, Aura, Copland, LFD, Myryad, QED, Rose and Roksan, who’ve all eschewed black boxes for svelte new separates finished in chrome, steel, brass and gold. Even Britain’s more conservative hi-fi companies have pushed the game forward. Arcam has abandoned its ‘safety first’ squared-off boxes for swooping, curvy fascias, and Quad - once the bastion of pipe ‘n’ slippers styling - has resurfaced with the ‘carbon look’ 70 series.

Real wood finishes are back in fashion after a decade as the poor relation of black ash. Dealers report that real wood veneered loudspeakers are selling better than ever, while some companies like Mission have started offering Primavera wood-looking vinyl wrap on their budget boxes!

Electronics manufacturers are also using it as a styling feature. Moth’s range of Stan Curtis-designed separates is fronted by real wood fascias available in a number of finishes to blend with the home and Unison Research’s Simply series valve amplifiers have more fine Italian burr veneer than a Maserati Bi-Turbo. Other valve amps are increasingly using chrome, stainless steel and brass top plates and casings to striking effect when the valves are glowing.

One of the surest signs of good design is when form and function are combined, with the engineer making a striking visual feature out of engineering necessity. Take Michell’s Alecto amplifier for example, which uses its huge acrylic-encased toroidal transformer as a central styling cue. Likewise Quad’s dramatic ESL 57 loudspeaker, whose clean planar lines derive from its electrostatic drivers and lack of a conventional box cabinet. Most amazing is that this object of sonic and visual beauty dates back to 1957 - proof positive that good design is timeless.

Another, if slightly less successful, attempt to make aesthetic virtue from sound acoustical design principles was JR’s 149, an innovative if imperfect Seventies loudspeaker with a cylindrical cabinet of rigid aluminium. Latterly, B&W has taken up the radical mantle with its bulbous Blue Room Minipods, claimed to eliminate the colorations inherent in conventional box loudspeakers. And as for the high-end Nautilus with its weird rear protrusions, mere words cannot suffice!

At the less esoteric end of the market Tannoy’s Six range has shown that innovative cabinetry isn’t the preserve of the rich, with its distinctive polygonal shape offering fine out-of-the box imaging. Rogers, meanwhile, claims to have identified a ‘lifestyle’ niche in the loudspeaker market, having introduced a range of stunning plastics finishes on its dB101 - a bold, if risky move in a conservative market.
GOOD TECHNOLOGY

Ergonomics and user-friendliness are also finally occupying designers' imaginations. CD has long disappointed vinyl enthusiasts because they find it fiddly and unintuitive to use. After dispensing with the clutter that afflicts so many silver-disc players, Thorens' designer Helmut Leitner produced a stripped-down, top-loading format for the Consequence CD player. By relegating all the bells and whistles to the remote, this 'hands-on' design has a sense of continuity with Thorens' turntables of yore. Naim and Rega players also espouse this approach, along with a rapidly expanding clique of high-end Japanese players from Lux and Denon, for instance. How ironic that it's taken CD designers so long to build in true user-friendliness when the very first of the breed back in 1983, the Philips CD100, had it in spades. It's also taken ages for hi-fi 'purists' to come to terms with the idea that systems can be convenient, easy to use and sound good too. Not so long ago the UK hi-fi press derided the likes of Bang & Olufsen for making sleek, ergonomic products, but now they've finally realised that yes, convenience is a good thing. Offering remote control with your electronics isn't actually tantamount to selling your soul at all - reviewers laughed when Linn introduced their first remote-controlled pre-amp a decade back, but now they wouldn't be able to work without one! Latterly, intelligent system remotes and bus-linking have become the order of the day, as implemented so affordably by Cyrus.

Nowadays, even the most flat-earth, dyed-in-the-wool vinyl junkies acknowledge that technology has its uses. The once fraught process of recording music for domestic and car consumption has been transformed with the introduction of MiniDisc, a remarkably fuss-free medium which makes cassette seem a real chore. And for radio freaks, the Radio Data System is nigh-on impossible to live without, what with its automatic preset programming, radio text and station identification. Both are proof that when technology is developed in answer to customers' needs rather than being pursued as an end in itself, it can reap dividends.

MISSION 776/777 - amps with something to shout about!

DESIGN FOR LIFE

In the early Nineties most hi-fi manufacturers were still content to sell low-brow design to the public for as long as they could get away with it. Now things are changing, and finally the creativity and inspiration that once characterised British hi-fi is coming back. At last, hi-fi is becoming more diverse and imaginative through a combination of excellent industrial design and modern manufacturing processes. This can only benefit buyers and manufacturers alike, so we say, "Long may it continue!"

SIGNS OF THEIR TIMES

Aesthetic milestones through the years.

QUAD ESL 57 LOUDSPEAKER, 1957

Their dramatic swooping lines give the Quads an air of sci-fi kitsch without dating them. An awesome combination of form and function and surely one of the designs of the century.

MICHELL REFERENCE TURNTABLE, 1965

Using a platter mass-loaded with gold-plated brass weights, this seminal piece of industrial design found its way into moviedom (Stanley Kubrick's A Clockwork Orange) as well as the New York Museum of Modern Art.

YAMAHA TC-800GL CASSETTE DECK, 1974

Recognising that early cassette decks were gawky, fiddly things, Yamaha sought the help of Mario Bellini, who came up with this 'ski-slope' tape deck. The TC-800GL is a superbly-packaged machine with its striking wedge shape that still looks fresh today.

LECSON API/AP3 AMPLIFIER, 1975

A radical departure from accepted amplifier design, the pre-amp was a large, flat expanse of black plastic with colour-keyed slider controls for quick recognition, while the power amp's 'Post Office Tower' proportions gave it excellent heatsinking.

MISSION 776/777 AMPLIFIERS, 1981

A superb sounding pre/power combo that boasted lots of original engineering thinking, along with the Mission logo dramatically die-cast into the fascias.
The Very Best Of Sting And The Police draws most heavily from his early years, with half of the tracks recorded by 1983. This seems a bit unjust considering he has been a solo artist for twice the amount time that he wore the badge.

The tracks unfold in an arbitrary fashion, firing off with the immense 'Message In A Bottle' before taking a short hop and skip to land on 'Seven Days' from the recent Ten Summoner's Tales by track five. Thence back to 'Walking On The Moon'. Dr Who's Tardis could not achieve a more miraculous chronological translocation.

Certainly the Police tracks capture the best of the album, from the instantly likeable but faux Reggae of 'Roxanne' and 'Can't Stand Losing You', through to the obligatory 'Every Breath You Take' and the entertaining nonsense that is 'De Do Do Do, Da Da Da'. It makes the very grave error, however, of leaving out tracks like 'Invisible Sun' and 'Wrapped Around Your Finger' - a gesture which will not go unnoticed by the die-hard fans.

Sting's solo studio cuts are generally straight-laced, serious and far mellower in comparison, the best being the splendid 'Englishman In New York' and the eerie 'Fragile', which curiously has been covered by both Julio Iglesias and Isaac Hayes.

The rest serve only to show a dull craftsman going about his business and the compilation ends on the biggest bum note of them all - the Puff Daddy-reworked 'Roxanne '97'; uninvited and unnecessary.

This slab of songs is worth buying in reality only for the Police songs, which begs the question: wouldn't it therefore be better to buy The Police's career-spanning Greatest Hits album released a few years back instead? Let caution prevail.
being the resident Fresh Prince Of Bel-Air and part-time alien-terminator, Will Smith lays claim to real musical ability and a mean line in rap. Big Willie Style, his long-awaited return to the music industry, will either lay waste the critics or prove that he has been playing with his and everyone else's todger all along.

The man is clearly on the crest of a wave and will inevitably be ridin' on the success of Big Willie Style too, all the way to the tills ringing with receipts, I suspect.

This much is known - the man loves himself and leaves absolutely no room for doubt on this. The songs are almost entirely reprises of his earlier 'Summertime' - upbeat and positive where cruising is the norm and life is one round of beach parties after the next.

In this sense Will Smith, Philadelphia born and bred, is more in step with the languid, booty-loving Rap of the West Coast than the reflective political Rap on the Eastern seaboard.

Stripped down, the tracks range from hip-swivelling groovy Disco to just plain hip-swivelling groovy. The former is well represented by 'Gettin' Jiggy Wid It', which samples Sister Sledge's 'He's The Greatest Dancer', while 'It's All Good' positively loots Chic's 'Good Times'. Then, of course, there's the far from downbeat 'Miami'.

Even the singles 'Men In Black' and 'Just Cruisin', which are also included here, are invigorating blasts of hard-edged Pop/Funk. Crowd-pleasing though these are, the album also carries the low-tempo Bill Withers classic, 'Just The Two Of Us' and the swingbeaty 'Candy' where he gracefully but momentarily shares centre stage with someone other than his ego. That man happens to be Larry 'Word Up' Blackmon of Cameo who (only just) manages to get a word in edgeways.

Which all leaves one question unanswered - will pack leaders The Wu be gettin' jiggy wid it? Probably not, but first single, the LP lifts off with a simple but quirky guitar riff, Abra's strong vocals providing the song's melody. A distinctive voice with great warmth it is too, a fact reaffirmed throughout the album.

Strangest Places may veer a little towards MOR on occasions, but there is surprising variety here too; take the Bluesy piano ballad of 'Happiness' and 'In The Light Of It All', the psychedelia of 'Keeps My Body Warm' and the Indie Folk/Pop 'Never Believe You Now'.

And if this selection isn't to your taste, more traditional Rock 'n' Roll fare can be found everywhere else on the album, from 'Don't Feel Like Cryin' to 'All I Want', where Abra's supercharged warblings plumb depths of rage reached only by Alanis herself.

Overall less rockin' than Sheryl Crow, less angry than Alanis Morrisette and less melodramatic than Meredith Brooks, Abra Moore is carving out another niche in a market increasingly besotted with female-fronted Rock acts. No doubt she will cast her spell too. Abracadabra!
who cares when there's this much fun going on?

Jane's Addiction, it seems, has been resurrected with the release of Kettle Whistle merely to show off their past achievements since there are only two original songs here. The remaining 13 ditties are demos, live recordings and out-takes.

In their day they were as highly-prized as the innovative Pixies, likewise as non-conformist in their approach but with a special flair for pumped-up theatrics and twisted lyrics. The only weak attribute was that they were tainted by the ghost of Led Zeppelin, with repeating Rock-riff motifs and acoustic Blues brazenly used on all tracks. In short, as All-American as Chuck Norris.

Enlisting the support of the Chili Pepper's Flea as replacement bass on the new songs - the title track, 'Kettle Whistle' and 'So What!' - it is evident that it is business as usual for Perry and company. A healthy dose of atmospherics, distorted guitar and trumpet don't do much to alter the view. Chances are the new Jane's Addiction will be beggared by comparisons with its former incarnation and sink ignominiously.

There is, however, the compensation of hearing Perry's extraordinary vocals again, if you like that kind of thing. Reed-thin but very powerful, they are best captured on the album's highlights, the magnificent 'Jane Says' and the hitherto unreleased 'Slow Divers'.

On the whole Kettle Whistle is grossly indulgent. You have, for instance, the plain silly 'My Cat's Name Is Maceo' written for Perry's cat but in homage to Maceo Parker of James Brown's All Stars, which ends up not so much funky as downright trilling. Then there's 'Been Caught Stealing', the world-wide hit, which is funky but rendered nonsensical by crass ad-libbing and an undisciplined studio jam.

Worse than that are the songs which were clearly not good the first time round, the early, thrashy demos and inferior textbook Rock that passes for most of the live songs. 'Mountain Song', 'Three Days' and 'Stop' are simply bump and grind of the lowest calibre.

Out-takes are usually out-takes for a reason and we know what that is, folks. There is no sign that the album even tries to please, and it is, to sum up, not one speckle better than it needed to be in order to be released.

THE ALBUM

Dr Dre made the collaborative album Aftermath last year with a special plea for black East/West appeasement in the wake of the shootings of Tupac Shakur and Biggie Smalls. "Collaborative venture" takes on a whole new meaning though with this latest offering from The Firm, a collective made up of Dr Dre, the New York Rap posse of Nas, Foxy Brown and AZ, plus an assortment of other luminaries, the most important of whom are NY's Funk producers, The Trackmasters.

It is a veritable coming-together of the families - East meets West and even Coppola couldn't do it better. Each song represents part of a traditional Mafiosi storyline, including the mandatory family bickering, the deceit and the ensuing blood bath. To that we can add the drugs, the hos and the hard-core violence.

The scenes are splattered with driving basslines and roller-coaster rhymes; fittingly there is even a mournful Italian violin when The Executive Decision has to be made. Heady stuff but it's hardly opera.

The laid-back production is classic Dre and this is nicely complemented and funkied up by the contributions of The Trackmasters who perversely choose, now and again, to throw in a jazzy George Benson-type guitar line just when the mood is anything but.

The femme fatale of the piece, Foxy Brown, makes them jealous again with her honed seduction techniques but takes a serious risk with the Gamble and Huff sampled '(You're Gonna Make Me) F**k Somebody Else'. I'm sure it was not intended to sound this way but the highly funky Rap diva with the dirty mind makes it sound as innocent as 'Boogie Wonderland'.

'Five Minutes To Flush' is the finest moment on an otherwise patchy album - a 4am cocaine bust by the Feds which is recounted in brutal detail and culminates in the high-noon shoot-out of desperadoes, all to the lilting strains of a Mexican guitar.

Despite the unevenness, while The Firm is certainly sophisticated it preaches to the converted, with the famous old adage murder and mayhem sells.
Robert Miles is the best-qualified Dance producer to win the Nobel Peace prize. He invented Dream House, the less-hectic-than-Techno dancefloor sound that curbed post-club violence in Italy. Miles' debut album Dreamland encapsulated the swirling, orchestral anthems with top-ten classics 'Children' and 'Fable' and had more of an impact on young Europeans than a police anti-violence campaign ever would.

23am has the potential for a similar effect. It combines a wider range of musical instruments and influences but still holds true to the Dream House vibe. The first track slated for release, 'Freedom', is a fine example of Miles' talent, building the soulful vocals of Kathy Sledge into a poppy, Radio I framework. But 'A New Flower' showcases Miles' ability to take the sound deeper with energised samples, Orbital-style, and the result is enigmatic.

Miles ventures further with 'Heatwave', a medley of chunky breakbeats, brass melody and Rock geetar, as if by way of musical revenge on all those critics who’ve claimed his records invariably sound the same.

The concept behind 23am is that the music is a journey, an expression of the emotions Robert Miles experienced recently whilst travelling around the world. The album certainly reflects a maturer, more complex identity and the broad span of musical flavours, from Classical to Drum 'n' Bass, amounts to a new, more cosmopolitan style. But the real message of 23am deals with the politics of society, from the mysterious 'Everyday Life' to the inner-sleeve plea for humankind to reject "destructive materialism". This man ain't heading for a Peace Prize, he's heading for sainthood.

With two releases already out on Relief and the highly acclaimed In And Out Of Fog And Lights on Peacefrog, Spencer Kinsey squeezed one more album out in 1997 for Distance which nearly slipped through the net. Gliding along the fine line between Techno and House with ease, Gemini's In Neutral turns away from the tried and tested formulas and takes a new approach. With more than enough Chicago-style House around at the moment, Gemini still manages to stay ahead of the rest.

The trademark heavy-jacking Chicago rhythms appear pretty much throughout, even in the mellow, lo-fi stuff. However, the routine is easily outweighed by the innovative - Gemini is pulling new sounds out of the groove to the last.

People who lean toward the Techno side will appreciate the bugged-out, skipping flavour of On This Planet, a large and loud one for the dancefloor. In a similar tone yet deeper is the fast and spacey 'Shadowland' with its Techno tinge.

Sitting comfortably next to these are the cooler sounds of tracks like 'De Bass' and 'The Wave'. On top of the customary punchy basslines Gemini treats our lugholes to a cocktail of chord washes and soft samples with these numbers. There's nothing that hasn't been done before here, but at least it's done in style.

The slower, funkier tracks are obviously the tunes most suited to the at-home-with-my-hi-fi fraternity. 'Motion' is down-tempo enough for residential raving but marks a mere warm-down to the mysteriously-entitled final track, '?', which retreats into a slow-motion mixture of beats and the occasional bleep.

As you'd expect the album provides its fair share of thrill to go with the chill, so you'll still be able to go mad on the dancefloor. And most jocks could easily be persuaded to find room in their collective boxes for the likes of 'Campanula' and 'Memory'. In fact Houseaholics everywhere will find...
Gemini's magic deep and invigorating. After all, if this is the Gemini-mobile in neutral, just imagine what it'll be like when it gets into gear.

Un fortunately though, the collaboration of Pan productions and Play it Again Sam aren't offering a free city-break with each album. Mind you, Sounds Like Glasgow showcases an intriguing view of some of their finest music so you needn't leave your living room to sample their handiwork.

Featuring a mixture of quality House, the odd Trance classic and some excellent down-tempo funksters, this compilation impresses in most departments. The accessibility of the music, demonstrated by the opening catchy underground House groove 'Jazz The Sea Turtle' by 4AM, gives a familiar feel to the album. An improvement on the labels' first foray into this theme, the more broad-minded Sounds Like Paris album, Glasgow is, as you'd expect, a bit harder hitting.

We are treated to only one hard-assed Disco romp of the kind so common on the Paris compilation, but 'Bedroom Hustler' by East End Trax with its Reggae-style chants and '70s whoops is Funk with enough freak to satisfy any serious Glaswegian clubber. Once the Dubby stuff has run its slow, subterranean course, with Fresh and Low's aptly-named 'Wind On Water' deserving special mention, it seems the obvious counter is up-tempo House. Instead, to my delight, we are exposed to a couple of spell-binding headstretchers - two decelerated Trance tracks, URB'n'Ril 'Aquarian Realm' and the unforgettable 'Funk De Fino' from Gypsy, a 10-minute orgy of phasers, subtle sound scapes and hypnotic background breakbeats.

If that's the climax of the album for lovers of Trance and Ambient, then the tracks that follow should give House-heads something to groove to. Representing the best of underground originality without being too 'out there', the Housey tracks chosen for this album all have that, stomping four-four beat and a raw, Glaswegian Garage feel. Devoid of vocals, efforts from Robinson Wall Project and Slam rely on their soulful piano samples and pumpin' basslines to keep us uplifted.

Need calming down after all this? Try Fresh and Low's second down-beat exercise in hi-hat-laden Trip-hop, 'Freefall', punctuated by some eerie female wails and sexy sax.

Whether you're looking for Scottish sound scapes or city breaks the Sounds Like posse should give you some ideas. I wonder when they'll bring out the Istanbul version. Now that would be interesting!

Koxbox followers and, for that matter; anyone with a healthy interest in meaner, harder beats will love Dragon Tales, particularly those who appreciate a mystical, psychedelic quality of music too. Tracks like 'Searching For Psychoactive Herbs' and 'Electronic Brainwash' typify the hypnotic, acidic sounds of Koxbox while every track on the album showcases the ingenious Trance/Techno concoction.

The Koxbox sound befits their new label, Blue Room Released, who traditionally always opt for Techno - Juno Reactor and Silicon Attic have done well on this B&W subsidiary, benefiting from top-class technology and crisp sound reproduction. A must for disillusioned E-Heads who like it meaty, Dragon Tales makes the Acid-Techno genre exciting again. Fantasy on CD.
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Cobra has evolved — higher grade oxygen free copper, improved dielectric, new balanced configuration. Deeper, tighter bass, controlled and open mid-range, sweet and detailed treble. A natural selection for your Hi-Fi.
Perhaps it’s just me, but over the last year or two I’ve become increasingly aware of a growing body of trumpeters making some of the most exciting Jazz-electric and acoustic-around. Off the top of my head I could cite: one-time guitarist, Sonic Youth-mentor and minimalist composer Rhys Chatham, whose EP Neon, a collaboration with programmer Martin Wheeler, saw him marrying post-Miles FX-enhanced trumpet lines with sharp Hip-Hop beats; the Scandinavian Nils Petter Molvaer, whose Khmer album I reviewed here rather enthusiastically a couple of months back; the ever-present Japanese Toshinori Kondo, whose harmonised, multi-tracked, swooping arcs of melody have made something of a re-emergence, with his playing gracing work by such Ambient music stalwarts as David Toop and Paul Schütze; the New Yorker Ben Neill (another colleague of Schütze’s), who also works as much in the Ambient and Electronica fields as in Jazz, and has pioneered the use of an instrument he himself made, the double-belled “mutantrumpet”; Graham Haynes, son of the great Bebop drummer Roy and one of the few genuinely mainstream virtuoso Jazz trumpeters to be exploring a wider influence-base and sound palette than the tradition might ostensibly allow; Dave Douglas, a quarter of John Zorn’s on-going Klezmer-meets-Ornette project Masada, and, as his own Tzadik-released album Sanctuary showed last year, a fine composer and conceptualist in his own right.

I say all this by way of introduction to trumpeter Ron Miles for perhaps two reasons. Firstly, this has all come as a bit of a surprise to me. For pretty much outrageous reasons I’d personally not really looked to either trumpet or flugelhorn players in expectation of exciting music, despite the obvious objection that some of the greatest electric Jazz albums of all time came from groups led by Miles Davis and Eddie Henderson. I don’t know, think of it as an over-reaction to that (admittedly virtuosic) tradition-loving, innovation-hater Wynton Marsalis.

Secondly I bring this up by way of confession; I now realise that Woman’s Day, released arguably too early last year to deserve coverage, is easily one of the year’s outstanding Jazz records. Yet were it not for the presence of guitarist Bill Frisell among its personnel, I might never have bothered picking it up, which would have been disastrous.

On the surface, Woman’s Day isn’t in any sense a breakthrough album. The kind of music on display is exactly the kind of serious-yet-accessible, free-ish (but never, ever capital-F Free), somehow essentially optimistic contemporary take on post-Bop and modal playing that has typified the output of such record labels as ECM and JMT for a long time now. Yet there’s something else at work here, some rare passion, some sense of adventure in the arrangements that sets it apart, at any rate in at least half the material here.

Other than Frisell, whose unquestionable stance as one of the most important Jazz guitarists of the last two decades has, of course, made him a regular visitor to these pages, every player here is a new name to me. The album’s basic group is a quartet: Miles, Frisell, bassist Artie Moore and drummer Rudy Royston. They’re joined, on occasion, by guitarist Todd Ayres, whose power-chording forms a nice counterpoint to Frisell’s flightier, if equally passionate, soloing (his playing on ‘Mommy On Top’ is pure King Crimson), second bassist Kent McLagen, bass clarinettist Mark Harris (I have to admit to bias here: the presence of bass clarinet on any Jazz record irrationally excites me) and pianist Eric Gunnison.

Well, relative unknowns they may be, but this is a fine group. All the pieces here are Miles’ own. Yes, they owe a lot to certain influences: to my ears the spectre of the UK’s own master of understated romanticism Kenny Wheeler looms large over many of these pieces (although there are touches here, touches which really make the album, that would never turn up on a Wheeler date - sudden bursts of guitar feedback, unexpected driving riffs). But, they have their own character too, and these musicians make the very most of them. Moore and Royston, for a kick off, are extremely impressive, by turns fiercely swinging, confidently loose
and genuinely stomping. Miles himself is an admirably eclectic player; he eschews some of the more outlandish approaches his contemporaries take (you won't find any use of even the subtlest FX here), but he brings an elegance and ease to all the lines he plays. And Frisell gives as good a performance here as he has done for a long time, turning in his trademark distortion-drenched searing solos and gorgeously hanging, pianistically-voiced chords, yet avoiding the more overtly idiomatic stylings of his own recent albums.

Overall, I'd say that what the album has is grace. Woman's Day is a work of confidence and maturity on one hand, and of wide-eyed pleasure on the other, but beyond this, it has an easy, accessible beauty that only makes me wish I'd picked it up sooner.

Turn It Over. (How these albums have CD beggars the imagination, but that's an admirably eclectic player; he eschews some of the more outlandish approaches his contemporaries take (you won't find any use of even the subtlest FX here), but he brings an elegance and ease to all the lines he plays. And Frisell gives as good a performance here as he has done for a long time, turning in his trademark distortion-drenched searing solos and gorgeously hanging, pianistically-voiced chords, yet avoiding the more overtly idiomatic stylings of his own recent albums.

The core of the group remained the same: Williams, the young English one-time R 'n' B and session guitarist John McLaughlin and the astonishing organist Larry Young. To the group Williams introduced Cream's former bassist Jack Bruce, perhaps the ultimate indicator of just what he wanted to achieve with this group.

If the results still sound astounding today, what must they have sounded like in 1970? The very notion of Jazz Rock now is so bound up with glossy, flashy, empty showmanship, but at this point the very idea of marrying Jazz and Rock seemed sacrilegious. Miles Davis is, of course, widely thought of as having kick-started the movement towards the introduction of electric instruments and Rock rhythms to Jazz. Yet his great breakthrough albums, Bitches Brew and In A Silent Way, for all their considerable beauty, don't come close to what Williams was doing with Lifetime.

For one thing, Williams dumped Jazz's formal make-up more readily than Miles; None of Turn It Over's 10 songs run longer than five minutes, and most clock in around three. If these pieces provided the platform for longer, more open improvisations live, here they're absolute. What the group crammed into these short bursts was defining stuff, the solos (McLaughlin's all spider and Young's grunting, fiery, truculent, supremely confident) strung out across some of the most overwhelming rhythm section work in Pop music history. Williams on his own could generate enough electricity to power a small town, but Bruce's bass, if anything, gives it even more weight. Actually, there are serious comparisons to be drawn with Cream full stop. For if Cream gave birth to a monster in Pop music - the supergroup - at their best they remain one of Rock's most inspiring forces. Lifetime displayed that kind of freewheeling energy, a similar darkness of overall vision and then some.

A word of warning to the uninitiated: a good deal of this album features Williams' singing. At best, this is something of an acquired taste, at worst an irritation which could get in the way of the music. Williams had a nasal, whiney voice that often sang like his voice).

This line-up of the group would burn itself out shortly after the album, and its participants would go on to various careers and various degrees of fame. But Turn It Over, along with its predecessor, despite years of critical neglect, remains one of the music's truly great albums.
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Three beginnings and an ending, as the Rubio String Quartet embark on a Shostakovich odyssey, and The Sixteen begin to explore the music of the greatest of Spanish Renaissance composers. John Eliot Gardiner marks the beginning of spring with Benjamin Britten, while Andrew Davis delivers a triumphant Vaughan Williams valediction.

**DMITRI SHOSTAKOVICH**

*String Quartet No1 in C major, Op49/String Quartet No4 in D major, Op83/String Quartet No8 in C minor, Op110*

Rubio String Quartet

GLOBE GLO 5157 (DDD/60.45)

Intense and penetrating, these are impressive performances from the Flemish Rubio Quartet, and an auspicious start to its cycle of all 15 quartets of Dmitri Shostakovich for the Dutch Globe label. An innate understanding of Shostakovich's musical idiom, its rhythms, motifs and harmonic language is evident from the characteristic opening of the First Quartet of 1938, with its Slav-tinged neo-classicism.

This work was written soon after Shostakovich's first brush with the Soviet cultural commissars over his opera Lady Macbeth Of Mstensk, and his 'reply' to their criticism, the Fifth Symphony. By 1949, however, the date of the composition of his Fourth Quartet, he had learnt that it was preferable not to invite the displeasure of Stalin in the first place and, given the strong anti-Semitic feeling then prevalent in the former Soviet Union, a work whose lengthy finale incorporated elements from Sephardic Jewish Folk music was unlikely to find favour. The Fourth Quartet, therefore, like the Fourth Symphony, was put to one side until after Stalin's death and had to wait until December 1953 for its first public performance.

There was no such problem with the Eighth Quartet, composed in Dresden during 1960 and given the impeccably politically correct subtitle of "In memory of the victims of fascism and war". This highly programmatic and pictorial work was destined to become the best-known of Shostakovich's quartets, even being transcribed as a chamber symphony for string orchestra. Yet, as in so much of Shostakovich's music, it is impossible not to feel that the superficial 'message' masks a deeply personal expression.

As with the Tenth Symphony, each movement uses a theme based on the notes D, E flat, C and B which, in the equivalent German notation of D, Es, C, H spells out the initials of Dmitri Shostakovich; and, given the incorporation of quotations from several earlier works, including Lady Macbeth, the conclusion that the composer was giving voice to his own oppression as well as that of the peoples of Europe is inescapable. The Rubio Quartet, who incidentally take their name from their instrument maker, the Cambridge-based David Rubio, give as compelling a reading of the Eighth Quartet as I have yet encountered, sensitively paced and shaped and, as in the other quartets, aided by a tonally warm, intimate and coherent sound.

**RALPH VAUGHAN WILLIAMS**

*Symphony No3 (A Pastoral Symphony)/Symphony No7 (Sinfonia Antartica)*

Patricia Rozario, soprano; Women of the BBC Symphony Chorus; BBC Symphony Orchestra; conductor, Andrew Davis

TELDEC BRITISH LINE 0630-13139-2 (DDD/77.27)

Although separated in their dates of composition by some three decades, the similarities between these two works make for a fascinating - and very generous - coupling, and a fitting conclusion to Andrew Davis's cycle of
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the Vaughan Williams symphonies for Teldec.

Both symphonies were inspired by landscapes and by acts of vain heroism, which has led some to undervalue the purely musical qualities of both pieces. Not so Andrew Davis, for whom the symphonic argument is paramount. Not that he seeks to impose a structure; rather, his is an understanding of the character of the works which allows eloquent and unforced expression. I found these to be performances whose full impact and stature did not come across with the first hearing, but only with repeated listening. With each playing, the sense of involvement increased, and that in works which I believed long ago to have yielded all they had to say.

The Sinfonia Antartica, premiered by the Halle Orchestra under Sir John Barbirolli in January 1953, has its roots in the music Vaughan Williams composed some five years earlier for the film Scott of the Antarctic, which was based on the disastrous South Pole expedition of 1910-12. A similarly tragic landscape prompted the composition of the Pastoral Symphony: that of the fields of Flanders during the First World War, where Vaughan Williams served as an ambulance driver. But these images were just starting points, as the superscriptions placed at the head of each of the five movements of the Sinfonia Antartica are perhaps intended to emphasise: only the last refers to the subject of the film.

Davis captures the visionary mood of both works supremely well, generating an awesome power in the Sinfonia Antartica and making the Pastoral hauntingly elegiac. The balancing of soloist, chorus and orchestra in the former is first-rate, with the deep perspectives of St Augustine's, Kilburn, used to excellent atmospheric effect. The playing of the BBC Symphony Orchestra, in this work especially, is outstanding, with thrilling brass and percussion. The recording of the Pastoral is marginally less successful: the chillingly evocative trumpet cadenza in the second movement is surely too distant and recessed, but the ethereal, wordless soprano of the finale is magically conveyed, with Patricia Rozario in radiant voice. However, while one might question the odd detail of interpretation or recording, the integrity and conviction of these performances is simply incontestable.

The Sixteen, under Harry Christophers, has been championed in these pages, most often in the ongoing Hyperion series with James O'Donnell directing the Choir of Westminster Cathedral, but also with important contributions from the likes of Magnificat on Linn and the Tallis Scholars on the Gimell label. However, to judge from this new Collins Classics issue, the pre-eminent Westminster discography is about to face formidable competition.

It comes in the shape of Harry Christophers and his marvellous team of voices, The Sixteen. The first volume of their survey is devoted to music written in honour of the Virgin and contains some of Victoria's most sensuously beautiful choral writing, including settings of five Marian motets, the Salve Regina à 8, the Ave Maris Stella à 4, the Alma Redemptoris Mater à 8, the Regina Caeli Laetare à 8 and the Ave Maria à 8, and concludes with the radiant Magnificat à 8. The main work though is a substantial Mass setting, the Missa Salve à 8, published in 1592 and - in the tradition of the time - based on an existing work, in this case the 8-voice double-choir antiphon Salve Regina with which The Sixteen usefully preceded their rendering of the Mass.

To lovers of Renaissance polyphony, and all who respond to the human voice at its most resplendent, this issue is self-recommending. The Sixteen is in as fine form as I have ever heard this highly consistent outfit, displaying an innate feel for the distinctive character of Victoria's music, with its intense mixture of the luminously serene and the fervently ecstatic. Who could fail to be moved by, say, the Gloria of the Missa Salve or the pure, soaring lines of the four-part hymn Ave Maris Stella (Hail, star of the sea)?

The recording, engineered and produced by Mike Hatch and Mark Brown of Floating Earth in the ideal acoustic of St Jude's-on-the-Hill in London's Hampstead, is an object lesson in how to convey these glorious sounds.
Benjamin Britten

Spring Symphony, Op44/Hymn To St Cecilia, Op27/Five Flower Songs, Op47
Alison Hagley, soprano; Catherine Robbin, contralto; John Mark Ainsley, tenor; The Boy and Girl Choristers of Salisbury Cathedral; The Monteverdi Choir; Philharmonia Orchestra; conductor, John Eliot Gardiner

Deutsche Grammophon 453 433-2

(BDD/62.04)

Britten's jubilant and joyful Spring Symphony was the outcome of a commission from the conductor of America's Boston Symphony Orchestra, Serge Koussevitsky, but its premiere - with Koussevitsky's approval - was an all-European affair, Eduard van Beinum conducting the Amsterdam Concertgebouw Orchestra at the 1949 Holland Festival. The work represented something of an about-turn for Britten who, in his early career, had rebelled against the Folk/Pastoral mood prevalent in so much British music. This potent and evocative mix of voices and orchestra, however, wears its muddy wellies with pride!

For his texts, Britten drew upon six centuries of English poetry, from Spenser and Herrick to his friend and mentor, W.H. Auden, as well as Milton, Blake and John Clare. It is all carefully arranged to mirror the 'progress' of a conventional four-movement symphony, from the melting of the winter ice and the first stirrings of nature to the exultant finale which combines Beaumont and Fletcher's London, to Thee I Do Present with the anonymous 13th century Sumer Is Icumen In. The emotional heart of the work, though - its 'classical' slow movement - is undoubtedly the Auden setting, his moving, almost mystical Out On The Lawn I Lie In Bed. Britten was fully forged his reputation, and the vitality and exuberance of this interpretation place it on a par, and in some respects ahead of, the composer's own recording, recently reissued on Decca.

This new recording, made in Walthamstow Town Hall, is notable for the way it clarifies Britten's complex vocal and instrumental textures while still maintaining lively tempos. The singing of the Monteverdi Choir is remarkable even by its standards, with breathtaking precision and judgement of dynamics. The focus is sharp and the attack clean. You might argue that it is a touch too refined in the more earthy numbers such as the rumbustious final chorus, but that would be nit-picking.

The soloists, too, deserve plaudits: the beautifully-shaped and expressive singing of Alison Hagley is a delight, as is that of John Mark Ainsley, although the recording places him too far back in the sound picture. Catherine Robbin is fresh-toned but in the key Auden setting suffers a little in comparison with Janet Baker in Previn's EMI version. But these are minor caveats in what is a richly enjoyable musical experience, one enhanced not only by DG's clear, vivid sound but by the well-chosen 'fillers', both a cappella works for chorus: the lovely Hymn To St Cecilia (another Auden setting) and the rarely-heard Five Flower Songs. Altogether a recording worthy of ushering-in the eagerly-awaited spring.
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<td>Quad 77 Pre + Console</td>
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<td>Restek Sixtant Pwr Amp</td>
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<td>Thorens TD 180</td>
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<td>Yamaha A492</td>
<td>£250</td>
<td>£199</td>
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£1279 OR £199 deposit 9 X £120
TOTAL PAYABLE £1279.
(Subject to Status)

OTHER FAVOURITES ALL AVAILABLE ON

<table>
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<tr>
<th>Product</th>
<th>Price</th>
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| Meridian 506 CD Player| £1100.00
| £200 deposit
| 6 x £150 Total payable| £1100.00
| (subject to status)  |        |
| Marantz CD1K1 CD      | £1099.00
| £199 deposit
| 6 x £150 Total payable| £1099.00
| (subject to status)  |        |

AVI, ALCHEMIST, ANTHEM, BAYER, BOSE, BOULDER, CABLETALK, CASTLE, CHARIO, CITATION, ELECTROCOMPANIET, EXPOSURE, FINAL, GAMMA ACOUSTICS, GENESIS, HEYBROOK, JAMO, KEF, LINN, LUMLEY, MAGNUM DYNALAB, MARantz, MCINTOSH, MERIDIAN, MICHELL, MICROMEGA, MONARCHY, MYRYAD, PRECIOUS METALS, PRIMARE, PROJECT, ORTOFON, QED, QUAD, REVOX, ROKSAN, RUARK, SEQUENCE, SOUNDSTYLE, SONNETEER, SONICLINK, SENNHEISER, SONIC FRONTIERS, SME, STAX, TDL, TEAC, TOTEM, TRICHORD, TANNOY, TARGET, XANTEK

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HI-FI YOU REQUIRE AT THE KEENEST PRICES

TEREST FREE CREDIT (Subject to status)

<table>
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<th>Product</th>
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<th>Deposit</th>
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<td>£695.00</td>
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ANTHEM Integrated/Pre/Power-Amplification - best of Canadian valves
CASTLE SEVERN 2 - frighteningly good valve
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LINN - LP12, Hi-Fi + Multi Room solutions
MARANTZ - CD17 K.I. sig - So Real, So Natural
MERIDIAN - 500 Series
MAGNUM DYNALAB - Ultimate reference tuners.
MICROMEGA STAGE/DRIVE - Vinyl like CD - so natural
ROKSAN - Caspian Amp + CD
RUARK - Icon, Sceptre, Broadsword - monitor heaven
RESTEK - The Germans have landed - Challenger II, Concret CD "Battleship hi-fi" - Truly remarkable
SONIC FRONTIERS SFC1 - HDCD - Heaven
SONNETEER CAMPION - The best
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* SUBJECT TO STATUS
“CHORA” HEADPHONE AMPLIFIER
ALPS “Blue Velvet” PRECISION AUDIO CONTROLS

Highest quality, purpose designed, “single ended” class A headphone amplifier for a stand alone use or to supplement those many power amplifiers that do not have a headphone facility. Easy installation with special signal link-through feature, the unit uses our “Andante” Ultra High Quality power supply. Housed in the neat, black finished, Hart minibox it features the wide frequency response, low-distortion and ‘musicality’ that only associations with the renowned John Linsley Hood contribute. Volume and balance controls are Alps “Blue Velvet” components, very easy to build, or available factory assembled, the kit has very detailed instructions, and comes with Hart audiograde silver solder. A valuable personal loaning option and an attractive and harmonious addition to any hi-fi system.

K1200: Complete Standard Kit £112.50
K1200 SA “Series Audiophile” Kit with selected audiophile components £150.65
A1000: “Series Audiophile”, Factory Assembled £115.46
CM2100 Construction Manual £2.50

SHUNT FEEDBACK PICKUP PREAMPLIFIER

Hart Audio Kits and factory assembled units use the unique combination of circuit designs by the renowned John Linsley Hood, the very best audiophile components, and our own engineering expertise, to give you unbeatable performance and unbelievable value for money.

We have always led the field for easy home construction to professional standards, even in the sixties we were using exact assembled printed circuits when Heathkit in America were still using ‘kit’ construction. Many years of experience and innovations of going back to the early Dinsdale and Bailey classics gives us incomparable design background in the needs of the home constructor. This simply means that building a Hart kit is a real pleasure, resulting in a piece of equipment that not only saves you money but you will be proud to own.

Why not buy the neoprene and construction manual for the kit you are interested in to see how easy it is to build your own equipment. The savings of both time and cost can be credited against your subsequent kit purchase.

“AUDIO DESIGN” 80 WATT POWER AMPLIFIER

Our John Linsley Hood designed 80 watt Power Amplifier continues to amaze all with its high fidelity sound. The feeling this new speaker manufacturers use it to show their own products to their best advantage. It’s flawless performance is a result of the combination of innovative circuit design and the very best components, specified by the designer. Such innovations as the super rail had stabilised power supply make great contributions to the overall reproduction quality yet we do not found on even the most expensive run-of-the-mill designs in the High St shop window.

We have long known that the delicacy and transparency of sound from this amplifier placed it in the world class and side-by-side comparisons with amplifiers costing five times as much still show small performance advantages, which suggests that even the most expensive amplifiers will only equal rather than exceed, its sound quality. All amplifiers in the range have the same basic quality and the decision about whether to use a preamplifier is governed by the facilities you need. The STANDARD amplifier has switching for up to three inputs, if you need more than this then a preamplifier feeding a second input can be used, and so on.

If you would like to build this incredible amplifier in action then arrange a visit to Winstow Audio’s new premises at Broughton Astley, near Leicester. Their phone number is 01555 26863, speak to Shaun or Terry. All amplifiers are available in kit or factory assembled form.

K1100 Complete STANDARD Amplifier Kit £145.71
A1100 Factory Assembled £155.21
K1100S Complete stereo SLAVE Kit £335.62
A1100 Factory Assembled £352.22
K1100M MONOBLOC Amplifier Kit £271.20
A1100M Factory Assembly £351.20

Super Audiophile (SA) Versions of all the above come with selected audiophile components and fully finished cases as standard. All Hart kits are designed for easy home construction to the very highest standards. Hart kits can be built by anyone of average manual ability. If you are still not convinced how easy it is to build it yourself with a HART kit you can order the Instruction Manual to read for yourself and we will refund the cost when you buy your kit.

JOHN LINSLEY HOOD 15W SINGLE ENDED CLASS “A” POWER AMPLIFIER

A design for the experiment who wants to try and re-create the warmth and purity of sound given by valve amplifiers from the vintage days. The Hart 15W kit is an advanced and specially optimized for low impedance moving coil cartridges as well as moving magnet types. Satisfactory dynamic characteristics are used throughout for ultimate sound quality. The combination of John Linsley Hood design, high quality components and Hart’s double sided printed circuit board layout make this a product at the leading edge of technology that you will be proud to own. A recent review in “Gramophone” magazine endorsing this view. Bought in kit form our step by step instructions will help you to try "your HART Printed Circuit Board Soldering Practice Kit comes with the right tools and everything you need to assemble the kit inside the fully finished 228 x 134 x 62mm case. Comes with full, easy to follow, instructions as well as the Hart Guide to PCB Construction, we even throw in enough Hart Audiograde Silver Solder to construct your kit.

K1450 Complete Kit £115.58
K1450SA Audiophile Kit £138.94
A1450SA Factory assembled Audiophile unit £188.94

Andante” Linear Technology AUDIOPIE POWER SUPPLIES

The Hart “Andante” series power supplies are specially designed for exacting audio use requiring absolute minimum noise, low hum field and total freedom from mechanical noise. Utilising linear technology throughout for smoothness and musicality it makes the perfect partner for the above units, or any equipment requiring fully stabilised +15v supplies.

There are two versions, K2350 has a 2 x +15v supplies and a single 15v for many etc. K2356 is identical in appearance and is available +15v only. Both are in cases to match our “Chora” Headphone Amplifier and our K1450 “Shunt Feedback” Preamplifier.

K2350: Full Supply with all outputs £94.75
K2356 Power Supply for K1450 or K2301 £84.45
A2350 Factory assembled Full Supply £147.25

SOLDERING

The size of modern components makes the right soldering equipment essential for good results. Everything we offer we actually use in our workshops. See the Lists for the full range.

The Hart Super Audiograde Silver Solder has been specifically formulated for the serious audiophile. Not only does it give beautiful easy-to-flow characteristics on all component materials but it melts with normal soldering temperatures avoiding the possibility of thermal damage to components or the need for special high temperature irons. A very low flux rate makes perfect joints easy but eliminates the need for flux cleaning after assembly. Super Version with Hart Silver Solder £6.95

HART SUPER AUDIOGRADE SILVER SOLDER

Hart Super Audiograde Silver Solder has been specially formulated for the serious audiophile. Not only does it give beautiful easy-to-flow characteristics on all component materials but it melts with normal soldering temperatures avoiding the possibility of thermal damage to components or the need for special high temperature irons. A very low flux rate makes perfect joints easy but eliminates the need for flux cleaning after assembly. Super Version with Hart Silver Solder £6.95

PRINTED CIRCUIT BOARD SOLDERING PRACTICE KIT

Unsure whether you can construct a Hart kit, this is your chance to try! Your HART Printed Circuit Board Soldering Practice Kit comes with a range of modern components, a typical Hart quality PCB, a roll of the correct grade of solder and full instructions. It enables the enthusiast who is uncertain of his, or indeed her, ability to put together and solder a printed circuit to try their hand at minimum cost. The instructions explain the right techniques and guide even an absolute beginner through the tapering process, but very little is needed to make a good soldered joint. Excellent value for money at only £9.99

Super Hart Silver Solder £9.95

LINSLEY-HOOD 400 SERIES SUPER HIGH QUALITY FM TUNER

This ultra high quality analogue tuner system is the ideal comparison to the audio Design FM tuner and a must for the serious enthusiast, with case size, front plate layout and even control switches identical for trucking. Like the B070 Audio Design Tuner it is fully balanced with ultimate performance at incredibly modest cost. Novel circuit layout, only slightly modified for present day components, combining a response down to DC and advanced sample and hold single stage together making a tuning which suffers better than the best of the high-priced exotica but, thanks to HART engineering, remains very easy to build and set up. Since all components are selected by the designer to give the very best signal to noise ratio this tuner is not cheap, but in terms of its sheer sound quality it is a true sequel to the “Andante” amplifier used in this tuner.

K400 Complete Kit £256.82
CM400 Construction Manual £5.00

Send for Your FREE copy of our LISTS
All Prices include UK/EC VAT.
This attractive module consists of a low pass filter and power amplifier ready for you to mount in a suitable subwoofer cabinet. The combined unit can then be combined with any new or existing hi-fi or amplifier ready for you to mount in a suitable subwoofer cabinet. The 20,000Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 200Hz and a power rating of 24 Hr. ORDERLINE 01691 652894 Fax. 01691 662864

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- Dominic Baker, Hi-Fi World

"Listening tests proved conclusively to my mind that SOUND-BYTES are thoroughly effective".
- Jonathan Kettle, CREMF

"It'll improve your unfilled stands, budget or dear".
- Ken Kessler, Hi-Fi News

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Musical Fidelity X-Series. Whole range from the X10 D to the absolutely brilliant NEW X-A50 mono power amps stocked and on demonstration in our dedicated X-Suite. These products have taken the industry by storm and rightly so. Stunning looks and sound to match. You can now own a full Musical Fidelity system, based around the X-Series with your choice of CD transport & speakers. Whether you are looking for a cost effective upgrade to your existing system, or to purchase a complete new set of upgradeable electronics, you owe it to yourself to seriously consider these superb products. Enthused about by the press, even outside of the normal HI-Fi publications, these are real objects of desire. You have probably gathered by now that we rate the X-Series more that a bit !!.

BOSE : Another of our favourite products. Lifestyle 12 Home Cinema System and Lifestyle 20 multiplay, dual zone high quality audio systems on permanent demonstration in our dedicated BOSE Theatre. Superb sound and vision from these stylish, virtually invisible, user friendly works of art. Full range of BOSE products available including the other Lifestyle systems and the Acoustimass loudspeakers. The performance and pure lifestyle orientated ease of use of these products make them out and out winners. We currently have some very special offers on all BOSE products, giving you anything up to a FREE PC system and 0% finance !!. Call for details and to book the BOSE Theatre.

Audio Analogue: Puccini & Puccini SE integrated amps, Bellini pre and Donizetti power amps. You should be familiar with these very, and we mean very classy Italian products by now. The Puccini SE recently had a storming review in Hi-Fi World, the Bellini and Donizetti will be equally as well received. Available in both silver and high gloss black finishes, these products are destined to become future classics. We strongly urge you to book your demonstration now. Priced from only £ 450.00 for the Puccini integrated, the range represents unbelievable value in the sound per pound stakes. Another Italian import heading for the Premier League !!.

Partington : Speaker stands or works of modern art ?. How about both. After 25 years in the audio industry Partington have come up with what can only be described as a truly brilliant and revolutionary NEW loudspeaker support in the A7-60. Will sell by the bucket load on looks alone, but the sound enhancement properties of this support make for something bordering on the spectacular. The A7-60 should be deemed as an essential purchase for anyone wishing to extract the maximum performance from stand mountable loudspeakers. Forms an incredible sonic and visual statement with the Townshend SSS . We have been waiting for a speaker stand like this for ages. Nice one Partington !!

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HI-FI WORLD

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MARCH 1998
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Audio Technica

AT 95 E $21
AT 110 E $20
AT OC 9 $220 $210

Denon

DL 100 $70 $55
DL 304 $190 $160

Goldring

1012 GX $74
1022 GX $90

Erlac (Lo & Hi) $172 $78

Elite $200 $153

Excel VX $44 $40

Grado

Prestige Black $44

Ortofon

510 $32
MC 15 Super II $212 $102
MC 25 FL $210 $178
MC 10 Super $263 $224
MC 20 Super $230 $200
MC 30 Super $963 $533

Shure

V 15 XMR $265
SC 35 X $269

REPLACEMENT STYLIS

Audio

ATN 10E, ATN 110E $13*

Technica

ATN 600 E $70*

ADC

XLM MX II $18

Alai

A, AN 70 $14

AA2, AN 70 $14

Dual

DN 146 E, DN 166 E $133.50

Discor E $150

Gold

D 12 GE (for 1000 Series) $12*

JVC

DT 35, DT 60 $9

National

EPS 35 LS, P 390, P 230 $4

Ortofon

DH 2 E, HRS 30 E, DN 20 $13.50

Pioneer

PG 25, PG 220, PG 240 $9

Shure

N 75 C, SC 35, SC 75 $9

N 75 EZ, N 30 E $41

N 95 EZ, N 105 E, N 75 T (105) $13.50

Van 25 $9

N 95 H, N 105 H, Van 35 $22

HD 134 C, HD 130 G, HD 115 G $9

QX 24

STEREO DECKS & TUNERS

Shure 1549 $59

MC 30 Supreme $392

MC 15 Super II $32

MC 10 Super $263

MC 20 Super $230

MC 30 Super $963

Shure $265

SC 35 X $269

Special price for analog output stage. The former and Analog Devices based cutout stage, lead to further HDCD price, the DAC-2 digital processor kit is $499.00 U.S. Of course, the best news is that all these improvements come with a very small hit with customers and reviewers alike. The DAC-2 builds on the price of $149.00, which makes it even more good news!

TURNTABLES/CARTRIDGES

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National

EPS 35 LS, P 390, P 230 $4

Ortofon

DH 2 E, HRS 30 E, DN 20 $13.50

Pioneer

PG 25, PG 220, PG 240 $9

Shure

N 75 C, SC 35, SC 75 $9

N 75 EZ, N 30 E $41

N 95 EZ, N 105 E, N 75 T (105) $13.50

Van 25 $9

N 95 H, N 105 H, Van 35 $22

HD 134 C, HD 130 G, HD 115 G $9

QX 24

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The new GRAHAM Mk 2.0 tonearm

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For further details contact

Distributors of: Convergent Audio Technology Amplification and Magnus Dynalab Turntables
Unit 8 Enterprise Park, Styfield Industrial Estate, Guildford, Surrey GU1 1RB
01483-573544
**Clearance List**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Original Price</th>
<th>Sale Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soundlab Dynastat loudspeakers - mint</td>
<td>£1700</td>
<td>£4750</td>
</tr>
<tr>
<td>Muse Serris II one seven fives mono power</td>
<td>£750</td>
<td>£2999</td>
</tr>
<tr>
<td>Transparent Audio Musicwave plus cable 8ft speaker pair 1 x 15ft interconnect 1 x 5ft interconnect approx</td>
<td>£1250</td>
<td>£1000</td>
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<tr>
<td>Audionote SPX reference speaker cable 2.5m by wire set (10m)</td>
<td>£2800</td>
<td>£7000</td>
</tr>
<tr>
<td>Voxstil s.p.u. £1875 SME4 Siltech wired £1000 Audionote 1/0 cartridge £1495 Audioninnovations £1000 M.C.T £349</td>
<td>£1000</td>
<td>£3999</td>
</tr>
<tr>
<td>BARGAIN! All above mint as new £2480</td>
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<tr>
<td>Mana sounds table</td>
<td>£300</td>
<td>£1300</td>
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<tr>
<td>GEMINI line integrated S. Ended</td>
<td>£699</td>
<td>£1350</td>
</tr>
<tr>
<td>BARGAIN Last one!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RHYTHM 211/VT4C phono Ex-Demo Marked</td>
<td>£999</td>
<td>£2499</td>
</tr>
<tr>
<td>RHYTHM LINE Ex review/ex new</td>
<td>£650</td>
<td>£2499</td>
</tr>
<tr>
<td>Aeon MK1 MonoBlocks 20Watt S.E. Slimcon construction Ex-review new marked - to clear</td>
<td>£2499</td>
<td>£4999</td>
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<tr>
<td>Era Std. phono mm preamp New marked</td>
<td>£999</td>
<td>£3999</td>
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<tr>
<td>SPACE REFERENCE MKII ex hl-fi show display as new</td>
<td>£5499</td>
<td>£3999</td>
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<tr>
<td>BARGAIN! Stunning soundbooks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPACE 300B</td>
<td>£1999</td>
<td>£7999</td>
</tr>
<tr>
<td>Epoch loudspeakers Ex-demo</td>
<td>£1499</td>
<td>£750</td>
</tr>
</tbody>
</table>

**Sale Items**

- **Epoch Reference 5 Loudspeakers**
  - Original Price: £2999
  - Sale Price: £2399
- **New Aeon Mono Blocks**
  - Original Price: £4999
  - Sale Price: £3999
- **Rhythm 211/VT4C Line Integrated**
  - Original Price: £2499
  - Sale Price: £1999

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WHEN IT’S RIGHT YOU KNOW IT’S RIGHT!

FROM AS LITTLE AS £91.53 PER MONTH

There’s little we can say about Audiolab and Monitor Audio that isn’t already well known. Other than that they are near neighbours of ours in a concentration of top-name manufacturers in the hi-fi hot-bed that is Cambridgeshire. The two companies come even closer in this system, demonstrate how bi-amping a superb two-way speaker with Audiolab’s latest ‘minimal’ integrated and additional power amp creates a soundstage of amazing scale and precision. We commend Audiolab and Monitor Audio, not only for such obvious sonic qualities but also for their outstanding engineering as well as a cosmetic finish which enhances the sheer desirability of all their award winning components.

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If you're after that toe-tappin', hand clappin', thigh slappin', sound experience - simply listen!

We'll demonstrate Nairn, a company that places a convincing emphasis on the value of true system synergy. For a growing number of our customers, Nairn reproduces music the way they like it, and we'll place a bet that when you listen, you'll probably discover the you do too!

No dogma here! While different technologies provide different solutions to achieving state-of-the-art sound reproduction, The Hi-Fi Company will always provide an appropriately wide choice of top quality equipment for your personal assessment.

Audio Research have earned a global reputation with their highly sophisticated vacuum-tube amplifiers which, with the help of their new CD player in this system, produce an utterly convincing portrayal of all types of music. Add the ProAc Response 2.5 loudspeakers and, in our view, these rare devices help this system create the transparent sound of electrostatics with the sheer power that only superior cabinet speakers can achieve.

For many years we have delighted in the transparency of electrostatic speakers, but never more than when driven by hugely powerful Class A amps. Electrostatics really come up to Krell amplifiers, enhancing their clarity with a three-dimensionality which can be easily real in some instances. With well recorded discs one can feel as if it's possible to walk right through a literally transparent soundstage to mingle with the musicians in your own living room!

Any system offering this level of performance usually deserves a home demonstration and if that is something you would like to experience for yourself, please contact us and we will be delighted to make the arrangements for you. The system is of course on dem in store.

For the largest range of quality used Hi-Fi in the country, please see our 'trading station' advert overleaf.
MEASURED PERFORMANCE

AMPLIFIERS

CHORD CPA 1800 AND SPM 400
The Chord SPM 400 power amplifier produces a healthy 112 watts into 8 ohms and no less than 82 watts into 4 ohms, so there's plenty of power for all loudspeakers and rooms, even though the '400 is very compact.

Frequency response was wide, stretching from a low 4 Hz right up to 70 kHz. Chords normally display plenty of low-end grunt and this model is unlikely to differ.

Distortion was low right across the audio band, at all power outputs, from low to high. Like most solid-state amplifiers though the distortion spectrum, seen in our analysis, has extended harmonics, especially at higher power levels. This may add a little hardness to the sound.

The Chords measured well, as they usually do. This is a well-engineered amplifier.

NK

<table>
<thead>
<tr>
<th>Power</th>
<th>112 watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD/tuner/aux.</td>
<td>4 Hz-70 kHz</td>
</tr>
<tr>
<td>Separation</td>
<td>68 dB</td>
</tr>
<tr>
<td>Noise</td>
<td>-96 dB</td>
</tr>
</tbody>
</table>

UNISON RESEARCH SIMPLY 845
Rated at 24 watts, the Unison 845 managed 18 watts before running into soft clipping. It could deliver this power at 40 kHz and 10 kHz too however, so its power bandwidth was good. Both channels were the same.

Unison are hardly conservative in their rating methodology, especially because SEs get progressively non-linear as output increases. So at 12 watts the Unison 845 was producing 0.6% distortion, primarily third harmonic in nature. This will have a slight brightening effect on the sound. However, there is unlikely to be any harshness, because SEs have no crossover distortion either.

Noise and hum were very low and input sensitivity high at 120 mV input for full output. At low signal levels of a few watts - all that is needed if you use big sensitive floor standers of 90 dB SPL or more - the Unison 845 produces just 0.1% distortion right across the audio band, a good result.

Our analysis shows second harmonic is dominant, with third present. As power goes up third harmonic distortion increases relative to second.

The Unison 845 measures well enough, but low power output means it must be used with sensitive loudspeakers.

NK

<table>
<thead>
<tr>
<th>Power</th>
<th>18 watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD/tuner/aux.</td>
<td>6 Hz-32 kHz</td>
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<tr>
<td>Separation</td>
<td>82 dB</td>
</tr>
<tr>
<td>Noise</td>
<td>-99 dB</td>
</tr>
<tr>
<td>Distortion</td>
<td>0.11 %</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>120 mV</td>
</tr>
</tbody>
</table>

CARTRIDGE

WILSON BENESCH MATRIX MC
The Wilson Benesch Matrix has a high output of 1.3 mV at 5 cm/sec rms, so it will work well even with relatively hissy budget MC stages. However, this suggests a few more turns have been put onto the signal coils, raising effective tip mass. Therefore I wasn't surprised to find that the cartridge had poor tracking in the midband (1 kHz) as a result. I'd expect it to let go on high-level vocals. Tracking performance wasn't great at 300 Hz either, suggesting low-ish compliance.

Vertical tracking angle was high at 26 degrees, to give adequate disc surface clearance. This raised vertical modulation distortion to a modest 3% - not bad.

Lateral modulation distortion was low though, measuring 0.7%.

Channel separation was unbalanced, measuring 20 dB in one direction and 30 dB in the other, suggesting a misaligned generator assembly.

Frequency response displays smoothly...
The Return of a Legend.

Genuine Garrard 401 turntables are available, as approved remanufactured units from Loricraft Audio, the official Garrard licensees.

The first thing you notice is its amazing bass slam. Notes go deeper and with more power and control than I have heard from any other turntable... Dominic Baker Hi Fi World

In musical terms the 401 combination was a real winner...... Chris Beaching Hi Fi News

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The Legend Continues.

---

**NEW**

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Now includes support for the Turtle Beach 20 bit Multisound Fiji professional audio DSP soundcard.

(external mic/probe preamp not required with Turtle Beach card)

*** Distortion levels to below 0.003% can now be measured ***

Additional enhancements include:

* Improved operation for Step Response display
* Improved Time Domain plotting
* New example script (under QC directory) for production testing of loudspeaker frequency response
* New ASCII text output report for Thiele/Small parameter tests
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falling treble on outer grooves, as our analysis shows. Output was -3dB down at 20kHz relative to 1kHz, so the Matrix won't sound bright. Inner-groove tracing loss amounted to -3dB, which will make it sound warmer as it goes across the disc.

My main reservation about this cartridge is its poor tracking performance. Most alternatives are significantly better.

**NK**
- Tracking force: 1.9gms
- Weight: 6gms
- Vertical tracking angle: 26degrees
- Frequency response: 25Hz-10kHz
- Channel separation: 25dB
- Tracking ability (300Hz)
  - lateral: 45μm
  - vertical: 45μm
- Tracking ability (1kHz)
  - lateral: 14cm/sec.
  - vertical: 3%
- Distortion (45μm)
  - lateral: 0.7%
  - vertical: 3%
- Output (5cm/sec rms): 1.3mV

**CD PLAYERS**

**SONY CDP-X3000ES**

Technically the Sony is a well-designed player with low distortion figures, excellent separation and fine dynamic range. But the real interest in this player comes from the choice of digital filters on offer to the user via a button on the remote.

The standard filter gives a very flat frequency response with an abrupt cut-off at the top end which causes some ringing. Combined with the good distortion figures I would expect this to produce instruments such as cymbals and triangles with plenty of sparkle.

Filter position No1 gives a significant roll off at high frequencies which should yield a smoother, fuller sound. Filter position No2 goes further in this direction by providing an even slower roll-off rate. Both these filters limit frequency response (-1 dB point) to around 17kHz.

Filter position No3 is a compromise between the standard filter and filter No1, extending the frequency response to 19kHz and eliminating any ringing.

Ultimately the best filter subjectively will come down to programme material and personal preference. On a final note, the output level is rather high so take this into account when auditioning. KB

**Frequency Response**

- Frequency Response: 4Hz-21kHz
- Distortion (%)
  - left: 0.005
  - right: 0.004
  - -6dB: 0.007
  - -30dB: 0.006
  - -60dB: 0.38
  - -90dB: 29.2
- -90dB dithered: 14.6
- Separation (dB)
  - left: 118
  - right: 116
- 1kHz: 100
- 20kHz: 104
- Noise: -104dB
- with emphasis: -104dB
- Dynamic range: 110dB
- Output: 2.5V

---

**SONY CDP-X3000ES**

**Tracking force**
- 1.9gms

**Weight**
- 6gms
Amplifiers, loudspeakers and all other audio & video equipment provide even contact and uniform energy distribution.

Designed using computer modelling techniques the spherical surface supports designed to be placed under compact disc players, turntables, FOCULPODS & POLIPODS are high performance vibration absorbing devices that sounds perfect.

Deflex material is a specially formulated low resilience polymer with exceptional shock absorbing properties. Loosely grouped molecules within the material rub together and transfer vibrations into heat. In its soft form the material has a texture similar to plasticine but with a high memory characteristic, the mechanical properties of the material guarantee to reduce unwanted noise.

Once you have gained access to the inside of the cabinet, remove foam and install one Deflex panel to upgrade your existing system. Place the flexible Deflex panel thru the speaker cut-out and stick to the inside of the speaker cut-out. The result was sharper imaging, wider tightness and control, improved internal dynamics and a more natural sound.

Deflex material is the only world acclaimed flexible acoustic damping panel for lining loudspeakers. "The only world acclaimed flexible acoustic damping panel for lining loudspeakers" (UK Patent No. GBPT 2277008)

These Deflex panels seem to give greater impact and control, imposed internal clarity, and their vibration - all without deadening the sound in any way.

For a FREE comprehensive information pack and details of other products from SPECTRA DYNAMICS Tel. (01745) 360070 Fax (01745) 360086 Unit A1, Ffordd Derwen industrial Estate, Rhyl, Denbighshire, LL18 2YR

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The simplest and most cost effective way to upgrade your existing system.

- Deflex panels seem to give greater impact and control, imposed internal clarity, and their vibration - all without deadening the sound in any way.
- The result was sharper imaging, wider tightness and control, improved internal dynamics and a more natural sound.

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ACCENT YOUR INSTALLATION WITH THE DYNASTY OF COLORFUL MR. MARK LEVINSON

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**ANTHEM CD I**

The Anthem CD I has a fairly flat frequency response, though there is a noticeable amount of ringing at higher frequencies due to the high-frequency 'brick wall' filter used. Distortion figures are fair - they're worse than average at higher signal levels but improve as the level drops. Unusually the figures for separation are slightly better at 20kHz than at 1kHz; you'd normally expect the reverse. Noise performance is acceptable but spurious outputs are very well suppressed, measuring -75dB or so. **KB**

<table>
<thead>
<tr>
<th>Frequency Response</th>
<th>4Hz-21kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distortion(%)</td>
<td></td>
</tr>
<tr>
<td>-6dB</td>
<td>0.013</td>
</tr>
<tr>
<td>-30dB</td>
<td>0.030</td>
</tr>
<tr>
<td>-30dB</td>
<td>0.033</td>
</tr>
</tbody>
</table>

**LOUDSPEAKERS**

**MISSION 750 LE**

Under test one Mission 750 loudspeaker exhibited a slight whistle and a high peak in the response trace at 800Hz, caused by rear-panel reflection. On the other, the reflection was less noticeable but still there. This will result in coloration. Otherwise the 750 has raised bass and a small amount of treble lift to give it a lively, forward sound. The bass peak around 130Hz will give this 'speaker fast bass.

Sensitivity was low at 85.5dB, but miniatures are less sensitive than big 'speakers. The 750s will need a powerful amplifier to go loud, around 60W or so.

One reason for low sensitivity was a high overall impedance of 9.5ohms, meaning the 'speakers will draw little current. They are, however, an easy load, possessing little reactance.

Technically this isn't Mission's best loudspeaker, but it will probably sound lively and entertaining. **NK**

---

**Noise** with emphasis -100dB -101dB

**Dynamic range** 108dB 1.9V

**Output** 77 76
When ordering if unavailable, please to% c the regular put cordigurallon and d on.l,iu for phono to IMN

Now, what will they say about the VirtuosoReference?

"...playa middle frequencies quite spectacularly. ...high and low frequencies come across with equal aplomb. ...fine dynamics ..." [Virtuoso, Gold, Hi-Fi Choice, June, 1997]

VirtuosoReference

Now, what will they say about the VirtuosoReference? Believe it: these are the free range, organic products of the audio world - they cost a little more, maybe, but they give a much better taste. Prices from £2995.

B*a speakers are designed and manufactured by Thomas Transducers

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Black Velvet gold plated phone-phono 1m £ 29.99
Black Velvet SE gold plated phone-phono 1m £ 39.99
Black Velvet 2 x phono - 4 or 5pin DIN 1m £ 29.99
Black Velvet 4 x phono - 5pin DIN 1m £ 39.99
Jackson Pyramid Loudspeakers pair £229.00

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The Black Velvet's unusually atmospheric sound proved engrossing. In the long term, there was vast insight into performances. thanks to an uncertain retrieval of low level subtleties." - Black Velvet (Neil Koekkoek, Hifi World, January 1997)

"The [Azure] cable is very accurate across the bandwidth. From the highest treble in the deepest bass it has an hidden easiness..." - Azure (Audio Obsession, Sept 1997)

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CASTLE KENDAL
The Kendal has over-damped bass and a slow bass roll off as a result. This is rather odd. The only way to balance out such a trend is to use both wall and floor to boost bass output. The Kendal is a floor stander of course, and it was measured off the floor to minimise the undulations in response a floor will introduce, for the purposes of visual clarity. It must be used close to a rear wall though.

Castle integrate the two drivers well, as usual, so there's no crossover dip even when listening off axis. However, our response analysis shows the tweeter rolls off slowly, a trend which will soften out treble, giving the 'speaker a warm sound.

The Kendal's impedance measured out at 10ohms overall and our analysis shows the curve stays high right across the audio band. This means the 'speaker will consume little power and it usually also means low sensitivity (according to efficiency). In this case the Kendal was reasonable in its sensitivity, delivering 86dB for one nominal watt of input (2.84V). It will need amplifiers of 40watts-80watts as a result for reasonable volumes.

The slight midband prominence of the Impedance is likely to give it strong vocal projection, useful with near-wall positioning. NK

Kendal is likely to give it strong vocal projection, useful with near-wall positioning. NK

TUNER
DENON TU-S10
The TU-S10's performance figures are about the best possible today, with a few exceptions. It has 'flat' frequency response, although close inspection shows small but significant treble lift - just enough to ensure a modicum of brightness that will also give some enhancement of detail.

Noise was 4dB lower than usual, measuring -75dB. Since hiss is only audible during silences its absence isn't of great impact, but Radio 3 listeners might notice better clarity. Distortion was also very low, measuring much less than 0.1% on sum and difference signals. Stereo separation was around 10dB better than the best of the rest, measuring 52dB.

Amongst these excellent figures, RF sensitivity was peculiarly mediocre at 40µV, attributable I suspect to the presence of RDS and switchable aerial inputs. Similarly, the Denon needs no less than 2mV from an aerial for best results - a strong signal, so it is best used with a good aerial. I was baffled to find that this tuner has no signal strength meter, a major omission in my view. Otherwise the TU-S10 delivers a very high standard of performance. NK

<table>
<thead>
<tr>
<th>Frequency response</th>
<th>8Hz-16kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stereo separation</td>
<td>52dB</td>
</tr>
<tr>
<td>Distortion (50% mod.)</td>
<td>0.06%</td>
</tr>
</tbody>
</table>

Hiss (CCIR) -75dB
Signal for minimum hiss 2mV
Selectivity (at 0.4MHz) 66dB/80dB
Sensitivity
mono 3μV
stereo 40µV
Signal strength meter: none
for High Quality Audio Tubes

Everybody in the tube business knows that the justly famous Brand names of yesteryear like BRIMAR, GEC, MULLARD, RCA & TELEFUNKEN Etc. Etc. are scarce and often very expensive.

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Our special processing includes selection for LOW NOISE, HUM & MICROPHONY and controlled BURN-IN on all power tubes to improve STABILITY and select out tubes with weaknesses Etc.

A selection of CVC PREMIUM Audio Tubes

<table>
<thead>
<tr>
<th>Tube Type</th>
<th>Power Tubes</th>
<th>Price (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE-AMP TUBES</td>
<td>ECC81</td>
<td>5.00</td>
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<tr>
<td></td>
<td>ECC82</td>
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Please note carriage charge extra + VAT (EEC Only) - When ordering state if matching required (add £1.00 per tube). Payment by CREDIT CARD (ACCESS, VISA, MASTERCARD) or BANKERS DRAFT, TRANSFER or CHEQUE (UK ONLY).

FAX or POST your ORDER - We shall send PROFORMA INVOICE if necessary.

Valve Amplifiers sound better still fitted with CVC PREMIUM Valves!

Chelmer Valve Company, 130 New London Road, Chelmsford, Essex CM2 0RG. England.

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Hi-Fi World March 1998

Midland Audio Exchange have the following products on permanent demonstration.

**Turntables**
- Touraj Moghadon Signature ArtemizJShiraz £5310.00
- Atessa DP3 Transport Atessa DAZM2 Atessa DS5 £2493.00
- Caspian CD player £695.00

**Amplifiers**
- Roksan L1.5 preamplifier £250.00
- Roksan power amplifier £1485.00
- Transfiguration Spirit Temor £1295.00

**CD Players**
- Xerxes Xrrabriza/Corus black £1845.00
- Roksan Radius/Tabriz £1195.00
- Rega Planar 3/RB 300 £945.00

Midland Audio Exchange have the following products on permanent demonstration.

**Cartridges**
- Sumiko - Alt models stocked
- Lyra - All models stocked
- Stylus - All models stocked

**CD Players**
- Rega Planar 2/RB 250
- Rotel DP 529 (new)
- Densen B103 (new)

**Loudspeakers**
- Oian 3 x Loudspeaker £420.00
- Gain v reference xerxes power supply £320.00

**Speakers**
- Audio Note Loudspeakers AN-KSP/JSP/ESP £795.00

**Other Products**
- Micromega Stage 1 CD player £595.00 inc fitting
- Micromega STAGE 1 £695.00

Any aspect or format concerning Roksan please call John Roberts for an appointment and we will carry out a demonstration.

**Recommended Vinyl**

**Purpose**
- New with a complete range of. The Doors £15.90
- Fleetwood Mac £15.90
- The Allman Brothers Band £15.90

**Suppliers & Installers of High Quality Audio Systems**

Roksan - Rega - Michell - DPA - ProAc

 Suppliers of: Audio Note - Densen - UKD - Orell - Myriad

Impulse - Ruark - Mark Levinson

Midland Audio Exchange are looking for good used British & American Hi-Fi,  cash paid.

**World AudioX-change**

181 Franche Road Kidderminster
Worcester DY11 5AD
Telephone: 01562 822236 Mobile: 0421 605696
The Audio Note Kit One

Based around the justly famous 300B directly heated triode, we see this kit as the introduction to real Audion Amplification, as it covers all the important aspects of design necessary. Single Ended, No-Feedback, Class A, Directly Heated Triode, to become a member of this exclusive club of amplifiers.

Kit One has one 300B per channel running at 420 volts with 75mA current giving 8-9 watts of the cleanest power you will ever hear, the input stage consists of a 6SN7GT with a 687 double triode driver stage running in SRPP. The power supply is capacitor-choke-capacitor configuration with a 5U4G rectifier, the 300B's have a DC filament supply for hum-free operation whilst the other valves are AC heated. Component quality is similar to our Level 2 finished products. Audio Note paper in oil signal capacitors, silver/gold 1% metal film resistors, good quality electroMics (sorry NO Black Gates!) and a simple, attractive stereo chassis in black paintwork. We have several component and cosmetic upgrades available for Kit One, please ask for details.

The Kit One has recently been awarded the title "The Greatest Audio Bargain of the Twentieth Century" by Dick Osher (ex-Stereophile) in a review on the internet - this is just one of many rave reviews, copies of which we can supply on request.

Price: £799 incl. VAT, which includes ALL parts & valves (yes, also the 2 x 300B's needed) but not postage/packaging which to UK customers is £12.

KIT ONE ORDER CODE: AN-KIT-001

Audio Note is happy to provide a wide range of complete kits, output and mains transformers, chokes, paper in oil, aluminium, tin, copper or silver foil signal capacitors, Black Gate, Cerotone or standard electrolytic capacitors, transformers, carbon and metal film resistors, silver wires, interstage and driver transformers, switches, balance controls, potentiometers, attenuators, chassis and fittings for the quality oriented DIY'er, whether you are a beginner or hardened experimenter, male or female, we have the best (and not always most expensive) parts for most projects.

Audio Note Loudspeaker Drivers & Kits

We shall be offering the speaker drivers that we use in our own loudspeakers for general sale from now on. You can buy the drivers individually or matched and tested cross-overs, cabinet drawings and reflex ports.

Audio Note Circuits, Valvedata & Basic Technical Information

If you would like some suggestions which to base a future project around, then we shall be happy to provide you with a circuit pack containing good circuits like ONGAKU, M7 Tube & M10 pre-amplifiers, which are the best sounding pre-amplifier circuits we have come across.

Audio Note Quality Output Transformers

We are in the process of building up four separate ranges of Audio Note output transformers. In order to offer the best possible outputs at different pricepoints, they will fall into four categories:

- Economy range: Selected to ensure quality audio in a price efficient package.
- Mid-price range: Top quality with specially selected components.
- High Quality range: Double C-core outputs for single-ended circuits exclusively.
- Super High Quality range: All-silver wired outputs of the best possible quality.

Audio Note offer a design, prototyping and production service, where we can supply for almost any requirement. Please telephone for details.

Audio Note Mains Transformers

Available for most popular designs. We shall continue to expand the range as opportunities become available.

The Audio Note Kit Two

Kit Two features a single 6550 tetrode running in Single-Ended mode, yielding some 12 watts of pure Class A. With a valve rectified HT for the output stage, stereo chassis, and 6SN7GT input and 12AX7/ECC83 SRPP driver stage, componentry and chassis as Kit One.

Kit Two costs £599 incl. VAT, includes valves, but not postage/packaging.

KIT TWO ORDER CODE: AN-KIT-002

The Audio Note Kit Three

Kit Three features 2 x 300B's per channel running in single-ended parallel yielding 16/17 watts in pure Class A. This kit is on two mono chassis with valve rectified HT supplies, no signal feedback; it uses a 6550 double Triode as input valve and a pair of 5687 double triodes running in SRPP as drivers. The Kit Three is essentially a mono version of the Kit One with double the power, the same component choices and on two chassis; instead of one.

The Kit Three costs £1,550 incl. VAT but excluding delivery.

KIT THREE ORDER CODE: AN-KIT-003

The Audio Note Kit Four

The Kit Four is really our introduction to valve amplifier kit building, the circuit and power supply being mounted on a single printed circuit board. The high-quality push-pull output and mains transformers are all mounted in a small aluminium chassis, covering everything so nobody will be able to see that you have succumb to the lure of the valve amplifier which is sweeping the world. The circuit consists of two 696GT tetrodes running in Push-Pull cross-A, yielding about 10 watts, driven by a 6SN7GT and a 12AX7/ECC83 input stage. Easy to build, even for the beginner. Visually Kit Four matches the Audio Note Pre-amplifier shown here but with a single chrome-plated volume control. As with all Audio Note kits everything (except solder) is included.

The Kit Four costs: £299 incl. VAT but not delivery.

KIT FOUR ORDER CODE: AN-KIT-004

Audio Note Driver, Interstage & Pre-Amplifier Output Transformers

Here is a product group that you do not see advertised every day! As usual we start small with the intention to grow quickly.

Audio Note Paper In Oil Signal Capacitors

These handmade signal capacitors are sonically superior to any of the plastic or other paper types we have come across. If you have never experienced the difference that a really good paperfilm capacitor can make in a valve amplifier, then you really should try.

Audio Note Paper In Oil Tin Foil Signal Capacitors

The tin foil is better than alu-foil for most applications, we recommend you try them.

Audio Note Paper In Oil Copper & Silver Foil Signal Capacitors

These copperfoil paper signal capacitors are considerably better than both the standards offerings and the tin foil, to start with there will be a few voltages / voltages of each available and we shall expand as fast as we can to cover at the popular values.

Audio Note Acid & Chloride Free Silver Solder

The best solder available, used in all our amplifiers from OTO to the mighty GAKU-ON.

Audio Note Cables & Wires

Audio Note manufacture a range of high quality copper and silver coax, speaker and wiring cables, which, depending on the overall price of the product, will do justice to any hi-fi system, regardless of price. Please call for prices and details.

Audio Note High Quality Stepped Attenuators & Switches

These handmade attenuators and switches are manufactured by a friend of Mr Koito of Audio Note, they are the best you can buy.

Audio Note High Quality Valve Bases

All of our valve bases are of the highest possible quality materials. Ceramic, Tetlon and gold and silver plated. If you want the best look no further - they are the ultimate.

Audio Note Resistors

Audio Note endeavour to stock the entire EL2 range of all the different makes of resistor, since most are used in our products stock is generally available within four weeks.

Audio Note Paper In Oil 1 Watt Tantalum Resistors

Audio Note Paper In Oil 1/2 Watt Tantalum Resistors

Audio Note Paper In Oil 2 Watt Tantalum Resistors

Audio Note Precision Carbon Film Resistors

Allen Bradley 1 Watt 5% Carbon Film Resistors
Components & Valves

Pre-Amp Kit

The Audio Note Pre-Amplifier Kit

A complete kit loosely based on the Audio Note Metro pre-amplifier circuit is now available. The moving magnet compatible phono stage consists of a cascode input, with passive RIAA equalisation and anode-follower output using the 12AX7/ECC83. Line buffer amplification for the four line inputs consists of an ECC82 configured in parallel anode-follower mode. For the power supply a valve rectifier and choke-input filtering are employed. All circuitry is housed in a non-magnetic aluminum chassis giving the very best sound quality.

Both phono and line stages are built on "like-kiss" pcb's allowing easy construction but with the sonic benefits of hard-wiring.

The standard-quality version of the pre-amp kit includes resistors, 1000pF film capacitors, Beyschlag 1 watt 1% metal film resistors, Noble open-frame style potentiometers and all pcbs, valves, wires etc. Various component upgrades are available, details upon request.

Cost of The Pre-Amplifier Kit is: £349 inc VAT but not delivery.

Audio Note Black Gate Electron Transfer, High Performance, Graphite Filp Capacitors

Audio Note is currently the sole source in Europe that holds any significant range of values in stock, we use literally 1000's in production, as we were the first company to realise the tremendous benefits that Black Gate capacitors offer, and we are to date the only high-end audio company in the world to incorporate Black Gate capacitors consistently in our finished products.

There are very few audio parts that promise a guaranteed improvement when replacing practically any other part, but this is what the BLACK GATE capacitors actually do. Exchanging any electrolytic capacitor anywhere in the circuit of an amplifier or in the crossover of a speaker will greatly improve sound quality. We are working on some guidelines as to where, how and which types of Black Gates to use in different circuits, the first such technical guideline is available now and is called: "Improving your CD-Player" and can be obtained by sending a stamped addressed envelope to us requesting this leaflet. All AUDIO NOTE Level 2 Signature products use the Black Gates values and where the prices for the BG's are prohibitive the Cerafine capacitors, a must in any single-ended project. The Cerafines reality cover many of "Improving your CD-Player" and can be obtained by sending a stamped addressed envelope to us requesting this leaflet. All AUDIO NOTE Level 2 Signature products use the Black Gates capacitors in critical signal / power supply junctions.

Audio Note Ceramic Powdered Ceramic Electrolytic Capacitors

We have at long last secured a reliable source for these fine power supply filter capacitors, a must in any single-ended project. The Ceratines really carry many of the Black Gates values and where the prices for the BG's are prohibitive the Ceramic is a fine sounding alternative. We have increased the range of Ceratines we stock quite recently and strongly recommend all the Ceratines as a far superior replacement or substitute for ordinary electrolytics, and at the prices offered that should be within most budgets. All power supply Ceratines are supplied with a capacitor clamp and are upright mounting.

Audio Note Potentiometers

The best available from a sound quality / price viewpoint, made by Noble Japan, two categories, standard production items and rare, mostly NOS (New Old Stock) valves which are no longer in production. We have compiled a special list of the NOS items, which is available against a stamped self addressed envelope, if you live outside the UK, send US $ 2. You should be aware that the valves on this list are NOT cheap, but we have stock of original GE, RCA and United Electronics 211, both standard versions and reinforced anode type for the US airforce, B&G Westhghouse, V75/10/10V, V76/B1A, V630B, STC430A, Mullard G25MD/1377, Tungson SU4G (best sounding SU4G we have ever heard), Chatham SR4WGY and many others.

Audio Note Selected Audio Valves

Our valves are selected from the best available sources and are tested to the same stringent standards that we apply in the production of our own amplifiers. They fall into two categories, standard production items and rare, mostly NOS (New Old Stock) valves which are no longer in production. We have compiled a special list of the NOS items, which is available against a stamped self addressed envelope, if you live outside the UK, send US $ 2. You should be aware that the valves on this list are NOT cheap, but we have stock of original GE, RCA and United Electronics 211, both standard versions and reinforced anode type for the US airforce, B&G Westhghouse, V75/10/10V, V76/B1A, V630B, STC430A, Mullard G25MD/1377, Tungson SU4G (best sounding SU4G we have ever heard), Chatham SR4WGY and many others.

Audio Note Recommended Magazines

Full list available on request

Listener - Review based music & Hi-Fi magazine that contains some of the best considered & well written articles in print. A very good read $4 per copy.

The Audio Adventure - Well produced publication, a good alternative to the established magazines Not afraid to be controversial £4 per copy.

Sound Practices - Our best seller A must for all DIY projects. Contributors include Audio Note, Herb Reichert and Diego Nardi. £5 per copy.

Vacuum Tube Valley - Specialising in anything to do with audio valves. A wealth of information on specific valves and their applications. £6.50 per copy.

Positive Feedback - Including Tony, controversial articles from a wide range of contributors including our own Peter Schreier. £7 per copy.

Audio Note

Music's Finest Conductor

Audio Note (UK) Ltd, Unit C, Peacock Industrial Estate Lyon Close, 125-127 Davdngdon Road, Hove, East Sussex BN3 1SG

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<th>Audiophile Component</th>
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<tr>
<td><strong>Krell KPSZ</strong></td>
<td>£550</td>
<td>Powered stereo amplifier, excellent quality, highly recommended.</td>
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<td><strong>JADIS</strong></td>
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<td><strong>Wilson Audio System</strong></td>
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<td><strong>B &amp; W Silver Signatures Inc Stands</strong></td>
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<td><strong>Audio Synthesis Passion</strong></td>
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<tr>
<td><strong>Audio Research VTM120 SE</strong></td>
<td>£2500</td>
<td>Latest iteration of a classic design, top-end performance.</td>
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<td><strong>13 &amp; W THX Speaker System</strong></td>
<td>£2500</td>
<td>High-end THX Certified speakers, excellent sound quality.</td>
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<td><strong>Micromega Stage One</strong></td>
<td>£1750</td>
<td>High-resolution analog and digital components.</td>
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<td><strong>Spendor SP7 Speakers</strong></td>
<td>£1100</td>
<td>Exceptional value, outstanding performance.</td>
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<td>£375</td>
<td>High-quality CD transport, excellent sound performance.</td>
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<td><strong>Krell KAV 300 Integrated Amplifier</strong></td>
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<td><strong>Audio Research D200 Power Amplifier</strong></td>
<td>£1495</td>
<td>High-end power amplifier, best-in-class performance.</td>
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<td><strong>Arcam Alpha 10 CD Player</strong></td>
<td>£335</td>
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<td><strong>Digital Audio Conversion</strong></td>
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<td><strong>MUSICAL FIDELITY X SERIES</strong></td>
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<td><strong>Counterpoint SA 12</strong></td>
<td>£1750</td>
<td>High-end CD player, exceptional sound quality.</td>
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<td><strong>泄漏</strong></td>
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<td><strong>Shunts, Trichord, Van Den Hul, XLO</strong></td>
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<tr>
<td><strong>Micromega 2.1 CD Transport</strong></td>
<td>£325</td>
<td>High-resolution CD transport, excellent sound performance.</td>
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<tr>
<td><strong>Krell KPSZ</strong></td>
<td>£1100</td>
<td>Powered stereo amplifier, excellent quality, highly recommended.</td>
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<tr>
<td><strong>Audio Research D200 Power Amplifier</strong></td>
<td>£2500</td>
<td>High-end power amplifier, exceptional quality.</td>
</tr>
<tr>
<td><strong>Arcam Alpha 10 CD Player</strong></td>
<td>£2500</td>
<td>High-resolution CD player, top-notch performance.</td>
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<td><strong>Krell KST100 Power Amplifier</strong></td>
<td>£325</td>
<td>High-end power amplifiers, excellent performance.</td>
</tr>
<tr>
<td><strong>Micromega D-2024 Power Amplifier</strong></td>
<td>£2500</td>
<td>High-resolution power amplifiers, exceptional sound quality.</td>
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<td><strong>MUSICAL FIDELITY X SERIES</strong></td>
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<td><strong>Counterpoint SA 12</strong></td>
<td>£1750</td>
<td>High-end CD player, exceptional sound quality.</td>
</tr>
<tr>
<td><strong>Audio Research VTM120 SE</strong></td>
<td>£325</td>
<td>Latest iteration of a classic design, top-end performance.</td>
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<tr>
<td><strong>Cable &amp; Accessories</strong></td>
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<tr>
<td><strong>Transparent Cables, Unison Research, Van Den Hul, Wilson</strong></td>
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**DEALS, DEALS, DEALS**

- **Spendor 2000 slim, petite, discrete floor standing loudspeakers, with excellent bass extension and loss back delivery.** (£695- £795)
- **DAX 2 x dac. Perfect boxed. Coaxial, ATM100: balanced digital inputs.** (£2000) x/d £1695
- **Sugden Synthesis XD 500 watt pure class A monoblock power amplifiers. Works well with above Perfect. Boxed.** (£700) (£1750)- £675
- **Sequence 300 loudspeakers. Black ash/ X/D perfect ( 2000 - £2500)** x/d £1500
- **Audiomeca Darnallion CD transport with TRACK Clock II & PSU** (£1250) x/d £550

**signals**

- **Audiomeca Darnallion CD transport with TRACK Clock II & PSU** (£1250) x/d £550
- **Audi o Physic Tempo ( Mk I) loudspeakers. Black ash/ X/D perfect ( 2000 - £2500)** - x/d £1500
- **Alphason Sonatina turntable in Black Ash with Alphason Delta arm. Good cond** but no hinges for the cover. x/d £750

**Grant Geos Integrated vapour amplifier with excellent phone stage. Extensively re-wired (with Audioquest) and revoled. Big black and heavy but worthy of very good ancillaries and able to drive “proper” loudspeakers. x/d £250

**INACCESSIBLE ACCESSORIES ~ BY POST ~**

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- **denon, golding, lyras, orion, suravo**
- **Sumiko Blue Point Special normally £250 for one month only £200**
- **New Lyra Parnassus DC out now 30% allowance for your old one**

**cables**

- **audioquest, cable talk, cord company, edm, heynbroek, eps, kobann, konst, nordrst flattine, orison, qed, sonic link, trichord, van den hul, xlo**
- **headphones**

- **beyer, creen, earmax, grado, jecklin, sennheiser, stax**

**new stock SR0001 in ear electrostatic package £279 in stock**

**stands**

- **alphonse, apollo, frameworks, hayasbroek, sound organisation, something solid, soundstage, stands unique, target**

**accessories**

- **audioquest, bib, creek, densen demagica, disacwasher, goldring, iks, kora, mcloughlin, miller, monarchy, moth, musical fidelity, nordost, paul, qed, rms, rata, shure, thomson, zezat (it’s back and not just for vinyl)**

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**Cantay House, Park End Street, Oxford OX 1 1JE**

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- Audiolab 8000Q Pre-Amplifier. As new. Cost £1250. Bargain at only £795
- Quad 57's Bronze (2 pairs - 1 exc. condition)
- Audio Research D200 Power Amp
- Audio Innovations 1000 Valve
- Audioplan Kontrapunkt Speakers (Black)
- Meridian 500 Transport (Clocked)
- Martin Logan Quest
- Beard BB1 (Separate Power Supply)
- Roksan Xerxes & SME 3009
- LFD MC2 Phono Stage
- Audio-Technica
- Pitney Bowes 350, 500, 700, 1000

**HEADPHONES**

- Sennheiser Beyerdynamic D7
d-Audio Technica
- Grado SR125e
- Audio-Technica
- Grado SR200
- Audio-Technica

**RECORDS/CD'S**

- TDK Amex Blank Tapes / Discs
- Tascam
- Studer
- Teac
- Yamaha
- Etc.

**CARTRIDGES/STYLUS**

- Audio-Technica
- Pitney Bowes
- Yamaha
- Etc.

**OTHER ITEMS**

- Maintenance M1 & Magician arm Record deck £150
- Arcam 1797 CD Transport £200
- Arcam Black box 5 DAC £110
- QED digital + Phono, power supply £200
- Rega RB300 tone-arm £300

**TRANSFORMERS INTERCONNECT CABLES**

- Cabletech SL600 Mute Boxed £250
- Origin live concentrics/new wood £1600
- Rogers LS1 Boxed £1200
- Tannoy Ardens.15i dual concentrics £400
- Quad 2W pre-amp & power supply £600

**SPEAKERS**

- Tannoy Ardens.15i dual concentrics: £1200
- Quad 2W pre-amp & power supply: £600

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**TEL 0116 2248250 Fax 0116 2835821**
It may be almost 20 years old, but Trio's L-07D direct-drive turntable can still mix it with the best, thinks Jon Marks.

Most hi-fi is built to a budget, as a quick heft of most equipment will tell you - a lot of cases contain more air than components. Every once in a while, a manufacturer decides to throw their accountants out the window and design a true statement product just to show everyone what the boffins in lab coats are really capable of. Trio's L-07D direct-drive turntable was their engineering statement back in 1980.

The preamble in hi-fi manuals usually consists of the manufacturer congratulating the buyer, and the Trio's is no different: "Your choice of this product indicates that you are a devotee of excellence in sound reproduction." In the majority of manuals this would look like unduly purple prose, but not in this one. The L-07D with its outboard power supply is 35kg of innovative precision engineering.

Selling for a not inconsiderable £1150 8 years ago, this turntable incorporates Corian, composite materials and aerospace aluminium to great musical effect.

Starting with the tone-arm, you'll find a high-grade aluminium arm-tube wrapped in a layer of carbon and boron fibres to damp resonance and increase rigidity. The detachable headshell is formed from the same fibres. Ultra-hard tool steel is used in the pivot which runs on oversize bearings mounted atop a stainless steel shaft. The whole assembly is then clamped to the plinth in a four-jaw collet chuck, similar to the one you'd find at the end of a power drill. Allowing precise height adjustment with these jaws open is a helicoid mechanism which raises the arm 0.1mm for each revolution of the dial. Once the arm is properly set up, the chuck just needs to be tightened before listening.

Rigidly connecting the arm and motor (as you might have guessed, rigidity was one of the main design objectives in the L-07D) is a heavy aluminium casting. The heart of the deck is the main bearing, a 12mm diameter shaft of precision-ground hard stainless steel. Inferior engineering in this area simply wouldn't have lasted because it has to support most of the mass of a whopping 5.5kg platter which would grind your average bearing to dust. Taking up the rest of the load is a floating magnet system which also helps reduce rumble.

The platter is unusual for its mat. Instead of rubber Trio opted for dished stainless steel, reasoning that any 'lossy' materials would absorb part of the signal cut in the record rather than relaying it through the cartridge. And judging from the power and focus of the music the L-07D makes, they were right.

Whether it's 33 1/3rpm or 45rpm you're spinning your vinyl at, the Trio has a crispness, detail and substance to its sound that's addictive. Play an orchestral work and you'll find there's no squashing of dynamics on crescendos - the tension and scale just build up and up effortlessly.

Some massive turntables with large platters can sound slightly sluggish in the bass. The Trio avoids this pitfall. There is a touch of looseness in the lower registers but the arm takes the blame for this - good as it was in its day it's now outclassed by modern midprice (£250-£500) offerings in many aspects.

Proper setting up is vital if you're going to realise the L-07D's full potential. As it has absolutely no suspension whatsoever it has to be sited on a stable platform that will transmit very little vibration into the deck. Make sure too the aluminium platter under the stainless steel mat is level as the plinth's in-built spirit level can drift with time. Finally, the arm is very sensitive to bias adjustment and headshell azimuth, so time spent getting both right is time well spent.

L-07Ds aren't as common as Rega Planar 3s but neither are they in as short supply as sincerity at a party political conference. Look to pay between £450-£700 depending on condition and make sure it's complete - Kenwood (tel: 01923 816444) have no replacements for most parts. Pick a well-preserved example though and you'll be able to enjoy superb vinyl replay for years to come.
Papworth Audio Technology

Fads, Trends and Flavours of the Month - A Cautionary Tale

The latest audio fad is for low power amplifiers, driving very sensitive speakers. Of course, a few years ago you were nobody unless you were using megawatts to drive speakers with the sensitivity of a brick. These are extreme approaches to audio. We believe there's an alternative. Our numerous customers in Britain and abroad agree.

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While the high and low power camps fought it out on our own terms, extreme standards of build, finish and reliability, extremely good sound and extreme look. Our sensible range of power outputs allows system building with a wide range of loudspeakers.

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COMPACT DISC PLAYERS
QUAD 67  
One of Quad's best products for a long time, the 67 is warmer and smoother than most, yet is highly musical and revealing.

DENON DCD-315  
Real hi-fi and real music for a mere £150.

NAD 510  
A competent all rounder with lifelike soundstaging and impressive treble clarity.

ARCAM ALPHA 7  
This British built player is extremely good value.

QUAD 67 second-hand  
A competent all rounder with lifelike soundstaging and impressive treble clarity.

MARANTZ CD-63MKII KI-S  
Similar to the CD-63SE but more powerful bass and an all-round smoother sound.

TRICHORD GENESIS £320  
Conveys music in a powerful and dramatic fashion. Smooth and sweet, with a good sense of depth. A little soft sounding though.

DPA LITTLE BIT 111 £300  
A lot more weight at frequency extremes than the II and far better control. A bargain at £300.

THORENS TDA2000 £700  
Used with the TCD2000 as a transport, the TDA2000 produces a sound that is focused, detailed and spacious. Good value.

MARSTON SILHOUETTE £795  
With Crystal Semiconductors' 18-bit DAC the Marston produces clean-cut images and a transparent sound stage. Very rhythmic too.

PINK TRIANGLE DA CAPO £1450+  
Offers a choice of filter modules, all up there with the best. The Da Capo is superb in many respects, but can sound a touch polite on Rock.

DPA 1024 £6000  
Proof positive that today's CDs needn't sound CD-like! Uses an in-house discrete converter, and DPA haven't skimped on the build either!

Marston produces clean-cut images and a highly authoritative overall sound. Using with the TCD2000 as a transport, the strengths of the Gyrodec and the IV's pace and precision.

DPA haven't skimped on the build either!

More depth and breadth than Rega Planar 3. A masterpiece of precision engineering with a tight, neutral sound with good tonality, but lacks the SME V's cohesion and musicality.

The Tarantella has more style than a catwalk full of models, it also combines PT's usual clarity with real authority. The biz.

One of Quad's best products for a long time, the 67 is warmer and smoother than most, yet is highly musical and revealing.

COMPACT DISC TRANSPORTS
TEAC VDRS-T1 £650  
Not as substantially built as its chunky looks suggest, the T1 is nevertheless a good entry-level transport with a warm, expansive sound.

AUDIOLAB 8000CDM £1300  
Beautifully built and finished, the CDM is packed with sensible features and performs superbly, day-in-day-out.

TEAC P-30 £2500  
Cheap it isn't, but then it sounds like a million digital dollars. Nothing short of superb.
World favourites guide

**ORTOFON SUPREMES** £225-£450

The MC10, MC20 and MC30 Supremes all offer superb sound and value for money, with a rich, smooth and musical performance.

**ORTOFON MC2000** £650

We came across this one in an SME IV on a Garrard 401; it duly gave one of the best results we've ever heard.

**ORTOFON ROHMANN** £1000

In a way it's MC2000 meets MC7500 with the tonal strengths and dynamo sound Ortofon put into their moving-cartridge cartridges.

**LYRA LYDIAN** £649

A truly musical, sophisticated device that makes most other MCs sound frigid.

**VAN DEN HUL MC-10** £840

Fluid bass, finely etched treble and highly tuned in between. The MC-10 is honey, pure and simple.

**ORTOFON MC7500** £2000

Conclusive proof that there's hope for humankind. CD lovers would die if they heard it.

**INTEGRATED AMPLIFIERS**

**NAD 3020** second-hand

Classic sweet sounding, punchy budget super-amp with strong phono stage. Able to embarrass many modern budget amps.

**NAD 310**

A real hi-fi amplifier at a bargain price. Forms the heart of a separates system that will murder any midi system at twenty paces. No phono stage, but you can't have everything at this price.

**NAD 312**

Smooth, clear and dry. Fine detailing with little to complain about at the price. Good facilities.

**ROTEL RA-970BX** £250

With its smooth and powerful sound, the Rotel sings a seductive song with all types of music.

**AURA VA-80** £280

The VA-80 is superb for the price - it is capable of embarrassing more up-market competition.

**PIONEER A-30R PRECISION** £299

This is the cooking A-300 tweaked with special components and it shows. Rhythm and detail are first-class and the phono stage isn't far behind.

**NAIM NAIT 3** £500

A taste of high-end audio. The most involving, musical design at the price, but low power.

**MISSION CYRUS 3** £500

Superb engineering, a solid cast chassis and a clear, spacious sound. Phono stage could be better.

**SONNETEER CAMPION** £579

An amplifier that delivers near studio definition along with exemplary timing. Utterly gripping.

**DPA RENAISSANCE** £595

Rich and smooth, the Renaissance is one of the sweetest amps around, if lightweight.

**AUDIO ANAVOLUE PUCCINI SE** £595

This superbly made Italian integrated has a lucidity and control which leave the competition at up to £1000 standing. Sound stage depth is unequalled.

**AUDION STERLING ETSE** £600

Economically but well built single-ended valve amplifier. Wonderful clarity with vocals.

**SUGDEN A21a**

Class A transistor amp. Rich, crisp, deep, tight sound and it images well too. Wonderful.

**MERIDIAN 551** £795

Beautifully-built integrated with a sweeter, clearer sound than mid-price alternatives. Plenty of facilities and remote controllable.

**UNISON SIMPLY 2** £995

This single-ended valve amplifier is smooth, sweet and open. An extremely musical performer.

**UNISON SIMPLY 4** £495

Sonically similar to the Simply 2, but with more power and control.

** McIntosh MA6800** £7375

The MA6800 not so much plays music as takes control of it, with effortless bass drive and a three-dimensional sound stage.

**PRE-AMPLIFIERS**

**QED DISCASSER** £35

A true bargain that offers a cohesive, musical sound but avoid using it in thin sounding systems.

**ROTEL RQ-970BX** £130

Superb value entry-level phono stage with audiophile quality components and clear sound.

**LFD MISTRAL PHONO STAGE** £300

The Mistral has a warmth and involvement that make more expensive phono stages sound overpriced.

**TECHNICS SU-C1000** £350

At its price, this battery powered pre-amp is difficult to beat. Weak points are lightweight build and average phono stage.

**DPA DSP20CS** £495

Not quite the SOS, but there's little to match it at this price if transparency and involvement are your priorities.

**AUDIOLAB 8000C** £520

Versatile with superb phono input. Can sound sterile, but latest version is much improved.

**MICHIEL IS/HERA** £530

This phono stage has fine midband and treble detail, with taut bass. The £830 ISO/HR brings more of everything.

**AUDIO INNOVATIONS P2** £749

Fantastic bass and super insight make this one of the best phono stages around. One for vinyl lovers.

**AUDIOLAB 8000Q** £995

Excellent line-level only pre-amp, greatly improves on 8000C with a more fluid, musical sound and greater grip. Remote control.

**ROKSAN ARTAXERXES X** £950

With the Attesa PSU the Artaxerxes X MM/MC stage still shines. Its fortiss are great stage depth, neutrality and total colour. Musical too.

**MARANTZ MODEL 7 PRE-AMP** £1350

A '60s reissue, the Marantz pre-amp still sounds superb. Has a great phono stage.

**POWER AMPLIFIERS**

**QUAD II** second-hand

Classic valve monoblock with many thousands still in use. Archetypal warm, smooth valve sound, although not the last word in detail or dynamics.

**LEAK STEREO 20** second-hand

The Stereo 20 can sound impressively up-to-date, although power and detail are ultimately limited.

**QUAD 405II** second-hand

Solidly built, but lifeless sounding power amp can be substantially improved by a Quad service.

**ARCAM ALPHA 9**

With 70watts on tap, the 9P will drive most loudspeakers with a spacious and detailed sound. Good bass drive too.

**MISSION CYRUS POWER** £450

This power amplifier is a real honey. Rich and smooth, but with a firm grip; a fine blend of properties.

**ROSE RP190** £495

Used with the partnering pre-amp it gives 70watts of smooth, relaxing sound.

**SUGDEN AU41P** £530

Extremely competitive at the price with 100W of unusually smooth, full-bodied sound.

**SHERANE PHASE 3** £619

A neutral, highly dynamic and thoroughly exciting amplifier. A sonic bargain.

**NAM NAP180**

Better than anything else at the price. Not as dry as the SOS.

**MICHELL ALECTO STEREO** £1300

A refined transistor amplifier with valve-like transparency and a full, warm, easy-going sound. The £1800 Alecto monoblocks have rare lucidity and three dimensional realism.
MERIDIAN 557 £1400
Great control is allied to seductive smoothness. A rare combination of power and delicacy.

MARANTZ MODEL 9 £8000
Authentic reproduction monoblocks still more than cut the sonic mustard. The sound combines grunt with great tonal colour and expressiveness.

LOUDSPEAKERS

KEF Q15 £199

CELESTION IMPACT 23 £299
A smooth and even handed loudspeaker. Has clear and well extended treble and deep, tight bass. Midrange is focused and pure with plenty of detail and speed.

REL Q-BASS £350
Few subwoofers match the Q-Bass at the price. The tuning controls can be a bit of a fiddle, but once set up the rest is pleasure.

CASTLE EDEN £450
Impressively vice-free 'speakers that offer great transparency and involvement. Unbeatable at the price.

HARBETH HL-P3ES £99
Fine tonal resolution through midrange and a smooth and extended treble. Treble quality a little metallic, but imaging precise. A lively, enjoyable sound.

NAKAMICHI DR1 £850
Better still than the DR2, with manual head azimuth adjustment to boot.

NAKAMICHI CR7 £1500
Kills every other cassette deck and stamps on their graves.

NAKAMICHI DR2 £600
Where serious cassette decks start. The DR2 pushes recordings to the limit, remaining unflustered at all times.

PIONEER CT-S740S £430
A simple deck, but high quality head and transport give an unusually high level of performance at this price. Not to be missed.

MISSION CYRUS FM7 £300
Clear and lucid sound puts it up with the best regardless of price. Superb build too.

CASTLE EDEN £450
Impressively vice-free 'speakers that offer great transparency and involvement. Unbeatable at the price.

REL Q-BASS £350
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NAKAMICHI DR2 £600
Where serious cassette decks start. The DR2 pushes recordings to the limit, remaining unflustered at all times.

MISSION 754 FREEDOM 5 £1299
The 754 Freedom 5 has a highly articulate and informative sound with fine imaging and high resolution. Deep bass extension. Uses silk dome tweeter, HDA midrange and 8in woofer.

ROTEL RT990BX £500
High quality Michi-based tuner with a sophisticated, forward sound with great imaging and soundstage. Sensible facilities and remote control.

AIWA AD-S950 £300
A stable transport, superb head and Dolby S make the AD-S950 an excellent all rounder.

REL STRATA £500
The Strata subwoofer is not a toy. It offers superb, true hi-fi bass depth and power, and opens up sound stage depth in particular.

PIONEER CT-S740S £430
A great piece of engineering from Pioneer, with first rate sound on playback and recording.

MISSION 752 Freedom £600
Use advanced High Definition Aerogel bass/midrange driver and silk dome tweeter. Dynamic, punchy and musical, yet refined like few others are at the price. Not as sweet or soft as the original 752s though.

SONY MDS-JE500 £300
An impressive sound and unmatched convenience make this MiniDisc player an excellent buy.

NAKAMICHI DR2 £600
Where serious cassette decks start. The DR2 pushes recordings to the limit, remaining unflustered at all times.

HEBBETH HL-P3ES £799
A fine example of good loudspeaker engineering. The top of the mini-monitor league.

TANNOY AM85 £2700
Bold sounding professional active monitor with solid bass, clearly focused midrange and delicious treble. Built-in amplification.

MISSION 752 £600
Use advanced High Definition Aerogel bass/midrange driver and silk dome tweeter. Dynamic, punchy and musical, yet refined like few others are at the price. Not as sweet or soft as the original 752s though.

HARBETH HL-50 £975
Clean, musical and classy - Harbeth have done themselves proud again.

KEF REFERENCE SERIES ONE £995
The KEFs combine pin-point imagery and detail with a smooth and polite balance. Good, agile bass too.

TANNOY D70 £10,000
An incredibly dynamic, detailed full-range horn design with a rich sound. Its high sensitivity predisposes it to valve amplification.

TANNOY WESTMINSTER ROYAL £10,000
An incredibly dynamic, detailed full-range horn design with a rich sound. Its high sensitivity predisposes it to valve amplification.

MINIDISC PLAYERS

SONY MDS-JE500 £300
An impressive sound and unmatched convenience make this MiniDisc player an excellent buy.

KENWOOD DM-7090 £500
Both replay and recording quality are superb through this Kenwood. Nakamichi owners should start getting worried - at last there's competition.

MISSION 754 FREEDOM 5 £1299
The 754 Freedom 5 has a highly articulate and informative sound with fine imaging and high resolution. Deep bass extension. Uses silk dome tweeter, HDA midrange and 8in woofer.

AIWA AD-S950 £34
A simple deck, but high quality head and transport give an unusually high level of performance at this price. Not to be missed.

EPOS EL2 £195
Epos' best. Combines near-uncoloured tonality with characteristic fireworks in the rhythm department. Superb by any other name.

BL 2600 £3500
Smooth, detailed and spacious with great dynamics and fine imaging. Capable of producing a superb performance when used in a big room.

NAKAMICHI DR2 £600
Where serious cassette decks start. The DR2 pushes recordings to the limit, remaining unflustered at all times.

FSH-N 557 £8000
Authentic reproduction monoblocks still more than cut the sonic mustard. The sound combines grunt with great tonal colour and expressiveness.

HEBBETH HL-50 £975
Clean, musical and classy - Harbeth have done themselves proud again.

MINI-CASSETTE DECKS

NAKAMICHI CR7 £1500
Kills every other cassette deck and stamps on their graves.

AIWA AD-S750 £150
Sonicly a very decent machine. For the price there's nothing better. Comes fitted with Dolby B, C and S.

MISSION CYRUS FM7 £300
Clear and lucid sound puts it up with the best regardless of price. Superb build too.

AIWA AD-S75 £150
Sonicly a very decent machine. For the price there's nothing better. Comes fitted with Dolby B, C and S.

KENWOOD KX-3080 £160
A simple deck, but high quality head and transport give an unusually high level of performance at this price. Not to be missed.

YAMAHA KX-5805E £250
The 'Special Edition' tag is more than a marketing gimmick. Sound is solid and clear with Dolby S.

NAKAMICHI DR2 £600
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YAMAHA KX-5805E £250
The 'Special Edition' tag is more than a marketing gimmick. Sound is solid and clear with Dolby S.

HENWOOD KX-3080 £160
A simple deck, but high quality head and transport give an unusually high level of performance at this price. Not to be missed.

AIWA AD-S950 £300
A stable transport, superb head and Dolby S make the AD-S950 an excellent all rounder.

NAKAMICHI DR2 £600
Where serious cassette decks start. The DR2 pushes recordings to the limit, remaining unflustered at all times.

MINI-CASSETTE DECKS

AIWA AD-S750 £150
Sonicly a very decent machine. For the price there's nothing better. Comes fitted with Dolby B, C and S.

MISSION CYRUS FM7 £300
Clear and lucid sound puts it up with the best regardless of price. Superb build too.

AIWA AD-S75 £150
Sonicly a very decent machine. For the price there's nothing better. Comes fitted with Dolby B, C and S.

KENWOOD KX-3080 £160
A simple deck, but high quality head and transport give an unusually high level of performance at this price. Not to be missed.

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### Amplifiers

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### New in

**This Month**

- **Power Amplifiers**
  - Unison Research Smart 845
  - Audio Note P1 SE
  - Sonic Frontiers 700T
  - Audio Note P1 SE
  - Audio Note P1 SE

- **Pre Amplifiers**
  - Audio Research P1SE
  - Audio Note P1 SE
  - Musical Fidelity T1 Tuner
  - Musical Fidelity T1 Tuner
  - Musical Fidelity T1 Tuner

- **Turntables/Analogue/Various**
  - Televison Tuner
  - Televison Tuner
  - Televison Tuner
  - Televison Tuner

- **Speakers**
  - Audio Note P1 SE
  - Audio Note P1 SE
  - Audio Note P1 SE
  - Audio Note P1 SE
  - Audio Note P1 SE

- **Bargains**
  - Audio Research D125 balanced power
  - Audio Note P1 SE
  - Audio Note P1 SE
  - Audio Note P1 SE
  - Audio Note P1 SE

### Clearance

**Agents for:**

**Pre Amplifiers**

- Unison Research Smart 845
- Audio Note P1 SE
- Sonic Frontiers 700T
- Audio Note P1 SE
- Audio Note P1 SE

**Turntables/Analogue/Various**

- Televison Tuner
- Televison Tuner
- Televison Tuner
- Televison Tuner
- Televison Tuner

**Speakers**

- Audio Note P1 SE
- Audio Note P1 SE
- Audio Note P1 SE
- Audio Note P1 SE
- Audio Note P1 SE

**Bargains**

- Audio Research D125 balanced power
- Audio Note P1 SE
- Audio Note P1 SE
- Audio Note P1 SE
- Audio Note P1 SE
Private Classified Ads
8 pages of great bargains!!

Dealers must not advertise in the Private Classified section. Monthly consecutive insertions will be considered Trade advertising. The Publisher reserves the right to judge submissions.

SOUNDLAB A3s latest model 6/97, reference and recommended speakers £6500 (£11,000) Delivery UK, demonstration. Foot passenger crossing possible. Tel: 00 33 2 3546 3557 evenings (France, Le Havre) (Mar/L)

LINN KAIRN pre-amp with phono £700 ono. Roksan Xerxes, Tabriz. AT0CS £450 ono. Deltec (DPA) DP50 power amp, cables £400 ono. Townsend Elite Rock, Excalibur, plinth, cover, offers. Tel: Dave 01222 616 151 (Mar/L)

NAIM 72 Pre-amp, MM boards, new style case £395. Naim Hi-Cap new style £395. Micromega Duo Pro 2 DAC, boxed, new £1350. Will accept £650. All excellent. Tel: 01524 381 389 (Lancaster) (Mar)

BEARD P35 valve power amp £400. Quad ESL 57 speakers £350. Lexicon CP2 processor £300. Harbeth P3 speakers £250. Tel: 0181 898 8292 (Mar)

EPOS ES14 Speakers, walnut, phase plug model, including Epos stands, not biwire but any Epos dealer can convert £325. Tel: 0131 310 2174 evenings/weekends (Edinburgh) (Mar/L)

WANTED URGENTLY: QUAD 67 CD Player to replace stolen item. Tel: 01453 764 734 or 0370 951 875 (Mar/L)

ZETA TONEARM, VDH, S/wired £650. 'Gold Bug Briar' MC cartridge £450. Both items recently rebuilt by 'The Cartridge Man' and still need to be run in. Perfect condition. Tel: 0181 688 6565 (Mar/L)

QUAD ESL63 Loudspeakers with new MAF stands £1550. Tel: Dave 0171 209 1468 (Mar/L)

NAIM CD3 £600, NAC 92/NAP180 £900. Epos ESII (walnut) with stands £325. All mint. Tel: 01905 830 120 (Mar)

BEARD P35 valve power amp £400. Quad ESL 57 speakers £350. Lexicon CP2 processor £300. Harbeth P3 speakers £250. Tel: 0181 898 8292 (Mar)

NAIM NAC72 (new style), Hi-Cap (old style). NAP90 (new style) £950. Chord interconnects and Naim speaker cable £50. Tel: 0181 217 8274 evenings/weekends (Midlands) (Mar/L)

MARTIN LOGAN SL3 (light oak), purchased new 15/8/97. Superb, boxed, mint £2600. Wanted: Sonus Faber Extremas or Wilson Benesch A.C.T. One's. Tel: 01902 786 818 (Midlands) (Mar/L)

NAIM NAC72 (new style), Hi-Cap (old style). NAP90 (new style) £950. Chord interconnects and Naim speaker cable £50. Tel: 0181 217 8274 evenings/weekends (Midlands) (Mar/L)

EPOS ES14 Speakers, walnut, phase plug model, including Epos stands, not biwire but any Epos dealer can convert £325. Tel: 0131 310 2174 evenings/weekends (Edinburgh) (Mar/L)

WANTED PINK Triangle Pip II pre-amp. Must be mint. Tel: 0181 461 4797 after 6pm (Mar)

TUBE TECHNOLOGY Synergy PPS valve amplifier. Four months old (balance of 10 year guarantee left) boxed with instruction book £3950 (£6900) No offers. Tel: 01703 601 222 (Southampton) (Mar/L)

RESTEK CHALLENGER Integrated pre-power amp £425. Naim Hi-Cap £280. Mod Squad line drive/phono drive units £295 pair. Tel: John 01494 837 358 (Bucks) (Mar)

See us at the Bristol Show. Room 312
Trade and OEM enquires welcome

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in conjunction with

East Midlands Composites
can now supply to the discerning DIY enthusiast a range of Carbon Fibre Components
Valve Amplifier with Carbon chassis now available in kit form (as seen in this issue) together with:-

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World Radio History
HI-FI WORLD
MARCH 1998
131
Is your vinyl input getting a little long in the tooth? Or does your latest amplifier not have a phono input? Either way, the Creek phono pre-amplifiers will give a boost to your system.

Employing state-of-the-art circuitry and high grade components, the OBH-9 stereo pre-amplifier achieves miracles at a very modest price. Optimal matching is achieved by using an OBH-8 or SE for moving magnet and OBH-9 for moving coil.

**UK Price:**
- OBH-9 £99
- OBH-11 £130
- OBH-12 £160

**WORLD VERDICT**

Smooth, yet truly musical, these are the best entry-level phono stages around at present.

**HIGHLY RECOMMENDED WHAT HI-FI AWARDS, 1997**

Creek OBH-8, OBH-8SE, OBH-9: MM and MC phono pre-amplifiers

Creek OBH-11 Headphone Amplifier

"The Creek OBH-11 makes the most of high-quality electronics and delivers clarity and weight that make any headphones perform to their utmost capabilities. If you are serious about personal listening, it's just the thing."

**OBH-11 UK Price:** £159

Creek OBH-12 Remote Control Passive Pre-amp

The Creek OBH-12 enables you to sit back and turn the volume up and down, select the input to your amplifier, have a remote mute facility as well as tape monitoring without the need to get up to press any buttons or adjust knobs on your amplifier: "... something that isn't possible with any other passive unit out there (yet)." (Audio Video Shopper, USA, Feb 97).

**OBH-12 UK Price:** £199

**List of Electrocompaniet Dealers**

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<tr>
<td>Ian Brown</td>
<td>Unfinished Monkey Business</td>
<td>£15.90</td>
</tr>
<tr>
<td>Pearl Jam</td>
<td>Back On The Block</td>
<td>£15.90</td>
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<tr>
<td>ETTA JAMES</td>
<td>Nothing But You</td>
<td>£15.90</td>
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| NEW ALTALABEL 180GM RELEASES(GERMAN IMPORTS)

<table>
<thead>
<tr>
<th>Artist</th>
<th>Title</th>
<th>Price</th>
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<tr>
<td>Ahmad Jamal</td>
<td>Ahmad Jamal's Anthems</td>
<td>£21.90</td>
</tr>
<tr>
<td>John Lee Hooker</td>
<td>Real Folk Blues</td>
<td>£21.90</td>
</tr>
<tr>
<td>Nanc Griffith</td>
<td>Songs</td>
<td>£21.90</td>
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**Current And Back Catalogue Releases**

<table>
<thead>
<tr>
<th>Artist</th>
<th>Title</th>
<th>Price</th>
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<tr>
<td>Action (brain mast tapes)</td>
<td>Rolled Gold (Gatelofol/80gm)</td>
<td>£10.90</td>
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<tr>
<td>Album</td>
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<td>Brian</td>
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<tr>
<td>Blur</td>
<td></td>
<td></td>
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<tr>
<td>Buju Banton</td>
<td>Inna Heights</td>
<td>£8.90</td>
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<tr>
<td>Byrds</td>
<td>Unifed 2LP</td>
<td></td>
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<tr>
<td>Elliott Smith</td>
<td>Either Or</td>
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<tr>
<td>James Brown</td>
<td>Its A Mother</td>
<td>£8.90</td>
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<tr>
<td>James Brown</td>
<td>Ragging</td>
<td>£8.90</td>
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<td>James Brown</td>
<td>She Is Funky Down Here</td>
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<tr>
<td>Janet</td>
<td>Playas Of You</td>
<td>£17.90</td>
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<tr>
<td>Phil Specter</td>
<td>Back To M Mac 5 LP Set</td>
<td>£9.90</td>
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<tr>
<td>Red Rat</td>
<td>On No Its Red Rat</td>
<td>£9.90</td>
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<td>Sizzla</td>
<td>Black Woman And Child</td>
<td>£8.90</td>
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<td>Sonet</td>
<td>Spirit Of '76 - 2LP</td>
<td>£20.90</td>
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<td>Taj Mahal</td>
<td>Happy Just To Be Like I Am</td>
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<td>Tal Malone</td>
<td>This Real Thing - Live</td>
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<td>Third Eye Blind</td>
<td>Third Eye Blind</td>
<td>£12.90</td>
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<tr>
<td>Townes Van Zandt</td>
<td>Documentary (Song/Worlds)</td>
<td>£13.90</td>
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**Linn Records - Titles At £4.90 While Stocks Last - Ask For List P and P £1.00 1st LP additional LPs 50p each (max £3.50)**

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**MARCH 1998 World Radio History**

---

**HI-FI WORLD**
PRIVATE

GARRARD 301 Turntable
SME arm; Leak Sandwich speakers; Leak Stereo 30 amplifier, Leak FM Troughline 3 tuner. Will sell separately. Offers to Tel: 0181 747 0498 or 0181 741 7272 (Apr(I)

NAIM CD1, as new, boxed with manual £1150. Rogers Master valve amp, rebuilt £350. Pink Triangle, export, light ash with matching power supply £550. Tel: 01454 885 933 (home) or 0410 533 947 (mobile) (Mar)

EARMAX VALVE
headphone amp, excellent controlled sound, suits any headphones £250 ono. Save over £100!. Tel: 01903 212 700 (Mar(I)

DPA LITTLE Bit Three digital to analogue converter £160. Quad 34 control unit (grey) £140. Tel: 01703 602 487 (Southampton) (Mar)

PINK TRIANGLE Export turntable, Rega arm-board, new motor, recently serviced, very good condition £300. Wanted: SME V tonearm. Tel: 01224 702 619 (evenings) (Mar)

AUDIO INNOVATIONS
(Series 200) pre amp £125 ono. Audio Innovations (Series 800 Mk3) power amp £395 ono. Audio Innovations (Series 1000) pre amp £455 ono. Morel tweeters (MTD 33) £200+new. £85 ono. ICL (200mm) transmission line bass, mids, latest spec £50 ono. Tel: 016625 48623 (Mar)

WANTED: VINTAGE
British hi-fi, Amps/Tuners: Quad, Leak, Radford etc (valves + transistors). Loudspeakers: Quad, Lowther, Tannoy. Must be in good functioning condition. Tel: Simon Styles 01243 376 923 (Mar)

METAXAS CHARISMA
preamp, separate PSU, line/phono, Australian high-end £595 (£1650 new). Matching power amp £625. Apogee Centaur Minor, hybrid ribbon speakers, dedicated Apogee stands, frequency contour selectable, mint, boxed £625 (£1600 new). Tel: 01394 460 281 (Apr)

LINN KAIRN
pre-amp phono version, 7 inputs, remote control £800. Audiolab 8000M power amps, 1 pair 1996 spec £1000. All excellent condition and boxed. Tel: 01793 850 847 (Swindon) (Mar)

NAIM 32-5/110 Late models, mint £375. Audiolab 8000M Mk II £295. Meridian 506, with remote £575. Wanted: Nytech 252 XD II receiver, Arc 050/101, must be good condition. Tel: 01604 765 924 after 7pm (Mar)

MUSICAL FIDELITY

ROTHWELL VALVE
phono stage, adjustable for capacitance and impedance to suit any MM cartridge, MC transformer and power supply £200. Tel: 01254 606 272 (Lancs) (Mar)

TDL STUDIO 3 Speakers, walnut finish, superb condition, including TDL stands and original boxes £395. 01635 33738 (Newbury, Berkshire) (Mar)

REVOX B77 Mk2, 7.5 and 15 ips chassis mounted, very good condition with NAB adapters £400 ono. Rogers Cadet 2 stereo control unit and amplifier, very good condition £80 ono. Tel: 0181 923 9766 (East London) (Mar)


QUAD ELS 57s, £350. Black grilles, teak ends, serviced by Quad with latest protection, on Quadrapod stands. Excellent order, genuine reason for sale, bought ESL 63s. Tel: 01449 737 961 (Bury St. Edmunds) (Mar)

VIRTUALLY NEW Gamma Acoustics Gemini integrated, single ended, all triode, non-feedback valve amplifier. Latest front, excellent sound, can demonstrate in New Forest area. Bargain £350 (£700) Tel/Fax: 01590 623 456 (Mar)

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Hi-Fi World Classified Ads

PRIVATE

CELESTION DITTON 44 speakers £250 ono. Wharfedale Model 2 speaker £20. Tel: 01273 562 954 (Brighton) (Mar)(I)


MICHELL GYRODEC, QC Gyro power, new springs and main bearing £300 the pair. Tel: 01642 822 398 (Mar)(I)

NAIM NAP 140 Power amplifier, recently upgraded, perfect condition £350. Tel: 01494 677 628 (Beaconsfield) (Mar)(I)

ROYD PRIOR Speakers, as new condition, in walnut £550 ono. Meridian 101 pre-amp, pair 105S monoblocks, matching 104 FM tuner £350 (A1 condition) Tel: 01908 510 838 (Milton Keynes) (Mar)(I)

SPEAKERS FOR SALE: Musical Fidelity MC2 (excellent condition, boxed); Celestion Diton 15 (good condition). Any reasonable offers considered. Buyer collects. (Walton-on-Thames) Tel: 01932 220 313 (Mar)(I)

HEYBROOK TT2/Basik/K9, excellent condition £240. Revok A77 MkII, with manual £100. Denon DRM800 tape deck in excellent condition £140. Wharfedale Coleridge in rosewood £200. Offers considered. Tel: 01303 264 879 (Mar)

GARRARD 401, Decca pickup, Quad 33, 303, FM3, manuals, no boxes, £300 the lot. Buyer collects. Tel: 01642 822 066 (Mar)(I)

DENON P0A4400A Monoblock poweramps, vgc £400. Mission 760 SE speakers, vgc £120. Puilips CD850 CD player, vgc £100. Sound Research CD3 preamp £200 (new). Cricket Electrik 100w stereo poweramp £100. Tel: 0181 407 1737 (Mar)(I)

MCINTOSH POWER Amp, No. MC2500, about 3 years old. Also many valves, new and used. Offers please. Tel: 0113 240 3496 (Mar)

-items of other products from SPECTRA DYNAMICS

**SPECIAL OFFERS**

-Defex panels were no gimmick. They work..."...the result was sharper imaging, wider dynamics and a more natural sound...","...Hi-Fi Choice - January 1994"

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-For Larger Cabinets

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-For a Information Pack & Details of Other Products from SPECTRA DYNAMICS

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-\* Special Offers *

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-Music..."...a marked improvement was obvious from the few bars of R.E.M.'s Automatic for the People album..."

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-Audio Video - December 1994

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-"...but one thing for sure - the Defex panels are no gimmick. They work...

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-SOUND QUALITY...

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-VALUE FOR MONEY...

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-**SPECIAL OFFERS**

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-ONLY £14.95...

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-BETTER OFF DEAD..."DEAD SOUNDS PERFECT...

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-Unit At Pinfold Ind. Est., Newnham, Derby, Derbyshire"...

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-March 1998
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...Jason Kennedy Hi-Fi Choice April 97

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BorderPatrol Tel/Fax Brighton 01273 276716
Hi-Fi World Classified Ads

PRIVATE

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Transport, white with smoked glass top, fabulous sound (£3995) £1995. Wadia X-32 Digimaster DAC, 20 bit, 250 times oversampling, stunning sound with above transport (£2200) £895. Nordost Moon-Glo coaxial cable (£145) £65, but free to purchaser of above. Tel: 01482 811 012 (Mar@)

Hi-Fi WORLD KLPI
Preamp, built with some upgraded components £250. Mission 752 speakers (original) £350. Teac T1 VRDS transport £385. DPA Little Bit 3 £175. Owner upgrading. Tel: 01189 787 225 after 6pm (Wokingham) (Mar)

ST2I0 £60
Arcam 290 control and power amps £950, Technics Tuner £200/pair. ARCAM 5 PLUS amplifier £850, Rogers E4.6 preamp £300. Rogers ECL86 monoblock £200/pair. Tel: 0121 326 8083 (Mar)

CELESTION A2 Speakers £950, Technics Tuner ST210 £60, Arcam 290 control and power amps £625, Arcam Alpha One CD £160. Cabling also available. Tel: 06128 781 118 (Mar@)


HORN LOADED
Speakers in teak cabinet. Superb sound. Professionally made to satisfy specifications of life-long ultra fussy speaker designer. Little used. Excellent condition. Were £4000. Now £1300 ovno. Tel: 0181 698 6294 (Mar)

MICHELL FOCUS 1's with Mission arm, vgc £165. Townsend Elite monoblock amps, superb £325. Infinity Modulus speakers with stands £465. SME 3009 arm £35. Tel: Adid 0171 308 4044/0181 673 3850 Mar@ (Mar)

QUANTUM AUDIO

ANTUDIO SYNTHESIS DAX
DAC, Ultra analogue version with glass optical input £800 ono. Musical Fidelity X-Cans valve headphone amplifier and X-PSU power supply £180 ono. Beyer DT990PRO headphones £70 ono. Hi-Fi News Headcase headphone amplifier £30 ono. Tel: 01962 851 802 (Mar)

COUNTERPOINT SA3.1 Valve pre-amplifier, Golden Dragon tubes £600. Onix OA21 integrated amplifier plus Sozap £350. Moth arm £40. Naim NAC5 tri-wired 3 x 3m £70. Tel: 01386 860 931 (Evesham) (Mar)

ART AUDIO Tempos 30W Class A triode monoblocks £1150 (£2600 new). Ruark Accolades tri-wireable £1200 (£2700 new). Silver Seven interconnect £95 (£200 new) 6 x 3 metre lengths Canare speaker cable £50. Tel: Chirstos 0181 993 2006 (Mar)

NAKAMICHI BX150E cassette deck, needs attention, boxed £75 ono. Goldring 1042 cartridge, 3 months old, boxed with receipt £70. Linn K9 £25. Rega EL8, walnut, 10 months, boxed with receipt £220. Tel: 0956 818 670 days, 0181 938 9664 ever (Mar)

SOUNDSTYLE X058 hi-fi rack. Three leg, five glass shelves. Black finish. As new £125. NAD 6220 cassette deck, excellent condition £50. Tel: 01403 251 697 (West Sussex) (Mar)

LOWTHER PM6A Acoustas, as featured in January HFW, Cabinets in good condition. Original drive units, surrounds replaced by ex-Lowther engineer four years ago. £350 ono. Tel: 01709 526 911 (evenings) (Mar)


B&W 801 Mk1 monitors require new home £575. Also Nottingham Analogue space deck, RB300, DL103 £500. Croft Series 4S monoblocks £700 p/r. EAR 834F phono amp with gold Aeros £375. Coggan Hall interconnect £65. Room downsizing forces reluctant sale. Occasional use only. Tel: 0181 203 2120 (Mar)

IMPULSE H2 Loudspeakers. Ultra-sensitive (95dB) ideal partners for low output valve amplifiers. Beautiful condition, black finish. A bargain at £1600. Tel: Mark 01252 845 128 (Fleet, Hampshire) (Mar)

NAKAMICHI BX150E cassette deck, needs attention, boxed £75 ono. Goldring 1042 cartridge, 3 months old, boxed with receipt £70. Linn K9 £25. Rega EL8, walnut, 10 months, boxed with receipt £220. Tel: 0956 818 670 days, 0181 938 9664 ever (Mar)

Informal Saloon Mark 1 Opening June 03. Contact Graham 0171 383 0677 (Mar)
**WINTER SPECIAL PRICES**

**ART AUDIO QUINTET MONOBLOCKS (CHROME/GOLD)** £2995.00

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**GAMMA ACoustics GEMINI LINE INTEGRATED** £450.00

**GAMMA ACoustics RHYTHM PHONO** £1100.00

**GAMMA ACoustics AION MONOBLOCKS** £2995.00

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**TUBE TECHNOLOGY UNISYS POWER** £1195.00

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- **Audio Electrolyc D1.2** (£595) Sale £375
- **Chord Electronics LS512A**
- **Loudspeakers (Blyth)** (£1679) Sale £1200
- **Parasound P/LD 2000 Preamp** (£1495) Sale £1095
- **VP HPH 19 MkIII Piano Black Turntable** (£1800) Sale £1150
- **Alon Petit Loudspeakers (walnut)** (£1087) Sale £795
- **Alon 1 Loudspeakers (oak)** (£1616) Sale £1200
- **Chord 800 Power Amp** (£2155) Sale £1600
- **Michell Argo HR Pre-Amp** (£1339) Sale £1050
- **Audio Electrolyc Headphone Amp** (£249) Sale £199
- **Beyer 531 Headphones** (£120) Sale £85
- **Stax SR-84 Electret Headphones** (£259) Sale £195
- **Questar Q2 Active Speakers/Stands/3M Kimer 4TC** £300 the lot
- **4M Set Nordost Red Dawn Speaker**
- **Cables (Terminated)** (£929) Sale £750
- **Audio Silver Knight 300B Mono Blocks** (£2495) Sale £1750
- **Roksan Xeres (Piano Black)** Table + SME V £1750
- **Tonearm** S/H £1200
- **Audio Note Meishu (phone m/m) amplifier** (s/h) £2250
- **XTC Pre 1 pre amp – 3 week old** (s/h) £800
- **Trichord Pulsar 1 DAC** (s/h) £825
- **Meridian 200 CD transport** (s/h) £400
- **Proac Studio 100 loudspeakers (cherry)** 3 weeks old £550
- **Technics SE-A1000 and SU-C1000** pre/power combo £450
- **SD Acoustics DO3 loudspeakers** (ex dem) £350
- **SD Acoustics Alexander stands for above** (new) £220

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**CODE KEY** - New X = Ex DEM S = Second HAND

<table>
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<tr>
<th>Model</th>
<th>Description</th>
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<td>Arcam Alpha 9</td>
<td>Integrated Amplifier</td>
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<td>Arcam Alpha 8CD</td>
<td>CD Player</td>
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<tr>
<td>Castle Isis</td>
<td>Bookshelf Loudspeaker</td>
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<tr>
<td>Castle Severn II</td>
<td>Loudspeaker of the year 1997</td>
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<td>Celestion 9</td>
<td>2 Way Loudspeakers</td>
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<td>Celestion A1</td>
<td>Loudspeaker with Stands</td>
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<td>Cyrus DISC &amp; DAC Master CD transport and DAC</td>
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<td>Mission 7331</td>
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<td>Quid 77 Preamp</td>
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<td>Rega Planar 78</td>
<td>78 rpm Turntable</td>
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<td>Sony CD1070</td>
<td>CD Player</td>
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<td>Target M38W 165</td>
<td>Wide modular equipment rack</td>
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<td>Yamaha CDX 961</td>
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<td>Yamaha DP8050</td>
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<td>Surround Sound Mini System</td>
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<td>Yamaha RPK 470</td>
<td>Prologic Receiver</td>
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- **Beyerdymanic DT511 phones** £75.00 U
- **Exposure VII/VIi pre/power amps** £425.00 U
- **Grado SR60 phones** £60.00 N
- **Grado SR325 headphones** £150.00 U
- **Heybrook TT2/Linn Basik Lvx** £150.00 U
- **Kinshaw Overture DAC** £199.00 N
- **Kinshaw mono-blocks and pre-amp** £700.00 U
- **LinN Kain pre-amp** £700.00 U
- **Micromega Minimun system (AMP/CD/FM/Speakers)** £500.00 N
- **Micromega Minimun CD** £150.00 N
- **Micromegme Minimun CD** £150.00 N
- **Pioneer A-400 amplifier** £200.00 U
- **QED Vector Reference Pre-amp** £250.00 N
- **QED Digit Plus DAC** £150.00 N
- **Revon 6711 estate cassette deck** £150.00 U
- **Revon 6780 rediovert** £700.00 U
- **Rotel RC900 pre amp** £120.00 U
- **Rotel RT935AX tuner** £150.00 U
- **Sanyo Plus N55 noise reduction system** £300.00 U
- **SME 9012 arm** £200.00 N

Plus more, phone with your requirements.

**DEALERS FOR THE FOLLOWING AUDIO PRODUCTS:**

AKG, Audio Technica, Bardridge, Beyerdymanic, Bose, Carvin Vega, Denon, Electrocompanient, Goldring, Harman, Impulse, JBL, JBL Labs/Klipsch, Musical Technology, QED, Quad, Rel Acoustics, Rotel, SME, Sugden, TDL, Tech, Thorens, Yamaha, others please enquire.

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III - CD transport & D.D.E.

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(with Orbe clamp, platter)

CHORD COMPANY
Flatline Gold bi-wired speaker cables 2x10m, boxed, cost £300, accept £150. Wanted: Wilson Benesch Full circle turntable, Naim A5 cables. Tel: 0181 763 8694/0831 476 144 (Mar)(Mar)

LEAK STEREO 20 valve amp, new valves etc £260. Armstrong FM-AM valve tuner £50. Tel: Tony Ryan 01203 216 650 daytime or 01203 460 729 after 5.30pm (Mar)(Mar)

ALCHEMIST KRAKEN
Anniversary power amp and pre-amp including phono board, all books etc £560 pair ono. Tel: 01600 713 755 (Monmouth) (Mar)(Mar)

LUMLEY REFERENCE
LM2 Mk2 loudspeakers, Black floorstanders. Morel 8" bass. Volt Abr. Open baffle. 2 Dynamic dome m'drangers, silk tweeters, ribbon super tweeter £2800 new. Excellent condition. Will demonstrate £1500. Tel: 01625 432 889 (Mar)(Mar)

NAIM SBL Speakers in black, excellent condition, pre-upgrade. Will accept £850 or near offer. Tel: Paul 01474 853 446 or mobile 03705 72149 (Mar)(Mar)

NAIM HI-FI System for sale. NACO1 £1000, NAP250 £1100, SBL walnut finish £1300. Supercap £1450, NAC82 pre-amp £1400. All complete with boxes, manuals and as new. Tel: 0467 234 218 or 01275 333 020 (Bristol area) (Mar)(Mar)

MERIDIAN 551 Integrated amp £425. Ruark Swordsmen Two Plus, teak £100. XLO Ref Type 4 digital interconnect 0.5m £65. XLO Ref Type 1 interconnect 0.5m pair £125. XLO Signature Type 1.1, 2x0.5m pairs £200 per pair. chord flatline Gold Twin bi-wire, 10m pair £150. Tel: 01249 821 288 (Wilts) (Mar)(Mar)

QUAD 405 Power amp, instruction booklet, one owner £240. Excellent condition. Tel: 01691 690 342 (Shropshire) (Mar)(Mar)

NAD 1000 pre-amp, 2100 power amp. Technics ST-G70L tuner, SLP-III CD, SH-GE70 graphic equaliser. Wharfedale 415 speakers with stands. Target 5 layer stand £600. Will not split. Tel: 01295 251 057 (Oxfordshire) (Mar)(Mar)

STAX LAMBDa

PIONEER 300R Precision amp, as new £300. Pair Spendor S100 speakers, with matching furniture stands. Very easy to drive. Sensible offers. Tel: 01977 620 558 (Mar)(Mar)

ONKYO TX-SV919THX THX Receiver, AC3 compatible, awesome, as new, mint boxed (£2000) £1095. Arcam Delta 290P power amplifier, as new, mint boxed (£400) £225. Pink Triangle 1307 Filter (£250) £125. REL Storm Subwoofer, superb deep bass, mint, boxed (£695) £425. Polk LS/FX dipole and bipole surround speakers, boxed (£450) £225. Stands Unique ash veneer 5-tier tower rack, upgraded to 10mm glass all round, complete with isolation shelf (£675) £295. Stands Unique, as above, but 3-tier, upgraded to 10mm glass all round, complete with isolation shelf (£525) £225. Tel: 0118 934 4447 (Mar)(Mar)

LINN Hi-Fi. Kairn Pro Pre £750. LK100 power (1997) £450. Both are as new condition with Linn packaging, manuals etc. Wanted: LFD Zero. Tel: 01642 542 395 office, 01429 429 953 home (Cleveland) (Mar)

MICROMEGA DUO CD
3.1 transport + Pro2 DAC £1400. Proac Response 1s £475. Rot Strata £300. All vgc. Tel: Simon 01925 572 936 (Warrington) after 7pm (Mar)(Mar)

YAMAHA DSPA 2070 10 months old £700 ono. Kef 104/2 Raymond Cooke Limited Edition, 1 year old £900 ono. 100C center speaker, 2 years old £150 ono. Polk LS FX, 1 year old £250 ono. Tel: 0131 660 9477 (Mar)(Mar)

NAIM NAC 32.5 (upgraded to NAC 72). NAP 160 and HiCap power supply. Boxed with manuals £550. Systemdek DST turntable £100. 2x8m VDH CS122 speaker cable £50. Tel: 01787 223 167 (Colchester) (Mar)

LINN KABERS £575 ono. Naim 140 £300 ono. Naim 12s (mint, boxed) £85 ono. QED Digit/Positron £55 ono. 5 Hi-Fi Year Books £100. Albums (600 plus) offers. Tel: 0191 422 3415 (Mar)

GAMMA ACOUSTICS
Rhythm 211/VT4C integrated S.E. triode amplifier inc. phono stage (£2499) £1000. Gamma Epoch Reference 5 loudspeakers (£2999) £1000. Pair Quad ESL 57 loudspeakers £350. Tel: 01246 200 096 (Mar)(Mar)(Mar)
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EAR 34P MC+MM phono amp £225. Monarchy 22B DAC £800. XLO Type 4 phono to BNC digital interconnect £45. Tel: Mike 0161 291 9331 (Mar)

HARBETH MONITOR speakers £160. NAD 4020 tuner £50. Meridian 101 preamp £80. Quad mono tuner £40. Linn K1 preamp with Linn Dirak power supply £300. Aiwa 1500 cassette deck £50. Technics SUV2 amplifier £60. B&W large speakers £140. All above as new. Tel: 0181 680 1341 (Croydon) (Apr)

MANTAZ CD63 K1 Signature, cost £500, sell £295. Aura PA100 P/A, cost £700, sell £425, brand new, 3 year warranty. Sony CDP 715E player, cost £250, sell £150. Quad 33/303 upgraded, excellent £175. Luxkit Class A amp, 50 watts, excellent £85. Tel: 0141 571 4947 (Mar)

TANNOY D700 Loudspeakers, rosewood, boxed, 5 months old, as new £1500. Quad 67 CD player, boxed, mint condition £500. Tel: 01355 264 586 (Mar)

LFD AUDIO Power stage 2, 19" version, boxed in excellent condition £600. Tel: 0162 633 4060 eves. (Mar)

KRELL CD DSP MKII £4200 (£8800 new). Krell KRC HR preamp £4900 (£6900 new). Lumley LVI preamp £650 (£1000 new). Lumley ST40 power amp (chrome) £750 (£1325 new). Tel: 01743 344 438 evenings or 0802 355 521 (Mar)

LOWITHER ACOUSTA PM6As. Birch ply cabinets. Re-coned PM6As. Reversable mods include spikes, Deflex panels, felted baffle and improved wiring. Dynamic, efficient and exciting. Value at £375. Tel: 01926 854 115 (Warwick) (Mar)

QUAD 44 Control unit and Quad 405 power amp £395 pair. Pioneer VSP 200 surround processor £100. Pair of Bolivar speakers - offers. Tel: 01902 665 243 (Mar)

QUAD 66/606 pre-amp and amp plus Quad FM6 tuner, Quad 66 CD player together with Quad rack & pedestal. Pristine condition with original boxes. Will not split. Offers over £1400, also pair B&W DM2A speakers - Offers? Tel: 01483 274 903 (Surrey) (Mar)

WANTED: SUGDEN A28, grey finish, late model with toroidal transformer. Mayware arm, suitable MC cartridge. GB record clamp. Tel: 01634 725 123 (Kent) (Mar)

M.F. X-DAC, mint £170. Theta TLC, mint £110. Theta Galiath, mint £100. Sitche HF6 Digital 1/2m £50. Sitche HF7 Digital 1m £80. Tel: 01903 247 779 (Sussex) (Mar)

ARCAM ALPHA CD Player £100. Royd Minstral speakers £150. A&R A60 integrated amplifier £75. All mint condition. Tel: 01993 775 623 (Witney) (Mar)

AUDIOSTATIC ES200 BK speakers £1800 (£2800 new) Leak Stereo 20 and Varislope 2 pre amp £400. Amp has been rebuilt. Tel: 0181 657 7141 between 7-10pm (Mar)

WORLD AUDIO 5881 20W Power amp. Professionally built £300. 10 hours use. Preferably buyer collects. Tel: 01229 828 922 (Mar)

NAKAMICHI DRI Cassette deck. Light use only. Excellent condition. Fabulous sound quality, boxed with instructions £390 ono. Tel: 01244 681 805 (Mar)

QUAD ESP/606 pre-amp and amp £150. Used; NAD 5120 integrated amp £350. I m pair AudioTruth speakers - offers. Tel: 01475 637 425 (Mar)

WANTED: PAIR of Linn Tucans preferably with stands. May swap/part exchange for mid 1980s black Linn LP12 immaculate. Distance no object. Tel: 0956 136 804 or 0181 408 0431 (Mar)

PROAC SUPERTOWER Mk1 speakers in black ash finish. 7 years old immaculate condition, boxed with original receipt £590 ono (£1200) Tel: 01727 766 601 (St Albans) (Mar)

QUAD ESL 57 bronze pair in good condition £300. Tel: 01865 246 946 (Oxford) (Mar)

KEF REFERENCE Series Model One. Rossetta burr, 6 months old, boxed, warranty £850. Tel: Geoff 0181 870 3451 (Mar)

LEAK STEREO 20 and Varislope II Stereo, excellent condition £200. Garrard 401 with Linn Basik arm plus cartridge on plinth £120. Lots more vintage equipment. Phone for price list. Tel: 0116 287 2397 (Apr)

WANTED: NAIM NAC 72, NAP80, 903 (Surrey) (Mar)

ROYD M506 CD Player, latest 18 bit spec. As new, hardly used £460. Tel: 01642 559 204 (Cleveland) (Mar)

PIONEER DA1000 DAT Recorder (Japanese model) with mains transformer £200. Akai AD1600 cassette deck £50. Akai 4000 DS reel to reel tape deck £80. Tel: 01707 267 379 (Mar)

MERIDIAN 506 CD Player, latest 18 bit spec. As new, hardly used £460. Tel: 01642 559 204 (Cleveland) (Mar)

NAIM NAC 72, NAP180, M/C boards, mint, boxed, with leads and instructions £975. Tel: 01803 315 391 (South Devon) (Mar)
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Given the parameters of the units that you wish to use we can then supply a Theoretical or Computerised Crossover design, optimising the performance of the desired units

2) Cabinet Design:
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At South Coast Speakers we have a comfortable listening area modelled on the average family living room, giving you, the customer, a realistic idea of how your kit speaker will sound when you have completed construction & plug them in at home. There are 15 kits on demonstration ±2 from time to time. We are here to help you, offering informed & friendly advice so please ask!
MUSICAL FIDELITY E100 amp £325. Linn Basik, Akito, K5, less than 1 hour use £175. Van den Hul Thunderline interconnect (brand new) £70. Tel: 01302 820 815 (Mar)


NAD 950 OBX, mint boxed £870 ono. Rotel RT 948 5568 (Mar(I) CD input ( dedicated), 1452 eves (Belgium - but equipment collects. Tel: Mike 01884 32465 (Devon) (Mar(I)

EQUIPMENT TABLES. Roksan Table, 5 shelves £125 ono. Hi-Fi News Wall Nut II wall mounting table, 2 shelves £30 ono. Tel: Mike 0032 2 512 0952 evenings. (Belgium - but tables in North London) (Mar(I)

POWER AMPLIFIERS. 2 Off unbuilt World Audio KS881 MkII kits £275 each or £525 the pair. Pair AVI S2000 MM monoblocks £675 ono. Tel: Mike 0032 2 512 0952 evenings. (Belgium - but equipment in North London) (Mar(I)

REGA PLANET CD player £250, Rega Elicit amp £350, Rega XEL speakers £400, Roksan Xerxes, RB300, Elys with Torlyte three-legged table £290. All in excellent condition. Sale owing to job abroad. Tel/Fax 01234 309 970 (Mar(I)

REVOX A77 Mk4 1/4 track, Dolby NR, little use from new, pristine condition, NAB adaptors including 8 x 10" pro grade NAB tapes, plus other tapes, some new and unused, boxed £450 Tel: 01492 878 107 (Mar(I)

ORACLE DELPHI Mk3 turntable, with ltock tone arm. Mint condition. Just serviced £695. Sorry no offers at this price. Buyer collects. Tel: Mike 01884 32465 (Devon) (Mar(I)

NAKAMICHI CR-7E Cassette deck, unique rare machine. Auto record calibration and tape type selection, playback azimuth adjustment, auto fade, remote control and much more, mint condition £1250 ono. Tel: 0171 286 9531 (London NW) (Mar(I)

FOR SALE: Technics SL-1000 Mk2 turntable with Technics plinth (original heavy version). Modifications include high grade regulators, Cerafine and Nichicon PSU caps. Comes with SME and Technics armboards. Superb sound, £650. Wanted: Sony TA-N 88B power amp and Technics ST-1 speakers. Also Musical Fidelity P140, P150 or P170 power amps and Teac VRDS-5 SE CD player. Tel: Jon 0181 992 8952 eves & w/ends (Mar(I)

BOSE SPATIAL Control tuner amp + 901 Series IV speakers and stands (black finish) £500. Pioneer PL-L1000 linear motor arm turntable + Shure V15 Type IV cartridge £100. All with documents. Tel: 01823 327 008 (Mar(I)

FOR SALE: Roksan Xerxes arm, black with XPS power supply £550. Tel: 0181 452 1452 eves after 7pm (Mar(I)

CHORD SPM 800, excellent £900. Garrard 401 vgc £100. Quad 303 and FM3 £90. Tel: 01642 822 066 (Mar(I)


CASTLE HARLECH speakers. Yew finish, excellent condition, only 18 months old, boxed £550. Quad ESL 57 (pair) black, very late model, refurbished, excellent sound and condition £395. Tel: 01978 780 580 (Mar(I)
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301 fully balanced amplifier, 80 wpc (8 ohms), list £1699, only £1150.
302 20 bit CD player, balanced outputs, list £1799, only £1250.
Micromega
Solo top loading one box player, latest model, list £2750, only £1895.
Data/Dialog transport and dac, latest model, list £4250, only £2950.
Micromega Stage players, latest spec, Stage 4 only £395, Stage 5 only £495, Stage 6 only £649, Dac2 digital converter only £450.
Minium 60 wpc amplifier only £259, Minium FM tuner only £199.
Revox
B780 FM tuner/amplifier, matches classic B77 tape machine, 70 wpc.
Secondhand but with all boxes and manuals, only £349.
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FT101A FM analogue tuner in black, current spec, superbly musical.
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HI FI WORLD SUPPLEMENT NOV 97

HI FI NEWS SUPPLEMENT NOV 97

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**MARCH 1998**

**DEADLINE FOR APRIL 1998 ISSUE IS MONDAY 2ND FEBRUARY 1998**

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