

P-Javes

**Hi-Fi**  
W O R L D

**Hi-Fi**

**Hi-Fi**

**W O R L D**

MAY 1999 £2.50

*For the love of music*

**TAKE FIVE**

Radical 'speakers  
from £1200-£1500  
group tested

**WATT WATCHER**

Accuphase's PS-500  
mains conditioner



**RADIO  
SILENCE**

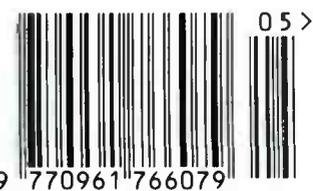
Conductor RFI  
filter from Matisse

**£1900  
COMPETITION**

WIN A MUSIC MAKER CARTRIDGE,  
AUDIO ANALOGUE CD PLAYER  
AND CARLSSON SPEAKERS

**SIX PAGES OF CLASSIFIED AD BARGAINS**

ISSN 0961-7663



9 770961 766079

- Integrated CD player
- Integrated amplifier
- Tuner
- Power amplifier
- DSP Surround sound processor
- 5 Channel AV amplifier

Finish: silver or matt black

MODE

CD

TUNER

VIDEO

LINE 1

LINE 2

TAPE

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www.roksan.co.uk

are a strange epitomise both well as the same time. At the side conspicuously in the lack of innovation afflicts about 80% of the designs currently on sale. This is perhaps a rather candid statement that many transducer manufacturers would take issue with, but it remains a sad and incontrovertible fact that more 'speakers than you can shake a very large stick at are lightweight boxes with a dome tweeter, cone mid/bass, a port and average sensitivity. As they're built the same, they sound pretty much the same - uninspiring. Of course, not all two-way reflex boxes are mediocre - there's a small number which have been solidly built and correctly engineered to give satisfying results, but they're the exception that proves the rule.

Now for the good news. The 20% of loudspeakers which take a different form show a wonderful range of



**JON MARKS**

technological approaches to the problem of turning electrical power into acoustic, and they don't need astronomic price tags to fund their unusual technologies. To showcase some of the best of what's on offer, we've rounded up 'speakers from Magneplanar, Klipsch, Carlsson, Living Voice and Diapason.

While the last might be close to the two drivers/box/port recipe, their build and component quality lifts them above the norm. Then we have the omni-directional Carlssons, the ultra-sensitive Living Voices

and Klipsches followed by Magneplanar's panels, all weighing in at £1200-£1500. And as we found, variety is the spice of hi-fi...

That "V" word is also to be found in other components like Accuphase's superb PS 500 mains conditioner. Using new circuitry to purify the mains, this battleship component shows just how much can be gained from cleaning the 240V your system plugs into.

Another unusual take on an accepted idea is The Conductor from Matisse. This little passive device plugs into an unused socket on a pre-amp and filters the dreaded high-frequency noise generated by digital items such as CD players, DACs and transports.

As the next generation of hi-fi begins to come into view over the horizon with digital amplifiers, Super Audio CD and DVD-Audio (more of which on p23 this month), we will continue to bring you reviews of all the most innovative and effective equipment that inhabits the hi-fi world.

## HOW WE TEST THE PRODUCTS

- *Hi-Fi World* has its own advanced test laboratory and acoustically treated listening room. No other hi-fi magazine has the benefit of such facilities.
- *Hi-Fi World* has a dedicated in-house team of experienced listeners, and uses selected freelance professionals. We review thoroughly by extensive auditioning, rather than by quick-fire group listening tests.
- *Hi-Fi World's* engineering team designs a wide range of products in-house. No other hi-fi magazine is so expert and dedicated.



## 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.



**POOR** - Seriously flawed. Not worth considering.

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# Hi-Fi WORLD

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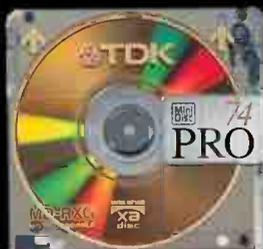
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# The new wave in sound.



All digital recording media sound the same, right? Not with TDK's new MD-RXG PRO MiniDisc they don't. Better definition, more precise control, an even more 'real' sound. All thanks to TDK's leading edge digital technology. But don't take our word for it. Believe the audio experts from across Europe who raved that the MD-RXG PRO was the most realistic MiniDisc they'd ever heard. So, if you really care what you listen to, there is only one MiniDisc. TDK's amazing MD-RXG PRO.

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## NU POWER AMP

"This is not an amplifier for the timid" warns the press release heralding the arrival of the Nu-Vista 300 power amp from Musical Fidelity. Like the Nu-Vista pre, the 300 is a hybrid of thermionic technology (with its front-end Nuvisor valves) and solid-state. Designed to complement the pre visually as well as sonically, the power is built into matching casework which has been expanded to accommodate electronics which put out the claimed 300watts into 8ohms and roughly 1kilowatt into 2ohms!

While Musical Fidelity opted for monobloc construction in their X-A200 amplifiers, with the 300 they have chosen a single case to house the signal circuitry, leaving the fully dual-mono, choke-regulated power supplies to their own chassis. Three transformers are used, one for each channel and a third for the control ICs, all in the search to obtain the same potential on the zero-volt rails of both channels. The company believes this last, which can apparently differ slightly between one monobloc and its partner, is vital for optimal imaging and low-level detail retrieval.

The front panels of both the power supply and the amplifier are machine-finished aluminium with large, gold-plated, solid brass bi-wire loudspeaker terminals. Die-cast heat sinks account for over 30lbs of the total weight.

The Nu-Vista 300 power amplifier tips the pecuniary scales at £3300. Acknowledging the hefty price, Musical Fidelity are offering it on interest-free credit or by part-exchange with their X-A50, X-A200 or X-AS100 amplifiers.



**Musical Fidelity**  
15-17 Olympic Trading Estate,  
Fulton Road,  
Wembley,  
Middlesex HA9 0TF  
Tel: 0181 900 2866

## SONY IN DVD ONSLAUGHT

Sony have introduced a total of four new DVD players to the world. These are the DVP-S725, DVP-S525, DVP-S325 and the new flagship DVP-S7700.

The AV credentials of the first three machines feature current digital surround-sound technology and digital outputs for DTS decoders. The '725 and '525 have in-built decoders for Dolby Digital (AC-3) and MPEG 5.1. On the audio side, the '725 (which replaces the '715 reviewed in August 1998) has an isolated audio circuit and R-Core mains transformer.

At the top of the range, the DVP-S7700's copper-plated chassis is finished in Champagne gold. The new centre-loading transport can be hooked up to external converters via a 12.5MHz optical digital output designed to lower jitter levels. Helping to reduce interference between digital and analogue sections is the fact that unused digital outputs can be switched off. Audiophile icing comes in the form of extra-thick copper PCB tracks and film capacitors.



**Sony UK**  
Weybridge,  
Surrey  
KT13 0XW  
Tel: 01932 816000

## TEUTONIC TUNES FROM ORELLE

Newly-revamped Orelle will be moving its main operations from Great Britain to Germany from March 1st. Components will continue to be designed in the UK, but their manufacture and distribution will be based in Bremen.

Products planned for future release number a two-way, bass-reflex floor stander named The Swing (at around £1200)

along with a 300watt active subwoofer called The Spice (to sell for approximately £1000). Watch this space for further news.

**Orelle UK Sales**  
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World premiere in an audio product of the 32-bit 60MHz Analog Devices ADSP-21065L SHARC™ Digital Signal Processor; decodes, as standard, all current movie formats with capacity to cope with the future.

## 2 Powerful 16-Bit Microcontroller

The 16-bit Siemens C161RI microcontroller controls the AV32R and its Setup Wizard provides most comprehensive on-screen user interface, making set-up extremely simple, without printed manuals.

## 3 96kHz/24-bit DACs

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## 4 Minimal Jitter/ TAGtronic Sync Link

The precision twin phase-locked loop reduces jitter to an absolute minimum, while the unique TAGtronic™ Sync Link sends a signal to products designed for this advanced technology (e.g. the forthcoming DVD32R) to synchronize its clock to the master reference within the AV32R. DVDs will sound better than ever before.

## 5 Future-Proof

All software is stored in Flash memory and is entirely user upgradable, with upgrades downloadable from the Internet via a PC and the TAGtronic™ Communication Bus. This bus also allows the easy transfer and sharing of information for multi-room installations and powerful communication between components.



five channel amplifier 100x5R  
(launch summer '97)



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World Radio History

**TAG McLaren**  
audio



## TEN FROM HARMAN

American manufacturer harman/kardon is making another foray into the hi-fi market with a new 10-model range. The line-up comprises three integrated amplifiers, three CD players, two CD multi-changers, one stereo receiver and a twin cassette deck.

The HK630, HK650 and HK690 amplifiers (40watts, 60watts and 90watts respectively) employ discrete componentry rather than ICs and boast Pre-Out sockets and phono stages. Prices range from £199.99 to £499.99 and include remote control as standard.

The CD players weigh in at £199.99 for the HD720, £299.99 for the HD740 and £499.99 for the HD760 (which is HDCD compatible). Again, the analogue stages are IC-free and assembled with close-tolerance resistors and selected capacitors. HDCD is also catered for in the more expensive of the

two CD multi-changers, the FL8350 (£199.99) and FL8550 (£299.99).

Having manufactured what they claim was the world's first hi-fi receiver back in 1963, harman are upholding tradition in their new 65watt HK3720 with its RDS tuner at £249.99. The range is rounded off with the DC520 twin cassette deck with Dolby HX Pro, B/C noise-reduction systems and double-speed recording at £199.99.

**Gamepath**  
**25 Heathfield,**  
**Stacey Bushes,**  
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**MK12 6HR**  
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## POPULARE COPULARE

Audiophile classics scholars will appreciate the name of this equipment-stand manufacturer. Copulare's speciality is custom-built supports, available in almost any colour and configuration. For more information, contact the distributor:

**Zentek Music**  
**Lizanne House,**  
**Mount Sion,**  
**Tunbridge Wells,**  
**Kent TN2 5DA**  
**Tel: 01892 616383**

## IT'S THE CUSTOM

Loudspeaker firm B&W have devised a nine-model Custom Installation Series for those who prefer to hide their hi-fi away. Three in-wall modules are joined by another three for ceiling mounting, a centre channel, surround 'speakers and an SE version of the Signature 7 in-wall monitor.

B&W state that there has been no sacrifice in sound quality as the drive units are the same as those used in their conventional ranges. As ever, Kevlar is prevalent in the mid/bass drivers while anodised aluminium is used in the dome tweeters.

Prices for the Custom Installation Series run from £200 for the ceiling-mounted CCM50 up to £700 for the Signature 7SE.

**B&W Loudspeakers**  
**Marlborough Road,**  
**Churchill Industrial Estate,**  
**Lancing,**  
**West Sussex BN15 8TR**  
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## DVD FROM ONKYO

Details of the new DVD player from Onkyo have just reached us. The second-generation machine employs what Onkyo describe as "audiophile-grade parts". It would seem one of its apparent plus points is that all on-screen functions can be controlled from the front panel for those "where's the remote control?" moments. Other features include 4x picture magnification that can zoom in on any of the 25 screen zones available and six playback speeds. The suggested retail price is £999.95.

**Audioclub**  
**Unit 15, Faraday Rd.,**  
**Aylesbury,**  
**Bucks. HP19 3RY**  
**Tel: 01296 482017**



## NAGRA'S NEWCOMERS

Nagra, the Swiss company respected for their professional equipment, are capitalizing on the success of their first hi-fi design, the battery-powered PL-P valve pre-amp. Two "ultra-high performance" power amplifiers are the latest additions to the domestic family.

The Nagra MPA is a single-chassis, 250watt MOSFET design incorporating a Power Factor Correction PSU which, Nagra say, improves performance by eliminating the power spikes inherent in transformer-based supplies. Should you require an even higher output, the MPA can be bridged to deliver 500watts in monobloc configuration.

Another optional feature transforms the Nagra into a remote-controlled integrated thanks to a module which provides four line inputs along with volume, balance and mute controls.

If transistors fail to tempt your ears, there are always the VPA 50watt valve monoblocs. Zero negative feedback in the output stage (a pair of 845 power triodes operating in push-pull) ensures compatibility with tough 'speaker loads. According to Nagra, their proprietary output transformers offer full power from 30Hz up to 40kHz.

A place in amplifier heaven will set you back £7995 for the MPA or £8495 for the VPAs.



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**Oxon. OX11 7TG**  
**Tel: 01235 810455**

## NEXT MONTH'S ISSUE

In just four weeks you can pester your newsagent to open early and hopefully feast your mince pies on the following:

### YAMAHA MSP5 ACTIVES

We get active again with these small but heavyweight beauties from Yamaha's professional division. At £400 they could be a bit of a bargain.

### BASIS 2000 TURNTABLE

Does the new breed of turntables war-

rant its prices? Our vinyl contribution for next month includes this £2000 perspex design from Basis.

### CLASSIQUE SOUNDS DECODER

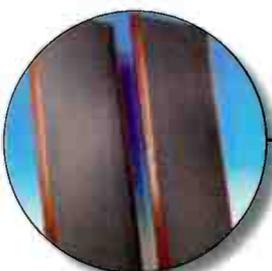
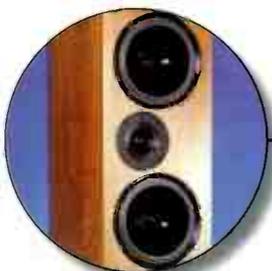
Classique Sounds send us their latest goody for all of those with a rusty

Troughline or an ageing Mozart tuner.

### PATHOS TWIN TOWERS INTEGRATED

Not as pathetic as its name suggests this stylish 35watt valve design resembles Manhattan relocated on black lacquer and wood. Definitely one to impress your pals.

# Variety *is* The **Spice**



**Tired of the same old loudspeaker thing? Let Messrs Marks and White sweep your blues away with a round-up of five unusual loudspeakers at £1200-£1500.**

Once in a while we like to do a group test which stretches the bounds slightly. Some of our more enterprising ideas have had to be abandoned along the way; for instance, our proposed test of high-power sports cars unhappily did not garner the industry support for which we had hoped. Similarly a scheme we had to review a series of hotel public-address systems in the South of France came to nothing.

In view of these previous disappointments, we are this month pleased to audition a group of loudspeakers which, aside from their price bracket, have little in common. Naturally they all turn an electrical signal into sound, but there the similarity could be said to stop.

The purpose was to find out just what diverse technologies and aesthetics are available to a prospective buyer with up to, say, £1500 to spend. To a degree we are, of course, engaged in dividing sausage into mash and trying to get the answer in Chelsea buns but, as our readers' letters are continually reminding us, not everyone likes the same thing, thank goodness. Bearing all of this very heavily in mind we have assembled an array of different design concepts from a suitably international set of manufacturers.

Carlsson Acoustics' (sic) 50.2 design aroused quite a bit of interest when we reviewed it in our December issue, with

many of our readers recalling the late Stig Carlsson's creations for Sonab in the early Seventies. This time we decided to audition the more expensive 52.2 at £1500.

The name of Klipsch has been a powerful totem for loudspeaker addicts for over 50 years. The Heresy II is a very different kettle of fish from the famous Horn but for modern domestic surroundings it boasts an exceptionally high efficiency of 93dB/W/m from a modestly-dimensioned box.

If the Klipsches are on the chunky side, Diapason's Karis will better fit the bill. Specially designed for small rooms, the £1250 Karis is a rear-ported reflex design, a sort of little brother to the company's Adamantes III series.

Magneplanar panel 'speakers have had a loyal following since their introduction over 20 years ago. Currently tipping the scales at £1200, the MG12/QRs combine trim dimensions with proven technology.

Finally, Definitive Audio have pondered long and hard over their Living Voice Auditoriums, eventually opting for a d'Appolito-configured two-way. With low-power valve amplification as one of their intended partners, the Auditoriums have come to the right place for an audition.

The stage is lit, the scene set. Let's usher in our five-piece variety act and put them through their paces...



## CARLSSON ORTHO-ACOUSTIC 52.2

£1500

### THE TECHNOLOGY

Every audiophile is aware of the fact that placement is a very important factor in deciding the final sound a loudspeaker produces. Dipoles like Magneplanars and Quad electrostatics (to name but two) are usually much more fussy than boxes but the Carlsson 52.2s are the exception that proves the rule. Both their overall tonal balance and imaging were heavily influenced by their position vis-a-vis side and back walls.

The instructions say the cabinets should be pushed up against a side wall and kept away from rear walls as putting them in a corner will give massively boomy bass, as you'd expect. But the angle the back of the 'speaker makes to the wall is crucial; a couple of degrees out at the back can help imaging and centre-stage fill no end, while shifting them in too far can cause unevenness, especially across the midrange.

As we found with the 50.2s reviewed in December 1998, orchestral tends to suit this design more than small-scale, close-mic'd Blues or chamber music where imaging plays a larger role in reproducing the recording. With this uppermost in my mind, I used Eric Bibb's Good Stuff to position the Carlssons and optimise their image sharpness without compromising sound stage breadth or depth.

### SOUND QUALITY

With Eric still in the P-30's drawer, what came out of the 52.2s immediately showed promise. There was that full-width presentation which appeals to a lot of people judging from the number of letters we received in the wake of December's review. OK, image precision wasn't on a par with that of the BKS 107s or Jamo Concert 8s, but it wasn't a million miles away from the MG12/QRs'. And whatever the method of dispersion was doing to their response, the solidity of the



It's a loudspeaker, Jim, but not as we know it. The 52.2's cabinet is shaped to sit on the floor against a side wall.

Carlssons' enclosures was audible in the lack of 'panel talk' which so many box loudspeakers introduce.

Another string to the OAs' bow was a mid/bass with an attractively natural tonality, free from looseness at the bottom (although the bass of the 52.2s was leaner than that of the 50.2s). Less cultured was the metal-dome tweeter, which added a perceptible huskiness to vocals and extra sharpness to strings and percussion. This came as a disappointment given the £1500 price tag and stood out against the smoothness of the mid/bass.

Moving closer to home ground for these Swedes I selected Opus 3's recording of Stravinsky's Firebird suite. Now the Carlssons were feeling more expansive, more relaxed. With some real scale to get their drivers into they

conjured up a naturally-proportioned sound stage. Where they really scored was in their portrayal of orchestral climaxes which often struggle to make it beyond the boxes of your average two or three-way reflex. With the 52.2s in the system there was no shortage of elbow room for the musicians to take advantage of, so everyone concerned went hell for leather without tripping over each other. And they managed this trick without thickening up or squashing dynamics; like their smaller siblings they allow recordings to breathe easily.

One eccentricity to the way these 'speakers deal with imaging came to the fore when instruments were panned hard right or left. Whereas a normal pair of boxes would merely shift the instrument to one side or the other, the Carlssons had a strange habit of pulling such sounds down towards their cabinets which sit low on the floor. With vocalists on Jazz or Blues about three feet off the ground, this could be rather unsettling at times as the sound stage arched rainbow-like between the 52.2s.

This effect gave rise to some psychedelic sound staging on Grace Jones' Slave To The Rhythm where the samples started bouncing around the room in an appropriately hair-raising fashion.

If you have the space to position Carlsson's 52.2s correctly, they will reward with a spaciousness rare amongst box 'speakers. They're also engagingly rhythmic whatever is flowing through them, as Blues Union confirmed. Convincing midrange tonality is another bonus. Unfortunately, the treble isn't quite so impressive, that metal-dome colouring the sound with a roughness at odds with the midrange. At £1500, the 52.2s don't represent such good value as the 50.2s did at £585 since they don't offer commensurately better performance, even if they are a lot more detailed.



## DIAPASON KARIS

£1250

### THE TECHNOLOGY

Once the price of a loudspeaker has risen above a couple of hundred pounds, you're fully justified in expecting bi-wire terminals. And when the price in question is £1250, binding posts as chunky as industrial fasteners are the norm. So I was surprised to find just a single pair of slim (albeit gold-plated) inputs in the recess on the Karis' rear.

Taking a leaf out of Epos' book, Diapason have engineered a 110mm mid/bass which requires no crossover as its natural upper roll-off allows it to match directly with the 20mm silk-dome tweeter. Because of its tiny cone size, the mid/bass reaches up a long way into the treble, the tweeter kicking in at a high 4.5kHz via a crossover hard-wired with silver-plated copper cable from van den Hul.

The coveted Quote Of The Month was awarded to Diapason for their description of the Karis' internal wadding: "A special, patented fibre is used like dumping material". According to the brochure, the interior of the solid Walnut cabinet is also shaped to limit resonance, while its 'diamond' external profile improves imaging by reducing diffraction.

### SOUND QUALITY

There's a theme which links the characters of many an Italian loudspeaker, whether it be in build or sound. If it's the former the common thread is the use of solid hardwood in the cabinets and heavy, gold-plated binding posts. If it's the latter, they all share a rich, organic approach to music making where the central tenet is to glean as much of the emotional content from the signal as possible. The Diapasons are a case in point, as I discovered when I played any predominantly acoustic music through them.

Take Joe Beard and Ronnie Earl's Blues Union as an example. Whatever the track, the performance was always smooth, open and involving as the Karises' tiny and light mid/bass drivers belted back and forth in response to the demands of the kick drum. The small, heavily-radiused cabinets meant imaging and sound staging



The Karises use an extremely long-throw 110mm mid/bass unit to hit bass notes.

were top-notch. The Diapasons avoided the pitfall of sounding as small as they looked, so giving plenty of space to guitar and vocals that were grippingly expressive. This ability to hunt out and display nuances is another Italian strong point, one that allows music free reign to communicate the artists' intentions unalloyed.

From a nitty-gritty viewpoint, the Karises pulled sweet but transparent treble and midrange out of their trick bag with ease. Upper bass had the speed and impact you'd expect from a dinky monitor but, in accordance with the immutable laws of physics, of lower bass there was not much. The Blues didn't mind this shortfall. Iain Simcock and Great Works For Organ (Bach Is Back) felt their loss a little more.

When an instrument known mainly for its output below 60Hz is fed into 'speakers with a mid/bass which is more mid than bass, some of the lower octaves are bound to go missing. The Diapasons redeemed themselves with their natural, musical way with everything else, the higher registers of the Koenig organ free from 'shout'. The venue of the Chapel of the Community of the Good Shepherd was also deftly transferred, as the Karises

turned their diminutive stature to their advantage.

Rimsky-Korsakov's Scheherazade had obviously been slimmed down slightly as well, but I had no trouble dismissing this as my ears stayed glued to a performance of real emotional impact. By not disgracing themselves with brittle, dry strings and rough brass, the Diapasons despatched a large chunk of the competition to second-rate status as a means of listening to music of a non-electronic type.

As you might have guessed, it was on electronic music that the Karises began to lose ground to other designs, as Garbage, The Chemical Brothers and Grace Jones proved. Put through the Diapasons an instrument which doesn't have to be hooked up to the mains and you can almost see them smiling in response. If 240V is involved, though, the story isn't quite so rosy.

With albums such as Grace Jones' Slave To The Rhythm in the Teac P-30, the Karises still sounded fairly happy. The clarity and control of this CD were helping matters, as was the fast bass. It was at the frequency extremes that these 'speakers revealed their misgivings in their treatment of the bright percussion and bottom-end acrobatics, sounding a touch fizzy on the one and blurred on the other. Things got worse as the production quality deteriorated through Garbage's Version 2.0 to that nadir of the singles world, The Chemical Brothers' Setting Sun, where it was sand paper at the top and mush down below.

You might reasonably argue that any good 'speaker is a revealing 'speaker, and you'd be right, mostly. Letting through the warts as well as the music is fine, but some transducers are kinder to bad recordings than others. The Diapasons mix their transparency with a preference for acoustic instrumentation, so Rock, Dance and Pop (most of which is poorly produced) loses out. On the other hand, if your taste embraces Classical, Folk or Blues, the Karises have considerable strengths.



## KLIPSCH HERESY II

£1150

### THE TECHNOLOGY

Paul Klipsch patented his earliest bass horn in 1942 and went from strength to strength with the famous Klipschorn and a select band of other designs thereafter.

The Heresy owes its existence to the popularity of the Klipschorn for monitoring. Because of the requirement for corner placement, stereo pairs could find themselves over 30 feet apart. Not unexpectedly there was a touch of the hole-in-the-middle effect with this arrangement! A treble horn 'filler' had duly been produced to obviate this problem when a local church approached Klipsch to exorcise some pressing public-building PA problems. By marrying the new treble unit to a fully-enclosed bass driver, the appropriately-dubbed Heresy was born.

Packed into a box 21in. by 15.5in. by 13in. (hwd), today's Heresy II weighs in at a hefty-ish 37lbs. without the optional risers which tilt the cabinets backwards slightly to avoid the build-up of standing waves in smaller domestic environments.

The three drivers are arranged one above the other, although there is a cut-out on the front flange of the midrange horn for a neater fitting of the 12in. bass driver and to ensure a more seamless integration. The horns are oriented horizontally to give maximum lateral dissipation. Oh, and the sensitivity is 93dB/W/m.

### SOUND QUALITY

A word of warning regarding the partnering of these 'speakers: beware previously-unsuspected amplifier noise as the Heresies will have no mercy. "I guess it's always been there, buddy!" is about all the sympathy you can expect. In the same way when a CD has left the mixing desk liberally imbued with hiss, the Klipsches point the finger without a second thought.

Assuming that your system is sufficiently quiet when quiescent not to disgrace itself, choice of recordings might be critical too. Such is the dynamic range of these 'speakers that they could prove an unhappy choice for someone whose



The Heresy IIs' drivers are linked by crossover points at 700Hz and 5kHz.

collection relies on high-amplitude recordings to compensate for the flaccidness of their equipment (pardon?)

Very well, in at the deep end. Plumbing the depths first with the opening to Stravinsky's *Firebird*, the effect was genuinely disquieting. Had a caption appeared "Hammer Films presents. . ." I shouldn't have been much surprised. Although the opening is pianissimo, the impressive sensitivity of the Heresies ensured that bass didn't fall by the wayside. There may be tauter bottom-ends out there, but there were none of the true crimes that your average reflex design is guilty of. There was also a good deal to be said for the detail which the treble department was pushing out. Muted trombone 'sneers' (Tom And Jerry style) were especially well presented - very little fundamental remains with a mute, so all the impact relies on accurate harmonics.

Similarly expressive were some of Joe Beard's R 'n' B numbers. For a nice change, the kick drum had its own note, rather than that of the loudspeaker. When the complexities built up, there was evidence of a glassy sheen to strings but the overall result had tremendous power and impact. Individualistic the Heresies may be; they are also loud!

As a check on what could be a rather

forward presentation, I turned to Jazz piano. 'Real' piano is not particularly rich in high harmonics, so what you get is largely down to the accuracy of the midrange. Happily the Klipsches managed an unusually smooth, eloquent rendition. Naturally the brushed cymbals were given full measure by the tweeter, but not to excess. And in a tradition as old as Jazz itself, the bass player's solo took place high on the top strings, so there was no cross-referencing bass extension here!

The Klipsches fired off a slice of Opus 3 woodwind groups with uncanny realism. This Scandinavian label prides itself (mostly with justification) on the naturalness of their recordings and these 'speakers responded in kind. Unfortunately this disc includes an awful lot of key clatter as well, which became irritating after a while.

One point to note with the mid and treble horns is that, unlike direct radiators in more modern narrow cabinets, the listening axes are reasonably forgiving - you won't lose all image depth simply by moving your head as the 'averaged' stereo imaging is very good with a broadish polar sweep.

In an attempt to uncover a worst case scenario for the Heresies' very powerful tweeters, I plugged in a tinny CD and amp and prepared to repel boarders. Actually the sound was not nearly as nasty as it might have been: although you tend to hear it like it is, good and strong, the most objectionable by-products of treble beaming are ironed out. This makes for a sense of relaxation which is almost at odds with the power obviously available.

Considering that the main *raison d'être* with the Heresy IIs is massive sensitivity, I can see a lot of people using sub-10watt valve amplifiers with them. These normally have a sweet, smooth character which would gel nicely with the Klipsches' midrange and treble which can be forward if its solid-state in the driving seat. But whatever the electronics, you'll never find music played through these 'speakers boring!



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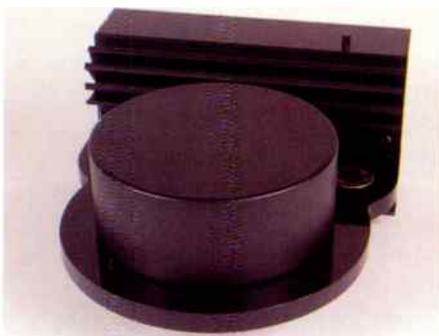
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## LIVING VOICE AUDITORIUM

£1500

### THE TECHNOLOGY

When it comes to elegance, the Living Voice Auditoriums (or should that be Auditoria?) have a head start on some of the less conventional outfits in this group test. 34in. by 8.5in. by 10.5in. (hwd) of veneered 18mm hardwood chip gives a slim outline which bodes well for imaging. Add to the recipe the twin 6in. mid/bass drivers in a d'Appolito configuration with the cloth-dome tweeter, and you have a sense of domestic harmony.

Living Voice designed the Auditoriums for use with low-powered valve amplification and, with this in mind, have attempted to design a level-ish impedance with higher than average sensitivity.

Prominent to the rear of the Auditoria are the pairs of terminals for bi-wiring and the rear-firing port. Rounding off the ensemble are neat metal stands with tapped holes for the spikes provided.

The manufacturers specify that the cabinets should be toed in so that the imaginary cross is in front of the principal listening position. With these narrow enclosures, this turned out to be easy to do by eye.

### SOUND QUALITY

To get the ball rolling with the least resistance, I called Haydn's Prussian quartets to the fore. Hanging judges of imaging and dynamics, string quartets can spring surprises in other areas too. With this particular recording, the Auditoriums were quick to point out that the first violin either had a cold or else was wearing a Crimplene jacket. Be that as it may, the exact location of the jacket/snuffle was easily pinpointed. On top of that, tonal quality was rich and satisfying with just a suspicion of overhang in the bass. This might have been down to an unlucky convergence of a repeated 'cello note with the cabinet air resonance, however.

For something about as different as it gets I gave Grace Jones' *Slave To The Rhythm* a spin. This offered some interesting insights into the Auditoriums' capabilities on more electronic music. The opening track 'Jones The Rhythm' (presumably he played in a band when



The Living Voices' twin mid/bass drivers have paper cones doped to control resonance.

not driving Ivor The Engine) gave a super-varied splurde of processed sound. Vocal articulation was not quite 100% but given the 'pseud's corner' nature of the words this was forgivable. What with the degree of sampling and bolt-ons on the album, it was hard to pinpoint the acoustic niceties with any degree of certainty but the Living Voices seemed more comfortable here than with 18th-century Vienna.

Part of the Auditorium experience that proved vital to obtaining the best results was positioning of both the 'speakers and the listener. Go too far off-axis and the whole can become a bit bass heavy. Living Voice's cross-axis advice should definitely be taken seriously.

With the huge range of snap percussion and purposely-distorted instrumental sounds (like mutes and overblowing) on Carlin Music's *History Of Jazz*, the Auditoriums had plenty to think about. Henry Davies' recreation of the

Dixieland Jug Blowers was a case in point. Given the ungovernable pitch of the jug bass, rather like a vaguely tunable bass drum, it presented a severe test in the bass regions. The 'speakers, as has happened many a time when reflexes are faced by this track, let rip with quantity rather than quality.

More reliable as a reference album was Eric Bibb's *Good Stuff*. In spite of their rich tonality, the Living Voices still sounded slightly 'papery' on the revealing solo track 'Saucer And Cup', the consonant 't' rounded off. This sort of presentation may be preferable to a spitty approach, but there was an undeniable loss of articulation. To say that Mr Bibb had mislaid his teeth would be going too far, but you get the picture.

As I headed on through the album, I discovered the mouth-organ was similarly reticent; there was a very firmly placed image with pleasant tonal characteristics but it was a touch recessed. In the same way the steel guitar 'wows' deserved more push. On the plus side the mandolin was smoothly integrated and very naturally detailed.

Back with the more serious stuff, and the RCA Red Seal 70th Birthday Tribute to Christa Ludwig yielded some tasty fruit, not least the 20-minute excerpt from Wagner's *Götterdämmerung* with which the disc closes. This monumental endeavour showed that the Auditoriums were certainly not short of clout. The sound stage had a handsome left-right spread too, with the individual orchestra sections clearly delineated. Again there was the shadow of a boof in the bass, on flams the box the drivers are housed in making its presence felt.

The perfect loudspeaker which handles all types of music with equal ability has yet to be built. Most transducers suit some genres better than others, the Auditoriums being no different in this respect. Their accurate imaging, spacious sound staging and rich tonality would appear to predispose them towards Classical. While they do a good job in this area, a lack of midrange sparkle and bass which can be a tad loose means they actually partner electronic compositions more effectively.

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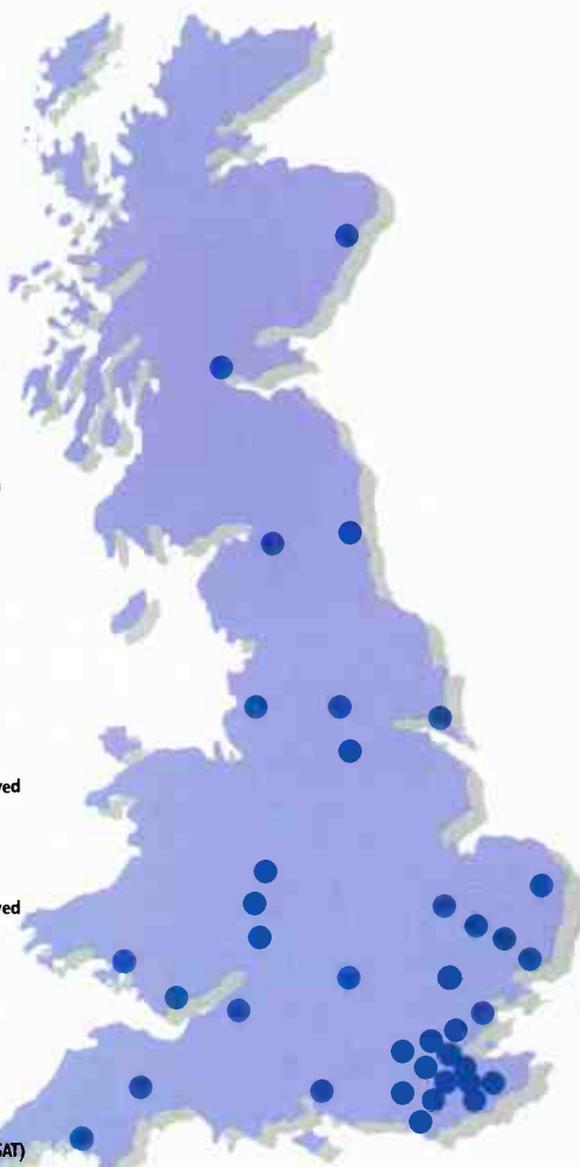
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# SENSATIONAL SAVINGS IN-STORE



## MAGNEPLANAR MG12/QR

£1200

### THE TECHNOLOGY

It's strange how pets, and cats more than any others, can be accurate barometers as to the sonic prowess of components. Magneplanar evidently has a strong following amongst felines to judge from section 7B of the MG12s' manual: "For owners of cats, we recommend cat repellent around the base of the 'speakers." Sage advice indeed, as one audiophile I know returned home after a day at the office to find the cat half way up his beloved Maggies.

Apart from their sound, cats seem unable to resist the outer 'stocking' and Mylar diaphragms attached to the wooden frames of these Minnesotan monoliths. And at only half a micron thick, the latter aren't exactly claw-proof.

Where electrostatics rely on a conductive coating on their panels, the MG12s use a lightweight aluminium-wire "voice grid" on the mid/bass units and a long, folded track of aluminium foil in their "quasi-ribbon" tweeters. These react against a perforated metal sheet which carries a large number of small magnets.

There may be no option to bi-wire these 'speakers, but their treble level can be tweaked to taste with a range of tweeter-attenuator resistors. I ended up with a 1ohm power resistor in preference to the wire link supplied as standard.

One constructional aspect where the MG12s lose out is their feet, a couple of pieces of bent metal with swinging brackets on the end. This makes obtaining the correct vertical angle easy, but it isn't the most rigid of support methods.

### SOUND QUALITY

Before embarking on a description of how the MG12s sound, I feel I should declare an interest. Having lived, day in, day out, for the past year with a pair of the baby SMGas in my system, I've come to appreciate the openness and lack of cabinet coloration which marks out good panels from boxes. And where electrostatics can be a nightmare load to drive, Magneplanars aren't so hard on amplifiers, although it has to be said they're not particularly efficient.

Another talent which distinguishes



Breaking with tradition, the Magneplanars' handed tweeters should be placed to the outside of the panel for correct phasing.

transducers whose diaphragms have a low moving mass is an addictive speed, delicacy and musicality which breathe life into recordings. This much was obvious immediately after firing up the Maggies even without having paid any special attention to placement or cabling. The overture from Tchaikovsky's Romeo And Juliet had a real sense of ebb and flow to it as the MG12s allowed through unfettered dynamics both large and small. Power and scale were in plentiful supply too, as there was little compression to the sound, those Mylar mid/bass panels coping well with timpani and double-bass alike.

Thanks to a fleet-footed transparency, the emotional content of this composition was also more strongly portrayed - where a lot of box 'speakers have a habit of flattening out the highs and lows written into a score, these dipoles imposed themselves less on the signal, capturing the mix of menace and sorrow in a compelling manner which kept me happily pinned to the listening hot-spot.

Alongside the undoubted strengths of Maggies, there's a couple of caveats that need highlighting. They can work surprisingly well in small rooms (I've heard them operating happily in a 12ft. by 10ft. shoebox) but they prefer a bit of

elbow room. If you push them too close to rear or side walls, the bass can become boomy and the sound staging and imaging start to lose their definition.

Magneplanars in general are very revealing of the power amplifiers which partner them - abundant current and control are two important commodities. Unfortunately, valve gear doesn't normally suit, especially the single-ended variety which produces a lovely, liquid midrange marred by basslines with no grip or grunt.

With a power amp like TAG McLaren's 60P, it's possible to coax a satisfying quantity of bass from Magneplanars, albeit not quite satisfying enough for organ and Reggae freaks. Then again, what gets lost in depth is more than made up for in speed and insight. A sad side-effect of this is that tracking down a matching subwoofer is wasted effort. As long-term panel and horn enthusiasts have discovered, domestically-acceptable cone subwoofers sound thick and slow by comparison, sticking out like sore thumbs whatever the recording.

Showcasing the MG12s' tonal purity and sheer enjoyability were Nathan And The Zydeco Cha Chas. Accordion on this album (as well as Eric Bibb's Good Stuff) was more harmonically convincing than cone-and-dome loudspeakers managed, and there was an irrepressible joie de vivre to tracks like 'Outside People' beyond more sluggish performers.

One electronic genre where the MG12s' virtues come into play is well-produced Drum 'n' Bass. OK, the drum part might not have the gut-rumbling extension provided by a high-power 15in. PA woofer, but the impetus and urgency of the Maggies' presentation leaves even the class-leading 107 MkIIs from BKS trailing.

For their lightness of touch, dynamics, clarity and expression, the MG12/QRs are definitely at the top of the loudspeaker pile. Their sound staging is equally adept, although imaging is not as pin-sharp as that of some of the best boxes. Unless the frequencies between 20Hz and 45Hz are absolutely vital to you, a little time and effort experimenting with position, cables and ancillaries might well see you bidding a fond farewell to box loudspeakers.

# CONCLUSION

**D**rawing all these diverse threads together, do we have a carpet of Oriental richness or just a tangled knot? For a start, the variety for which we'd hoped was present in trumps. Even so, it's doubtful whether we've done much more than scratch the surface, although it's a fine line that runs between off-beat and crack-pot designs. Proven technology and reliable performance have to be considered high among the criteria in this price bracket.

It is perhaps telling that the most uncommon transducer type found the most favour. Despite the Awful Warnings for cat lovers, the Magneplanars pleased with their transparency and speed. Placing needs some care to maximise imagery and ensure an even tonal balance, but the effort required is amply repaid by the sweetness and light these panels are capable of propagating.

The MG12s are not particularly sensitive and are unlikely to give of their best with low-powered amplification. For best results, an amplifier of 100watts/channel minimum is called for to avoid bass waffle and compressed dynamics. There are valve amplifiers which produce this sort of output but they tend to be expensive. Within a reasonable budget, good quality solid-state equipment will make the most attractive combination.

Quite the opposite is true of the Klipsch Heresy II, where too much volume can yield truly deafening results. As different from the Magneplanars as it is

possible to be, the Heresies' common-sense coupling of midrange and treble horns with a tightly-controlled infinite-baffle bass driver turned out to be a fine compromise. The earth-shaking potential of horn-loaded bass is sacrificed but the all-important domestic harmony is preserved!

Crossing the line more or less together were the Carlssons and the Diapasons. It is possible that, had we not scrutinized the Carlsson 50.2s, we should have had less elevated expectations of the 52.2s. Be that as it may, the 'ortho-acoustic' design rewarded careful placement with a delightfully broad sound stage and full richness of tone.

If you favour the symphony orchestra and a wall of sound across the width of the room, the

52.2s would bear closer investigation. The crossover points were carefully integrated and full marks were gained for naturalness. Their build is commendably solid and their styling 'modest'; it was chiefly the choice of tweeter that prevented this unusual design from fulfilling its potential.

From the 'small is



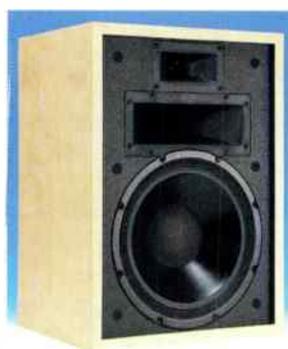
beautiful' school of thought come the Diapasons. Obviously it is not possible to plumb the Pacific depths with boxes of this size but their controlled attempt to go as low as musically possible gave generally pleasing results in conjunction with a sweet treble. As is to be expected from such a tiny box with radiussed cabinet edges, imaging was spot

on, the main disappointment at £1250 being no provision for bi-wiring.

Living Voice's Auditoriums made a name for themselves in integration, the twin mid/bass drivers working well with the soft-dome tweeter. There was plenty of bass as well, so lovers of lower frequencies should be happy. Up against the competition here, however, cabinet coloration was rather noticeable and the LVs' transparency couldn't equal that on offer from our other contestants.

In every way this month's Group Test has proved enlightening. For one thing, it serves as a reminder that 'box, two

drivers, reflex port' is not the mandatory recipe for everything. Even those which conform to this formula need not lack individuality as the Diapasons show. At the opposite extreme, 'speakers like the Klipsches, Magneplanars and Carlssons demonstrate that there remain many ways to skin a cat!



## Contacts:

**Carlsson 52.2**, 78 High Kingsdown, Bristol, BS2 4BL

**Diapason Karis**, UKD, 23 Richings Way, Iver, Bucks. SL0 9DA

**Klipsch Heresy II**, Midland Radio Supplies, Maypole Works, Maypole Lane, Birmingham B14 4PE

**Living Voice Auditorium**, Definitive Audio, Stanhope House, Leopold Street, Derbs. NG10 4QE

**Magneplanar MG12/QR**, RT Services, 118 Mendip Heights, Didcot, Oxon. OX11 7TG

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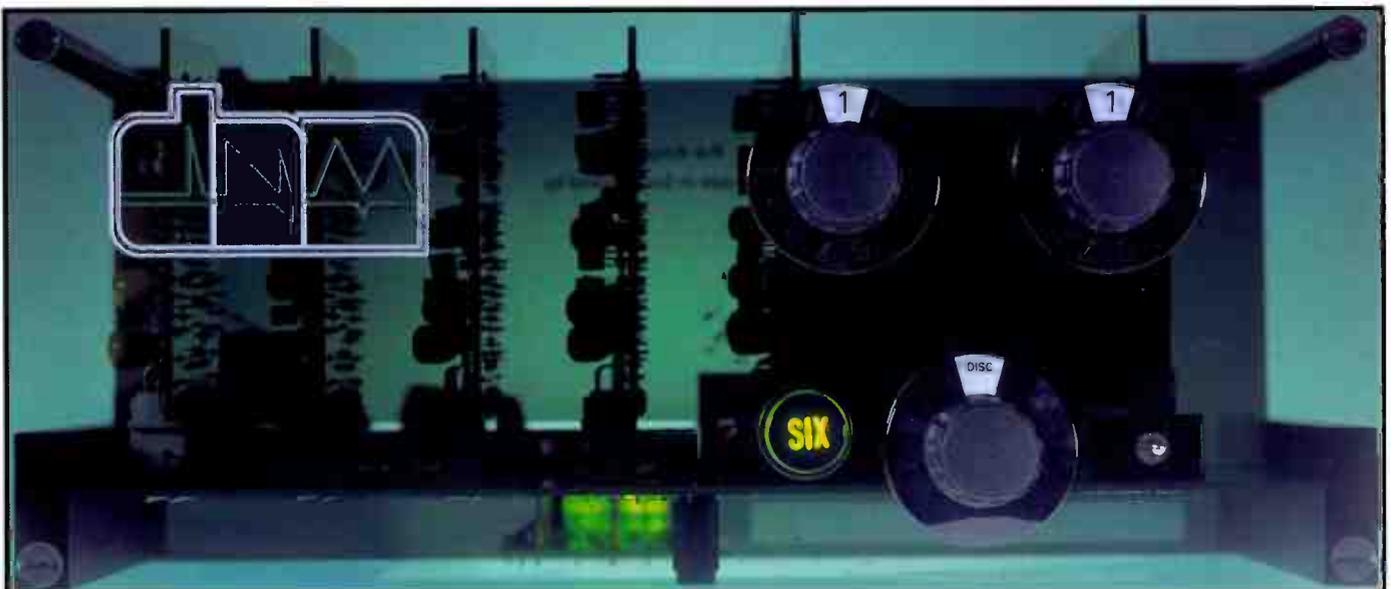


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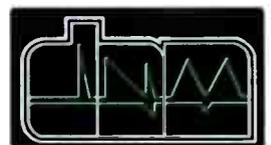
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# CD SUPERCEDED

David Price looks at the future of digital audio in the shape of the new DVD-Audio Disc and Super Audio CD.

Something of potentially great significance to hi-fi happened on a chilly February morning in Tokyo, as the finished DVD-Audio specification was finally unveiled to the world's audio press. After three years of talks, the DVD Forum (the group responsible for defining all the various new Digital Versatile Disc-based formats) finally agreed on the DVD-Audio Disc Version 1.0 specification. Impressively far-reaching, it offers super-high-quality digital sound in a number of formats.

To those used to normal Compact Disc, DVD-A is little short of staggering, calling for Pulse Code Modulation at 16, 20 and 24-bit resolutions with sampling frequencies spanning 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz and 192kHz. Recording options range from two to six channels, but even in the highest quality 24/192 stereo mode (giving a theoretical frequency response of DC to 96kHz with 144dB dynamic range, compared to 16/44's 96dB dynamic range and 22kHz bandwidth), you get over 74 minutes of music on the lowest capacity single-sided, single-layer DVD disc. Indeed, even in six-channel mode running at 24/96 there is over 74 minutes! Usefully, these multi-channel recordings can be replayed properly on normal stereo systems thanks to what the DVD Forum calls, "dedicated content producer-directed fold-down capability"!

The new format also offers compatibility with DVD-Video and DVD-ROM formats, as well as supporting playback of video clips with PCM and/or AC-3 sound with the quality of the DVD-Video format. Video slide shows can be included for



viewing while listening to music, and DVD-Audio discs can contain other information such as liner notes, artist discographies and website links for accessing bonus contents.

This is all possible thanks to the dramatically enlarged storage capacity the new DVD discs offer (currently seven times greater than CD and set to increase still further), plus the option of "lossless packing". Added since the DVD Forum issued the Version 0.9 specs back in June 1998, Meridian's Lossless Packing allows music data to be stored in a compressed form which can subsequently be decompressed during playback with no quality

degradation. MLP is what makes that 74 minutes of multi-channel 24/96 digital audio from a single-sided, single-layer disc a reality.

Purists may find DVD-Audio 1.0's provision for data compression shocking, but MLP is different. Developed by Meridian's Bob Stuart, Peter Craven and the late Michael Gerzon, it's designed to save disc space in a manner similar to the way in which computer files are 'zipped' and 'unzipped'. By necessity these have to be exact recreations of the originals, with not a single bit of data lost.

Stuart has commented that, unlike MD or DCC, the decoded signal isn't altered in any way from the original. He also emphasises the fact that MLP is "cascadable", meaning there's no "error accumulation" even after multiple generations of copies. On top of this, MLP apparently requires relatively little computing power - "six channels of 24-bit/96kHz audio can be processed by an inexpensive DSP chip".

## DVD-AUDIO VS SACD

While the DVD Forum was busy finalising DVD-Audio 1.0, Sony and Philips continued to develop their rival Super Audio Compact Disc which uses single-sided, dual-layer DVD discs and Direct Stream Digital coding.

DSD has several advantages over PCM, including a wide frequency range without the need for dramatic, brick-wall filtering. However, it's still the subject of heated controversy within the industry. For example, leading academic Professor Malcolm Hawksford of Essex University

has expressed reservations about DSD's "just barely adequate bit-rate" compared to 24/192 PCM.

In truth it's too early to judge the relative sonic merits of the two new formats due to the lack of available hardware and software. Initial impressions have been positive, from February 1998's press listening session at London's famous Abbey Road Studios to June's North American gathering. US record label executives including Telarc's Bob Woods and DMP's Tom Jung auditioned the system and were reported as saying, "Super Audio CD will let people hear the full potential of these recordings for the first time".

Compatibility issues are far more clear cut than the two formats' relative technical merits, as SACD's use of dual-layer discs allows a standard CD recording (which will play on all existing players) to be included. In short, its backwards com-



The DV-515 replaces the capable DV-505.

patibility means that buyers don't need to change players to play the new discs, even if they only get standard CD quality until they invest in a new SACD player. If Sony and Philips license the new format for free as has been suggested, this would mean that all music software sold from tomorrow morning could be SACD, without causing any compatibility problems with existing players. By contrast, DVD-Audio lacks backwards compatibility, a problem for music retailers to wrestle with. DVD-Audio



Sony's new flagship DVP-S7700 DVD/CD player.

machines will play standard CDs, but DVD-Audio discs won't play on existing CD machines.

The impact of a possible format war could be lessened as several manufacturers are thinking of making DVD machines that play both DVD-Audio discs and SACDs. Intriguingly, another section of the new DVD-Audio version 1.0 specification allows for an "optional audio format", which could actually be DSD! Mr Suzuki of the DVD Forum's Working Group 4 recently said that, "there is no move to approach DSD at the moment," but the WG-4 have repeatedly said that DVD-Audio specifications reserve space for DSD as an optional audio coding. He added that a format war "should be avoided".

DVD-Audio's strength is its ability to integrate the worlds of audio, video and computing. According to Pioneer's John Bamford, the Japanese electronics giants aren't working on new DVD video, audio and computer machines separately but on "DVD-Universal", a single player that reads all DVD formats including DVD-Audio 1.0. Neither is this yet another pipe-dream proposal from a Japanese

corporation. He revealed that Pioneer will launch the first DVD-Universal players in Japan by July, that they'll reach Britain by this Christmas and that, "in two to three years there'll be Pioneer DVD-Universal players in the shops for under £300".



Pioneer's DV-LX10, with its "Double Air-Lock Shield Loading" is a prototype DVD-Audio player.

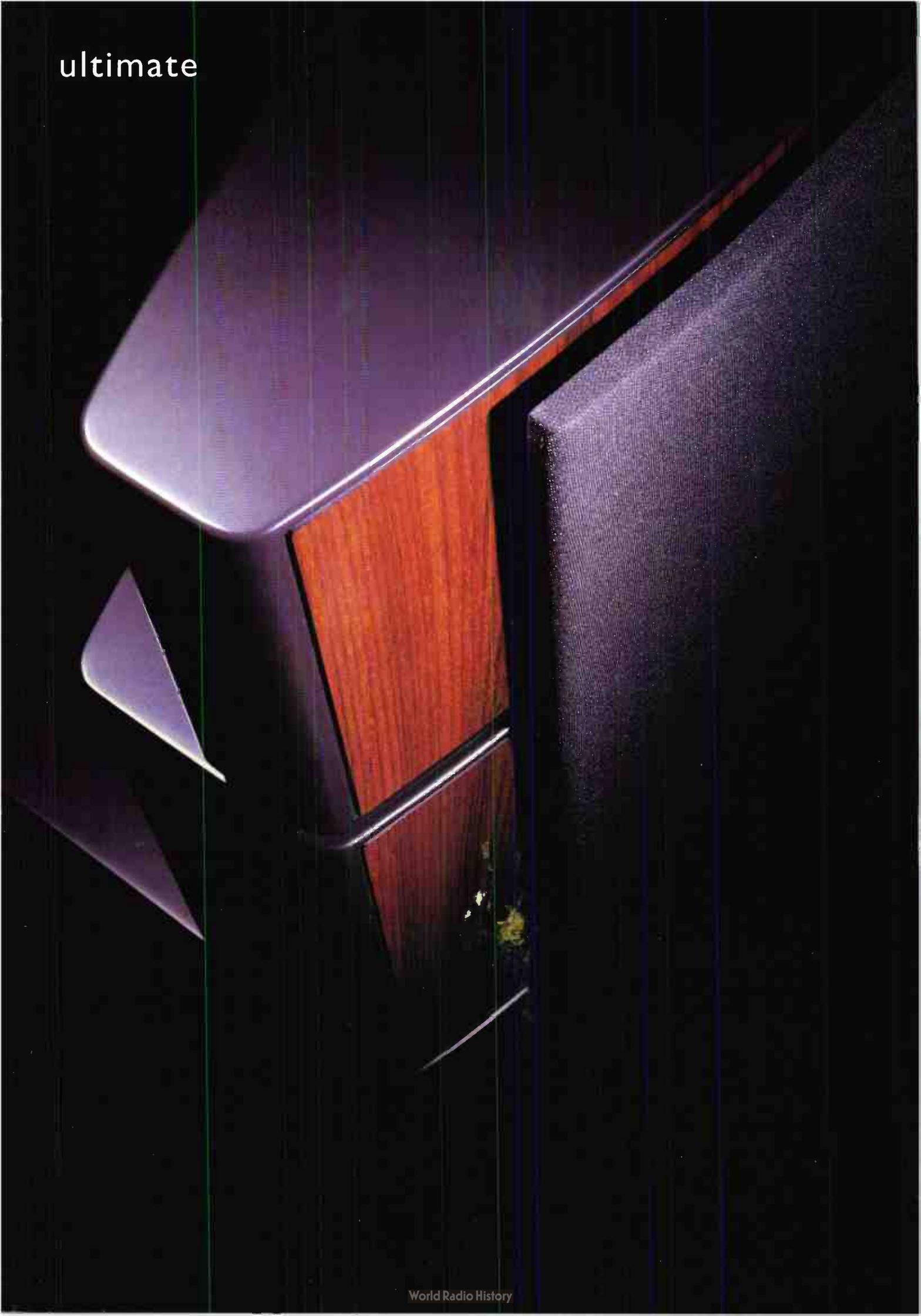
By bringing together high-quality audio with state-of-the-art video at CD-player prices, DVD-Universal makes a convincing argument for itself. Professor Hawksford points out that in the world's largest markets such as the United States and Japan, home theatre is outselling hi-fi by a sizeable margin: "The new millennium is a turning point and this will include audio and video convergence. The old ways are dying - ignore this at your peril." Considering the Japanese manufacturers' avowed intention to replace VHS with recordable DVDs (which include the full DVD-Audio 1.0 specs) within the next few years, he may have a point.

Another important key to DVD's future success is its adoption by the motive force behind all technological advances, the computer industry. In the multi-billion-dollar PC market, DVD is fast establishing itself as the norm. Computer DVD players are available for under £100, and will read audio CDs, CD-ROMs, CD-Rs, CD-RWs and all existing DVDs. In under a year they'll also handle DVD-Audio 1.0, while a whole new



The DVL-919E handles CDs and Laser Discs as well as Video DVDs.

ultimate



generation of recordable DVDs (known as DVD-R and, DVD-RAM) are appearing, giving cheap, high-capacity data storage. In the absence of low-cost, high-capacity flash memory storage for several years yet, DVD-Universal could be the solution.

Last but not least are production costs. As Professor Hawksford pointed out last year, DSD's greatest advantage is the cheapness of the DAC chips needed to decode it. Thanks to its relative simplicity compared to PCM, DSD hardware lends itself to budget personals and portables, which Sony and Philips sell in vast quantities. If SACD catches on, the hardware manufacturing costs may go right down.

SACD loses out on the software side due to its need for dual-layer discs (one for SACD data, the other for CD), which raises costs above those of single-layer DVDs. And if you're talking about selling billions of units, dual-layer discs are a heck of an expense. This could make DVD-Universal discs the format of choice for the world's music industry.

## GOODBYE CD?

Just as the LP vs CD debate dominated hi-fi magazines' letters pages in the Eighties, so the CD vs DVD debate may have pens heading for paper in future. The question is, how long will CD stick around now a far superior music carrier is almost with us? Conversely, how will this



Pioneer's as-yet-unnamed DVD-Recordable prototype.

superior digital disc be sold to the public if 99% of them believe CD is perfect anyway?

As far as average audio buyers are concerned, DVD-Universal's extra multi-channel mixes, sleeve notes, artwork, video clips and Internet links should be sufficiently persuasive that they 'trade up' as soon as the prices reach those of current CD players. Audiophiles will appreciate this factor as well but will have to deal with the fact that a dedicated high-end CD player will probably play their large collection of existing 16-bit discs better than a high-end DVD-Universal machine. Switch to 24/96 or 24/192 and the situation reverses dramatically, as even a merely competent DVD machine replaying a higher sampling-rate recording will blow the best £10000+ CD player into the weeds.

When the new 24/96 and 24/192 discs start arriving en masse (there are already a few 24/96 Advanced Audio Discs around from US specialist labels), will there be any reason for buying CD-only machinery? Pioneer's John Bamford is unequivocal: "CD players ended a year ago with the advent of DVD. It's game over, mate".

Perhaps the answer to The Great Format Debate is that there isn't one. Everyone from marketing executives to cultural theorists is now speaking of a fragmented consumer marketplace with no one, single standard for anything. In a sense, they say, the black-only days of Henry Ford are over. No longer will we be forced to accept a format chosen solely by the established hardware and software producers. This is because technology, fuelled by the computer industry, is developing apace. New music delivery systems like the Internet, plus flash memory cards and blue lasers could transform the consumer landscape, and very soon we'll inhabit a truly multi-media, multi-standard world.

Professor Hawksford suggests that a change in thinking on our part is necessary, that we shouldn't look to one 'winner' in the way we watched CD usurp LP.

Rather, "audio formats may become more like the computer industry where things at the cutting edge are out of date every nine months. Ten years from now smart card storage will be the

norm with music bought through vending machines in a format you the buyer can specify." He's optimistic about Digital Versatile Disc, seeing its various formats as increasing consumer choice. And by bringing hi-fi, home entertainment and multimedia dramatically closer together, DVD-Universal could represent a paradigm shift in the way we'll buy and listen to music in future.

## DVD - THE FACTS

### 1) FORMATS

DVD-Video	playback-only video
DVD-ROM	read-only data storage
DVD-RAM	read/write data storage
DVD-R	re-recordable video
DVD-Audio	playback-only multi-channel audio

### 2) DIGITAL DISC CAPACITIES

MD	(single-sided, single-layer)	0.14GB
CD	(single-sided, single-layer)	0.65GB
DVD	(single-sided, single-layer)	4.7GB
DVD	(double-sided, dual-layer)	17.0GB
SACD	(single-sided, dual-layer)	8.5GB

## DVD-AUDIO V.10 SPECIFICATIONS

16, 20 or 24-bit Pulse Code Modulation at 44.1, 48, 88.2, 96, 176.4 or 192kHz quantisation. Up to six channels of music, with a transfer rate of 9.6Mbps maximum.

MLP option permits supplemental information storage, including album name, song titles, artist data, artist discography plus URLs. No regional coding, unlike DVD-Video. Optional audio format facility.



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# CROSSING *the* RUBICON

**Dominic Todd wonders if the Indus stepped attenuator and Rubicon valve power amp from Rothwell will sink or swim.**

In spite of the fact that Andrew Rothwell has been producing hi-fi components for over eight years now, you could be forgiven for not recognising the components he builds. The ex-Alphason electronics designer has made limited runs of phono stages, pre and power amps in the past for dealers, but this is the first time any of his components have been submitted for review.

Rothwell started out by producing stepped attenuator passive pre-amps. He believed these to be superior to the more common infinitely-variable potentiometers which are widely used these days. Of course, the classic drawback with stepped attenuators is that, in accordance with Murphy's law, the ideal volume setting falls exactly between two steps, even when using a 24-step device

which provides relatively high resolution. The answer was to provide two 12-way controls, one offering coarse and the other fine adjustments. This may sound like a somewhat strange arrangement but it provides a total of 132 volume settings!

This bright idea is at the heart of the £500 Indus pre-amp. The price tag might look expensive for a passive pre but it doesn't seem so much when you consider the time and skill that have evidently gone into this bespoke device. Also worthy of note is the use of solid-core, silver-plated copper wiring and silver-plated switch contacts. If it's features you're after, though, you'll have to look elsewhere as there's no phono stage, remote control or headphone socket.

The Rubicon power amp is similarly devoid of features but equally

well engineered. A neat little viewing window reminds you that it's valves you're listening to as the case-work, which should fend off the closest attentions of pets and children, fully encloses the chassis. As well as the Cherry wood and bronze finish reviewed here, both units can be clad in a smart gloss black with Perspex front panels.

The valve count includes four self-biasing ECC83s in the driver and phase splitter stage. The output is handled by two pairs of EL84 pentodes working in triode mode. A disadvantage of this *modus operandi* is a low power output, in this case a measly 10watts. Mind you, scrawny ratings never did Audio Note any harm! For those who want to monobloc in the search for extra watts, an internal switch is provided.

Plenty of attention has been paid to ensuring a clean power supply, with the cathode bias voltage derived from a variable regulator to ensure accurate adjustment of the output valves. Individual parts have also been carefully selected, with silver-plated wiring and polypropylene caps boding well.

Promising they may be on paper, but how would the Rothwells handle being part of a system? I hooked them up and plied them with Lauryn Hill's 'To Zion'. My initial reaction was that the sound was far too gusty to be coming from a valve amp, especially one whose output barely makes it into two figures.

Whilst the Rothwells' bass wasn't the deepest, I was struck by the immediacy of the song, underpinned as it was by a tight, punchy bassline. Any thoughts that this might be at the expense of the other virtues valve gear possesses were quickly dispelled by a beautifully-resolved guitar rendition. Lead vocals were powerfully projected from within a broad and deep sound stage positively bristling with detail. And during the closing section of the track which becomes quite 'busy', the Indus and Rubycon kept their cool with fine separation.

Each song on this album is interspersed with a little classroom banter. Even these incidental snippets showed a degree of intimacy, such as the shuffling of chairs and giggling, that lesser amplification would completely gloss over.

After an impressive start I was keen to see if the Rothwells would be as beguiling with an older recording. Margo Thunders' 'Expressway To Your Heart' on Blue Note fitted the bill nicely. Again I was reminded of just how well decent valve amplification handles female vocals - their full body and tonal colour were faithfully reproduced. The same went for the instruments, brass especially vibrant, although I can imagine that with some brash ancillaries the final result could be too forward. Nevertheless, with most systems it would be hard not to be drawn in by the finely-etched yet tonally rich presentation.

Via an outboard phono stage it was now the turn of vinyl to strut its stuff. The atmosphere on Liza Minnelli's 'If There Was Love' shone through in the manner I had grown to expect of the Rothwell combo. Again, you'd get deeper bass from a large solid-state power amp, but at least what there was was tight, clearly defined and well integrated with the rest of the mix. Teasing apart the various musical strands was a piece of cake as well, with no hint of the 'mush' that can veil detail in some valve gear.

Another pleasant surprise was some real height to the sound stage. It's frequently the case that an otherwise capable hi-fi component falls down because it makes singers sound as though they're performing on their knees! Not so the Rothwells



Contributing to a good deal of the Rubicon's weight are the sizeable mains and output transformers.

- if you yearn for vocalists 'in the room' with you, this is a good place to start.

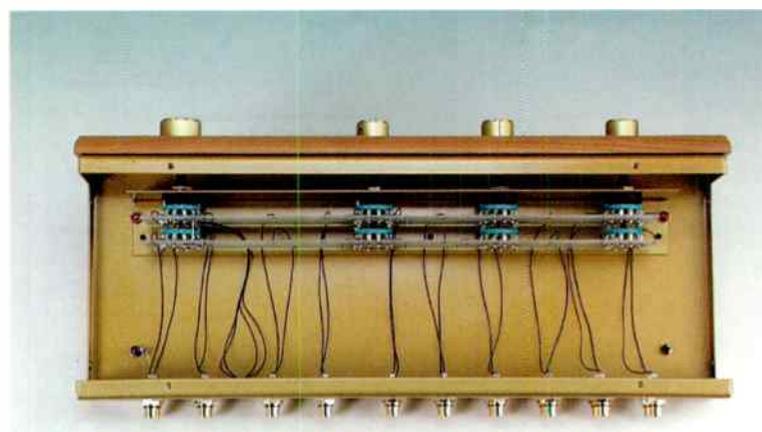
Looking for the Indus and Rubicon's weak points I employed Holst's Jupiter. Compared with transistor power amps in the same price bracket they couldn't stretch quite as far across a full orchestral recording. Ultimately dynamic response was curtailed, but there was plenty to enjoy within these limits. As a whole the piece had excellent timing and pace aplenty to inspire all those air conductors out there. The strings had a natural, mellifluous timbre which off-set the metallic percussion to a tee. The piece flowed too, with none of the grain or stilted progression that can mar more powerful tranny kit.

Rothwell's Indus and Rubicon won't suit all tastes. If buttons and upgradable modules are your thing, then they fall at the first hurdle. If it's sheer grunt you're after, then you'd be better served by something like Musical Fidelity's X-A200s. However, where the Rothwells are good, they're very good. The resolution of fine detail and texture is superb, and gives more than just a glimpse of the true high-end. Sound staging is expansive, and you'll never find yourself wishing for more pace either. As an intimate device to bring the music out of your hi-fi and into your listening room, the Rothwells are hard to beat at this price ●

Rothwell Indus £499

Rothwell Rubicon £949

Rothwell Electronics  
60 Pennington Road,  
Great Lever,  
Bolton BL3 3BR  
Tel: 01204 654614



Short runs of wiring are the order of the day inside the Indus. All the switch wafers feature silver-plated contacts.

WORLD VERDICT



They may be low on power but the Rothwells score high on sound.

Measured Performance see page 111

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Status 3.4 LC-oxygen free silver

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# POWER PACK

Jon Marks side-steps mains pollution with Accuphase's PS-500 Clean Power Supply.

The motto printed on Accuphase's brochures is: "Enrich life through technology." Judging from the construction quality of the PS-500, just as apt a company slogan would be: "If a job's worth doing, it's worth doing right." You certainly couldn't accuse this Japanese firm of cutting corners or suffering from a blinkered technological outlook. Where most forms of active mains-treatment involve a couple of transformers and assorted components arranged in a well-worn configuration, all bundled in a black box, the PS-500 has the air of solidity associated with bomb shelters and some innovative electronics.

AC synthesis is the process normally used to provide a pure 50Hz sine wave for hi-fi equipment. There's a couple of ways to fry this particular fish. One consists of an AC voltage well below 240volts (supplied by a transformer) which is rectified, smoothed and then fed into a power amplifier whose input signal is provided by a 50Hz sine wave generator. The amp's output is then fed into another transformer to step it up to 240volts. Method number two bypasses the second transformer, instead relying on a high-voltage amp which can swing 240volts.

While both of the above have merits, they have their problems too. These include fairly high power consumption if you want a synthesiser capable of supplying more than tuners and pre-amps, and RF emission from the sine wave generators (which often have high-frequency quartz crystal oscillators at their hearts).

The PS-500 addresses these drawbacks with Waveform Shaping Technology. Rather than going through a wasteful AC/DC/AC

transformation, it maintains the signal in AC throughout. Therefore it doesn't 'start from scratch', it corrects the mains' deviations from the ideal sine wave, which necessitates only low-power and hence high-efficiency amplification. It does this by generating a reference signal to compare the mains with and correcting any differences with the 10 parallel push-pull transistors in the waveform compensation amplifier. And as the reference is synchronised with the mains, no noisy oscillators are needed.

Firing up the PS-500 is simplicity itself. Make sure everything is switched off before plugging components one-by-one into the Accuphase's four rear-panel sockets. As these were not IECs, we used the round-pin-to-IEC leads supplied.

I started out with a basic system consisting of an Arcam Alpha 9 CD player, Rothwell stepped attenuator and our 300B valve power amplifier working into Jamo's Concert 8 stand mounters. Later beneficiaries included Teac's P-30 transport, Pink Triangle's Da Capo Dac and Canary's 601 Mk2 valve pre-amp.

Powering up the PS-500 and then switching on the 300B told me that the valve amp was drawing around 350watts, the heaters responsible for a large chunk of this. With the Alpha 9 still running from unprocessed mains, I hit the Play button.

The Accuphase's sonic impact is not one of those subtle effects you can only pick out over extended listening. Whatever music was flowing through the amp was now clearer, more natural and more spacious. The biggest surprise was how much faster basslines and melodies were too, the 300B plugged directly into the wall sounding slow and uninvolved by comparison.



Accuphase PS-500  
£3250

Repeating the switch off/switch on procedure, I added the Alpha 9 to the PS-500's loads. Again, with discs a-spinning there were more blatantly obvious advances in transparency and tonal richness. In addition, midrange grain and treble hash dropped substantially, the music becoming more involving.

Only cleaning up the supplies to two components doesn't yield great value for the Accuphase. With its 500watt limit, however, as long as your system doesn't contain huge class A monoblocks, the PS-500 could handle an entire system.

On average, a cassette deck, pre-amp, tuner, CD player or turntable will require roughly 10-30watts each. With, say, four sources, a pre-amp and a modest class A/B power amp hooked up to 'speakers of normal efficiency, there should be no danger of tripping the protection circuitry. And with major improvements in sound with every extra box connected to it, the end result is a very significant boost in sound quality at a cost of about £500 per component.

As a lump-sum purchase the Accuphase appears to be firmly in high-end territory. Feeding an entire system, though, its virtues can be appreciated in less esoteric surroundings. Given its cost per component, the PS-500 is an extremely effective upgrade.

RT Services  
118 Mendip Heights,  
Didcot,  
Oxon. OX11 7TG  
Tel: 01235 810455

## WORLD VERDICT



The PS-500 may not be cheap but it is fabulously built and worth every penny sonically.



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Audio Analogue Puccini SE Amp	£635
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<b>System Price</b>	<b>£2634</b>
<b>Minimum Deposit</b>	<b>£264</b>
<b>Maximum Balance</b>	<b>£2370</b>

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Musical Fidelity X-Ray CD	£800
Musical Fidelity X-P100 Pre	£800
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Wilson Benesch Orator Spkrs	£2900
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<b>Maximum Balance</b>	<b>£4770</b>

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Krell 250CD CD Player	£2490
Krell 300i Integrated Amp	£2495
Martin Logan Aeries i Spkrs	£2199
<b>System Price</b>	<b>£7184</b>
<b>Minimum Deposit</b>	<b>£724</b>
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# SUGAR DAD-DY

Simon Pope puts the revamped Cyrus dAD 1, the dAD 1.5, through its stylish paces.

I cannot think of any manufacturer who has stuck to their design guns as strictly as Cyrus with such effective results. Their metal shoebox still somehow manages to look innovative and refreshing after years of production. Integral to the Cyrus image is the die-cast chassis which is used for their most affordable CD player as well as the most expensive - the vast majority of differences are purely internal. Consequently the entry-level £400 dAD 1.5 looks virtually identical to the £900 dAD 3Q.

Elevating the old dAD 1 to dAD 1.5 status is a range of component improvements. As a result DAC linearity has apparently been boosted and the filtering circuits tweaked, which the company claims provides a lift to all aspects of the dAD 1's sonic performance. There are also independent power supplies for the digital and analogue sections as well as the disc motor. Facilities and operation modes remain the same, including the backlit LCD display. At the rear are the MC-BUS connections (which hook up an entire Cyrus system so it can be controlled from a single remote, although the one supplied is fairly basic), RCA audio sockets and one co-ax digital out.

Clear treble is one of the traits common to Cyrus gear and with Classical music the dAD 1.5 continued this tradition. Using an Audio Analogue Puccini SE integrated and a pair of Heybrook's meaty (and affordable) Optima loudspeakers it was "wagons roll!"

The Royal Hunt And Storm scene from Berlioz's mammoth opera *The Trojans* can end up a bit of a dynamic headache for both equipment and balance engineers due to the skeletal orchestration of the start and the large forces

involved at the climax. Decca's recording conducted by Charles Dutoit, however, succeeds in striking (literally) the right balance and the Cyrus responded well, not balking when the going got tough.

Double-basses and cellos, as ever with Berlioz's writing, seemed to appear from somewhere below the earth's crust.

The dAD 1.5, although not possessing the deepest bass around, mustered all its electronic resources to produce a muscular sound. Steadily, as the rhythm pendulum started to swing, the Cyrus's control highlighted the fervent rushes of the violins. Gradually, as the rest of the orchestra, chorus, kitchen sinks, etc joined in, the dAD 1.5 maintained its grip commendably. All manner of timpani-banging, bass drum-thumping and chorus-yodelling failed to throw it. Full marks to the Cyrus for consuming such rich fare without indignation!

Peculiarly the dAD 1.5 didn't seem to have as much control with heavily-layered studio recordings as it did with orchestral music. 'Airbag' from Radiohead's *OK Computer* suffered from a forward midrange and slightly splashy treble on the cymbals. Due to a forced, nasal coloration across the midrange, I found Thom Yorke's vocals were even more annoying than usual too. Plus points were good stereo separation and a firm bass that didn't match seamlessly with the rest of the sound but still managed not to sound detached.



Less artificial and compressed material such as the Franz Schubert Quartet playing Tchaikovsky's String Quartet No1 and Mikio Masuda's Jazz trio (on a JVC K2 CD) were tunes closer to the Cyrus' heart. The string tone of the Schubert foursome was rich and balanced, even if the first violin would occasionally take the odd filling out. This tonal aberration lies in the recording itself, however, rather than the dAD 1.5.

The Cyrus showed itself to be very revealing when dealing with smaller forces and intimate recordings, excellent detail and imaging being two of its key achievements. Masuda's pedal work and key contact was clearly audible, which created the sense of a live performance in my front room.

Processed studio Rock with a typically up-front production wasn't as exciting through the Cyrus as it can be with other players, and it had quite a biting midrange with this stuff too. The dAD 1.5 really hit its stride on acoustic music, both full orchestral works and string quartets bringing its cohesion and grip to the fore. As they say, "One man's meat . . ."

Cyrus dAD 1.5 £398

Cyrus Electronics  
Stonehill,  
Huntingdon,  
Cams. PE18 6ED  
Tel: 01480 451700

## WORLD VERDICT



Great detail and imaging with intimate music. Classical and Jazz suit the 1.5 down to the ground, but Rock can sound harsh.

Measured Performance  
see page 111

# WIN LOUDSPEAKERS, A CD PLAYER OR A CARTRIDGE WORTH OVER £1900

**This month we have another trio of great prizes to give away in Carlsson's 50.2 'speakers, Audio Analogue's Paganini CD player and The Cartridge Man's Music Maker cartridge.**

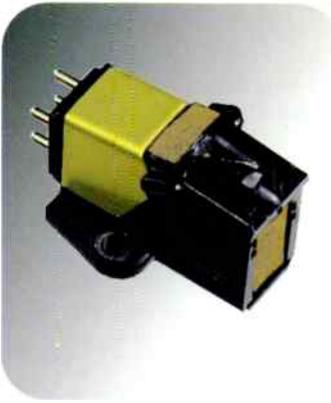
**F**irst of our prize threesome is Carlsson's 50.2 Ortho-Acoustic loudspeakers. Harking back to omni-directionals from the Seventies (such as those from Sonab, which Stig Carlsson, creator of the 50.2s, also designed), these short floor standers break with transducer tradition.

Unlike the majority of box loudspeakers which eat into valuable domestic floor space, the Carlssons' unusual but effective design dictates that they be positioned against opposite walls to achieve the desired omni-directional effect. Less iconoclastic is the driver line-up, where a mid/bass with paper cone serves alongside an aluminium-dome tweeter.

As he discovered in his December '98 review, when properly set up the 50.2s are capable of impressive results compared to



more normal loudspeakers. Once he had become accustomed to not trying to pin-point the position of the enclosures, Richard White described the Carlsson experience as "a musical wall



spreading the whole width of the room."

As confirmed by several organ works the Carlssons handled bass as well as they had sound staging, while an Arne Domnerus Jazz CD showed they were capable of full-bodied, tangible imaging. Their highly natural sound actually had Richard White craning his neck to peer around Mr Domnerus at

the drum kit! This flair for portraying performers and space between them meant that the 50.2s dealt particularly well with orchestral music, more run-of-the-mill loudspeakers sounding cramped and small-scale by comparison.

The past few years have seen Italian hi-fi establishing a strong reputation for itself thanks to stylish lines, solid construction and quality sound to match. One of the leading lights in this Latin league is Audio Analogue, whose components (such as the Puccini SE integrated and the Bellini/Donizetti pre/power combination) have left lasting impressions at World Towers. The company's habit of christening their products after famous Italian composers is apt as they have all turned out to be eminently musical.

Audio Analogue's latest star, the Paganini CD player, proves that AA are not content to rest on their laurels. Tim Liu reviewed this single-box machine last month and discovered that, as ever, the build quality was exceptional. The same 10mm aluminium fascia that graces the Puccini SE is here punctuated by an eye-catching circular display mirrored by the control buttons which are laid out like the chamber of a revolver. Under the black bonnet lie two Talema toroidal transformers and a Crystal Semiconductors 24-bit convertor feeding AA's own output stage.

When it came to sonic fortes Tim found the Paganini had them in abundance. With Led Zeppelin's Houses Of The Holy, the player's "deep, tuneful bass lifted this track into overdrive". The treble was "sweet and free from grain" and refreshingly detailed. Taken together, these attributes meant the Paganini had a knack of relaying well-known recordings and shedding new musical light on them. There's no doubt AA's boffins have come up with the goods once again as this player does for CD what the Puccini SE does for amplification.

Prize number three is for fans of the old, black disc, the Music Maker cartridge from The Cartridge Man. The Music Maker uses a high-output moving-iron generator which can be plugged straight into a standard Moving-Magnet input on an amplifier.

Whilst spinning a disc of Pinchas Zuckermann, the Music Maker portrayed a wide dynamic response with lots of attack and detail. This characteristic remained unchanged regardless of recording; as Richard White commented, "whether it was the filigree of transients found in Baroque harpsichords or the flam of the drums on latter-day Be-Bop. . . it took everything in its stride".

To qualify for the chance of winning one of the above, all you have to do is answer correctly the questions below and follow this by completing our tie-breaker in no more than 30 words. Stick the form or a photocopy onto a postcard or sealed envelope (not inside it!) and send it to the following address, to arrive by May 5th:



**Carlsson/Music Maker Competition**  
**Hi-Fi World Magazine,**  
**Suite F29, Imex House,**  
**Kilburn Park Road,**  
**London NW6 5LF**

## COMPETITION ENTRY QUESTIONS

1) Who designed the 50.2 loudspeakers?

- A. Björn Borg      C. Stig Carlsson  
 B. Vlad The Impaler      D. Robin Marshall

2) What material goes into the 50.2s' mid/bass cones?

- A. Paper      C. Spandex  
 B. Cobex      D. Polypropylene

3) Which country do Audio Analogue hail from?

- A. Lithuania      C. Britain  
 B. Italy      D. America

4) How many transformers are there inside the Paganini?

- A. 3      C. 2  
 B. 1      D. 10

5) What sort of generator does the Music Maker use?

- A. Moving Magnet      C. Strain gauge  
 B. Moving Coil      D. Moving Iron

### COMPETITION VERSE (obligatory)

Complete the following in fewer than 30 words

**When the Carlsson cube gives vent to an idyll,  
 There's sure to be plenty of takers.**

**Add a famous composer (not on the fiddle) -**

**How's that for some Music Makers!**

### COMPETITION WINNER

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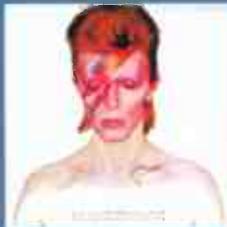
## THE MILLENNIUM VINYL COLLECTION



EMI will launch their Millennium Vinyl campaign in April. 10 classic titles will be re-issued in their original packaging in heavy quality sleeves, on 180 gram virgin vinyl and cut from the original analogue tapes. The titles are:



A DAY AT THE RACES



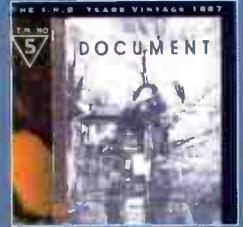
ALADDIN SANE



WALLS AND BRIGDES



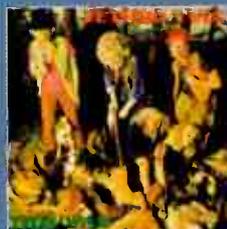
MUSIC FROM THE BIG PINK



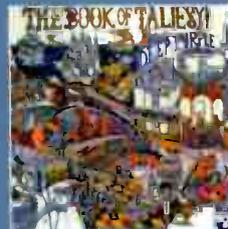
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# X-Emplary

With furrowed brow, Richard White ploughs into his records with the aid of Musical Fidelity's X-LP.

It seems almost an impertinence to describe the looks of the X-LP; Musical Fidelity's cylindrical casings are now so well known that likening their styling to a beer barrel or concocting another X-rated pun for the heading risks a Readers' March on our HQ. At least it remains true that we've not yet had to use any headings like "X-cruciating" or "X-scrabble" for MF gear so far. Fingers crossed, nor shall we this time!

For those of us invariably doomed to lose at Hangman, the X-LP is a free-standing phono stage powered with 12V from one of those neat little transformer-plugs supplied with the unit as standard. Having the power supply located at the mains socket, several feet away from any of the electronics, is a sensible hum-reducing idea which could usefully be emulated by more equaliser designers. In the instructions, Musical Fidelity say that the X-LP can be left on all the time; with its modest current requirement, obviously overheating will not be a problem this side of the Apocalypse.

There are three pairs of phono sockets on the back, one each for Moving-Magnet, Moving-Coil and Output. A simple toggle-action button changes between MC and MM, which allows one cartridge of each type to be permanently connected - a handy feature if you have two decks or a turntable fitted with two tone-arms.

The X-LP was mated with an assortment of cartridges old and new and a choice of records that covered the entire musical spectrum. Since the purpose of a stand-alone phono stage is usually to compensate for a



pre-amp without one, I naturally tried the X-LP into the Aux socket of a line-level pre and through a passive stepped attenuator. In addition, a minor modification to the input sensitivity of a valve pre-amp with phono stage allowed a proper check as regards using the MF for upgrading vintage gear.

Knowing that Musical Fidelity X products have a reputation for a certain crisp clarity, I rootled out one of my crispest records, DGG/Archiv's Dance Music Of The Renaissance. There are times when this record merely raises smiles as the crumhorns and lutes get under way; the accumulated mental baggage of Monty Python's Holy Grail added to Blackadder and numerous 'historical' serials has somewhat debased this music for serious listening. However, the sonic signature of these antiquated instruments needs real ability both in the cartridge and the rest of the reproducing chain.

A few bob carefully spent on

interconnects will pay dividends in the phono regions, but the X-LP's output seemed fairly forgiving of some quite unpleasant pieces of wire. The direct contest between old integral phono stage and X-LP was simply a slaughter; the X-LP remains whilst the cobwebs are beginning to accumulate on the valves!

After an extensive tour of the record collection, it was very difficult to fault the X-LP. On one hand, the 3mV sensitivity of the MM setting is perhaps not as generous as you might wish if your cartridge is on the low-output side. On the other hand, the oft-noted clarity and sparkle of MF gear can partly compensate for this - time to listen to the music, not the mush.

Bearing in mind that £130 effectively buys both MM and MC stages, the X-LP has a lot to recommend it. Couple the keen price with the clear and comfortably musical sound and you'd have to be very niggly not to give it high marks.

**Musical Fidelity**  
15/16 Olympic Trading  
Estate,  
Fulton Road,  
Wembley,  
Middx. HA9 0TF  
Tel: 0181 900 2866

## WORLD VERDICT



Transparent and involving, the X-LP is an enjoyable way to listen to LP.

Measured Performance  
see page 111



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# GETTING HIGH

High output isn't the only trick up the sleeve of Dynavector's latest cartridge, the DV20X-H Black moving coil.

Any analogue addict worth his record collection should remember the Ultimo 10X, a high-output moving coil designed and manufactured by Dynavector of Japan. Back in the late Seventies it was one of the most musical budget pick-ups around, and had the added benefit of not requiring a costly step-up transformer.

The trouble was that, for many people back then, pukka moving coils had to be low output or they just weren't the real McCoy. There was some sense in this, because the (relatively) vast quantities of wiring necessary for higher output made for all manner of tracking problems.

Dynavector was the exception that proved the rule. The company's founder, Professor Noburu Tominara of Tokyo university, is a leading expert in miniature coil-winding technology. He designed a winding machine that used ultra-fine wire, giving a class-leading output-to-mass ratio. To this day it's proved central to Dynavector's success.

Of course, using masses of wire to achieve high output is always going to compromise performance, but it eliminates another potentially more serious pitfall later in the replay chain - the MC head amp or transformer. Put this way, the £299 DV20X-H Black makes a strong case for itself before you've even taken it out of the box. Construction is excellent, with a body of milled aluminium alloy and a hard aluminium pipe cantilever fitted with an elliptical, nude-diamond stylus. In my Michell Orbe/Origin Live RB250, the Dynavector tracked extremely securely at the bottom of its 1.8gm-2.2gm range, while its 8.6gm total mass proved no trouble for the lightish Rega counterweight.

As soon as its stylus hit the groove, I was struck by how different



the Black was to most moving coils. Audio Technicas have always had a very exciting sound but can be tonally thin and hard, while Ortofons are more refined but sometimes bland. The Dynavector, however, treads between these extremes very adeptly. Indeed, my first reaction was that this was a 'Goldring from heaven'. It has that deep, rich musical sound that we all love in the 1042 but none of its murkiness or treble splash. And then it starts doing the clever stuff MCs are famous for too, like crisp, clean treble, strong sound staging, tight imaging and real dynamics!

For example, The Crusaders' 'Street Life' kicked off with Randy Crawford in fine voice hanging between the 'speakers. The DV20 projected her voice forward into the room and pulled the accompanying keyboards right back. Saxophones had a deliciously deep, breathy quality to them and the drum kit was tight and delightfully punchy. An unusually up-front and unself-conscious performance then, one that was more fun than the MC30 Supreme which sounded over-polite by comparison. The Ortofon also

showed the Dynavector's sins, though, which centred around not resolving every last shimmer from the cymbals and losing some of the recording's atmosphere.

Moving to The Prodigy's 'One Love', the Dynavector was better still. It's a real 'take no prisoners, come out fighting' sort of cartridge, and didn't wait around trying to resolve the subtleties of the Akai S1000 sequencing. The result was a lot of fun and not a million miles from the old Decca London Export.

Classical was probably where the Dynavector was least successful. It wasn't bad - far from it - but it seemed just a tad too coloured and unsubtle to resolve every last nuance of an orchestra in the way that more expensive coils do so well.

The Dynavector is not flawless but it covers its tracks so much better than its rivals that it often sounds like a high-ender. It's certainly as musical as many top moving coils. Just because Dynavector's a bit of an enigma over here, don't assume their cartridges aren't any good. Indeed, the DV20X-H Black comprehensively proves the reverse●

**Dynavector DV20X-H Black** £299

**Pear Audio Limited**  
7 Prospect Place,  
Alnmouth,  
Northumberland  
NE66 2RL  
Tel: 01665 830862

## WORLD VERDICT



Delightfully musical sound makes the Dynavector an essential budget MC.

Measured Performance see p111

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# LOW-COST LINKS

Simon Pope investigates three interconnects priced between £5 and £20.

**MONACOR GREEN** £5.50



**T**hese interconnects come in a rather garish green/turquoise cladding which unfortunately clashes with just about every piece of hi-fi ever built. However, once hidden behind Audio Analogue's Paganini CD player and matching Puccini SE amplifier, the gaudy colour was replaced by a surprisingly grainless sound.

The third movement of Mahler's Seventh Symphony yielded a wide sound stage with decent imaging and a very smooth if slightly compressed presentation. The violins were refined and full-toned but there was a slight lack of sparkle to the midrange which stopped the Monacors from sounding as open as they might otherwise have been.

Shifting from Classical to Rock, I discovered fine imaging and detail on Soundgarden's 'Drown Me', with the lead vocals well-centred and clear-throated. Tight, controlled bass guitar and kick drum ensured there were sufficient pace and energy to keep the song driving along. My only gripe was that the cymbals were slightly 'smeared' so the contact of stick on metal was glossed over.

The Monacors' pleasantly relaxed and warm character makes a lot of sense when you consider cheaper systems usually have a bright, brash character. At the money they're decent value.

**Cricklewood Electronics**  
40-42 Cricklewood Broadway,  
London NW2 3ET  
Tel: 0181 452 0161

**REALISTIC TANDY GOLD** £6.99



**R**ealistic may not be the first name in hi-fi but these cables are far from bell wire. The plugs are solid and grip the socket firmly and the cable in between is very capable.

Replaying Mahler I was taken by the Golds' clarity - they had a habit of homing in on the principal instrument that carried the main theme. The upshot was that solo woodwind was bold and clear at the expense of the rest of the orchestra becoming rather distant. Still, with this extra lift to the midrange and treble there was more detail and life through the Realistics than the Monacors - string runs and quick passages were more exciting.

The Golds coped admirably well with Soundgarden's heavy Rock as well. One highlight was percussion detail, every drum with its own individual signature, a feat even interconnects twice this price often fail to pull off. As with Classical there was an emphasis on the instruments at the core of each song and, of course, on Chris Cornell's 40-a-day voice.

Realistic's Golds are a very viable alternative to the Monacors with their more open, vivacious sound and merit equally bargain status.

**Tandy (branches nation-wide)**  
Tel: 0800 358 3858

**QED QNCT 1** £19.99



**J**ustifying their price premium, the QEDs proved to have the most transparent sound of this month's trio. When handling Mahler they did a superior job of revealing the space and air between instruments. Their dynamic range was wider too, which increased the sense of scale and impact.

Quality conductors and dielectrics made their presence felt on woodwinds in a more natural tonal balance. Strings also enjoyed better separation, which allowed me to tell apart cellos from violins when the two were playing together, not something I'd been able to do with either the Realistics or the Monacors.

Returning to Soundgarden, I found the Realistics caught up with the Qnects when it came to insight, especially in the all-important percussion. The ace up the QEDs' sleeve was a more cohesive and concrete sound in general, as if a selection of individually-recorded performers had been replaced by a band. The only potential pitfalls to watch out for were a coloured (although muscular) bass and slightly bright treble.

Like the Realistic Golds, QED's Qnect 1s would be at home in a system in need of a lift in the midrange, treble and liveliness departments where their £20 would be money well spent.

**QED Audio**  
Ridgeway Close,  
Lightwater,  
Surrey GU18 5XU  
Tel: 01276 451 166

# Letter of the Month

The writer of the 'Letter of the Month' wins a free subscription to Hi-Fi World.

## I AM NOT A NUMBER!

Looking through HFW back issues for some product information, I re-read your review of the Audio Analogue Bellini/Donizetti pre/power amplifiers. It struck me what a refreshing change it was to see products given evocative names after the Japanese predilection for christening things with telephone numbers and, more recently, website addresses.

Giving the matter more thought I decided that this was just what the British hi-fi industry needed, so here are some suggestions:

High-end vinyl junkies should

consider the Tippet turntable fitted with an Arne arm or possibly a Bliss.

Cartridges from Maw, Tallis and Quilter are all compatible, the Maw/Bliss combination no doubt proving the most popular.

The Turnage CD transport is the one to beat, especially when partnered with Bax DACs. Those tuned in to the ether may find solace in the Birtwistle, and cassette users are catered for in the form of the Wordsworth.

All you need now are a pair of Howells loudspeakers and some solid, dependable amplification such as the Brian (pre) and Arnold (power). Those on a budget should listen to a Vaughan-Williams integrated.

Any enterprising companies wanting further suggestions should contact me, their psychiatrist or an insolvency expert.

Steve Newton  
Bradford.

*I note that you do not mention the Purcell Record Cleaner ("Gets your discs as clean as a Fairy Queen") nor yet the possibility of connecting amplifiers with a Stanford Bridge. Although not British-born, could we add another cartridge, the Decca London Bach?*

*Somehow I suspect that most would consider these ideas*



Should these products have been named Decca London Bach?

*a load of Peter Warlocks and, if we're not careful, we might expect to get the Byrd. RMW*

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## THE COST OF CLEANLINESS

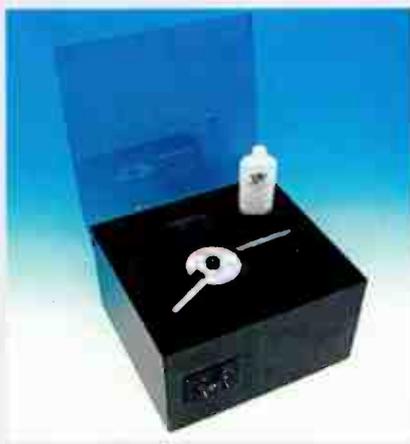
I was very interested in your recent review of the VPI record cleaning machine. It is often pointed out in your magazine that this is the best way to clean vinyl, but for those of us who haven't got £400 to blow on such a wonderful invention, what is the second best way of cleaning records?

A friend of mine uses lighter fluid applied with a cloth. A second-hand record dealer I know also swears by the stuff, albeit watered-down. Another method is to apply detergent and then suck the remaining liquid off with a vacuum cleaner that can double as a carpet washer (with a couple of pairs of tights over the nozzle first). On top of this, I recently found something called the Ronco Record Vacuum. You put your treasured piece of plastic upright in the machine's slot and pushed it around as the dust (in theory, anyway) was removed.

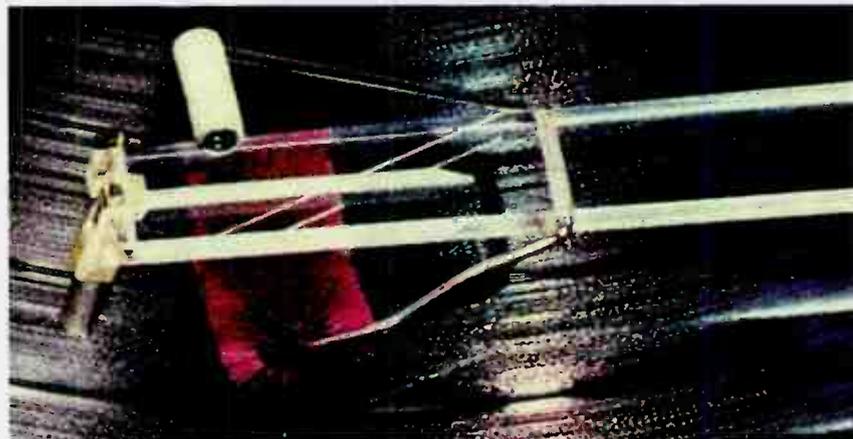
At the moment I go through the following process. Prepare some warm water with a little washing-up liquid in it. Lay this on a J-cloth, then get a carbon-fibre brush, dip it in the soapy liquid and run it gently but firmly round the grooves. Turn the record over and repeat. Once this is done, take your record and rinse it carefully under the shower head in the bathroom. Allow your record to dry in a safe place out of the reach of children.

This approach works quite well but which, if any, of the above is the most effective and cheap way to keep my beloved vinyl in tip-top condition?

S. Beetleston  
Warwickshire.



VPI's HW 16.5 record cleaner.



One effective way of getting dust off your LPs - the Watts Dust Bug from yesteryear.

*The most satisfactory cheap way of cleaning records is probably to find a friend with a machine, but I guess you've asked around already!*

*Lighter fluid is a petroleum distillate which is alright for cleaning gravy stains off your tie but isn't really suitable for records. The reason for this is that, although the spirit content does a reasonable job of dislodging the dust deposits, you are still left with the job of getting the remnants out of the grooves. All this and a microscopic oily deposit left behind, so, on balance, the verdict on this one is 'no'.*

*I am somewhat puzzled by the idea of mixing lighter fuel with water. Assuming that the mixture is shaken to produce an emulsion, what is the advantage, apart from reducing the volatility (and cleaning power) of the fuel?*

*I do not doubt that any of these methods will leave the record appearing 'cleaner' than it was, but there is an equally strong likelihood of dirt being merely redistributed rather than removed. The past-time of chasing dirt round the grooves is at least as old as the microgroove itself. For this reason, I do not recommend washing microgrooves in tap water; the dust may be removed but there is likely to be left behind a deposit of limescale, sand and sundry treatment chemicals. Again, what have we gained?*

*Left to itself, a vinyl record should not cause significant wear on a stylus. What does the damage*

*is the accumulation of dust, mainly silica in some form or other, which has a hardness index about four times that of steel! This behaves like the carborundum paste between the valve and valve-seat when you're 'grinding in' the cylinder head of a motor car. Unhappily, we do not usually require our styli and records ground in with respect to each other! That approach died out with the steel needle and slate-filled 78s, thank goodness. The answer is, of course, to get rid of the dust, since preventing the stuff settling in the first place is next to impossible.*

*For this reason, provided the record is reasonably clean to begin with, I still have a fondness for the original Watts Dust Bug. Since the nylon bristles tickle up the dust to be caught by the plush pad, a good deal of the dirt which otherwise finds its way on to the needle is caught beforehand. I do not advise the use of liquid media outside of a proper cleaning machine: all too often the needle or brush just ends up chasing a sludge of silicate and petroleum by-products round the LP.*

*I hope in the near future to be publishing instructions in the Supplement for making a budget cleaning device at home, so hang on just a little longer and, please, leave the Hoover under the stairs!*  
RMW

*Investigate a different form of liquid treatment with a free bottle of DNM's Licon contact enhancer.*

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**RINGING THE CHANGES**

My present system is fronted by a Linn Sondek (latest spec) fitted with an Ittok MkIII arm/Asaka cartridge and a harman/kardon 7500 CD player. Amplification is from Audiolab (8000C and 8000P) driving TDL Studio 1 loudspeakers.

With cables from Audioquest, Linn and Supra, the overall sound was very thin and edgy on vocals. After a change to van den Hul and DNM interconnects, with the latter supplying loudspeaker cables too, the system is much improved in smoothness and sound staging.

I need to upgrade the cartridge first; models such as Sumiko Blue Point Special and vdH MC10 spring to mind. I intend to replace my pre-amp as well, whilst retaining the 8000P. I was thinking along the lines of an 8000Q, line-only Linn Wakonda and possibly a Linto phono stage. I have £800 to fund this change.

The CD player could also be better. Sticking with Linn, there's the Karik III second-hand or the Marantz CD-17 Kl-S. Ideally I don't want to spend more than £1000 on this item, which should produce a full, smooth sound.

Chris Hurst  
Huddersfield.



Big brother to Lavardin's AS integrated, the IT Reference proved to be an outstandingly natural, transparent amplifier.

*Seeing as "full and smooth" is your goal, I would go more for the Marantz than the Linn when it comes to CD machinery. It has to be said that Audiolab isn't a name synonymous with the qualities you seek either. If you can dispose of your 8000C and 8000P second-hand to boost your budget, Lavardin's AS line-level integrated can be had for £1245. This employs circuitry designed to eliminate the Memory Distortion which this French company says is responsible for the characteristically hard, artificial sound of transistor amps. Partnered*

*with Lehmann Audio's Black Cube phono stage, this would make a formidable combination.*

*There's a rather large price differential separating the two cartridges you mention. Both are very capable needles, but the van den Hul ain't cheap. It would certainly be the better of the two, but you would have to be very sure you wanted to spend £800 on an MC before parting with your money. JM*

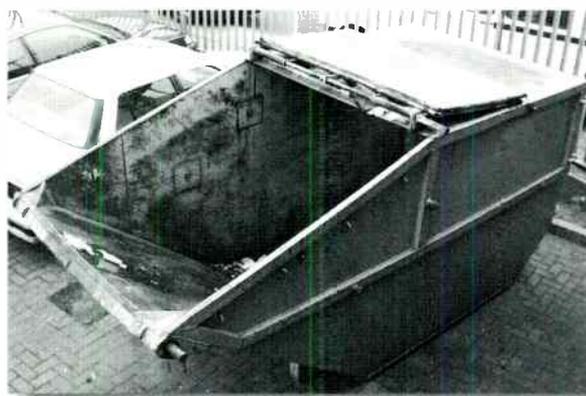
Take your CD replay a step further with a free Ringmat Statmat.

**LOSING MY MARBLES**

As I am constantly unsuccessful in your competitions (I thought my Celine Dion 'sub' poem would have won the Rel Storm easily in the December issue), I feel I might have more luck getting this piece of information printed.

My hi-fi tip is as follows: make the acquaintance of your local marble/stone mason. Outside the one at a factory unit near where I live, there's a skip in which all the off-cuts of marble are dumped. All I've done is ask if it's OK to help myself to some of the contents. Nobody at the company has any objections, so I have managed to get some heavy oblong pieces of marble to place my separates on. Of course, what is thrown out is mostly unusable, but perseverance pays off (and it is free, after all).

I am thinking of building a pair of marble 'speaker stands with the layers



Self-respecting tweekers often find inspiration in, ahem, "bulk waste-storage facilities".

separated by Blu-Tack. These would be very heavy and solid, but would probably take some time to complete.

J. Wilson  
Essex.

*Your letter is a timely counterblast to those who cannot contemplate*

*using anything that doesn't come furnished with a dealer network and RRP! I suspect you've been quite fortunate in finding an obliging firm such as you describe, though. With a similar object in view, I always keep an eye out for timber and angle-iron in skips and the like; it's amazing what people throw away!*

*Blu-Tack has its uses, but the point of a loudspeaker support is to stand firm and rigid. You might find an outdoor plaster like Tetrion preferable for gluing things together as it sets hard and will not therefore dissipate energy which is needed elsewhere, ie in your ears!*

*All power to your elbows but don't drop 'em on your foot! RMW*

Slake your lust for prizes with a pair of Siren interconnects from The Chord Company.

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## THE ITALIAN WAY

I've just bought an Audio Analogue Puccini SE to replace my old Naim set-up. My main source is a Lingo/Ittok/Ortofon MC30 Supreme/Linn Sondek (soon to be upgraded with a Cirkus bearing). I intend to replace my original Marantz CD-63 with something like a Roksan Caspian. Speakers are Tannoy 609s sitting on Atacama stands and bi-wired with Linn cable.

I'm really pleased with the Puccini and would like your thoughts on upgrades for the 'speakers, their stands and cable. I've been offered a pair of Rogers LS3/5as but was initially contemplating Jamo Concert 8s with QED Profile Silver. An interconnect recommendation for the Roksan would also be appreciated. Future upgrades will probably take the shape of a Naim Aro, Ortofon Rohmann and Lehmann Audio Black Cube.

Steve Gallagher  
[steve@stevegall.force9.co.uk](mailto:steve@stevegall.force9.co.uk)

*The Rogers would be fine if your tastes are biased towards Classical or generally smaller-scale, lightweight music. On the other hand, if you enjoy Drum 'n' Bass and Rock, the LS3/5as would be a step in the wrong direction.*

*Jamo's Concert 8s are fine stand mounters, but there's plenty of competition out there, as you'll see in this month's group test. If room*



One of the best partners for a Puccini SE is Audio Analogue's own Paganini player.

*size is a major limiting factor, the BKS 107 floor standers with their lean, uncoloured bass would make more sense. However, if you do decide on the Jamos, the QED cable is one option, although it can sound very slightly hard and splashy across the midrange. Stand-wise, Target's massier offerings sit well beneath the Jamos.*

*Roksan's Caspian CD player looks and sounds good, but it's no longer leading the class. Arcam's*

*Alpha 9 is closer to the cutting-edge, but its slightly cool character in addition to the Puccini SE and the Jamos would leave you with a rather 'cold' presentation. Musical Fidelity's X-Ray, or better still AA's own Paganini, would be more appropriate matches. And interconnects? Try Cable Talk's Advanced 2. JM*

Lift a veil from the sound of your hi-fi with a bottle of DNM's Licon contact enhancer.

## THREE TO GET READY

I'm putting together a completely new system here in the UK since I sold all my old gear at home in Sweden. I recently bought a pair of Epos ES22 loudspeakers and am now on the hunt for amps and a CD player to go with them. The problem is that I am thinking of eventually tri-amping my Eposes, so I would like to start out with an integrated amp fitted with Pre Out sockets. What amps, new or

second-hand, would you recommend with a budget of £500?

Another thought I have is to buy a passive pre (such as the Creek OBH-12) to go with a suitable power amp. Would an Audiolab 8000P match the Creek and the ES22s?

The next thing is to get a CD player. I'm thinking of buying a DVD machine with a 24-bit/96kHz DAC (or at least one with 24/96 digital output) and then a

Musical Fidelity X-24K DAC. Do you have any other suggestions?

Jorgen Armft  
[J.Armft@shu.ac.uk](mailto:J.Armft@shu.ac.uk)

*Tough one, this. None of the top integrateds up to £500 (such as the Pioneer A-300R Precision and AA Puccini) have Pre Outs. You'd be right to go for the OBH-12 and a*

If you do not want your e-mail address published, please let us know.

power amp. We found Creek's own A43 worked a treat with their passive pre in our March 1999 amplification group test.

As your system progresses, you could move on to the P43 pre in active guise, which will do a better job of running multiple power amps than the OBH-12. Then you can stay with Creek and add more A43s. I suspect two A43s (40watts each) for mid and treble, with an A52SE (80watts) handling the bass,



If it's a 24-bit/96kHz digital output you want, Pioneer's '717 DVD player is one to audition.

would yield dynamic, open and nicely-balanced results. Our experiences with the new

crop of stand-alone 24/96 convertors suggest that they do lift the performance of Pioneer DVD players (the only ones currently to provide 96kHz digital outputs), but not to a huge extent. Have a listen to some of Pioneer's latest DVD machinery in addition to Arcam's Alpha 9, if you decide on CD-only replay. JM

A free Statmat from Ringmat is one way to enhance your CD collection.

## THE SOUND OF SILENCE

I have two vintage questions concerning tuners and loudspeakers for the experts at Hi-Fi Towers.

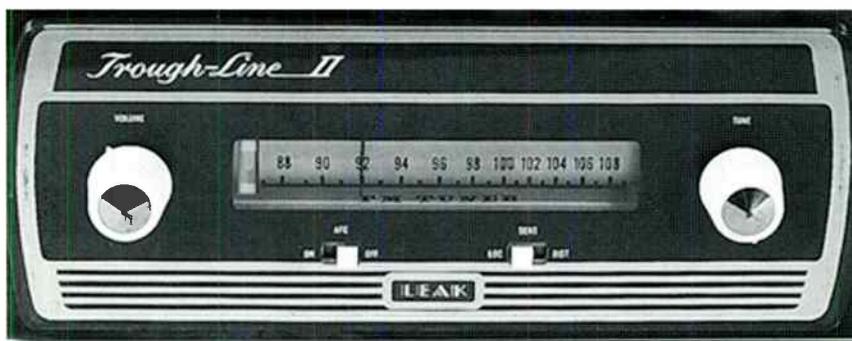
A month or so ago, I became the proud owner of a Leak Troughline III, bought for only a handful of fivers at an audio jumble. Having rushed home and plugged this attractive beast into the nearest socket, I was relieved to find all the tubes glowing happily. Only one snag - no sound. But should I expect to hear anything using the piece of string I laughingly call an aerial, or have I missed something?

I will, when funds permit, have the unit serviced and buy a stereo decoder. Until then, can I hope to listen to Radio 4 in mono? Or am I sitting here staring at an antique turkey, feeling well and truly stuffed?

To loudspeakers, and AR18s in particular. I have a pair of these hidden away in a cupboard, where they have been since their woofers gave up the ghost many moons ago. It may not make financial sense, but I have the urge to hear these boxes singing once more. Do you know if replacement drive units are available? Alternatively, should I inform my friends that they are a new style of Swedish furniture and use them as book-ends?

Kevin Brock  
kevinbrock58@hotmail.com

A useful index of a Troughline's health is the Magic Eye (you know, the double-ended, thermometer-style indicator at the left-hand side of the tuning scale. When your tuner is warmed up and the AFC slide switch is in the Off position, the Magic Eye will give an indication



Troughline tuners suffering the ills of old age are best cured by qualified RF engineers.

as to the signal strength it is receiving and processing up to the 'middle' part of the tuner.

If you are just getting thin strips top and bottom, as far as it knows the Troughline is not receiving sufficient signal to discriminate the broadcast from the RF 'mush' that fills the air. Setting the sensitivity to Distant may help you pull in something, if there's anything there.

As regards the aerial, that depends upon where you live. Mine runs quite satisfactorily on a cheapo Maplin's dipole, but then I live in London. Although good loft and roof aerials are available quite cheaply, I should take the tuner outside with your piece of string and try for a signal - any signal - in the open air before you lash out on one of these.

You could also check whether or not there is any output from the multiplex socket on the rear. If the cathode-follower audio output fails, the multiplex might be unaffected, although if it's the whole valve that's gone (and not just half of it), most of the

multiplex will go down with it as well.

If none of these simple tests helps at all, GIVE UP and take the Leak to a competent repairer. Troughlines do not respond very well to the 'enthusiastic-but-don't-know' approach. Fundamentally they are quite simple beasts but the number of variables which may be mal-adjusted, not to mention valves getting tired and other components drifting out of tolerance, means that you need to know exactly what you are doing.

Classique Sounds of Leicester (Tel: 0116 283 5821) are currently offering Troughline re-alignment excluding new valves. GT Audio offer a similar service.

As regards your loudspeaker drivers, the job should present no problem to 'DK Dave', whom we featured in our March issue. He can be contacted on tel: 01708 447344. RMW

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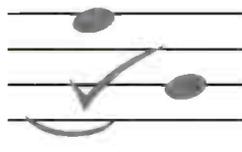
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Jimmy Hughes, Hi-Fi Choice, March 1999

Richard White, Hi-Fi World, April 1999

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## THE BEST OF BEEF

I'm gradually revamping my system, currently Linn LP12 (Valhalla/Cirkus/Ittok/K9), Mission DAD5 CD player, Naim 72/140 (just bought to replace an old Arcam) and Royd A7 loudspeakers. The Chord Company supplied interconnects and 'speaker cables.

Even with the new Naim the Royds sound pretty good so I'm wondering if, rather than upgrading the A7s next, I should be:

- 1) paying some attention to a change of cartridge
- 2) looking out for a second-hand DAC5 or another convertor (Flying Calf or MF X-DAC) to further improve the sources
- 3) saving my pennies to change the CD player completely?

LPs and CDs spend about equal time on the system and I had intended to spend £500-£600 on 'speakers, so this could be diverted into other things.

**Richard Kent**  
richardk@mjl.co.uk

*The last time we looked at the DAD5 was May 1992, where this player fared well but didn't set our world on fire. To be honest, it's likely to be well past its prime by now. Adding a Flying Calf is one*



Inexpensive it may be, but Midiman's Flying Calf is a superb DAC.

*way forward. However, buying a completely new machine is the most effective route to superior digital replay. In fact, with £600 burning through your pocket, our standard CD advice is Teac's T1 transport with said Flying Calf. Tilting the balance back towards one-box outfits is the new Audio Analogue Paganini, but that lurks*

*a way beyond your current budget at £750.*

*Leading the cartridge field at £130-£150 is the DNM Mica. Below that price are Ortofon's 500 series MMs and the cheaper Goldring 1000s. JM*

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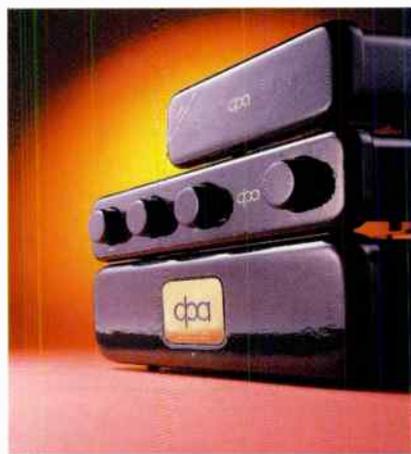
## MATCH MAKING

In the August 1998 Vintage Virtues, Haden Boardman mentioned Quad 50E professional monoblocs. I own a pair of these which I picked up from a friend who used two pairs to drive a wide range of loudspeakers, among them full-range electrostatics and subwoofers.

As Haden states in his article there was never a matching pre-amplifier built by Quad to go along with the 50E. I could use some advice on which pre would fit the bill. I want to use them in a CD/tuner-based system. Should I go for valves or solid-state? I am currently using a Quad 34 pre-amp. I have a budget of around £300.

**Ad Raaymakers**  
golem@xs4all.nl

*A modern pre-amp at £300 is not really going to challenge the 34 in any way, to be honest. I'm afraid*



One pre to match a pair of Quad 50E monoblocs would be the DPA 50S, shown here with its outboard PSU and power amp.

*that discovering what the 50Es are truly capable of would entail splashing out rather more.*

*Alternatively, you could dip a toe in the second-hand waters.*

*As a DPA user myself, I have a soft spot for components like the '50 and '100, albeit it with modifications to damp their PCBs and the surface-mount parts which populate them. This removes a high-frequency brashness which can otherwise become fatiguing.*

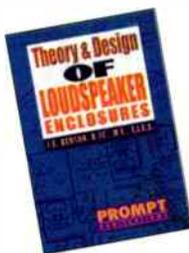
*Michell's Argo line-level pre with its Hera outboard PSU (basically a large toroidal in a box) is another common used purchase. Thermionic contenders come from the likes of Audio Innovations (the L pres), EAR (the 834, available in line and phono versions) and, at the other end of the price spectrum, Audio Research (the LS series). JM*

The next link in the chain - Siren cables from **The Chord Company.**

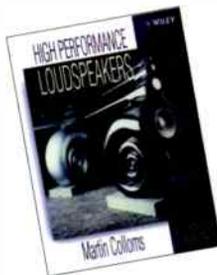
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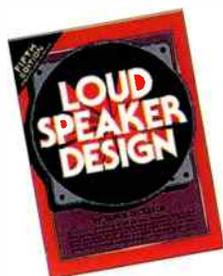
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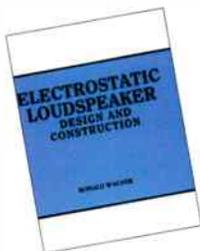
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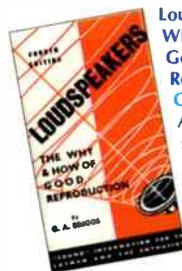
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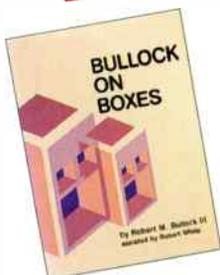
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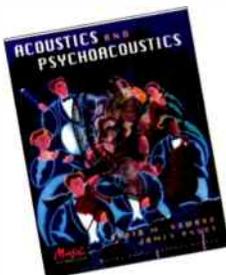
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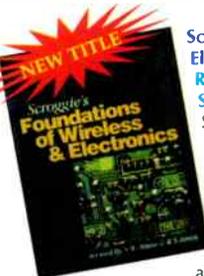
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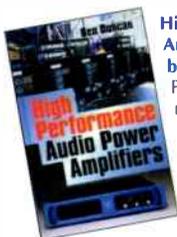
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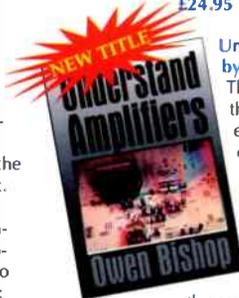
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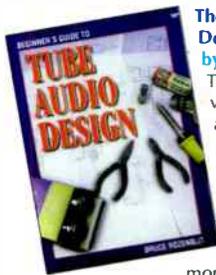
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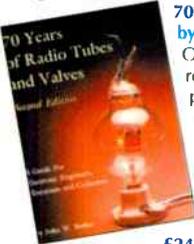
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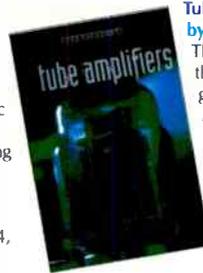
Morgan Jones, Audio Engineer

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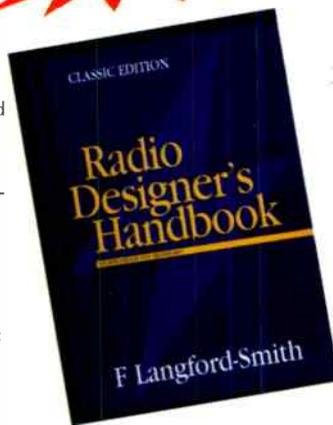
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# ANIMAL MAGIC

Matisse's Conductor claims to sweeten the sound of CD. Jon Marks judges.

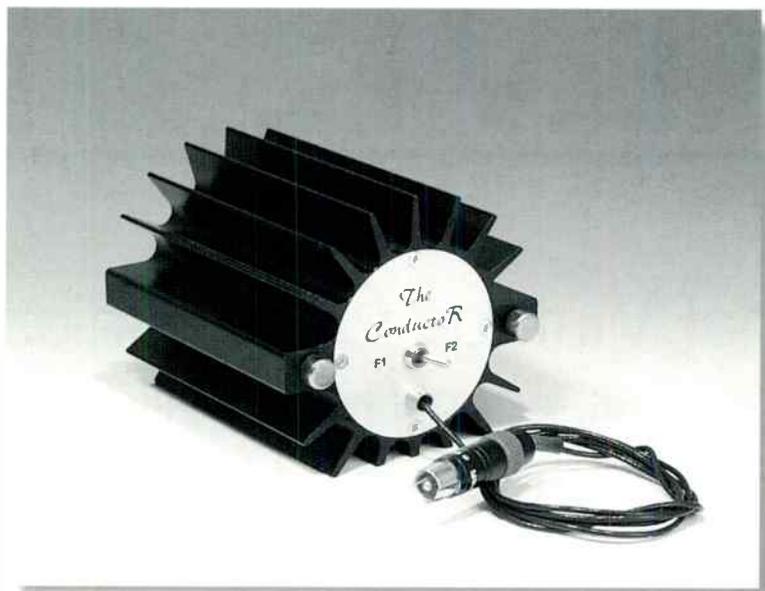
With the world becoming increasingly automated, electronic machinery is playing an ever greater role in people's lives. One weird bit of evidence as to how pervasive the micro chip has become are the Tamagochis, those little electronic 'pets' from Japan about the size of an old pocket watch. Now Tamagochism seems to have infected the audio community in The Conductor from UK firm Matisse.

This device, cast in the mould of a streamlined hedgehog, is intended for a rather different purpose, though. It might be therapeutic to Blu-Tack The Conductor to a roller-skate and take it for a 'walk' around the local park, but its real aim in life is to clean up the sound of your hi-fi.

Potted in epoxy resin within the aluminium case is circuitry apparently based on the research of an American physicist into the effect of Ultra-High Frequency noise (generated by digital equipment) on electronics. The result is a passive filter which plugs into an unused input on a pre-amplifier and removes the UHF injected into its earth rail by a CD player or DAC and transport. A switch on the front (labelled F1/F2) toggles between two filter networks; the choice as to which sounds best is down to the system, according to the brief instructions supplied with the Matisse.

To test the Conductor's mettle (no pun intended, honest) I plugged it into a battery-powered DPA 50S pre connected to Musical Fidelity's X-A200 monoblocs. Loudspeakers were Magneplanar's SMGas, sources a venerable Meridian 207 and a modified Pioneer DV-505 DVD player.

With the blistering Drum 'n' Bass of 'Like A Moving Truck' from Red Snapper's Making Bones album,



The Matisse's sonic impact was obvious after the specified 20-hour burn-in period. Where this track could get a tad over-enthusiastic in the treble before, it was now smoother and more natural when it came to vocals and hi-hats. Imaging was more precise too, as instruments and samples had a greater feeling of space around them.

Digging deeper, the Conductor also pulled away a layer of slight smearing which had previously blurred basslines. As a result, all the tracks on Making Bones were crisper and sounded almost as if they had been speeded up.

Slower numbers such as 'Spitalfields' and 'Image Of You' gained in clarity as well. The acoustic guitar and double-bass of the former have managed to get through the recording process relatively unscathed, but the Conductor demonstrated there was still more to be had when it came to transparency, tonal colour and neutrality. The same went for the violins and muted brass, adding to the melancholy mood of these songs.

Continuing down the acoustic road with Beth Orton's Trailer Park, I found a similar story as the music became a more evenly-balanced, cohesive whole with the Matisse in circuit. This and Elgar's violin concerto (as performed by Nigel Kennedy, the London Philharmonic and Vernon Handley) brought home the truth in the advice imparted in the instructions: "be prepared to do a little fine tuning of your system to get the best possible results." The mix of cabling between DPA and MFs was sounding too warm now that the Conductor had reduced the 'glare' on music. A spell with replacement interconnects rectified matters.

High-frequency noise from digital components has been a prime target of hi-fi designers for a while now. Matisse's literature is possibly overstating the case when it says the Conductor's "effect is just magical", but there's no doubt it is another useful weapon in this fight alongside stalwarts such as Kimber mains cables and DPA's The Power mains filter.

Matisse Conductor  
£349.99

GT Audio  
5 Upper Road,  
Higher Denham,  
Bucks. UB9 5EJ  
Tel: 01895 833099

## WORLD VERDICT



The Conductor certainly works but its price is high.

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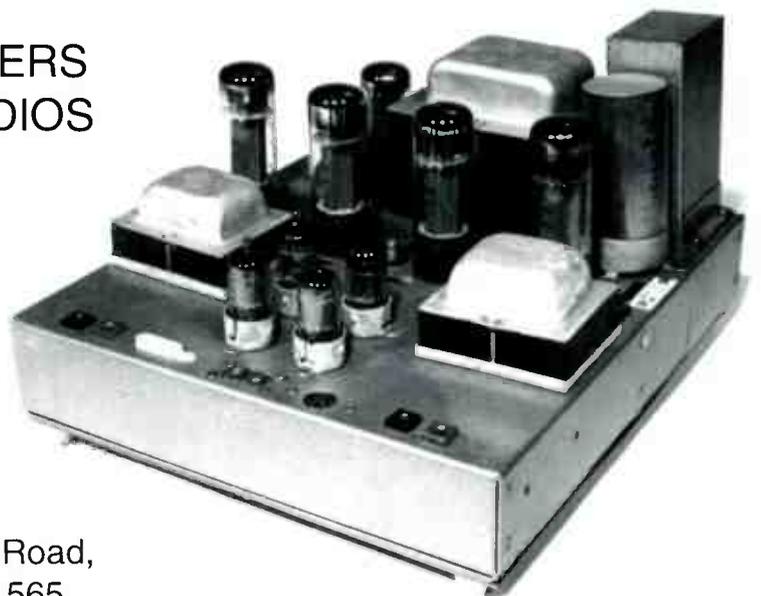
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Noel Keywood

When the bottom fell out of Far Eastern markets a few years ago, British hi-fi was hit hard. Many UK companies export 60% or more of what they produce, much of it to the Far East where, I found, Made In Britain still means quality. Trouble is, our products carry a hefty price premium there. They are, in effect, luxury goods. When people have to tighten their belts, items like this are the first to get crossed off the shopping list.

So will the good times return? Slowly, I believe, but the picture has changed. Once we talked about the "tiger economies" collectively, but perhaps no more since they appear to be diverging under the burden of their woes. Whilst confidence is returning slowly in Malaysia and Singapore, unemployment continues to rise in Hong Kong. All three seemed very alike economically and were talked about in the same terms. Not any more.

Since gaining independence from Britain, Hong Kong has progressively lost momentum. Tourism, for example, has suffered badly. This is having a knock-on effect, causing unemployment to rise progressively: it now stands at a high 6% and things are getting worse rather than better. Apparently, the Japanese are staying away in droves, most likely due to loss of confidence since Hong Kong returned to China and became part of a communist state. It might have its own 'law' that, to Peking, looks liberal and democratic, but I doubt if it does to the Japanese.

For the time being Hong Kong is unlikely to bounce back. Having said that, it is an entry point to China, so trade through Hong Kong remains strong. I believe Hong Kong and China will absorb

more manufacturing from Europe in due course, a subject I will return to later in this column.

The other Asian tigers have problems too. Korea is having to cope with massive losses in its large conglomerates, whilst Taiwan remains under military threat by the Chinese. Japan meanwhile cannot get its consumers to spend their savings in order to reflate the economy.

With so many different pressures in the Far East, the good old days of rampant spending on Western luxury goods are over. A new reality has imposed itself: the Far East may love everything from Range Rovers to Tannoy's, but it cannot afford them any more. It is our turn now to follow the Japanese and move our manufacturing to where the market lies: over there rather than over here. The conditions are right and the time is right too - what's more it is already starting to happen. But there are some implications for European

fabrication plant in Penang, and Philips shifted their audio division to Singapore, close to a factory in Johore, southern Malaysia. I mention all this to illustrate a point: others have already seen the need and made the move. There are two outcomes.

First, because the electronic products from these plants are locally produced they undercut goods imported from Europe by such an amount the latter can only be sold as up-market luxury items, limiting volume and making sales very prone to consumer confidence - a pretty volatile animal. The good news is that a large culture of sub-contractors has sprung up to supply such 'transplants', putting into place all the basic manufacturing needed to make amplifiers, CD players and loudspeakers. I notice only a shortage of expert designers in the region, but that will change.

I believe it is only a matter of time

*"With so many different pressures in the Far East, the good old days of rampant spending on Western luxury goods are over."*

employment down the line.

As far as some Europeans are concerned, Britain is a low-wage economy with poor social provision and should fall closer into line with the French or German models. There is another way of seeing things, though, and British hi-fi manufacturing offers one example.

In order to remain competitive in the Far East we must move manufacturing to the region, meaning Singapore, Malaysia, Korea, Taiwan or Hong Kong/China. I have written about this before, but the other way around. Namely, the Chinese are buying into British hi-fi, moving manufacture to China. But British companies will increasingly be forced to consider this option, following in the path of the ever-resourceful Japanese.

When their home costs soared in the late Eighties they moved manufacture into low-wage economies like Malaysia and Singapore by setting up their own production plants in the region. Intel moved into Malaysia some time ago, placing a chip

before British companies are forced to move production out of the UK in response to these economic pressures. We either do so or we slowly lose all sales in the Far East. The factories and skilled workers necessary are already in place. British hi-fi, produced locally, still wouldn't compete with Japanese product in price, but it would get a lot closer. Carriage costs and import taxes of up to 40% would be avoided, so even without taking into account lower labour and material costs, the benefits are enormous.

Of course, as a trend this is bad news for jobs in Britain and worse news for jobs in Europe where labour costs are higher. In a shrinking world where increasingly the term "world culture" gains meaning, the only alternative I can see is a return to trade barriers, which is hardly likely. British hi-fi manufacture will increasingly move out to the Far East, closer to a vast local market that knows how to build such things and also appreciates them. It will be a peculiar end to UK hi-fi.

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# MONSOON REIGNS

Continuing the eternal search for the innovative and different, Simon Pope reports on Monsoon's MM-1000 planar magnetic loudspeakers and matching subwoofer.

One of the most oft-heard complaints from hi-fi lovers in this country is a lack of space. While many households on the other side of the Pond have sufficient acreage under the eaves to house amps the size of fridges and panel 'speakers as big as barn doors, conditions in the UK are usually more cramped. Monsoon's diminutive MM-1000 three-box affair, with its multi-media PC aspirations, seeks to break from the huge-is-beautiful tradition.

Some doubts arose when the package was opened. The desktop 'speakers weren't exactly huge and I was left wondering what kind of frequency range panels of this size could actually reproduce - these planar transducers measure only 4in. by 8in. A quick tap on the subwoofer's moulded cabinet top had me furrowing my brow at the card-boardesque resonance too.

The Monsoons are rated at 12.5watts for each of the satellites and 25watts for the sub, which has a 5.25in. cone operating in 8.2litres of cabinet. Its upper roll-off point is set at 200Hz. Source connections on the sub's rear panel are via mini jack sockets, for which a phono adaptor is supplied.

As they are designed primarily to be used either side of a PC, the panel transducers are angled backwards. On top of this, their dipole nature means they're directional, so some care is called for to attain optimum sound quality.

With Jamiroquai's 'Deeper Underground' playing through Roksan's Caspian CD hooked directly up to the sub, it was obvious that, with the possible exception of '(Boom) Shake The Room', a more aptly-titled track would be hard to find. Bass literally rattled the glass in the windows!

With all this bass, you might expect that the mid and treble



would suffer a little. To a certain extent this was the case if comparisons were made with a £200+ pair of audiophile loudspeakers. However, considering their price effectively includes a two-source, line-level integrated, a subwoofer and loudspeaker cables, the Monsoons are very transparent and fast, especially with acoustic music.

With the satellites well away from the walls and toed in to point straight at the listening position, a surprisingly deep sound stage emerged. I had a hard time getting to grips with the fact that a genuinely room-filling sound was coming from a couple of small metal wafers and a sub not much bigger than a shoebox.

Knowing that the acid-test of a good subwoofer is Classical music, I plied this trio with the opening of Solti's recording of Die Walkure. Once again the amount of deep bass present and the imaging precision and separation were a real turn-up for the books. The sub might not be up to quite the same standard as the satellites but it still handled powerful double-basses with aplomb bearing in mind its minuscule enclosure. Where its partners fell short was a thinness in the treble

and a lack of detail on vocals which rendered them marginally less intelligible.

Stravinsky's The Rite Of Spring played by the Minnesota Orchestra under the baton of Eiji Oue was next in line. The wide dynamics of this excellent recording caused a few problems for the satellites. When the bass drum entered for the first time, judging by the distortion which accompanied it the panels were running out of puff. A lower volume level swiftly eliminated this hiccup and served as a reminder that the Monsoons' main area of use will be either side of a PC.

As with any fairly revealing loudspeakers, the better the recording, the more impressive the Monsoons sounded. A badly-produced Dance compilation on the other hand gave the impression the satellites had been hidden under a couple of wet blankets.

These 'speakers might be aimed predominantly at the PC market but, like Jamo's CS5 actives reviewed in October 1998, they have a lot of appeal for audiophiles assembling a system in a small space. With a good source and interconnects the Monsoons are quite an achievement in a tiny package●

Monsoon MM-1000

£200

Boston Ltd.

Unit 5, Woodshots  
Meadow,  
Croxely Business Park,  
Watford,  
Herts. WD1 8YT  
Tel: 01923 699399

## WORLD VERDICT



A novel active set-up which actually demands to be taken quite seriously. Bass-heads will love it.

Measured Performance  
see page 111



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# fresh & FAST

Has a challenger to the all-conquering Puccini SE finally arrived? Simon Pope finds out with MVL's Integral A2.

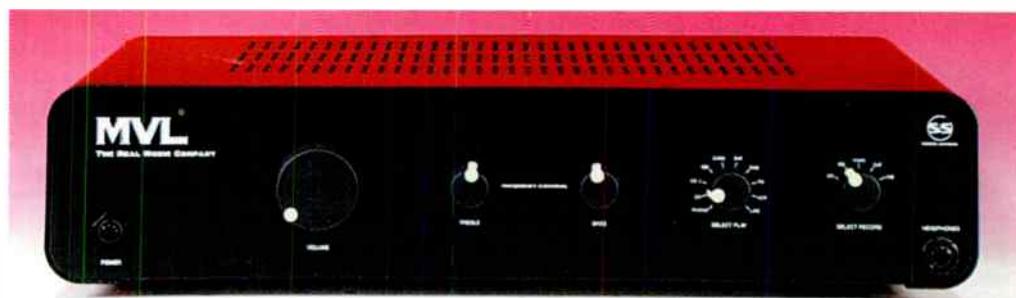
The problem with much mainstream and affordable hi-fi these days is a certain herd instinct which has a lot of manufacturers mimicking each other in design and styling. The result is components that look and sound almost the same and fail to capture the spirit of whatever music they're processing. A wolf in sheep's clothing is MVL's Integral A2 amplifier.

It may be unlikely to win any awards for its conservative case-work, but the number of patents covering the A2's innards in addition to a five-year warranty suggests that there's something different from the norm going on here.

This 100watter comes in two versions, one virtually frills-free apart from the bass and treble controls (again, these are made to a secret recipe), the other with a range of Sound Sentinel goodies bolted on. These are individually engineered to boost the sound of the components they're dedicated to and take the £850 cost of the base A2 up to £1250 when all nine inputs (including an MM phono stage) and four record outputs (CD-R, MiniDisc, Cassette and DAT) are treated.

System-wise, the bare-bones A2 was slotted between a pair of Heybrook Optima floor standers and sources including Roksan's Caspian CD player and an aged but still hale and hearty Linn LP12. Comparison was made with the current sub-£1000 front-runner, Audio Analogue's Puccini SE.

One CD which was pressed into service was Beth Orton's Trailer Park. Regardless of which ancillaries were backing up the MVL, 'She Cries Your Name', the opening track, had a refreshing musicality to it, acoustic bass and guitar realisti-



cally rounded and resonant. One of the contributing factors in this enjoyability was the sheer speed of the A2, which made the competition appear slow and thick. Also benefiting were the lucid vocals and the brushed snare drum, neither tainted by the electronic processing common to affordable solid-state.

More aggressive Rock from The Screaming Trees showed that the A2 was capable of excellent power in the lower octaves to judge from the taut, sharp thuds emanating from the kick drum. On non-Rock numbers the amp put its 100watts per channel to use in a less obvious manner, which is one of the hallmarks of quality gear - the sound was never crude or merely loud. Instead, there was a solidity and confidence to the music that comes from having power and control in reserve.

Less frenetic fare (a CD of English Choral Music from the excellent Cambridge Singers) revealed the Integral was adept at handling subtle details such as the stereo effect of the two sets of singers in double-choir pieces. This created a wonderful canonic effect and a great sense of space, turning my front room into the acoustic of Ely Cathedral's Lady Chapel - I could almost pick out the stained glass behind the net curtains.

Larger scale works (Shostakovich's 10th Symphony and

Wagner's Tristan Und Isolde) were equally well catered for, with a smooth, weighty presentation that never deteriorated into confusion. In fact, the tonal accuracy on strings, trumpets and piccolos, which are often portrayed in a hard-edged fashion, was uncanny at times.

Swapping the silver disc for the black, I wheeled in the Linn and copies of Mozart's Mass in C Minor and Talvin Singh's OK. These two LPs confirmed the phono input had the same grip and cohesion as its line-level counterparts. Rhythmic sections of the Mozart matched excitement and verve with a confident maturity, string phrasing portrayed with just the right amount of sheen in the tone. On Talvin Singh's album, bass was once again solid and fast with no one-note booming.

Then came the acid test. Comparing the cheaper MVL with Audio Analogue's Puccini SE I discovered the Briton isn't quite on a par in overall transparency but outstrips the Italian everywhere else. The A2 is more of a stickler for strict tempo too - fast Rock stays fast, soothing Classical remains relaxed but never plods along. And it's kinder to bad recordings.

The Puccini SE is an outstanding integrated, but unless transparency is your main requirement, the admittedly more expensive A2 is better. ●

MVL Integral A2

£850

MVL Technology  
Northfield Mill,  
Wymondham,  
Norfolk NR18 0DF  
Tel: 01953 850800

## WORLD VERDICT



An excellent performer with any music. At present, it would be hard to imagine the A2 being beaten at the price.

Measured Performance  
see page 111

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**W**riting for Hi-Fi World is by no means a one-way traffic. In addition to the technical query letters with which we cudgel our brains each month, there is a steady stream of helpful comments, encouragement and, on occasion, the inevitable 'constructive criticism'. To turn the latter aside with the old tabloid standby "if you don't like the paper, you don't have to buy it" seems to me to be cheating. If a reader isn't happy with what they're reading, we have to ask ourselves why.

When I took a quick refresher course in 'dissatisfied of Noits.' letters, one of the most striking similarities between them all seemed to be not that our conclusions on a particular piece of equipment were questioned (after all, how can you reject someone's opinion without hearing the article yourself; this is hi-fi, not party politics!); most commonly, the unflattering remarks related to style, not content.

Having spent considerable time each month ensuring that what is eventually printed conveys the meaning I had in mind, it is disappointing to be accused of "metaphor polishing". So, as a welcome breather from matters technical, I thought we'd take a look at the dodges available to writers trying to express sound in words.

I believe it was Lord Kelvin who said that you have only a superficial grasp of your subject if you can't express it in numbers. This is all very well in its way, but those who have followed this dictum when writing about audio have often been voted dry-as-dust by their readers. This is why we have a subjective review, measured performance AND written interpretation of measured performance. Otherwise, let's face it, if the numbers expressed everything, all you'd need would be the manufacturer's specification. As many will have felt before me, manufacturers' self-praise doesn't strike me as the ideal

guide to a component's merits.

Once equipment has been reviewed, the biggest hurdle is how best to express in printed words what has emerged from the loudspeakers. It is when you are first faced with this conundrum that you realize quite how inadequate our everyday vocabulary can be. Words such as 'nice', 'good', 'poor' and so on have a very limited application unless qualified by cartloads of explanatory clauses. Even "Woooo. . . Girl Power" has occasion-

“ Once equipment has been reviewed, the biggest hurdle is how best to express in printed words what has emerged from the loudspeakers.

ally failed to make its meaning explicit.

There is a legend told round reviewing firesides of a manufacturer asking for a reprint (for an advertising hand-out) of a review which was couched in such flowery terms that it had escaped notice that the verdict was largely unfavourable. I can't decide whether this reflects worse on reader or writer.

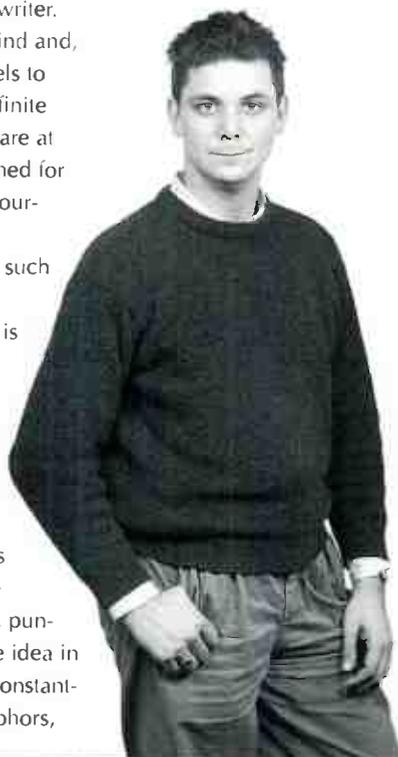
Words are the tools of the mind and, like every tool, from laser-scalpels to steam-hammers, they have a definite function, outside of which they are at best misapplied or, at worst, ruined for further use. We labour to make ourselves understood.

When it comes to describing such an emotional response as that engendered by music, literature is well ahead of us. That's not to praise flowery language per se; words can and should hit surprisingly hard, provided they're the right ones. For this reason, I do not favour extensive use of similes; what a waste of printer's ink to say that 'something is like something else' when Metaphor, pun- gently employed, gives the same idea in fewer words. We are therefore constantly seeking apt and striking metaphors,

something that constructs the right mental image.

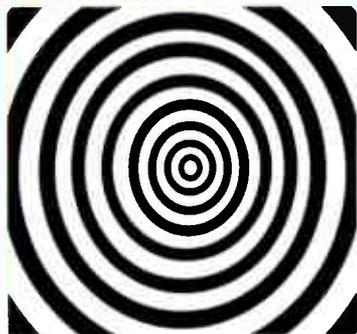
Casting about for examples of this, I have been struck by how deep the roots of metaphor go. For example, you might hear a system, loudspeaker or whatever described as "glassy". Hackneyed, maybe, but it conveys a definite impression of the sound, to my mind at least. Try changing it: substitute 'sheen' and you're no further forward; 'sheen' is a metaphor borrowed from language used to describe surfaces. In the same way, a more elaborate approach referring to the treble 'peaks' of a measured response is simply changing our 'surfaces' analogy to one derived from topology. Whatever the path chosen, any audio buff presented with either the graph, or 'sheen', or 'peaky', or 'glassy' would have little difficulty understanding what was intended.

"Metaphor polishing" is itself a metaphor. In this profession, words remain our most versatile tool until the technology exists to play to any reader exactly what we have heard ourselves. Until such a time comes, and purely in the interests of being more perfectly understood, I shall carry on polishing.



**Richard White**

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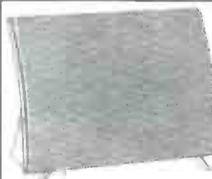
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# TUNER SALAD

Have Marantz cooked up another tasty dish with their ST-17 tuner?  
Richard White snuffles in at the trough line.

There seems to be a growing trend to regard wave-modulated broadcasting as reeking of 'wireless', coal fires, Tommy Handley and standing room only in the one-and-nines. DAB may be knocking at the door but Marantz obviously don't believe analogue tuning is dead, not by a long chalk.

Their £600 ST-17 tuner is housed in a heavily-fortified, champagne-gold box which measures 3.25in. by 18in. by 12in. The knobs and buttons are discreet, as is the well-balanced thumb-wheel for the tuning, although once they've found it, I doubt if the children will be able to resist seeing how fast it'll spin.

On the back there are three aerial inputs, one for AM and two for FM (for 'local' and DX stations). One pair of solidly-anchored phono sockets carries the output while another allows the use of those programming gizmos for recording something when you're out.

The front panel is liberally endowed with gadgets. Up to 60 pre-sets are available with selection of aerial input and stereo/mono included. A PTY button displays what material a channel thinks it's broadcasting, which gave rise to a few sniggers from time to time. There is also a search-by-style function which sounded more useful than it turned out to be. Unhappily the style designations are neither specific nor general enough to be of much use. I set out to find all the 'Rock' stations and came up with just two: Virgin and Radio One! Further investigation showed that all the other likely candidates happened to have News or Chat or Adverts on at the time and had thus altered their information flags. Jazz FM remained resolutely 'Other'.

When tuning manually, the frequency changes in increments of 50kHz, which is near enough for



most purposes. When set to automatic, moving the wheel lets the selector circuits amble through to the next tunable station.

Between channels the tuner is silent. Unfortunately, it stays that way with any station which the tuner thinks it cannot make a decent shot at. This doesn't matter much, but with the side-band information channels displayed it can be frustrating to be effectively 'tuned' to a channel which the tuner then classifies as too poor to bother with. I'm not sure if silence is preferable to a drifting mish-mash, but in any case you don't get the choice.

The making or breaking of a tuner is naturally its sound. Even Marantz's generous build quality won't compensate for 'kitchen radio' quality or noise.

A concert on Radio 3 by the Borodin Quartet (strings) was just what I'd been looking for: a live performance with a spacious acoustic and good spread of frequencies.

Smoothness was very much the key to the Marantz's approach. Hiss was minimal if not absent (it's sometimes difficult to tell with live recordings). Although Radio 3 is usually slightly compressed, the essential dynamics of the Tchaikovsky were accurately portrayed with the tuner apparently determined to take a back seat and

let the music speak for itself. This absence of audible hi-fi nuts and bolts made the ST-17 a real pleasure to listen to on Classical.

Swapping to other genres, it was interesting to note that the Marantz's detestation of distortion seemed to apply to such effects which had been intentionally added - waa-waa pedals and the like - which emerged perhaps over-smooth.

Unfortunately the Budget speech came over loud and clear on Radio 4. For fractionally better news, a four-way discussion on constitutional matters was well spread with voices all natural, life-like and spatially distinct.

A general item on Mario Lanza didn't seem to be a particularly relevant testing ground until I realized that this would be American stereo from the late 1950s - ideal for separation testing! Test passed with distinction (real ping-pong stereo!) and a rapid reappraisal of the late Mr Lanza's voice might have been in order.

Compared with other fine tuners, the ST-17 can be rather civilised on Rock and Dance. Apart from that, it's a hugely enjoyable listen - smooth, controlled and self-effacing. The provision of two FM aerials might be better substituted for a sensitivity switch, but considering the build-quality and convenience the ST-17 is worth every penny●

Marantz ST-17 £599.90

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## WORLD VERDICT



Knock-out build and velvety sound. A little refined for some ears.

Measured Performance see page 111

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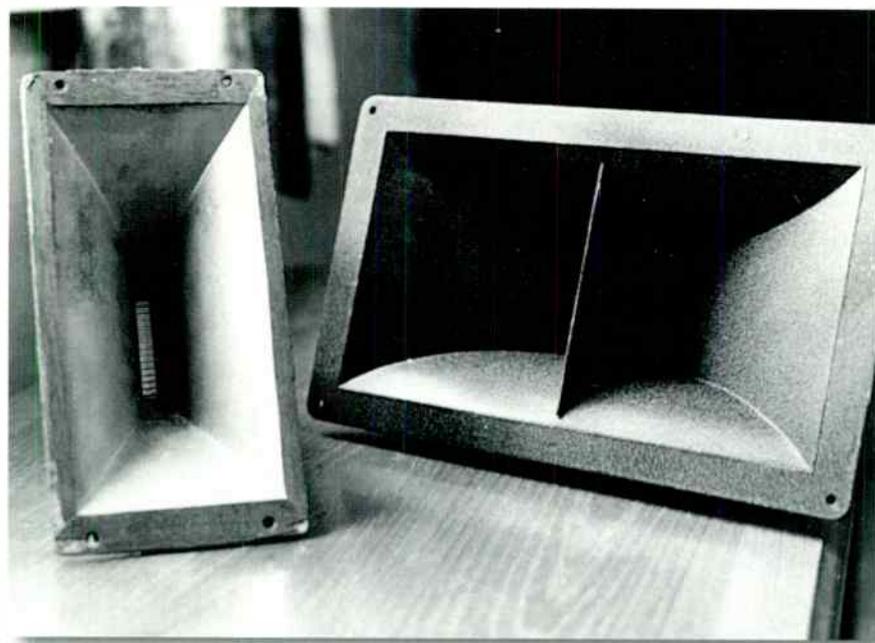
# VINTAGE VIRTUES

By Haden Boardman

**A**fter the electrostatic and the ionophone, the only other low-inertia drive-unit technology is the true ribbon loudspeaker. Be careful here, though, as a lot of 'speakers go by the name of 'ribbon' these days when they are really isodynamic types (more on these in a future article).

Rare these days due to the high cost of manufacture, ribbons remain the kings of practical tweeter technology. The most famous name in England to be associated with ribbon tweeters is Stanley Kelly. He might not have been the first to design and build such devices, but that didn't prevent his name becoming synonymous with them.

The first ribbon loudspeakers were actually German. The Siemens Halske units laid the ground rules for all the others that followed - pole pieces either side of the diaphragm, and the diaphragm itself made out of corrugated metal. (If any overseas readers have information about these units, we would be interested in finding out more about them). Unlike



The Seventies saw the introduction of the Decca London (right) with its larger horn.

typical ribbons, the Halskes were not just tweeters; they were, in fact, built for full-range PA use, which makes all we know about later technologies and their tweeter-only limitations slightly mysterious.

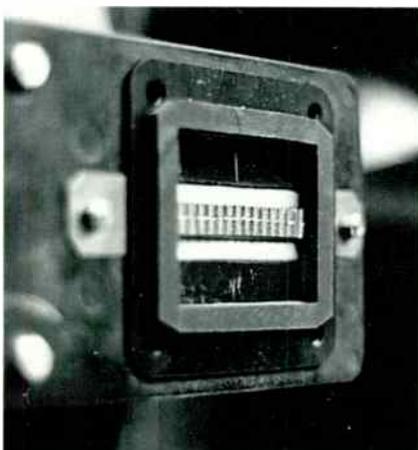
Ribbons are, of course, famous in the world of microphones too. The classic Coles 4038 (still in production) and RCA 44B (sadly not) still command high prices, perhaps because of the lack of development and new designs in this field.

As I mentioned a couple of issues ago, the first British ribbon was marketed by EMI at the end of the Forties but is very rare these days - I have yet to see one in the flesh. It was supplied in a complete and complex cabinet, aimed at the very finest reproduction, and was strictly for the connoisseur with unlimited financial resources!

The next major development was the Acoustical Manufacturing Company's (Quad's) corner ribbon loudspeaker of 1949, which featured a pretty little tweeter and cost no less than £83, including delivery and installation by the manufacturer.

Thankfully, by 1955 Mr Kelly had set about constructing his own ribbon loudspeaker, the basic core of which is still being made today. The corrugated ribbon was around 60mm long, about 6mm wide and was formed from thin aluminium foil. This is of such low impedance that a small transformer is required to match its 0.15ohms to the output of an amplifier.

On the front of the Kelly, a die-cast horn helps raise efficiency and ensure good high-frequency dispersion. On the rear is a small chamber, where the



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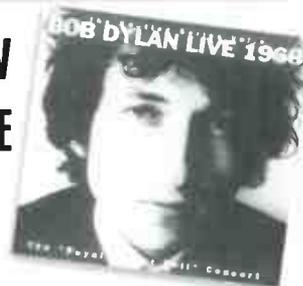
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magnets are mounted, which stops back-pressure ripping the delicate ribbon from its mountings. These early MkI ribbons are very, very difficult to find; they make the Acoustical corner ribbon loudspeaker look positively commonplace! Power handling (with the factory-fitted crossover) is around 10watts, the output level average for the time.

The hammerite-silver MkII Kelly is far more common. This second incarnation was mechanically simpler (which no doubt saved a small fortune in manufacturing costs) but is in no way sonically inferior to the MkI unit.

By the mid-Sixties, Mr Kelly had sold his design to Decca Special Products Limited, who were already busy producing fancy Decca Decolas and the Decca FFSS pick-up arm and cartridges.

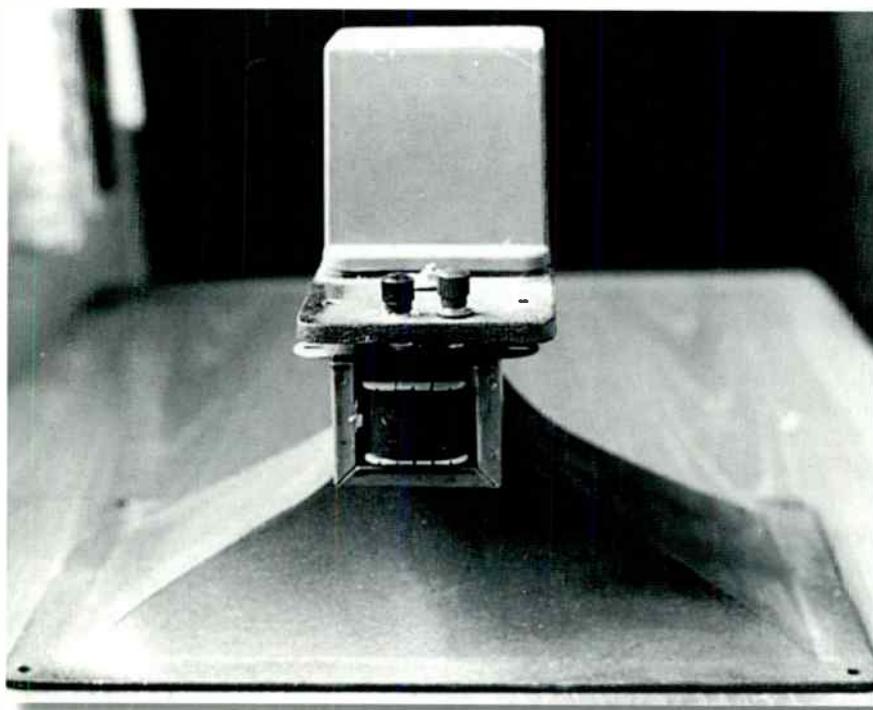
The MkII then changed from silver to gold, and mutated into the DK30, or Decca-Kelly 30. The number hints at later units' power-handling capabilities, which Decca achieved by increasing the thickness of the ribbon. Some purists insist the original, thinner diaphragms are much better, but as I have never seen or heard anything other than the DK30s (and this includes plenty of MkIIs with DK30 ribbons), I cannot comment.

By the Seventies, Decca had launched the London, a "new, improved" loudspeaker. Actually, everything except the horn on the front is the same, this having been enlarged to offer potentially lower crossover frequencies. However, with today's more 'electronic' music, I would suggest getting the crossover as high as possible, say 5kHz.

Later Londons suffered from fibreglass horns which sounded no worse than their metal counterparts but had an annoying habit of losing their corners when the mounting bolts were tightened.

The last stage in the Kelly's development was the Decca Super Ribbon, which did away with the horn completely. This unit, which is basically just a London minus its horn, boasted ultra-high-frequency performance at the cost of greater directionality and lower efficiency. A facsimile of the Super is actually still being manufactured by Howard Dawson (tel: 01263 734361).

American designer Day-Sequerra, famed for his Marantz 10B tuner amongst other things, has also produced some pretty impressive ribbon dri-



Because of its low impedance, the ribbon needs to be connected to a power amp via a matching transformer.

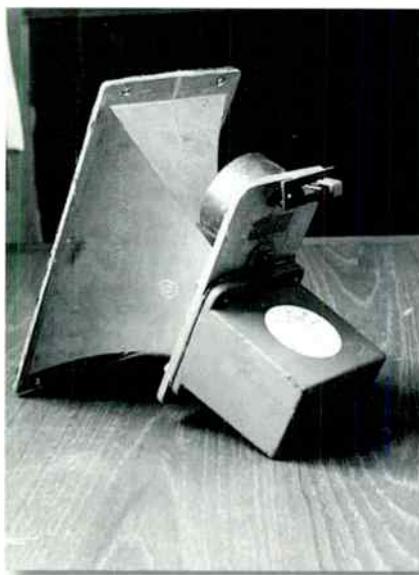
vers. Although not very commercially successful despite quite a reasonable price tag in the UK, a three-box, four-way loudspeaker of his which I heard about five or six years back sounded extremely good.

The Japanese have produced some outstanding (if rather potty) ribbons as well - Pioneer's PTR7/III runs up to almost 200kHz! For goodness sake, that's Long

Wave! Sadly, it really doesn't match up to any other unit acoustically and is only suitable as a super tweeter. Technics made a much more practical device in the 10TH, unfortunately no longer in production. Then Onkyo came up with the world's first ribbon 'dome' tweeter, with a spiral diaphragm. Mind you, like the modern-day Lineaum, this is not a 'true' ribbon.

Second-hand Decca Kelly units trade for anything between a few pounds and a hundred pounds. Keep an eye out for Sixties 'speakers in junk shops as a lot of these had Mr Kelly's ribbons fitted. However, you can guarantee the diaphragm will be bust since the power handling is very low indeed. At least replacements only cost £20 each, so there's no worry on that score.

Very few complete 'speaker systems which include the DK ribbons can be recommended, so this is one for the home builder. I would recommend a crossover point as high as possible with a 12dB/octave slope as a minimum. Yes, this means you need an almost full-range mid/bass or a midrange worth its salt, but the results you'll get from the right combination can be astounding - life-like treble with a winning openness and natural sparkle●



On the rear of the driver is a back-loading chamber which also houses the magnets.

# Time Waits For Saga of the Audio Note

**W**hile we all wait for the brave new world of DVD, with its many proposed (imagined??!) benefits to sound quality, Audio Note is introducing a highly innovative and unusual addition to existing digital converter technology.

**The question is, will the one times oversampled D to A converter with no digital filter make a further contribution to 96kHz/24Bit technology or extend the life of the existing 16Bit system??**

A brief technical discussion follows below.

Digital Audio recording consists of measuring (sampling) the amplitude of the audio waveform at regular intervals and storing the measurement results in the form of binary data.

A digital to analogue converter generates an output which bears a direct relation to the digital data it is presented with, and hopefully if all goes well we retrieve the original analogue signal.

The sampling rate is the rate at which measurements are made and the resolution is the accuracy of these measurements. The greater the sampling rate, and the greater the resolution (number of "Bits") the closer we theoretically get to the original, and infinite amounts of each would result in a perfect recording, this has been the limiting factor so far, because more resolution and higher sampling rate means more information which in turn requires greater storage space and thus greater cost.

The engineers who originally specified CD decided upon 44.1kHz sampling rate and 16 Bits (65536 discrete levels) of resolution were aiming at good recording time on the disc combined with acceptable cost within the technology available at the time (1982/83). This just about gets us to the generally accepted 20kHz upper hearing limit and gives acceptable dynamic range and distortion, but only just.

Due to the limited sampling rate of 44.1kHz the actual bandwidth of the system is limited to a theoretical maximum of 22.05kHz (half the sampling rate). If a digitally recorded signal is played back above the high frequency limit there is a lot of signal related noise which is generally considered to be undesirable. In fact, if you observe a 16Bit 44.1kHz encoded signal which has been directly converted by a D to A converter without filtering it looks a real mess. The current wisdom is to use a digital filter which interpolates the 16Bit/44.1kHz signal to a higher sampling rate and to a seemingly higher resolution. Commonly the interpolation is 8 times oversampling (to 352.8 kHz) and to 18 or 20 Bits of resolution, no information is added, the filter mathematically joins the "dots". Then after the interpolated signal has been converted to analogue an analogue filter is used to put the final polish on the signal.

As the theoretical maximum frequency limit is 22.05kHz and the required bandwidth is 20kHz the digital filter has to cut off very very quickly. In fact the popularity of the digital filter today is entirely due to the impossibility of designing an analogue filter which can roll off so fast, and without phase distortion and time related problems. The digital filter uses a mathematical function called a sinc function which gives the required "brickwall" roll-off and with no theoretical phase distortion. The sinc function is an impulse which starts at time Zero and ripples off infinitely into the future, and the past!! Of course this is impossible in reality and the filter uses a part of the function and feeds the data into one end. Even though the filter only uses a small part of the sinc function it must still be large enough to be effective at filtering and this means that it is usually several milliseconds long, regardless of the duration of the signal itself.

At Audio Note we have long pondered the question of how much damage the signal suffers at the hands of this filter function and the unavoidable time smearing it introduces. To give you an example, if an impulse lasting only one sample is fed into a digital filter, it gets smeared out into a ringing signal several milliseconds long, hardly supporting claims of accurate reproduction, or as we say here at Audio Note: time waits for no-one, not even the "perfect" digital medium. Time displacement is the greatest cause of audible anomalies in audio reproduction and always has been.

Whilst we are not alone in questioning the effects of the sinc function and the digital filtering universally used in all CD-players and D to A converters, we are the only manufacturer unconventional enough to have grasped the nettle properly and removed the digital filter altogether, in an attempt to answer the central question: "how else do you establish with any accuracy exactly what the digital filter actually

does to the signal and is there an alternative method of filtering that would preserve the signal better??"

After much trial and error we found a way of removing the digital filter and incorporating a carefully designed analogue filter after the D to A conversion. Needless to say, this goes so completely against the grain of all current opinion because a lot of the spurious signals above 20kHz are still present in the output of the converter after the analogue filtering. The filter is a 3rd order design with a silver wired inductor and silver capacitors and is so designed to slowly attenuate the higher harmonics in a natural way, preserving as much of the musical waveform as possible, each filter is dynamically matched to within 0.5dB of its partner in the other channel across the full frequency spectrum, to achieve best possible channel balance.

Rather than use an off the shelf voltage regulator chip for the low voltage digital and analogue power supplies for the DAC we designed a unique discrete shunt regulator circuit, and use only the finest components throughout. In fact the DAC 5 power supplies take up more than 2/3rds of the substantial chassis. After the signal leaves the filter it is passed to a valve output stage, similar to that used in the M5 pre-amplifier, and is transformer coupled to the output, allowing both balanced and single-ended operation.

**So how does the Direct Line DAC 5 converter with no digital filter and one-times oversampled D to A converter sound??**

Let me first give you some background to what I believe matters in music reproduction and how I have arrived at the evaluation criteria we use at Audio Note.

It is no great secret that ever since Digital Audio was introduced in 1983, I have seriously questioned the validity of the claims that the technology would deliver the "Perfect Sound Forever" that launched the technology, I, and many others with me, found analog reproduction far more "real", satisfying and authentic, not to mention less fatiguing.

The main criterion I have always used when evaluating any hifi system or component is that when playing different pieces of software (whether LP or CD) the better system or component is the one that individualises the sound from each record the most, or in other words makes you sense each recording as a different and individual musical "event".

This evaluation system is based on a fundamental analysis of recording in all its forms that concludes that all we really know about recordings, is that they must sound different from each other, the conclusion is based on the indisputable fact that each piece of software was done at a different time in a different location, with different microphones, cables, mixers, tape recorders and they were recorded by different people to any other recording, furthermore the software was manufactured by different cutting and pressing machinery at different plants and as a result must have an individual character or "signature" uniquely its own.

I call this method of differentiation "Comparison by Contrast" and with this tool in hand (or should I say ear??) I have spent many years searching out the "better", more accurate (you will notice that the term used is more accurate, not accurate in its absolute sense, because total accuracy does not exist in recording or music reproduction, it is an unachievable goal, that will never be a reality, no matter how much the marketing men of the hifi industry would like you to believe it is) audio components and technologies in a largely selfish quest to improve the reproduction of my own record collection.

I made this pursuit my livelihood in 1977, when I left my career as a broker with a large multinational shipping company.

Back to the main subject, by the criteria outlined above, CD fails miserably compared against even quite cheap analog component hifi, and I have always thought that this failing was inherent in the medium itself, i.e. the fact that the musical signal is broken down into little "bits", with poor resolution at low levels, which is after all the entrapment of the musical signal (it is often forgotten that music starts from silence, not from somewhere up the amplitude scale, the assumption is often made that what we hear at the beginning of a note is what was recorded and the words "I hear more detail" assumes that we somehow know what is supposed to be there, which we certainly do not, what the reviewer should perhaps say is I hear more contrast!) it never seems to occur to anyone that the starting parts of the musical note might be missing.

The quiet background of the digital medium should therefore allow the best possible low level detail, but it does not, low level acoustic information like hall ambience is almost completely lost on most digital recordings (it is a little better on good analog recordings transferred to CD, indicating that the digital recording process is at least

# No One or the DAC 5 D/A Converter.

partly to blame), modern recording techniques do not help, as multi miking, digital mixing and other technical gadgets used in the studio, "help" the recording engineers do their job speedily and within budget, a far cry from the simplicity, dedication and time that went into every recording made from the early acoustically recorded 78's to the earliest LPs) and this real acoustic information is replaced by a varying degree of hard and bright electronic echo, which makes most CD listening fatiguing, unless of course the system used tailors the high frequencies to suit, creating a "listenability" that comes at the price of severe loss of information at high frequencies, which may be preferable, but does nothing for the idea of a wide band system or signal, nor does it improve the listener's ability to distinguish between the great and the merely good performance or interpretation.

While I owned Audio Innovations (sold out 1991) I spent years in denial and despite all the arguments in favour of the commercial considerations of what my company required I heard nothing from CD that encouraged much enthusiasm and since I prize my longterm credibility more than just making money and as long as my favourite music was available on LP either new or second hand, I had no need for CD until the early 1990's when a lot of interesting material (mainly historical piano recordings previously unavailable) suddenly appeared on CD-only releases.

I had already spent a lot of time looking at the subject of digital to analog conversion, without achieving any really substantial sonic improvements against the better converters already available, my approach was to conformist, as it turned out, as it accepted too much of the existing dogma and therefore too closely followed the already beaten track.

In 1990 I decided to test the use of an interface transformer between the converter chip and the analog filter, primarily in the belief that a better interface between the D-A converter chips output should yield sonic improvements but also because I felt that separating the digital and analog circuits ground planes ought to yield some improvements.

Early experiments showed promise, but the matching impedance and associated analogue filter configuration were more critical than first assumed, after two years later we finally got it right and Audio Note launched its first digital product, the DAC3 D-to-A converter with patents awarded in the UK, the USA, Germany, Australia and elsewhere.

Since then we have progressed with greatly refined components quality (DAC3 Signature), even more high quality components plus a power supply with a valve rectifier (the DAC4), and finally the best output stage and ultimate component quality (the DAC4 Signature), and whilst all of these measures achieved even better sound quality than the original DAC3 offered, the improved versions did nothing to dent the original product's price/quality relationship to competing converters, after 6 years on the market it is no mean achievement for a digital product to stay at the top of the performance spectrum in its price range in a market where model life generally is measured in months rather than years.

The more I studied the fundamental equations that all digital theory is based on, the more convinced I became that the sinc functions used in the digital filtering must have a far more damaging effect on the signal, than is generally accepted (or even considered).

The basis for my idea is that there has to be a price to pay in all attempts to improve, "correct" or manipulate the signal, regardless whether it is done in the digital or the analog domain, and I have always thought that the digital filters with their oversampling, relocking, noise shaping, jitter reduction and whatever else are no different in their fundamental properties to the corrective feedback systems employed in the analog domain, in that they also try to "stop" or reverse time, so their deteriorating effect on the sound must be similar.

In early 1995 work started on the no digital filter - 1 x oversampling D to A converter and when Andy Grove joined me in 1996, his contribution to the idea was a first prototype within weeks of joining, a great credit to his talent and ability.

Although the first version had a fair bit of the sampling frequency breaking through, even with this interference it was obvious to everyone that the sound had something fundamentally "right", it was freer, had more presence, immediacy, delicacy and contrast than any digital product I had ever heard, there was obviously more good information in the digital data stream than previously thought, and it was clear that this converter had very serious sonic potential, so we persevered getting the interface transformer and filtering right, and here we are, nearly three years later introducing the finished product, the DAC5 Direct Line D/A Processor with 1 x oversampling and no digital filtering, relocking, noise shaping, jitter reduction or other such signal correction or manipulation.

Having listened to the final version of the DAC5 with its no-oversampling D to A conversion for nearly a year, I can say for the first time since my earliest experience with digital audio in late 1983 that digital has more to offer than I had ever imagined, because for the first time there is genuine contrasting quality between recordings with the DAC5, a fact which combined with an incredible sense of hall ambience, where instruments have greater presence, solidity and texture and a far more defined spatial position (provided this is what how it was recorded). An orchestra now has an organic quality where the musicians appear more like real people actually playing in real space, rather than as cardboard images in a sound deadened studio, the reproduction of stringed instruments has the sound and feel of real wood rather than the usual artificial and plasticky presentation of digital.

It may sound absurd, but the greatest beneficiaries of this vast improvement in the sound of my CD's are my big collection of historical recordings of piano music, the distinct differences in style, touch, tempo, tone and sound of each of the great pianists from Sergei Rachmaninov to Joseph Lhevinne, and from Simon Barere to David Saperton is a true revelation, which has greatly contributed to my appreciation of the interpretative skill, dedication and pure musicianship of these great artists.

When all is said and done, however and despite the DAC 5's great and almost analog qualities I still find my AN-TT Three Reference turntable with AN-1s/AN-Vz arm and 10Gold cartridge excels with the best recordings, but at least now it is a contest between the two formats rather than a race between a Ferrari and a man wearing a pair of worn shoes!

The DAC 5 uses the Analog Devices AD1862NJ chip with as little in the signal path between it and the input chip as possible, the analog filtering has been done in such a way that the carrier frequency is inaudible, although it will show up on the oscilloscope in abundance (another example of the hard to grasp reality of measuring and its correlation to sonic reality)! We have experimented extensively with different filter configurations to find the one that passes an amount of breakthrough that does not disturb the ear without affecting the quality of sound more than necessary.

The DAC 5 has facility for 96KHz DVD technology, as well as the conventional 44.1 and 48KHz, it has high B C-core output transformers, with a 600Ohm balanced output using a professional Lemo connector (we can provide the silver cables with the Lemo plug for this) as well as a standard unbalanced RCA output.

There will be no patent applications or copy rights filed on this revolutionary idea, because that would limit its wider use by other manufacturers, to the detriment of the reproduction of music, instead we are offering a small technical paper on the technology to anyone who wants to test the idea, and this includes any of our competitors, all we ask is that you remember who thought of it first.

The DAC 5 is not cheap at £ 18,500.00, its component, power supply and transformer quality is far too expensive and elaborate for that, but go and give it a listen anyway, even if it is out of your price range, because the improvement it represents is nothing short of a digital revolution and you can rest assured that we shall move this advance in technology down in price as quickly as possible, so after 6 years most of our DAC-range (from the DAC3 upwards) will be upgraded to 1 x oversampling and 96KHz technology, to take us through at least another 6 years, which is in line with our stated aim to do our homework thoroughly and properly and only release products that have longevity built in.

Peter Qvortrup  
01.09.1998.



Audio Note

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Dominic Todd

Once upon a time a hi-fi system was a piece of furniture; no self-respecting gramophone or, later on, music centre would be without its French-polished, veneered cabinet. Speaker stands, cables and interconnects weren't an issue as everything was built in and neatly folded away.

The situation changed as hi-fi separates began to infiltrate people's homes in the Fifties and especially the Seventies, when a shiny sideboard became less of an option. In the vanguard were style gurus such as Terence Conran, who demonstrated to the masses that there was a choice other than Teak, vinyl and doilies. The problem that then arose was where to put the collection of boxes and miles of cable that resulted. It appears that there was little choice other than plonking it all down on the nearest bookcase, unless you went to the expense of getting a dedicated cabinet made.

In the late Seventies and early Eighties hi-fi became upwardly mobile as stacking the individual components one on top of the other and stowing them in a glass-fronted tower unit became all the rage. The glass not only gave the 125-channel graphic equaliser's light-show maximum exposure but also allowed for the use of those new-fangled, infra-red zappers for armchair enthusiasts. Whatever the desirable finish (Teak, Walnut or authentic black plastic), castors were essential.

Of course, by this stage specialist hi-fi furniture manufacturers were beginning to crop up. This, and the advent of the Midi system, relegated tower units to that great audio dustbin in the sky. Surprisingly, though, up until very recently you could still find the odd lonely

example lurking forlornly in the back of some of the catalogues produced by large Japanese companies (I believe Pioneer were one of the last to cease production).

The hi-fi furniture specialists usually chose (and continue to choose) one of two approaches. The first involves constructing cabinets which look a little like the old towers but are hewn from real wood and often made to mock a particular period. The second path that groundbreaking outfits of the time such as Target took was simply to supply a basic, black rack. This minimalist structure had much to offer as it matched the appearance of black hi-fi separates as well as bringing to the attention of the buying public the fact that their choice of support actually played a very large role in sound quality.

At the same time, loudspeakers were generally becoming smaller and stands, whilst no more critical a part of the sonic

candidates. Coloured stands were seen as the key and Soundstyle have done a splendid job in introducing a range that fits in with a broader spectrum of living environments. There are now even several companies offering versions in wood finishes that can genuinely be considered pieces of furniture (something that could hardly be said of the earlier structures). In many respects we've come full circle to the point where hi-fi is once again furniture rather than an eye-sore to be hidden away.

One noteworthy point is that, in spite of racks and stands having been around since the early Eighties, it's only recently that I've seen a real consumer awareness of them. When I started out in retail 10 years ago, it was still pretty much the audiophiles alone who would bother with them; the response I would get when trying to recommend a pair of stands would often be, "How much!?! I could get a

*"The trouble with most supports is that they often bear more than just a passing resemblance to tractor accessories with their unadorned, angular lines."*

recipe, were seen as making a greater contribution to the final result. For the past 15 years or so, good dealers have therefore been promoting the worth of decent equipment supports.

At the forefront of platform production were Target, Apollo, Partington, RATA and Sound Organisation. Over the years these companies were joined by others, the plain racks metamorphosing into 'modular support systems' which sported features such as glass shelves to enhance their sound. More recently, new heights have been scaled by Townshend and Audiophile Furniture, who proved that the effect a well-engineered support could have was far more than just slight.

The trouble with most supports is that they often bear more than just a passing resemblance to tractor accessories with their unadorned, angular lines.

Those who wanted something which combined aesthetics with effectiveness faced a long quest in search of suitable

mate to make some for less!" I'm sure some of them could, but few bothered, the loudspeakers ending up on the floor instead. This situation has changed over the past three or four years, so that now people will come into the shop and actually ask unprompted as to which the best stands are for a particular 'speaker.

It's taken quite some time for separates buyers to latch on to the benefits of popular component supports compared to how swiftly they would take to a wholly new format, for example. The reason for this is probably that all bar the most dedicated will only buy hi-fi (unless it's said new format) about once every decade or thereabouts. Hence fresh ideas in cabling and racking only gain recognition quite a while after their release. But it's good to see manufacturers finally responding to what consumers want with more pleasing methods of storing hi-fi gear. Now, where did I leave the key to my Dynatron sideboard?

# LOUDER & LOWTHER

Do Lowther's new DX4 and DX4M drivers make themselves heard? Our man round the horn, Richard White, puts them through their paces.

Time and tide wait for no man it seems, not even in Sidcup. At the same time we had a look at the new Lowther DX2 twin-cone driver with its neodymium magnet in our August issue last year, we also got wind of its forthcoming superior. Well, here we are six months on and both models of the DX4 are with us.

As regular readers will be aware, many horn loudspeaker designs are founded upon one of Lowther's units; the Carfrae, the dT Horn, the Pentowther and Thomas Transducers' are but a few of these.

To its credit, a single, full-range driver obviates the need for an electrical crossover, so the output is a couple of decibels up before you start. Coupled with this, for many years Lowther have used the finest Alnico magnets with their very high flux densities and total fluxes. The upshot is a driver that is, to say the least, extremely efficient.

When the DX2 magnet range was introduced, care was taken to ensure it was compatible with older-pattern chassis. This meant that, for equivalent performance, the weight of the old PM6A driver could be reduced by about half! With a little practical woodwork, the new DX4 units are suitable for the Lowther cabinets of yesteryear too. Roughly half an inch of spacing is all that's necessary to adapt a PM series cabinet to take the chunkier magnet assembly.

In reply to those who consider Lowthers to be inherently bass-light, the drivers' lower output is very dependent on proper air loading. To an extent this is the case with any loudspeaker unit: the half-wave cancellation effect holds good for an un-baffled radiator no matter what. The difference with Lowthers is that they have phenomenal treble output, and this needs to be properly balanced at the other end, typically



by effective horn loading.

To begin with, I fitted one of the plain DX4s (£460+VAT) to my 'test cabinet', a handy box which enables me to vary the resonant point of the enclosed air over a wide range. This experiment established that, in the case of non-horn loading, either a very substantial cabinet or else a long tuning port would be required to achieve a good match. To box up a driver of this sensitivity (99.5dB/watt!) is simply to waste it. Time to try out horn-loading!

Fresh from the box, all Lowthers are prone to a touch of the tizz, although the worst of this wears off quite quickly, and some of this forwardness seems to have been tamed by the new phase plug. As we've pointed out before, these units take a long time to 'mature', but the benefits of their potential are deliciously apparent long beforehand.

In this instance, as expected, once the drivers had started to ease up a bit, over came the well-known Lowther pin-sharp clarity, with my old standby, harpsichord recordings with their super-20kHz transients, reproduced with crystalline accuracy.

One of the biggest problems with rear-loaded horns is the amount of midrange signal which escapes into the horn. In addition, some cabinet designs put a plane surface directly behind the magnet, splashing reflections through the cone.

Perhaps with this in mind, the DX4 Module (£495 + VAT) has an acoustic filter fitted to the back (Lowther term it a 'capsule'), the effect of which is to remove the need for fine tuning and, presumably, lagging the chamber into which the driver fires. Willing to be convinced, I fitted the DX4 Modules to a pair of battered old Acousta cabinets and brought out the big guns in the shape of some pipe-organ music to stir up the old 30Hz region.

Well, it works! Even considering the crudities of the Acousta horn, which doesn't really deserve this treatment, the improvement in bass clarity was discernable and, of course, the extra 6dB or so over a PM6 means that amplification needs to be only of hearing-aid output to bring the ceiling down; this is high-fidelity demolition, though!

Somehow I think the late Mr Voigt would have been proud!

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**£175**

## HD83 VALVE HEADPHONE AMPLIFIER KIT

The HD83 is our new headphone amplifier, a beautifully simplistic design using Mullard ECL83 valves, a triode and power pentode housed in the same envelope. It works directly from any source be it a CD, tape, tuner etc., or from an amplifier's tape out or pre-amp sockets. The circuit utilises high specification output E and output transformers that will drive any headphone load from 16 ohms to over 300 ohms depending on how the secondaries are wired up. The HD83 is a single ended design with the power pentode wired up in triode configuration for that added purity and is as quiet as a mouse. For sound quality Jon Marks says, "The bass is punchy and controlled without becoming artificial, while treble has the crispness of the best solid-state, with the tonal purity, delicacy and speed associated with valves. External dimensions 18cm(w) x 30cm(l) x 8cm(h) weight 4kg.

Please note that we are selling the full range of sennheiser headphones at discounted prices when purchased in combination with our HD83. Please ring 0171 221 0691 for further details.

## KEL34 VALVE INTEGRATED AMPLIFIER KIT

The KEL34 is our all-new budget stereo integrated valve amplifier, providing a massive 40 watts of pure valve sound, with 4 line level inputs and one tape output, fully controllable from the front panel. The KEL34's simple and elegant circuit design utilises a 6AU6 pentode input valve, an ECC82 double-triode phase splitter and a push-pull pair of E1 6CA7s (a turbo-charged EL34). The result is a typically sweet, open valve sound with atypical bass control and power. And with 40watts output, KEL34 will work its magic into 'speakers of average sensitivity too. "When I first heard the KEL34 under test I was astonished at the strong, punchy bass which, good as it was, did not compromise the smooth clarity and true detailing in the treble. What I most appreciated about this amp was the sumptuous valve midrange; the feeling that the sounds were being painted from a broad and secure palette." At the price, this kit is second to none and will open up the benefits of valve amplification to a whole new class of audio nuts! Weight 10kg. External dimensions with valves: 33cm(w) x 27.5cm(d) x 18cm(h).

**NEW!**



**£295**

## K5881 MkII VALVE AMPLIFIER KIT

MkII with SRPP input stage!



**£395**

A 20watt, Class A power amplifier that uses reliable Russian 5881 output valves, a military version of the American 6L6, designed for low distortion audio work. Now with a super shunt regulated push-pull (SRPP) input stage K5881 offers amazing sound quality. It can be used with a simple passive pre-amp or one of our own pre-amplifiers, and it matches modern loudspeakers well. Weight 15kg external dimensions with valves 40cm(w) x 32.5cm(d) x 17cm(h).

## 300B VALVE AMPLIFIER KIT

**£850**



This is a specialised 28watt amplifier based on the highly linear 300B triode valve. Our 300B runs in Class A, giving one of the most sweet, open and neutral sounds possible today. Matched with good loudspeakers, it is unsurpassed. All parts are included in the kit, except valves since different 300B makes are available. Weight 26kg, external dimensions with valves 44cm(w) x 35cm(d) x 20cm(h).

## K5881 MkI Upgrade kit

Upgrade your pre November 1996 K5881 amplifier to MkII status. The kit converts your amplifier to the new 70Z5 double triode input stage in place of the original EF86 pentode input.

**£35**

## KLPP1 VALVE PHONO PREAMPLIFIER

KLPP1 has five line inputs, a tape input with monitor and a unique low noise valve MM/MC phono stage. There is a switchable subsonic filter to prevent output transformers of valve amplifiers saturating. The line stage has gain, so it will drive any power amplifier. Audio grade components are used and many parts are custom made for highest quality. KLPP1 has a super clear sound, sweet and detailed through line and phono inputs. Weight 6.5kg external dimensions 28.5cm(w) x 23cm(d) x 8cm(h).

**£495**

KLPP1 & KLPI use the same chassis

**£345**



## KLPI VALVE LINE PREAMP

The KLPI line level preamp uses one an elegant cathode follower line drive circuit to give a sound of remarkable clarity and detail. The components are all high quality and include Alps volume control, Sovtek valves, silver plated wire etc. With a gain of x1, it matches our sensitive power amplifiers. Beautifully built, with solid machined alloy fascia and gold anodised knobs, it looks compact and elegant in the home. Weight 5kg external dimensions 28.5cm(w) x 23cm(d) x 8cm(h).

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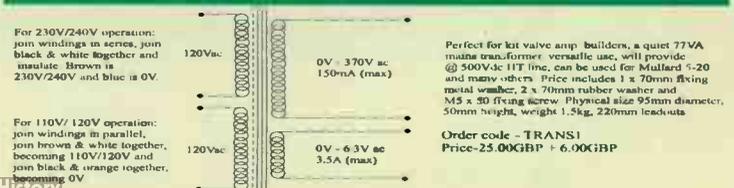
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# LIFE AT THE CUTTING EDGE

Simon Pope re-visits The Exchange mastering studio in London to investigate the final stage in the CD, LP and Cassette production process.

**H**aving worked on the pro side of things myself for a while, I was keen to share some of this hard-won experience with World readers. An invitation from The Exchange mastering studio proved just the opportunity to put my back-catalogue of knowledge to good use.

The Exchange has been operating for over 10 years and, by reputation and word of mouth, has acquired clients of the status of Fat Boy Slim, Jamiroquai, Propellerheads, The Chemical Brothers, Björk, Oasis, The Prodigy. . . What singled out The Exchange were their distinctive, high-level masters with an attractive warmth to them. Any aspiring Goldies out there should also note it is apparently the place to have your Drum 'n' Bass magnum opus mastered.

## MASTERING MASTERING

Raw material for The Exchange's touch usually arrives courtesy of an artist or record company executive with the original (two-track) master tapes from the recording studio. These can be on a variety of formats - Digital Audio Tape and 1/2in. tape are the most common, with CD-R popular for 'home studio' stuff. On the odd occasion, even cassette has been used, although it really doesn't cut the mustard at this level!

If the originals are on DAT tapes, machines from Sony and Tascam are employed; for 1/2in. tape it's Studer A-80s (hospital-machinery-sized beauties). Marantz's professional CDR 620 takes care of CD-Rs. Reel-to-reel tape, provided that the machine has been well-serviced and properly-aligned, is the preferred option of many engineers for its rounder, deeper sound.

## LIFT AND TUCK

Next stage in the mastering process comprises getting the signal from the original master recording onto copper or lacquer



"A fist full of dollars". Guy Davie shows off some of the pure silver Audioquest Diamond interconnect (£800 per metre) used to hook up all the various pieces of equipment.

(for vinyl) or a U-matic tape (for CD). This is often done via a direct connection to the EQ units which can be used to add a little extra life to the sound, if necessary.

Guy Davie, one engineer responsible for this, plays the first track back from the original master in order to assess the equalisation requirements before setting the sound level. He might also need to de-ess the vocals to reduce sibilance or apply some compression. This can help prevent distortion difficulties when the finished pressing is played.

It's not really a mastering engineer's job to alter the sound of the original mas-

ter - any EQ should be 'corrective', not necessarily creative. The whole idea of mastering is to preserve as much of that original sound as possible. Sometimes a well-mixed track can be left 'flat' (non-EQ'd) at the mastering stage. However, a little remedial tweaking can be accomplished with the valve equalisers and compressors which are sourced from Esoteric Audio Research. The EAR products were selected on merit: "They degraded the sound less than anything else that was tried out".

Engineer and Exchange Director Mike Marsh assured me that masters from a

£2000/day studio will not automatically be superior to the sort of tape 'lashed up' in a small home studio. The amount of time an amateur can give to preparation of a master can give good results despite the meagre resources.

**IT'S A WIREY WORLD**

While there's a feeling amongst some engineers that cable is cable and anyone who believes they can hear differences between brands is potty, a number of pro outfits think along more hi-fi lines. At The Exchange connections to the EQ units are made directly from the analogue L/R outputs of the source component; a patchbay (a multi-way interconnect 'junction box') is avoided where possible. Their cable of choice is pure silver Audioquest Diamond cable with XLR terminations: a snip at £800/m!

During the transfer a number of other devices are brought to bear. One is a Klark Teknik spectrum analyzer, a device which displays the frequency levels in 'real time', helpful for showing which frequencies have been boosted or cut (or need to be) with the response ranging from 25Hz to 20kHz.

**DIGGING THE GROOVE**

A less familiar piece of equipment is the phase meter which, as its name suggests, shows the relevant track's stereo phasing. When cutting to vinyl or copper Direct Metal Master (DMM), if the sound stage is too wide it may need narrowing to avoid cutting problems, because stereo imaging affects the groove depth.

After this preparation the signal is routed to the amplifiers that power the disc



Mike Marsh at work on one of the Neumann lacquer cutting lathes.

cutting head (approximately 500watts per channel!) on the German-built Neumann cutting lathes. For maximum playing time, amplitude-dependent variable groove spacing is used; a delay unit is set at 0.75seconds for 33.3rpm and just over one second for 45rpm.

Besides its built-in Neumann amplification, the cutter can draw on the power from monster EAR 549 valve amps (250watts per channel). A monitor circuit enables the engineer to switch between the pre and post-cut signals to listen for any foibles, such as channel cut-out due to a blown fuse in one of the amps (which can be triggered by excessive treble).

In addition to the final lacquer or DMM copper, a copy of the cut is made on either DAT or U-matic tape for the artist's reference. The two discs (one for each side of the LP or 12in.) are then boxed up and sent off to the pressing plant. (For more information on what happens after this, see our June 1997 issue featuring EMI's LP production plant in Hayes).

**GET UP AND DANCE**

Not surprisingly, most vinyl mastering these days is done for the Dance music scene. These records are inevitably cut at high levels with relatively wide spacing between the grooves. As a consequence, they rarely contain more than three tracks per side; indeed just one is common, especially for Drum 'n' Bass. Many DJs apparently won't touch anything with more than a single tune on each side! This results in albums consisting of five-record boxed sets, all with very high level cuts.

A nasty to be avoided with long tracks is close-cut, high-amplitude grooves, since there is the possibility that the grooves will 'intercut', causing the stylus to jump from one to the other. Heavy bass sounds can also cause this effect. All this can be checked with either the microscopes on the lathe or via the TV monitor, which views the grooves in close-up through a miniature camera.

Another part of the paraphernalia when producing DMM discs is the canis-



Simon Davey at a mastering console which contains a phase meter and spectrum analyser. Behind the desk are a pair of Tannoy dual-concentric monitors.

ter of compressed Helium which sits by the lathe. This is to displace the oxygen from around the head to stop the copper oxidizing as it's heated by the stylus cutting into it, not, as many might think, for relieving the tedium of the cutting session with a quick Donald Duck impression.



From top to bottom: Sony DMR-2000, DMR-4000, Revox cassette deck and Sony 1630 PCM convertor.

**IN THE PITS**

Fans of digital will be pleased to hear that mastering a CD is a slightly less laborious process. After passing through the EQs the signal travels on to a stereo valve A/D convertor made by Studer. These again were chosen for their neutral tonal quality and clarity. Next comes a Macintosh computer and the Sonic Solutions hard-disc editor, where the tracks are stored and the fade outs/ins, pauses between tracks and track order are finalised.

The compilation is then played into a Sony 1630 PCM (Pulse Code Modulator) which turns it into the correct format to be stored on Sony DMR-2000 and DMR-4000 U-matic machines.

Another possible format is Exabyte, a removable hard disc. After extensive tests, however, The Exchange went for the more solid sound of U-matic. After the transfer to CD they considered Exabyte to sound rather 'papery' by comparison. Cassette production masters, by the way, are often taken from either the vinyl or CD master onto a DAT or U-matic which becomes the production master.

The client takes away the production master, which eventually goes off to the manufacturing stage, and safety copies are made at The Exchange and kept in a library●

# Sound And Vision '99

On an overcast February morning, Jon Marks headed for Bristol's Marriott Hotel and 1999's Sound And Vision Hi-Fi Show.

Editor's log, stardate: Friday, February 19th, 1999. With a small away-party, shuttled over to a large building known locally as the Bristol Marriott hotel after picking up intriguing electromagnetic and acoustic readings on long-range scanners. Arrived to find hundreds of people moving from room to room, clutching wads of printed material in what appeared to be some kind of male-only transcendental ritual. The following equipment was spotted in various locations within the Marriott 'audio temple':

**CASTLE:** Long-known for the superb build and finish of their speakers, Castle continue the trend with their Inversion range. The styling may be radically different, but carbon-fibre is still the material of choice for the mid/bass cones on the three models available from April, the Inversion 15 (£425), 50 (£875) and 100 (£1975). The 50 (reflex-loaded) and 100 (twin-pipe, quarter-wave loading) are floor standers which replace the Avon and Howard.



Castle's Inversion 100s have tapered cabinets.

**NAKAMICHI:** Yes, after a long leave of absence from the UK, Nakamichi have returned under the wing of BBG distribution. Leading the wave of components soon to be arriving here were the DVD-10a, AV-10, RE-10 and MB-10. Behind these somewhat uninformative monikers lie (respectively) a DVD player and AV and audio receivers in addition to a five-disc CD changer. While prices have yet to be confirmed, they are likely to be around £450 for both the 100watt RE-10 and the MB-10 (which uses Nakamichi's Music Bank disc-changer).

Glad tidings for tape-lovers came with the DR-10 and DR-8 cassette decks. Looking more than a little similar to some of Nak's earlier efforts, the DRs come in two-head (DR-8) and three-head (DR-10) flavours.

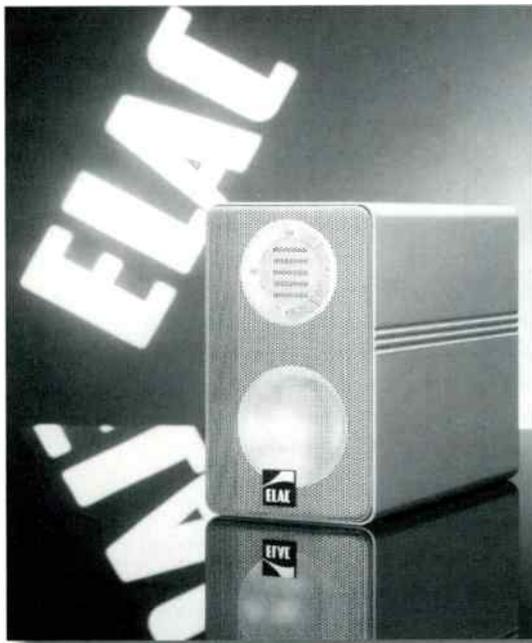


Back due to public demand - Nak's cassette decks.

**CYRUS ELECTRONICS:** their amplifiers and CD players might have been drawing a lot of attention, but Mission's most fancied was a hybrid NXT loudspeaker. This floor stander incorporates an NXT panel to take care of the higher frequencies, leaving the bass to a standard cone woofer. The release date has been set for later this year, with a ball-park price of £2000.



Best of both worlds? Mission's hybrid NXT floor stander.



Mostly metal - ELAC's Jet CL310i.

**ELAC:** German manufacturer ELectrical and ACooustic gave prime position within their system to the tiny new CL 310i Jet loudspeakers. These £800 stand mounters feature a long-throw, metal-cone mid/bass driver below the Jet folded-ribbon tweeter. The enclosure has a small frontal area but is very deep, which meant bass was surprisingly extended. Cabinet coloration was also minimal thanks to the box (available in silver, black or white) being an alloy extrusion with walls 6.5mm thick.



NAD's heavyweight SilverLine components.

**NAD:** producing some persuasive sounds in the spacious Rome 3 room were NAD's SilverLine amps, CD and tuner. Giving the rack a hard time were components including the S100 pre-amp, S300 integrated and S500 CD player.

**TEAC:** Topping off one of Teac's stands was a mock-up of their A-E2000 integrated, due out soon at £180. This amp relies on Unifactor power-supply technology which is, "efficient and draws power diligently from the world's resources to bring you an effortless musical delivery" ●



Teac's A-E2000.

**Meanwhile, in far-off Kent, Richard White was tucking into the left-overs and snapping up unconsidered trifles at the Tonbridge Audio Jumble.**

**F**ar and few indeed may be the land where the Jumbles live, but that is not enough to prevent them assembling in some strength whenever there is an event which demands their peculiar attentions.

The Angel Leisure Centre in Tonbridge once again played host to the Jumbles on a damp Sunday afternoon in February. Given the date (14th) I half expected to enter the hall through an arch of cardboard hearts, or perhaps the stall-holders would be touting fiddle cases for the Massacre. Alas not; business as usual, although many a sweetheart may have taken some persuading that blowing the cobwebs off a Lenco L68 was the acme of a romantic weekend. I shouldn't think things were much better the evening after:

*Scene: Suburban front room. Evening. Pretty girl is curled up seductively on the settee. A solitary Valentine's card sags on the mantelpiece. Dishevelled audiophile with a soldering iron behind his ear sits at the occasional table, a litter of tarnished chassis and grimy valves before him.*

**She:** "Coming upstairs, darling? I'll go and put on something special. . ."

**He:** "Yes, yes; just a sec, this may work better upside down. . . grab hold of that wire can you?"

**She:** (distractedly sharpening breadknife) "Is that all I've become to you? A substitute for a pair of pliers? Can't we even go to the pictures?"

**He:** "Ooh! yes, they've still got a pair of Westrex horn-reflex hybrids at the Rialto; beautiful jobs those, been there since 1950 aaaargh. . . ! Stock shot: ambulance racing through streets, bell furiously ringing...Fade.

Although you never can tell what'll turn up at one of these events, there are some regular items



A chance to hob-nob with the famous - Andy 'Thunderclap' Newman mingles with some young fans.

which seem to do the rounds of all the stallholders in turn. Not that there weren't some bargains to be had, if you have the space. Dave Beecham's Vortexion stereo reel-to-reel made periodic attempts to hop into the boot of my car but where do you put a thing like that?

Something I hadn't seen before was a pair of Rogers Senior amplifiers in rather nice condition. What with that and a 'brick-built'

and pre-1955 Leaks and little else seems to have passed. Instead, quite healthily people are having a go at 'lesser brands without the law' and finding that the inevitable tweaked Mullard 5-10 or 5-20 circuit sounds pretty similar, no matter which illustrious name is stencilled on the chassis.

Large 'have-a-go' home-made Williamsons and Mullards were on offer at very reasonable prices. The fact that they were not selling particularly is a mark of a sad increase in buying only branded goods.

There comes a point when no amount of cross-questioning a Classified advertiser on the telephone is of any use - you simply have to SEE the damned thing! There are few better places to do this than in the friendly atmosphere of a well-organized Audio Jumble●



Proto-Walkman from Vortexion.

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Incidentally, the time when valve amplification was synonymous with QUAD IIs



Brothers in ohms - a rare pair of Rogers Seniors.



Goodnight Ovalteenies . . .

## ROCK & POP

by Jon Clarke & Stuart Lenz



CHUMBAWAMBA  
**UNEASY LISTENING**

Music was never their strong-point. For the Chumbas, it was lyrics, lyrics, lyrics. 'Tubthumping' aside, the ethos of this raggle-taggle bunch (and there could be up to a dozen of them at any one time) was Anarchism and that the message should always come first and foremost. Thus the Leeds-based commune ventured out to Anti-hunting rallies, Poll-tax protests and numerous other causes and sang almost folkie ballads.

Their songs were simple and involved any number of the band - be it Danbert Nobacon, Boff or Alice Nutter - dressed up in costumes and disguises. It was, at its best, colourful and inspiring protest theatre, reminiscent of the days of the Republicans during the Spanish Civil War. At its worst (and there are quite a few examples here - take 'Hanging On The Old Barbed Wire') - it was childish and irritating.

Nowhere did the formula work better than on their first album, *Pictures Of Starving Children Sell Records*, an extremely clever and catchy debut. Sadly, only one song, 'In A Nutshell', a Geno-

inspired trumpet standard with Tony Blackburn inserts, is included on this oddly-chosen compilation. It opens *Uneasy Listening* which does its best to cover the band's 13 years of history in the space of 20 tracks.

Track two is the powerful 'Mouthful Of S\*\*t', followed by the relaxed 'Behave' and the Dance-orientated and addictive 'Timebomb'. The rest of the tracks go up and down like an anti-road protester and, without exception, have real direction and meaning. Thank God 'Tubthumping' was left out though.



BLONDIE  
**NO EXIT**

Who'd have thought it a year ago, the return of Debbie, Chris and friends? This was a band that shaped a million teenagers, a group of such talent they achieved countless No1s whilst keeping the critics on their side. Now they've come back after more than a decade. Moreover, *No Exit* is a stylish, cool and surprisingly contemporary look at Nineties Americana.

What with contributions from Coolio, the Lunachicks

and the late, great Jeffrey Lee Pierce, *No Exit* demonstrates the level of respect Blondie still command in the music business. Segueing smoothly with their earlier repertoire, the album is built around the catchy chart-topper 'Maria', a simple three-chord affair which nonetheless rates as brilliant.

She might look a touch heavier and more bewrinkled than she was in 1980, but Debbie Harry still has a voice on her! Starting with the scary skin-head, moon-stomp 'Screaming Skin', she then moves almost transcendently on into a spot of Eighties kitsch with the Pet Shop Boys-like 'Forgive And Forget'.

This sets the tone, with the album drifting between a quite incredible range of styles for its predominantly pleasant 14 tracks. Well, I suppose Blondie were New Wave in their heyday and as such were allowed to mix and match their influences. There's even Rap here, with the apocalyptic dirge 'No Exit', featuring Mr Coolio. Then again, the only constants at the time were their clothes and hair.

The most important inclusion here is 'Under The Gun' (for Jeffrey Lee Pierce) who, for the ignorant out there, was the one-time head of the Blondie fan club and later the brilliant driving force behind Eighties Swamp Punk band The Gun Club. Prone to alcohol and drug abuse, he sadly died last year and this seems like a fitting tribute to a

talented man who even wrote songs for Blondie in his time.

*No Exit* is, in a word, brave. Like *Kula Shaker* it's naturally a throwback, but with its variety of interesting and worthy tracks it should rank as a definite purchase for anyone who died for Debbie Harry when she was Pop's Queen.



U2  
**The Best Of, 1980-1990**

They were the group that crossed the divides, a Christian band from Northern Ireland comprising two Protestants and two Catholics who liked mincing about at being Rock 'n' Rollers until, a few years later, they suddenly found themselves one of the biggest bands on the planet.

Religious? Possibly, at least until Bono discovered his penchant for lures and Satanic outfits on the recent Zoo tour and passed it off as irony. But at the beginning it all made perfect sense to these northside Dubliners, who at one time lived together in a spiritual community and practised fasting. And, as the first chapter of U2's career

ROCK & POP

RECORD OF THE MONTH

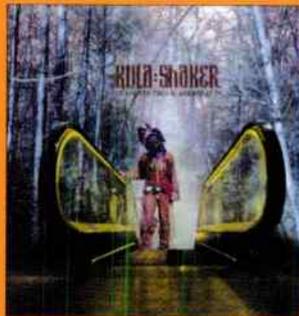
KULA SHAKER

PEASANTS, PIGS AND ASTRONAUTS

The swastikas may have gone but the mysticism remains. Runes, ley lines and astrology; no doubt a lot of Crispian Mill's quasi-Buddhist/Krishna beliefs were put to the test for the naming, track listing and correct release date of this, the group's second album.

The names are a real give-away to start with - 'Great Hosannah', 'Radhe, Radhe', 'Golden Avatar', 'Namami Nanda-nandana'. Then there's the chanting. Suffice to say, these are not the songs of Chas 'n' Dave.

In a straightforward continuation of everything groovy and retrospective about Kula Shaker, Peasants, Pigs And Astronauts (what a great title!) is a pleasing and far from tricky follow-up. 'I'm Still Here', an incredibly short and mellow acoustic track (all one minute and 30 seconds of it to be exact) kind



of sums the LP up. Despite Crispian's world being in flames, he is still here, as he tells us.

Of course, Mr Mills Jr. has done a lot of growing up since he started realising that a sock in the mouth is a very useful addition when talking to the press. Gone are the far-right ramblings and pretentious bunk he was so well known for spouting. In their place now is a smattering of common sense (Sir John and Hayley must be relieved). Fortunately, after ending his courtship with controversy, he and his fellow band members have come up with a strong second album, even if it is

another shameless throwback to the Sixties.

After kicking off with the superb swirling and rousing 'Great Hosannah', long at over five minutes, the single 'Mystical Machine Gun' really gets the mood going. Drifting in on a haunting Indian melody, this number builds up a real sense of purpose.

'Radhe, Radhe' is another stirring track. Opening with its hypnotic Krishna chant, it transports you to Varanasi or whichever part of the sub-continent Crispian was dreaming of at that particular moment. The same can be said of 'Namami Nanda-nandana' which ends the album.

All of the above comatose music-making is very different from '108 Battles', the album's stand-out tune. With a kind of Small Faces/Who rhythm, a Hammond organ and a dose of Sixties attitude, it bounces along with verve, almost stepping on Oasis' toes. Just

what or whose battles they were, however, only the historically inclined will be able to guess.

Next up is the band's 'Sound Of Drums' single from last summer, which didn't fare half as well as had been hoped and probably should have been left off Peasants, Pigs And Astronauts. Better by far are the jingling bells and haunting Indian horn of 'Timeworn' and 'Last Farewell', a moving jumbo-chord, flares and beads outing.

Peasants, Pigs And Astronauts very much keeps the faith and should please all those die-hard Kula fans out there. Spiritual and hypnotic, with an eclectic range of Oriental instrumentation, it has genuine passion in its grooves and offers one of the best returns to Sixties style for a long while. Whether it will win any plaudits for originality is debatable, but Crispian provides ample further evidence that he is still a musical force to be reckoned with.

unfolds, it's that youthful righteousness, optimism and perhaps naivete that appear so striking.

The relationship between The Edge and Bono has arguably been as groundbreaking and as insistent as Plant and Page's ever was, and they proved, more than anyone before, that a series of good riffs and a charismatic front man are all that's required to make a perfect Pop marriage. The foundation

of U2's sound, however, was the use of digital delay on guitars, giving them the anthemic, chiming quality which so distinguished them from their contemporaries. It's there on 'I Will Follow' from the group's debut Boy (1980) and reached its zenith on Eno/Lanois credits such as 'Pride' and 'Where The Streets Have No Name'.

It does seem remarkable then that, in terms of history, this compilation is slightly

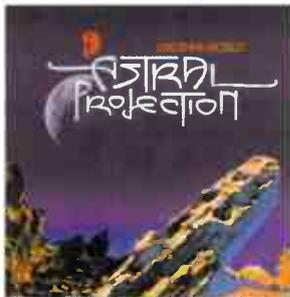
lacking. It lurches from all the usual standards such as 'New Year's Day', 'Sunday, Bloody Sunday' and 'The Unforgettable Fire' to merry, but far from great post-Joshua Tree indulgences like 'Angel Of Harlem' and 'When Love Comes To Town'. Why classics like 'Gloria', 'Celebration' or any of the other songs from October (1982) have been left out is anybody's guess, as these more than most define U2's

Eighties canon.

The inclusion of recent single 'Sweetest Thing', a love song originally from the Joshua Tree sessions, brings the compilation to a nicely-polished conclusion. At least it proves, if nothing else, that this enduring combination drawn from both sides of the religious divide can offer some hope to even the most hardened sceptic of the Northern Ireland peace process.

## DANCE & AMBIENT

by Sara Davis



ASTRAL PROJECTION  
**ANOTHER WORLD**  
TRANSIENT TRANR621CD

Believe it or not, this is the sixth release from Danny Rampling's fave Israeli Trancers, something close to a record in the world of Trance as we know it. Transient seem very happy to maintain support for one of Israel's biggest musical exports (behind Dana International, of course) because no matter how many times the psychedelic Trance scene gets knock-backs from mainstream clubland, Astral Projection know they can't fail.

The secret to their success so far has to be the cheeky combination of hard-fisted Trance (not far off the Goan sound) with the melody and colour which the genre's artists tend to bury under aggressive beats. On this album such expertise is best exhibited on tracks like 'Nasca' and 'Aqualine Spirit', which will lock you into a deep psychedelic groove both acidic and sweet.

There's more to success than just a single good idea, however. For no less than a decade the AP duo have relied on a massive gigging schedule, grass roots

following and continued support from the likes of Oakenfold, Rampling and John '00' Fleming to keep them hot. With solo projects always on the go, Avi and Lior have managed to get involved with just about every label which matters and thereby confirm their status in Trance guru-land. In short, unless Astral Projection had spontaneously changed into a line-dancing outfit, Another World would be unlikely to fail.

Even on first listening it's clear this album is as good as the last, Dancing Gallery. By the second sonic viewing the quirks and wobbles will have your lust for the free-party scene all fired-up, guaranteed. Pack yer bags, we're going Trancing with the summer sound system brigade.



LADOMAT  
**LADOMAT 2000, VOL 4**  
LADOMAT CD 2083-2

Although this is the fourth in a label compilation series, it might as well be the first. Ladomat is still such a tiny label in recognition terms it's doubtful whether or not punters will even have heard of artists such as Popacid, Forever Sweet and Egoexpress. In Germany, it's a

different story. There, Ladomat 2000 has already made a name for itself as the rebellious offspring of Hamburg's famous L'Age D'Or Indie imprint.

Classed as "House that enjoys experimenting to home listening" (whatever that means. Maybe something got lost in the translation), Ladomat's '98 collection features mainly bizarre, off-the-wall tunes. The most noticeable of these is 'Don't Speak', a soft mattress of House supporting some tone-deaf German geezer reciting the words to Abba's classic 'The Winner Takes All'. Although this tune is bound to come in for some criticism, it captivates from beyond the humour level, twisting an early Underworld-style vibe into an otherwise tongue-in-cheek offering.

As the album progresses, it wavers between more of this cheek and tunes that sound, well, cheap - it will be down to the individual to decide which is the most appropriate description.

Running through Hip-Hop, Old Skool Electro and House, innovation is the key here. Les Rhythmes Digitales' remix of Whirlpool's 'From: Disco To Disco' is pretty damn groovy, and Egoexpress' 'Telefunken', with its Hip-Hop backbone and dancefloor nous, would fit nicely into any Breakbeat set. On the other hand, there's plenty of bog standard between the quirks; an album couldn't really be more polarised. Cheek or cheese? You decide.



PEPE DELUXE  
**SUPER SOUND**  
CATSKILLS RIDCD002

Finnish Pepe Deluxe was formed in 1995 when component DJ Slow was contacted by cult San Francisco Bomb Hip-Hop Records because they wanted his production skills on the second Return Of The DJ compilation. It was here that B-Boy Slow met JA-Jazz, the Hip-Hop, Jazz-Funk wing of Pepe Deluxe. Constructive networking ensued and before long James Spectrum, a psychedelia, Blues and progressive Rock kid was added to the equation and Pepe Deluxe were three.

Bizarrely, the trio's leisure activity of flirting with strangers in the Mr T website chat room proved to be time remarkably well spent. It was here that Messieurs Deluxe hooked up with Catskills Records. Although the band would have us believe that fate was compounded by their technologically internationalist agenda, we know that it has more to do with the long, dark Scandinavian nights and dubious web pages (and that goes for Catskills too!)

The Pepe Deluxe sound

DANCE & AMBIENT

RECORD OF THE MONTH



UNDERWORLD  
BEAUCOUP FISH

JBO1005432

This has to be one of the most eagerly-awaited albums of the year. Believe it or not, it's been six years since their last album release, *Dubnobasswithmyheadman*, and a couple of years since *Trainspotting* catapulted 'Born Slippy' to phenomenal success in the UK charts.

The story so far has distinct episodes. Most mid-twenties clubbers will recall the earliest Underworld classic, 'Rez', which dominated dancefloors at the beginning of the decade and earned its anthem status underground. The *Dub...* album consolidated the credibility of Junior Boys Own's best by filing a fair few Underworld hits in the Indie mainstream. The dark and sombre vibe of this album coupled with a dependence on monotonous vocals won the acclaim of the Indie/Dance crossover fans and would have spawned a new genre if anyone else had managed to mimic it. Now everyone's raving about New Underworld, this album supposedly presenting a Jazz-

Funk vibe to change the face of Underworld again.

Despite adopting an altogether more uplifting attitude, *Beaucoup Fish* stays true to the classic Underworld vibe with similar rhythmic loops, tough-man vocals and the same array of synthesised materials at work. 'Shudder/King Of Snake' is particularly reminiscent of the *Dub...* days - it could sit quite easily on the '93 playlist without standing out.

'Winjer' is another reminder of the dark mood, soft, haunting chords slowed to a snail's pace for a twisted, lyrical half-chant. In contrast, 'Bruce Lee' uses the Breakbeats everyone's talking about, although not without the familiar layer of

splintered vocals. It also features elements of sampling and scratching (which jump out so much further when the moody chords are dropped) to produce the New Underworld sound we've been anticipating. It's not as 'in-yer-face' as some might have hoped, but it's definitely there in *Beaucoup Fish*.

As for 'Rez'-type classics, 'Kittens' is a contender with its long, evolving orchestral basis and the most energetic beat imaginable kicking in over swooping, luscious breakdowns. Or there's 'Cups', 11 minutes of smoochy, Jazzy slush with - you guessed it - those synthesised Underworld vocals.

was always going to be a bit of a mish-mash with such contrasting elements and influences, but the sum of the parts probably owes a lot to the early remixes and odd-jobs taken on in Finland. As well as working with various Finnish hot-shots, *Pepe Deluxe* were grounded in the art of TV commercials (a surf tune, no less) and the production of a few tracks for a phone sex company!

Don't be put off by the above as this album doesn't consist of glorified porn music - it's a highly-tuned, quirky and instantly likeable fusion of Funk, Hip-Hop and Blues. *Muzik* magazine awarded the first EP single of the month, and it's easy to hear why. This

EP plus six new tracks all share an infectious mix of selection trippy Funk and musicality. It's got attitude, style and an effortless panache, which come together in a surprisingly super sound, mate.



BLU PETER  
WIDESCREEN AND DIGITAL

REACT CD146

When Blu Peter turned around and said that he hated being pigeon-holed as Nu-Energy (despite being one of the scene's founders), it seemed like just another example of a petulant DJ who's never satisfied with his press. But when you listen to this first album, you can see why he would want to distance himself from such a scene.

The Nu-Energy/Hardbag sound may be integral to the proceedings, but the overall picture is more akin to the fusion of House, Trance and Techno which characterises his Melt night at Turnmills.

*Widescreen And Digital's* opening mix starts up like a filtered version of The Prodigy's 'No Good (Start The

Dance)', Breakbeat-driven and fiery, while the warmed-up set leans more towards minimal British Techno or a Carl Craig groove than Nu-Energy.

This doesn't mean that the man who produced the ground-breaking track 'Shinny' has lost his sense of commercial appeal as he tries to produce the House equivalent of intelligent Drum 'n' Bass though. The first single from this selection, 'Blue Air', has already made an impact on Kiss FM dudes Graham Gold and Pete Wardman, and elsewhere on the disc there are plenty of stompers as well as a fair amount of Breakbeat, melody and mood too.

# Infidelity

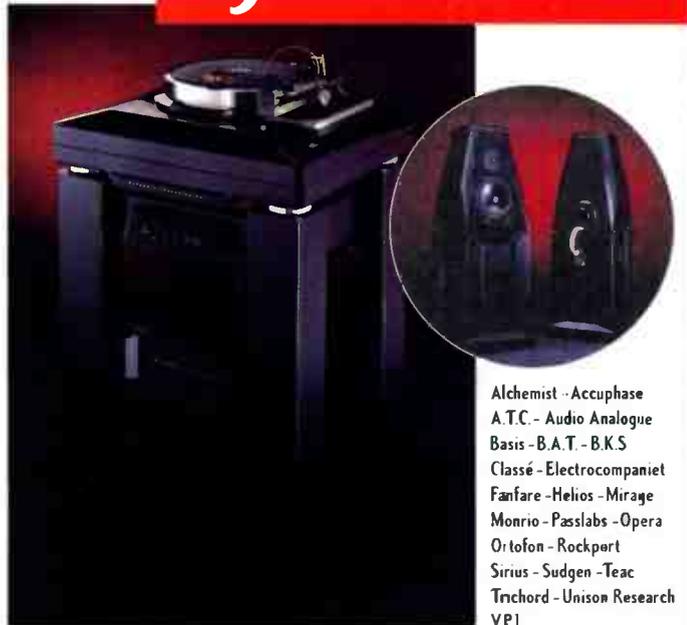
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JAZZ

by Ian Nicolson



VARIOUS ARTISTS  
**A NEW GENERATION -  
TWELVE URBAN JAZZ  
GROOVES**  
TIMEWARP MZCD002

Apart from its central Soho location (just up the road from Ronnie Scott's) and its reputation for prestige and exciting food, Terence Conran's London megacafé Mezzo has also been bolting on class mainstream and newer Jazz to its week-day line-ups for more than a year. And although neither the club nor the regular clientele are as committed to the music as the fans who have made Soho's Pizza Express, Kettners (and Ronnie's itself) into London Jazz meccas, there's no getting around the fact that Mezzo's association with Jazz bookers Timewarp and sponsor Campari is as potent a hook-up as the tobacco-sponsored French Jazz-to-Blues label Gitanes.

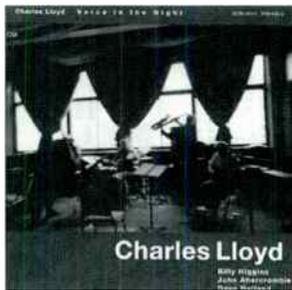
All the artists on A New

Generation - with the exception of New Yorkers the Holland Tunnel Project - are part of the new wave of British Jazz, urban Jazz, contemporary Jazz, Jazz-Funk, whatever you choose to call it. And because the British Jazz market is limited in scale and always fuelled by crossover to Funk, Dance and Pop rather than MOR, there's no chance of the deadly smooth Jazz miasma coating these grooves in candy floss.

On this CD there are six acts, two choons to each, and the same seamless, uplifting grooves that made Jazz-FM's Listen In Colour such a success. And what's even sweeter is that most of these tracks are white labels at best to date, and represent the Hippetty-Hoppitty, R 'n' B-soaked future of UK Jazz-Funk rather than the past.

If the thought of finding new takes on Seventies Crusaders, Donny Hathaway or Rufus twanged your elastic,

dip into this mid-price gem and be prepared to be simultaneously lifted and separated.



CHARLES LLOYD  
**VOICE IN THE NIGHT**  
ECM 1674

Veteran Texan tenorist Lloyd packs an inspirational ear for a song worth opening out, or a colour worth repeated exploration. On his latest for Manfred Eicher's ECM label he's backed by a trio of ECM giants (John Abercrombie on guitar, Dave Holland on bass and Billy Higgins on the rest) and has leavened his own compositions with two hand-picked pearls.

Lloyd's own title track rolls this band's credentials like the overture to the story of the bent, blue notes behind electric Jazz, but 'God Give Me Strength', by the Grammy-winning team of Costello and Bacharach, truly sets out the stall, all warm tone and gentle runs while subtle but stinging breaks from Abercrombie Jazz dance around Higgins' sturdy, stripped-simple-to-fly-faster accents. Then Strayhorn's 'A Flower Is A Lonesome Thing' closes the album with the kind of effortless, care-free

exploration that casually blends last-dance slur with panache and precision, leaving a fragrant memory behind (not as easy as it sounds unless you're doing the dancing for real).

The soundscape throughout is the buffed, dynamic Eicher version of CTI for North-European homes. If some director has shot a scene of delicate forests of conifers shrouded in hoar frost at the corners of opalescent skyscrapers onto monochrome film, get right back to me, I've got the perfect act to play in near silhouette against the snow and it really will still be classy, honest. But even better than that, they can play all the other colours you might want too, like the empty-bullring resonance of Abercrombie's introduction to 'Dorotea's Studio' trickling steadily down toward a square south of the border where the South Seas would feel at home.

Listen with concentration or interest and Voice In The Night will delight. If you want something that isn't old, isn't electronic, and doesn't risk the neighbours singing along, this could well be it. Need to concentrate for an hour or so, or work with it on in a near-field environment and you'll be energised even if you are regularly distracted. The nervous tempo of 'Homage' and its feverish glissando sequences on guitar and sax and scratchy loco-military percussion left me snapping back at the stapler - which probably deserved it anyway. And 'Dorotea's Studio' still makes me feel like the cat with next-door's cream.

## JAZZ



VINICIUS CANTUÁRIA  
**TUCUMA**  
VERVE 559 863

Singer, writer, guitarist, percussionist and producer Cantuária is a legend in Brazil. He is the fourth slinky limb of the loping-cat Tropicalia style born in the Seventies to reinvent Bossa Nova. Gilberto Gil, Gal Costa and Caetano Veloso are the other three. Like theirs, his music is instinctively Jazz in character because the starting points are innovation and beauty. It is also intuitively accessible in style.

When Cantuária moved to New York in the mid-Nineties his mesmeric, seductive Portuguese vocals became clearer. 1997's *Sol Na Cara* release introduced him to an American circle beyond old friends like Arto Lindsay and Nana Vasconcelos, and *Tucuma* is the fruit of a homesick old master, a prime source, overjoyed to be

working at length with Jazz musicians from all over the world who had plenty to say.

There's a track on here, 'Retirante', about being a wandering Brazilian Popster singing so that he won't cry. He remembers a thin girl wearing sandals, her face, her voice, which should be the start of a song Steps or Abba could get angry with Russian pirate pressers over. Instead, 'Retirante' features three percussionists and Laurie Anderson, scrape samples itching under her voice answering his yearning.

A flirtation with a filigree Funk instrumental dedicated to Ryuchi Sakamoto later and we're barefoot in the sand of Copacabana as a brew of chemistry and Tropicalia fever turns crockery and bells into one of Mr Kipling's exceedingly mellow trips. And yet somehow every track sways like a lazy monkey hanging from his tail, or sunshine on your toes.

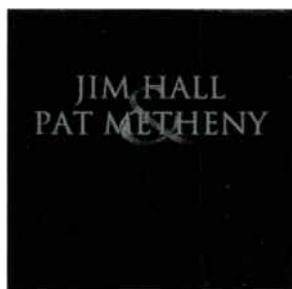
Brasil is a turbulent fusion of potent musical traditions, from native to slave to emigrant to refugee. Cantuária's inventive, lyrical guitar and gymnastic voice have spoken in their tongues for years. I'd like to think that this album will emerge in a decade's time as a landmark in some late-night cultural circle so I can jump up and shout: "I told you so". There'll still be a copy in the house, I'm sure of that. The millennial troubadour is out on the road in some new landscapes rather than re-seeing his waterlily pond. If this is what globalisation means, I'm going to stop stirring cauldrons and muttering about gloom and buy a ticket for somewhere.

Metheny's own hall-of-famers, and himself on top of the latest in his regular peaks of critical respect and some healthy sales.

The problem is there's a lot of this sort of thing about - stunning playing, immaculate recording and mixing, any given moment a pearl in a long string of pearls. And in summit meetings there always has to be a communicate and an achievement to announce. Luckily the way Hall's slippery, single-note runs glitter like ripples in the stream of Metheny's fear of boredom-crazed power play throughout 'Summertime' is worth standing on some steps and clutching a bouquet of microphones for.

Jazz guitarists live and die by phrasing - respected, copied, they can even define an era, as did Wes Montgomery and Django. These two just play like ice cream and custard, throw quotes at each other, sit out and listen, tumble through each other's ideas. Then they sweetly stitch 35 minutes of studio pieces together with 40-odd of an intimate show at the Manchester Craftsman's Guild in Pittsburgh.

The album title is a good name for the project - no frills, no high concepts and no pigeon holes, just Hall on the left live, Metheny on the right. Two tracks feature something sounding like a Japanese temple band discovering John Cage that the sleeve tells me is a 42-string guitar, but that's fine, because those are my favourites. Most of the time these two will fill your life with just 12.



JIM HALL AND PAT  
METHENY  
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METHENY**  
TELARC JAZZ CD-83442

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**CHOICE HI-FI** Tel: 0181 392 1959. Specialist dealers in high end quality second-hand equipment. All main brands in stock including Krell, Audio Research, Wadia, Mark Levinson, Sonus Faber, Linn, Naim, SME & many more. Generous price given on trade-in. Part exchange welcome. Also dealers for Trichord, SME, Gamma, Trilogy, Lumley, Boulder & many more.

**INFIDELITY** 9 High Street, Hampton Wick, Kingston-upon-Thames. Tel: (0181) 943 3530. for full details see entry under SURREY

**HIFI EXPERIENCE** 227 Tottenham Court Road, London W1. 0171 580 3535. Arcam, Audiolab, Mission, Cyrus, Quad, Celestion, Kef, Meridian, Rogers, Tannoy, Yamaha, TDL, Thorens, Marantz, Nakamichi, Musical Fidelity and many more. Open 10.00-7.00 Mon-Fri. 9-6 on Sat. Service dept, Credit facilities, delivery and free installation.

**K J WEST ONE** 26 New Cavendish St., London W1M 7LH. 0171 486 8262/63. Fax 0171 487 3452. Two hi-fi & two home cinema dem studios. Appts pref. Home trial. Installation by arrangement. Service dept. Major credit cards. Interest free credit on selected items. Major brands stocked: Arcam, Audio Alchemy, Audion, Audiolab, Audio Research, B&W Castle, Chord, Copeland, DPA, Epos, Graef, Harbeth, KEF, Klipsch, Krell, Lexicon, Marantz, Martin Logan, Meridian, Michell, Micromega, Mission, Musical Fidelity, Nitty Gritty, Pink, ProAc, Quad, Rel, Rotel, Orelle, Sonus Faber, Stax, Tannoy, Theta, Unison Research, Wilson Benesch. Open 6 days.

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**THOMAS HEINITZ LTD** 35 Moscow Road, Bayswater, London, W2 4AH. Tel: 0171 229 2077. Fax: 0171 727 9348. Nearest tube stations are Queensway and Bayswater. Plenty of parking meters available. Demonstration room available by appointment. Stockists of B&O, NAIM, REGA, Micromega, Cyrus, Denon and Epos. Payment Via, Access, Visa, Cheques, Cash and interest free credit facilities (details on request.) Open 10.30am-6.00pm, Tue-Sat.

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**SWIFT OF WILMSLOW**, 4-8 St. Annes Parade Wilmslow. Tel (01625) 526213. Aura, B&W, Denon, Kenwood, Marantz, NAD, Pioneer, Rotel, Tannoy, Revolver, JPW, Open 9.30-6.00pm. 2 dem. rooms. No pressure!

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**MUSICAL IMAGES** 173 Station Road, Edgeware, Middlesex. Tel. (0181) 952 5535. Fax. (0181) 952 5535. Most brands available - see full page advert. Interest free credit, ask for details. Demo rooms. Repairs & Service. Sunday opening - Open all week. A Home Cinema Specialist. Mail order. Part exchange.

**OPAL DESIGNS LTD.** Rockware Business Centre, 5 Rockware Avenue, Greenford, Middlesex, UB6 0AA. Tel: (0181) 930 7972. Fax: (0181) 930 7976. Email: jas@opal.co.uk. Home Page: www.opal.co.uk. High-end Audio & Home Theatre Consultants. Authorised dealers: Mark Levinson, Proceed, Linn Hi-Fi, Linn Knekt, Runco Projectors, Farouq, Stewart Film Screen, Revel Loudspeakers, Stax, Wilson Audio, Martin Logan, Sonus Faber, MIT, Transparent, B & W. Mail order welcome. Credit cards accepted. Phone for latest brochure.

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Kef, Krell, Marantz, Martin Logan, Meridian, Musical Fidelity, Panasonic, Pioneer, REL, Rotel, Ruark, SME, Sennheiser, Sonus Faber, Tag McLaren, Teac, Theta, Yamaha etc. Classical CD's available at Birmingham only. Demonstration rooms, service and installation. BADA member. VISA / MASTERCARD / AMEX / SWITCH. Open: 10-5.30 Tuesday to Saturday. Late night Thursday till 7.00 (not Stourbridge).

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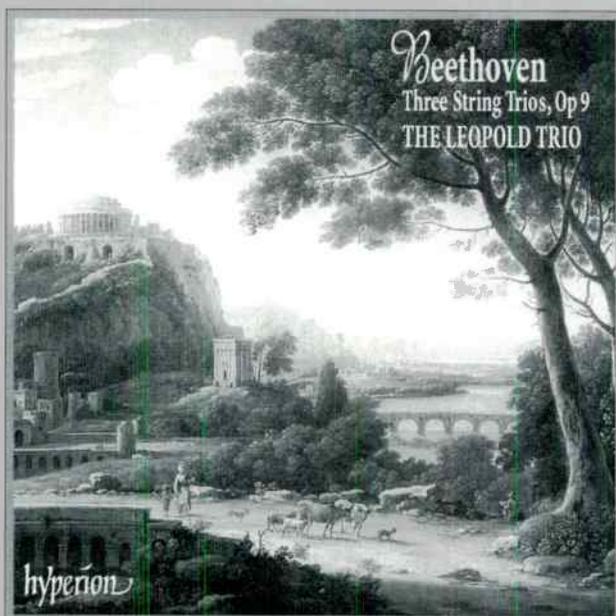
by Peter Herring

The 'secret' music that awaits discovery: early Beethoven, songs of the 12th-century troubadours, Schumann's choral masterpiece and two great recordings of the past.

RECORD OF THE MONTH

LUDWIG VAN BEETHOVEN  
**String Trios in G major, Op9 No1, in D major, Op9 No2 and C minor, Op9 No3**  
 THE LEOPOLD TRIO  
 HYPERION CDA67254  
 (DDD/75.57)

**Serenade in D major, Op8/String Trio in E flat major, Op3**  
 THE LEOPOLD TRIO  
 HYPERION CDA67253  
 (DDD/72.25)



more than the precursors of the great quartets, trios and sonatas of Beethoven's later years; the Op9 set easily stands comparison with the far more famous Op18 string quartets.

The final work in this survey by the youthful, all-female Leopold Trio is something of an oddity. The seven-movement Serenade Op8 is a light-hearted diversion and lacks some of the invention and craftsmanship which makes its companion pieces so attractive.

Viennese string players of the 1790s may have had difficulty with these works but, two centuries on, they present no barriers to the Leopold Trio, one of the finest British chamber ensembles to emerge in recent years (the trio was founded by three graduates of the Royal Academy of Music in 1991). Their playing is consistently vibrant and alert, and has a freshness that suggests they have enjoyed discovering this music as much as the listener will. Engineer Tony Faulkner contributes an agreeably natural recorded balance, immediate and detailed while retaining the warmth, coherence and richness of the interwoven string sonorities.

Beethoven was an accomplished pianist, something which enabled him to promote his early piano trios and sonatas personally. With his first compositions for strings alone, however, he relied on the advocacy of other performers. Add to this that the string trio was not a particularly fashionable genre among Viennese audiences of the 1790s and it becomes clear why the works on these two Hyperion discs have undeservedly entered the rarely-encountered category.

Given these drawbacks, why did Beethoven opt to write string trios at all? Primarily they offered a means of trying his hand at chamber music without inviting comparisons with his peers, chiefly the string quar-

tets of Haydn and the recently-deceased Mozart. Inevitably, though, their influence is felt most obviously in the six-movement Op3 trio of 1795, which takes Mozart's celebrated Divertimento K563 as its model. Nevertheless, there is much - especially in the variety of rhythms and textures - to suggest a burgeoning and soon-to-become highly original talent at work.

This is even more evident in the three Op9 trios which occupied Beethoven on and off for several years until their completion in 1798. In spite of being conventionally classical in conception, they

are exacting to play and proved too radical for the ultra-conservative Viennese. Yet the mood of these rewarding pieces is overwhelmingly genial, with many magical, witty touches, and they abound in youthful vigour.

In contrast, the last of the set finds Beethoven in the restless, turbulent mood that characterises and drives so many later works. It is no coincidence that it shares the key of C minor with, for example, the Fifth Symphony.

All of these trios display a creative maturity which marks them out as much

## CLASSICAL



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**Martin Best Concert**  
NIMBUS NI5544 (DDD/65.11)

There is no finer or more persuasive advocate of medieval troubadour songs than Martin Best. As with his previous recordings of this repertoire for Nimbus, the presentation of the songs is atmospheric, evocative and beautifully recorded in a spacious acoustic. The effect is wholly convincing.

The pattern of the programme here has been carefully planned along 'medieval' lines. It is in six parts, six being a multiple of three, the medieval number of perfection. Each part also has three components: a troubadour song, a dance and an antiphon to the Virgin Mary. The dances represent earthly things, the pulse of life; the songs convey human experience and emotion; and the plainchant of the antiphons suggests the eternity beyond.

Martin Best is the singer in the troubadour songs, the finest of which are those by Bernart de Ventadorn who died in 1194. Best also accompanies himself on the psaltery, along with Frances Kelly on harp. There is an appealing tenderness in his singing, and a captivating expressiveness, though at times the restraint is at odds with the passionate sentiments in the poetry. The dances, how-

ever, are performed with tremendous gusto and the singing of the antiphons, by a five-voice female choir, is utterly ethereal.



ROBERT SCHUMANN

**Szenen aus Goethes Faust (Scenes from Goethe's Faust)**  
**William Dazeley, baritone; Camilla Nylund, soprano**  
**Chapelle Royale**  
**Collegium Vocale; RIAS Chamber Choir;**  
**Orchestre des Champs-Elysées; conductor,**  
**Philippe Herreweghe**  
HARMONIA MUNDI  
HMC90L66L-62 (DDD/I22.06)

It is a long-lived fallacy that Schumann only mastered small-scale musical forms. Last year, John Eliot Gardiner's revelatory recording of the symphonies demonstrated how they had been misjudged and now, again using 'period' forces, Philippe Herreweghe has rehabilitated Schumann's greatest choral composition, Scenes From Goethe's Faust.

Period instruments freshen and lighten the orchestral texture so much superb instrumental writing emerges. The well-balanced vocal forces, too, bring a pleasing transparency and clarity to the score, where human intimacy is set against the lofty vision.

The composition dates from

the final decade of Schumann's life. He had already completed the setting of the third part of Goethe's epic poem when he worked on the first two parts during 1849 and 1850. The result demonstrates that Schumann was well capable of marshalling large forces and the effect is frequently thrilling.

Herreweghe has a well-matched team of soloists led by baritone William Dazeley as a compelling Faust, and the choral singing and orchestral playing are nothing short of outstanding. Recorded in concert, the sound here conveys all the drama of the performance, one which combines authority with conviction.



EDWARD ELGAR

**Cello concerto in E minor, Op85**  
**Pablo Casals, cello;**  
**Albert Sammons, violin#;**  
**BBC Symphony Orchestra; New Queen's Hall Orchestra#;**  
**conductors, Sir Adrian Boult;**  
**Sir Henry Wood#**  
AVID MASTER SERIES  
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This is not the first time that these recordings have appeared on CD, but technically the transfers are more successful than any previous attempts. Most significantly, few allowances have to be made for the sound. The background

'mush' remains, but somehow it becomes unobtrusive.

Moreover, the fatigue that often sets in through straining to listen to old recordings simply doesn't occur.

For many, Albert Sammons was not only the first soloist to record the Violin Concerto (in this case in 1929) but also the finest. His playing does have a special quality, a glowing warm-heartedness and exuberance. No lover of this work would want to be without this performance, along with one recorded in 1932, when the composer conducted the 16-year-old Yehudi Menuhin in one of the great recordings.

If there is a drawback to the Sammons performance it is in the rather brusque - or so it seems in comparison to contemporary interpretations - orchestral direction of Henry Wood. He propels the first movement with real urgency and refuses to sentimentalise the reflective andante. The finale is also highly-charged, a characteristic it shares with Casals' 1945 recording of the Cello Concerto.

Both Casals and his conductor, Adrian Boult, offer a fervently powerful account of this, Elgar's last great orchestral composition, an approach that contrasts sharply with the conventional view of this concerto as nostalgic. Making this recording only months after the end of World War II, perhaps Casals and Boult recalled that Elgar wrote the cello concerto in the aftermath of war, the 1914-1918 conflict which deeply affected him. Despite the occasional gruffness of Casals' playing, this is a performance of eloquence and, again, it wears its age lightly in Avid's excellent transfer.

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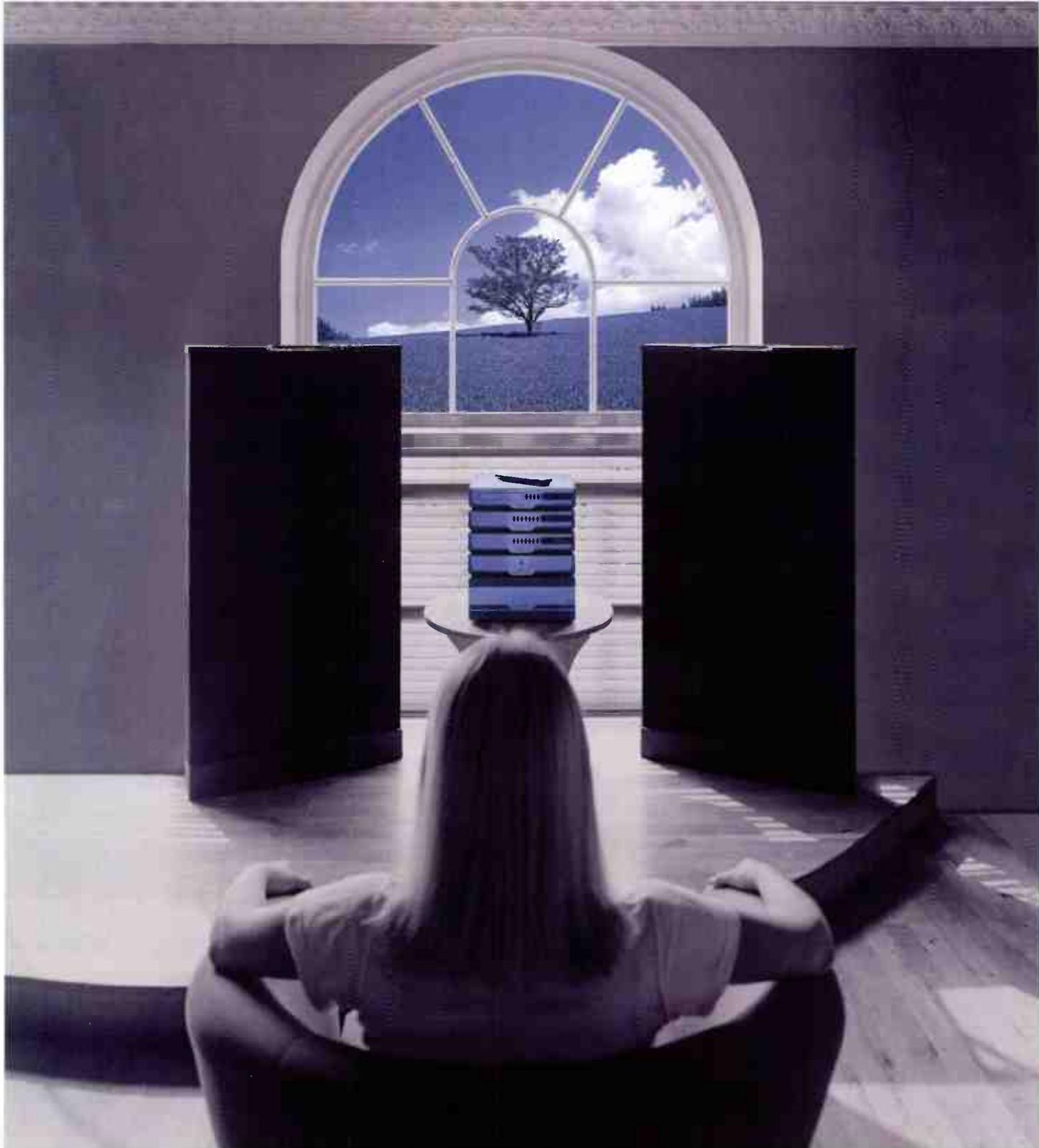
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**The best speaker supports in the world.**

State of the art in performance and design, custom made to suit any loudspeaker. Solid slate, supremely rigid and totally neutral! (\*One specific Slate was chosen after extensive testing on all other stones)

**SPEAKER PLATFORMS ISOLATION PLATFORMS TURNTABLE PLATFORMS SHELVING SYSTEMS**

"Immaculately finished, sublimely rigid, on a par with the best stands I've used" **Ken Kessler, Hi-Fi News R/R.** "An astonishing degree of instrumental separation, stable and holographic, with great precision and remarkable poise. The ultimate in high fidelity supports." **David Prakes, Hi-Fi Answers.** "Superbly finished, the sound quality was considered to be first rate." **Martin Colloms, Hi-Fi News R/R.** "The sound quality when using the Slate Audio stands proved to be a revelation, something special." **Paul Messenger, Hi-Fi Choice.** "The finish is excellent, the sound quality magnificent and breathtaking." **Tom Bryant, The Telegraph.** "The Slate stand is unusual and expensive, but if you are after an exceedingly neutral stand it's the leading contender. This stand offers an exceptionally neutral platform for speakers; highly transparent sound leads to musical performances with real insight." **SOUND QUALITY: ■■■■■ Malcolm Steward Hi-Fi Choice.**

## **SLATE AUDIO GARRARD 301 and 401**

**The best & most musical record players in the world.**

Our researched Solid Marble Plinth System® brings the Garrards into the 21st century. All wooden Plinths produce unexceptionable levels of coloration and feedback. No other Plinth system can claim to improve the performance of these superb players.

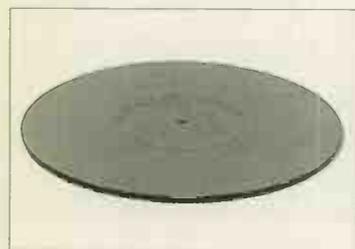
### **THE REVIEWERS**

"The Slate deck defines what real instrument solidity should be, it's in a class of its own." **Alan Sircom, Hi-Fi Choice.** "The build and performance of the Slate Audio 401 are the audio equivalent of the E type Jaguar." **Audiophile.** "I have never used a system like this one, it gets everything right. Peter Soper insists Garrards are best mounted on Marble or stone, and from my experience with this plinth I wouldn't disagree." **Noel Keywood, Hi-Fi World.** "The Garrards main problems are dealt with most effectively by three cures; correct set up, heavy plinth and appropriate mat. Peter Soper has mastered them all, the results are close to miraculous." **Ken Kessler, Hi-Fi News R/R.** "I have been using the fantastic Slate plinthed Garrard, the sound was nothing short of breathtaking. The basic Garrard without the Slate plinth is well engineered and pleasant sounding, but they only give exceptional results with the right kind of treatment." **Dominic Baker, Hi-Fi World.**

**OUR CLIENTS** "I have tested your 301, the sound quality as you know is excellent!" **G. Pyne.** "The results I get are really unbelievable and I have tried some of the best turntable around, (Linn LP12 Roksan Xerxes). "Thanks again for a marvellous piece of art." **Mr Teilinger.** "I am delighted with my Slate Audio Garrard 301, it sounds fantastic. Well worth all the detailed work that went into the design." **R. Newham.** "When I first put up the Slate Audio 301 I must admit to having quite a shock, forever converted." **K. Van Green, Electric Eel Studios.** "I'm over the moon, the plinth looks and sounds superb, stunningly beautiful!! I would very highly recommend any of your customers to seriously consider this great combination." **J. Marsh.**



*Nothing sings like a diamond*



## **THE GLASSMAT ®**

**The finest platter mat in the world.**

The Glassmat ® was developed to improve the performance of the Garrard 301 and 401 record players. However it also gives astonishing results when used on other turntables. So effective is its performance, we have now made it available as a universal replacement mat. In all cases other mats introduce colorations of their own, robbing the music of large amounts of detail and ambience. In order to achieve maximum information retrieval with optimum damping, a hard and unyielding material is required. Glass is ideal in every respect, damping is complete, the playing surface being quite simply sublime. In terms of detail resolution and sheer three dimensional ability, no other mat comes close. But then you still have to consider the absolute clarity, precision and solidity of the presentation. This is the ultimate platter mat.

**THE POWERHOUSE OUR QUARTZ REFERENCED GARRARD 301/401 TD124 AND UNIVERSAL POWER SUPPLY. "KILLER" K.K.**  
**THE TABLESTROBE QUARTZ REFERENCED STROBE GUN DESIGNED SPECIFICALLY FOR THE GARRARD 301 AND 401.**  
**THE HANDSTROBE QUARTZ REFERENCED HAND HELD STROBE SUITABLE FOR ANY TURNTABLE WITH SPEED ADJUSTMENT.**  
**STORMFORCE SOLID MARBLE ENCLOSURES® FOR ALL TANNOY DUAL CONCENTRICS. BEWARE... STRUCTURAL DAMAGE MAY OCCUR!**  
**HUMDINGER ELEVATE YOUR EARLY SME 3009S2 TO 1997 STATUS. BREATHE NEW LIFE INTO A GREAT CLASSIC.**  
**BACKLASH SUPERB SME 3009 & 3012 GOLD PHONO SOCKET CONVERSION, INCLUDING OFC LEADS; BRILLIANT? YES.**  
**BRAZEN UPGRADE YOUR V15III WITH OUR ALLOY RE-BODY AND MICRO RIDGE STYLUS; INSANE? NO.**  
**SOLID MARBLE PLINTH SYSTEMS® ALSO FOR EMT AND THORENS TD124.**

SLATE AUDIO GARRARD 301 AND 401 ARE AVAILABLE COMPLETE OR MARBLE PLINTH SYSTEM® ONLY.

SME CELEBRATION ARMS WITH SPECIAL GRAPHICS "SLATE AUDIO 301 OR 401 CELEBRATION" AND "SLATE AUDIO TD124 CELEBRATION" 309 • 312 • IV • V.

THE TONEARM OUR SPECIAL VERSION OF THE FAMOUS REGA RB300, FITTED WITH GOLD PHONOS.

SME 3009S2 (1997 VERSION) A PERFECT MATCH FOR OUR V15III BRAZEN AND THE NEW SHURE V15V x MR. "STILL CRAZY AFTER ALL THESE YEARS".

THE SPIKEKIT SPECIALLY DEVELOPED TO FIT DIRECTLY TO FLOOR STANDING LOUDSPEAKERS OR ANY WOODEN SUPPORT ADJUSTABLE AND VERY SIMPLE TO FIT.

**"COMPETITION IS HEALTHY, IT ENSURES WE STAY AHEAD"**

SHURE STYLUS PRESSURE GAUGE • GARRARD 301 SWITCH SUPPRESSOR • TURNTABLE SERVICING • GARRARD 301 LEVER SET • GARRARD 301 FIXING BOLT SET  
STROBE DISC • GARRARD 401 CONTROL PANEL SET • GARRARD 301 MOTOR PULLEY • FULL RESTORATION OF GARRARDS TO ORIGINAL CONDITION

**ALWAYS WANTED, GARRARD 401, GARRARD 301 AND THORENS TD124 RECORD PLAYERS, PLEASE PHONE**

**47 GEMINI CLOSE, LEIGHTON BUZZARD, BEDS, LU7 8UD.**



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MC Phono Stage + PSU	£795 £498
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Linn LP12 + Grace + AT (MM)	£425
Linn LP12 (Ex-dem)	£1750 £993
Linn LP12 (Blk) Ekos/Lingo/Clear Audio Aurum	£2398
Luxman PD300 + SME III (Vacuum platter)	£468
Luxman PD555 Vacuum platter	
Belt drive - Accepts 2 arms - 33/45/78	£1498
Lyra Parnasus	£878
Manticore Mantra/Moth/AR P77	£195
Michell Focus One/Hadcock 228/Dynavector 20a	£220
MicroSeiki DDX1000 + SME3009/Ortofon MC20	
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Nottingham Analogue Hyperspace	
with Mentor arm	£2300 £1498
Oracle Delphi II/Linn Ittok LVII	£1395
Oracle Alexandra MK111 (Cut for SME)	£748
Ortofon T-300 Transformer	£900 £495
Pink Triangle PT2 Teak (SME cut)	£348
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Roksan Xerxes + Artemiz + AT OCS	£1700 £758
SME V arm (Ex-dem - Mint)	£1467 £POA

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Arcam Alpha 9 Power	£400 £295
Arcam Delta 110 Pre	£700 £195
Audiogram MB1 (Integrated) Ex-dem	£493 £359
Audiogram MB2 (Integrated) Ex-dem	£599 £429
Audiolab 8000A	£500 £365
Audiolab 8000C Pre (Old Style)	£550 £245
Audiolab 8000LX	£470 £378
Audiolab 8000LX (Ex-dem)	£470 £397
Audiolab 8000S	£700 £495
Audiolab 8000M (Mono's)	£1800 £1100
Audiolab 8000Q	£1249 £895
Aura VA50 Integrated	£299 £175
AVI S2000 Integrated	£999 £693
Chameleon 900S 2 x 300w pwr	£1000 £495
Chord 1200B Power (Ex-dem)	£3790 £POA
Chord 1200C Power (Ex-dem)	£4710 £POA
Chord CPA 2200 Pre (Ex-dem)	£2530 £POA
Classe 30 Pre-amp Balanced/Remote	£695 £450
Classe DR6L Line Pre	£3500 £1695
Conrad Johnson MF2300 Power	£2900 £1895
Copland CTA301 Pre (Ex-dem)	£1249 £849
Copland CTA401 Integrated (Ex-dem)	£1698 £1069
Copland CTA501 Power (Ex-dem)	£1420 £999
Copland CTA504 Power (Ex-dem)	£1999 £1389
Counterpoint Solid 1 Pwr	£1495 £675
Cyrus One	£150
Cyrus Two	£185
Cyrus Straight Line (Integrated)	£398 £298
Denon 4400 Mono's	£595 Call
DPA DSP200 Line Pre (Ex Dem)	£499 £397
DPA Renaissance (Ex Dem)	£595 £447
Dynaco ST120 (Classic circa '76)	£278
Exposure VIII (Mono's)	£1300 £898
Exposure X (Int)	£195
Exposure XXI RC (Pre)	£999 £625
FM Acoustics A800 (2,500 watt)	£12,000 £4298
Goldmund 6B (Ex-dem)	£3124 £1799
Harmon Kardon AVP1a Processor	£2000 £495
Harmon Kardon HK620 Remote	£250 £165
John Shearpe Pre/Pwr	£2300 £1295
Krell KRS-1 + KRSP (4 box pre)	£2245
Leak Delta 30	£75
Leak Delta 70	£95
Lescon AC1/API (The best we've seen!)	£275
LFD LSB + PA2 (Pre/Pwr)	£3800 £1498
LFD LS2/PA1 (Pre/Pwr)	£2600 £1198
LFD Phono Stage 2	£598
Linn Kairm Phono Pre	£1198
Linn Kairm Line (Ex-dem)	£1400 £1095
Linn Kairm Phono (Ex-dem)	£1700 £1493
Linn LK1 Pre	£250
Linn Majik 1 Phono	£800 £593
Marantz PM66SE (Current)	£400 £288
Marantz SC22 (Pre) + 4 MA22 (Mono's)	£2800 £1795
Meridian 201 Pre	£760 £395
Meridian 501 Pre (Ex-dem)	£740 £597
Meridian 502 Pre	£1395 £895
Meridian 603 Pre/DAC	£1750 £794
Meridian 561 AC3/DTS/MLP (Ex-dem)	£2850 £POA

Meridian 562 Pre (Ex-dem)	£995 £797
Meridian 557 Power (Ex-dem)	£1525 £1193
Meridian 605 Monoblocks	£2000 £1345
Michell Argo + Hera	£900 £595
Musical Fidelity A1 (Integrated)	£359 £225
Musical Fidelity Elektra E100 (Int)	£750 £475
Musical Fidelity P172 Pre	£395
Musical Fidelity 2300 Power	£2895 £1895
Musical Fidelity 3a Pre	£379 £248
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Myryad MP100 Power (Ex-dem)	£599 £443
NAD 2700 THX Power 140WPC	£449 £295
Naim NAC12	£165
Naim NAC32.5	£195
Naim NAC42.5	£150
Naim NAC62	£150
Naim NAC12S	£95
Naim NAC22	£145
Naim NAC42	£195
Naim NAC72	£498
Naim NAC82 (Ex-dem)	£2225 £POA
Naim NAC92	£POA
Naim NAP90 (New Style)	£460 £370
Naim NAP110	£200
Naim NAP140 (Old Style)	£750 £450
Naim NAP250 (Old Style)	£1705 £828
Naim NAP250 (Ex-dem)	£1705 £POA
Naim NAP135 Mono's (Ex-dem)	£3410 £POA
Naim NAIT 2	£298
Naim Hi-Cap (Old Style)	£720 £378
Naim Hi-Cap (Ex-dem)	£720 £POA
Nakamichi 1A-3 (Int)	£150
Nakamichi 420 Pwr	£220
Nakamichi 603 Pwr	£290
NVA AP50 (Integrated)	£650 £395
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**NAIM ALWAYS WANTED**

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TDS Definitive State Mono  
Power amps Pair £6400 £3200  
Probably the most beautiful solid state amplifiers we have ever seen!

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PS Audio 6.1 Pre (Ex-dem)	£799 £499
PS Audio 6.2 Pre (Ex-dem)	£899 £599
PS Audio 4.6 Pre (Ex-dem)	£998 £649
PS Audio 5.6 Pre (Ex-dem)	£998 £649
PS Audio Delta Power (Ex-dem)	£1499 £999
QED A270 Integrated	£225
QED Systemline Kit + Mods (Ex D)	£3000 £1897
Quad 33/303 Pre/Power	£POA
Quad 405 Power-amp	£195
Quad 33 Pre	£65
Quad 34 Pre (Grey & Beige)	£220
Quad 44 Pre (Beige)	£265
Quad 77 Pre	£450
Rappaport Pre 1 (Pre)	£275
Rappaport Amp 1 (Pwr)	£550
Roksan L1 Pre + PSU	£1100 £758
Rotel Michi Pre	£795 £643
Rotel RC972 Pre	£225 £173
Rotel RB971 Power	£225 £173
Rotel RB981 Power	£325 £273
Sonographe SC1 Pre	£1250 £450
Sugden Optima 140 (2X70w Intgd)	£770 £448
Thorens TTP2000 MK1 Pre (Ex Dem)	£499 £397
Thorens TTA2000 Pwr (Ex Dem)	£599 £497
Thule PR200 (Pre) + 2 X PA200 (pwr)	£2700 £1598

**URGENTLY REQUIRED**  
ALL TYPES OF QUALITY HI-FI  
WE BUY OR PART-EXCHANGE

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Audio Note P3 (300B Power)	£1298
Audio Note Meishu	£2750 £1895
Audio Research V70 Pwr (Ex Dem)	£4480 £2487
Audio Research D70 Pwr (Ex Dem)	£2800 £1395
Audio Research V140 (Mono-blocks)	£9000 £3998
Audio Research SP14 Pre (silver)	£3300 £1295
Audio Research D200 Power (Ex-dem)	£3248 £1997
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## AUDIO VALVE BALDUR

(200+200 watt mono-blocks) RRP £10,000

AN UNWANTED PRIZE

Make us a sensible offer!

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Avantic SPA II Vintage valves	£168
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Conrad Johnson PV11	£2000 £1398
Copland CTA501 Power amp	£1800 £998
Counterpoint SA12 Valve/Hybrid Pre-amp	£750
Grant G100AS (Pwr) + G100PB (Pre)	£2000 £650
Jadis DA30 DeLuxe Int (Black) Ex-dem	£3490 £2699
Jadis DA60 Int (Black) Ex-dem	£4483 £3759
Jadis JJP200V Pre Ex-dem	£4778 £3759
Luxman LX33 (Integrated)	£698
Luxman CL32 (Pre) + 3600 (Pwr) 50+50watts	£1498
Muse Model 300 (Mono powers)	£4400 £2898
Papworth Audio M100 monoblocks	£3600 £2600
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Sonic Frontiers Assemblage L1 Pre	
Built and reviewed by Hi-Fi World with extensive upgrades	£798
Tube Technology Prophet/Genesis	£4800 £2398

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So that you get the Best Price without any of the hassle!

## TAPE AND TUNERS

A&R Cambridge Alpha Tuner	£75
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Avantic BM611 Valve Tuner Circa 1960 (no dec)	£148
Denon TU660 Tuner	£145
Harmon Kardon TU950	£158
Leak Delta FM Tuner	£65
Leak Delta AM/FM Tuner	£75
Kenwood KX-4520 3 Head HX-Pro	£135
Magnum Dynalab FT11	£550 £328
Marantz SD55 3 hd / 2 mtr	£400 £195
Myryad T40 (Ex-dem)	£399 £294
Naim NAT02 (Ex-dem)	£1130 £POA
Naim NAT03 (Ex-dem)	£615 £POA
Nakamichi ZX7 (Mint/Boxed)	£648
Nakamichi 630 Tuner/Pre-amp	£500 £295
Pioneer RTU11 1/4 & 1/2 track 10" R to R	£598
Pioneer F91 Tuner	£395
Quad FM3	Choice from £95
Revox A77 1/2 track	£POA
Revox B77 Mk's 1 & 2 (Call for details)	£POA
Sony TCK 611S	£330 £218
Theta Lynx Tuner	£500 £324
Yamaha 800 AM/FM Tuner	£175

After twentyfive years, and with three specialist stores, we know that thousands of satisfied customers prefer to shop this way!

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Accuphase DP75 CD Player	£5995	£3998
Alchemist Nexus APD32A CD Player	£600	£425
Arcam Alpha 8 CD	£450	£350
Arcam Delta Black Box (DAC)		£148
Arcam Delta Black Box 5 (DAC)		£248
Arcam Delta 170 (Trans)		£198
Audiolab 8000CD (Ex-dem)	£1000	£749
Audiolab 8000DAC	£1000	£450
Audio Alchemy Vac-In-The-Box	£249	£175
Audio Alchemy Drive 3	£695	£498
Audio Alchemy DACMAN (Ex dem)	£149	£117
Audio Alchemy DAC-IN-BOX (Ex dem)	£229	£177
Audio Alchemy V1 DAC		£238
Audio Research DAC1 20 bit (Ex-dem)	£3740	£2199
Audio Research DAC3 Mk2 (As new!)	£3999	£3269
Audio Research DAC5 (Ex-dem)	£2335	£1999
AVI 2000MC Reference CD	£1300	£898
AVI S2000 DAC		£225
California Audiolabs Delta DAC (Ex-dem)	£1100	£859
California Audiolabs Sigma 2 DAC (Ex-d)	£995	£789
California Audiolabs Alpha CD Trans	£1800	£1359
California Audiolabs Aria 3 CD Player xD	£2489	£1599
California Audiolabs Icon 2 CD Player xD	£1197	£899
Copland CDA266 (Ex-dem)	£1200	£10A
DPA Little Bit 2 (DAC)	£250	£148
Denon DCD1650 (CD Player)	£600	£295
Jadis JD2 CD Trans (Ex-dem)	£4490	£3299
Kinergetics KCD30 CD Player (Ex-dem)	£1900	£1059
Kinshaw Overture DAC		£195
Krell KPS200/1 CD/Pre (Breathhtaking!)	£11,000	£5995
Marantz CD80		£230
Mark Levinson No.39	£5000	£3998
Meridian 200	£818	£425
Meridian 203 DAC	£560	£195
Meridian 206	£995	£495
Meridian 263 DAC	£650	£395
Meridian 500 Transport (Old style)	£1025	£793
Meridian 508 20 Bit (Ex-dem)	£1650	£1293
Meridian 508 24 Bit (Ex-dem)	£2150	£10A
Meridian 563 DAC	£865	£468
Meridian 563 DAC (Ex-dem)	£865	£693
Meridian 606 DAC	£1500	£795
MicroMega Stage 5 (Ex-dem)	£750	£597
MicroMega Stage 6 (Ex-dem)	£950	£747
MicroSeiki CD-M2	£2800	£1445
Mission PCM II CD		£150
Monarch DIP Jitter Buster	£245	£188
Monarch DIP Jitter Buster (Ex-dem)	£245	£197
Musical Fidelity Digilog DAC		£98
Musical Fidelity A2 CD (Ex-dem)	£499	£397
Musical Fidelity E61 CD (Ex-dem)	£299	£247
Myryad T-10CD (Ex-dem)	£399	£294
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Naim CDI	£2000	£1178
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PS Audio Digital Link 2 DAC (Ex-dem)	£599	£399
PS Audio DC 3 DAC (Ex-dem)	£777	£499
PS Audio SL 3 DAC (Ex-dem)	£1449	£899
PS Audio Reference Link PRE/DAC		
Balanced (Ex-dem)	£4500	£2899
PS Audio Lambada CD Trans (Ex-dem)	£2250	£1439
QED Digit Reference	£450	£284
Rega Brio (Ex-dem)	£229	£174
Rega EXS (Ex-dem)	£599	£444
Roksan DAC 1		£250
Roksan Attessa (Trans)	£2300	£575
Rotel RCD971 CD	£400	£293
Rotel RCD930AX CD	£200	£143
Sugden SDA-1	£800	£528
Teac VRDS10SE CD Player	£850	£598
Theta TLC	£230	£178
Theta Cobalt 307 DAC (New!)	£699	£539
Theta ProPrime DAC (Ex-dem)	£1449	£1249
Theta Data Basic 11 CD Trans (Ex-dem)	£2397	£1689
Trichord Pulsar 1(DAC) (Ex-dem)	£1195	£658

### LOUDSPEAKERS

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Apogee Centaur (Ex-dem)	£2300	£1399
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Apogee Mini Grand (Mint)	£7598	£4499
Apogee On Wall (Mint)	£3000	£1999
Apogee Slant 6 (Mint)	£7598	£4499
★★★★★		
Apogee Full Range (Ex-dem)	£17,000	£8999

QUITE LITERALLY A 'WALL' OF SOUND

Audio Note ANJ/SPX (Efficient!)		£1098
Audiostatics ES100	£2400	£1698
B&W 2000IFS Centre	£220	£108
B&W P5 (Rose) Ex-dem	£875	£593
B&W Silver Signatures. Fabulous!	£6000	£2498
Cambridge Audio R50 (Trans Line)		£495
Castle Avon (Ex-dem/Yew)	£849	£647
Castle Chester (Yew)	£770	£495
Castle Durham (Inc stands - R/wood)		£245
Castle Harlech (Ex-dem/Yew)	£995	£879
Castle Howard (Rosewood)	£1399	£878
Castle Pembroke (Black Ash)		£200
Diesis Solitaire		£150
DCM Time Windows		£245
Duntech PCL500	£5250	£2699
Epos ES11 Rosewood		£368
Epos ES12 Walnut + stands	£500	£375
Epos ES14 Ex-dem	£675	£474
Epos ES14 Black + stands		£428
Gale 301 (Black)	£250	£159
IMF Professional Monitor MKIV (Teak)		£798
KEF 103/4 (Mahogany)	£1299	£748
KEF 104/2 (Teak)		£795
KEF 107 + Cube (Walnut)		£1395
KEF Reference 3 (Black)	£1995	£1498
Leak Sandwich (Classics in good cond)		£135
Leak Mini-Sandwich		£125
Leak 2060		£125
Linacum LFX	£649	£445
Linn Isobarik		£750
Linn Index	£225	£138
Linn Nexus		£275
Linn Kan (Black Teak)		£295
Linn Kaber (Active) Ex-dem	£3000	£2393
Linn Kaber (Black)	£2200	£1098

## MAIL ORDER

All items Fully Insured and Guaranteed

M&K VX7 MkII Sub (Ex-dem)	£450	£344
Magna Planar SMGA (Blk & Chrome)		£450
Magna Planar SMGA (Wood/Brown)		£450
Magna Planar SMGA (Ex-dem)		£10A
Magna Planar MG2.5 (New)	£1998	£1199
Martin Logan Quest (Walnut)	£5700	£3395
Meridian A500 (Rosewood)	£875	£595
Meridian M30 Active (Black)	£900	£525
Meridian M2500 Sub (Ex-dem)	£1695	£1297
Mission 707 (Walnut)		£100
Mission 727 (Teak)		£158
Mission 733 (Black)		£155
Mission 770 (Mahogany + stands)		£225
Monitor Audio R352 (Teak)	£395	£248
Monitor Audio Studio 60SE New/Blk/Rose	£5000	£2995
Musical Fidelity MC2		£150
Naim Intro (Ex-dem)	£680	£574
Naim SBL - Cherry (Latest)	£2030	£1378
Note Perfect Virtuoso (Ex Dem)	£2750	£1497
ProAc Tablette 50 Signature (Ex dem)	£899	£10A
ProAc Response 3.5 (Ex dem)	£4250	£2997
ProAc Response 3.5 (Cherry)	£4250	£2800
ProAc Studio Towers (Black)	£2595	£1395
ProAc Studio 150 (Cherry)		£1399
Quad ESL57	From...	£395
Quad ESL63		£3449
Quad ESL63 (Ex-dem)		£3449
Rogers LS33/AB33 (Black Ash)		£1428
Rogers LS3/5a (Cherry/Bi-wire)		£395
Rogers Studio 1a (Teak)	£600	£348
Royd Mstrel (Walnut/Black)	£240	£168
Royd Sintra	£330	£230
Ruark Equinox Light Oak (Up-dated)		£10A
Snell K II		£288
Sonus faber Electa (Black) Ex-dem	£1790	£1299
Spendor SP2/3	£1195	£775
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# TESTING, TESTING

Simon Pope and Richard White reveal two of their favourite recordings for grilling hi-fi components.



OLIVIER MESSIAEN  
**Et exspecto resurrectionem mortuorum**

I first encountered Messiaen's music many years ago at the end of Vespers in Westminster Cathedral, when I initially thought the organist had collapsed onto his instrument! I'd never heard such a massive sound before. The bug had bitten. On hearing Et exspecto... years later in the RFH played by Rattle and the CBSO, I was converted.

A rarely-recorded piece, it was released as an excellent DG '4D' recording with Pierre Boulez and the Cleveland Orchestra in 1995. It is scored for woodwind, brass and percussion (in mammoth proportions) and the Cleveland playing is truly inspired.

The magnetic attraction of this music lies in the harmonic colours and sparkling orchestral effects. If music is escapism, then with this you're well out of Alcatraz. Listen to the fourth movement, with its repeating tam-tam strokes (becoming louder every time) and be transported far, far away from the present time and place.

Two other large orchestral works partner Et exspecto here, Chronochromie and La Ville d'en Haut (The City Above), both as colourful and exciting as the main composition. Messiaen commented that this piece was "for large spaces, cathedrals... among high mountains". Until I can afford the CBSO for a night in the

Alps, my front room will have to suffice. SP

J.S. BACH

**St Matthew Passion**  
**Gundula Janowitz, Christa Ludwig, Peter Shreier, Horst Laubenthal, Dietrich Fischer-Diskau, Walter Berry, Anton Diakov Herbert Von Karajan, conductor Wiener Singverein, Berliner Philharmoniker**

DEUTSCHE GRAMMOPHON

I wonder what the parishioners of St Thomas' Leipzig thought as the strains of the opening chorus wove their contrapuntal glories round the church in 1729.

We know that Bach had a good deal of trouble trying to get both the quantity and the quality of performers he desired. It seems likely that lack of rehearsal may have resulted in a somewhat ragged performance.

Whatever the shortcomings of that first performance, the famous Deutsche recording under Karajan goes a long way to redress the balance. A no-expense-spared galaxy of stars - Peter Schreier; Christa Ludwig; Fischer-Diskau; the Berlin Philharmonic - amassed to do no more than justice to this choral colossus. Double-choir; double-orchestra; seven soloists; yet there are some people who persist in regarding the St Matthew as a chamber work!

For some tastes this recording might be over-smooth but it has the incalculable advantage of first-rate singing and playing throughout: no trace of the 'English Choral Tradition' which can trivialize any major work in the Canon. If the foundations of Bach's monument were laid by Mendelssohn, this large-scale Romantic performance, alongside Klemperer's awesome HMV interpretation, must be among the pinnacles. RMW

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Small but perfectly formed MC3

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ART DUDLEY: Leading American hi-fidelity critic.

I'm impressed with the MC3, and from a musical point of view, I think it's worth every penny of the price. Those of you who have tube-based systems & can afford it should pester your local dealer until he lets you take one home and try out Value/Quality \*\*\*\*\*

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Rega Bino 2 x 30 watts inc. (vgc) s/h	250.00	139.95
Rotel RB 9608X (2x60watts) power-amp (vgc) s/h	180.00	149.95
Rotel RB 9708X II (2 in. sect. / bridge to give 180 watts) (vgc)	180.00	149.95
Rotel RC 9708X pre-amp (vgc) s/h	130.00	89.95
SAE Mark IV CM 2x100watts American power amp (g.c.) s/h	loads	149.95
Sugden CS1 pre-amp (vgc) s/h	-	89.95
Technics SLA900 Mk II 2 x 70 Watts integrated (vgc) s/h	450.00	249.95
Union Research Simply Two Valve Integrated (Mint) s/h	1150.00	795.00

**TURNTABLES/ARMS/CARTRIDGES PHONO-STAGE ETC**

Audio Technica AT630 step-up transformer (vgc) s/h	-	30.00
Audio Technica AT FSV0C moving coil (vgc) s/h	100.00	50.00
Dynaworck DM62 step-up transformer (vgc) s/h	-	40.00
Heybrook TT 2 / Formula Four / Grado MC + (vgc) s/h	500.00	249.00
Linn k5 cartridge (vgc) s/h	70.00	30.00
Linn k18i cartridge (vgc) s/h	200.00	100.00
Linn LP12 (walnut) (Black arm) k9 (vgc) s/h	1500.00	445.00
Linn LP12 /Black Plus / Track P.L.C. (vgc) s/h	2000.00	549.95
Mission 775 SP/174 arm/VMS 20E (vgc) s/h	loads	399.95
Monacor SP16 PM Phono Stage/PSU (Brilliant Value) New	£26.95	-
Musical Fidelity X LP (The One At This Price) MM/MC NEW	-	130.00
QED R232 2arm/MIA MP20 (g.c)	200.00+	109.95
QED Disc Saver Phono Stage RSL (vgc) s/h	35.00	20.00
Revolver Rebel c/w arm/ALC cart (mint) s/h	-	149.95
Sansui SR222 IV/Magnum MP 11 (vgc) s/h	-	£79.95
STD 105H c/w Mayware Unipivot/Golding Elan cart (vgc) s/h	loads	199.95
Surriko Blue Point High Output MC Cartridge (Mint Boxed 30 hours) s/h	120.00	80.00
Thorens TD280 IV / A.T. cart (mint) s/h	200.00	129.95
Zen MC2/2 moving coil (vgc)	300.00	100.00

**LOUDSPEAKERS**

Acoustic Energy AE1/dedicated stands (vgc) s/h	1250.00	595.00
Apogee Caliper (piano black) with bases	-	-

A selection of our ever changing offers for sale (all fully guaranteed)

Equivalent New Price Sale Price

(Restoration project/need finishing) (g.c.) s/h  
Canon S.35 inc. stands (vgc) s/h  
Canon SU.15 mini monitors (mint) s/h  
Castle Durham Bi-wire (black) (vgc) s/h

3500.00	500.00
300.00	169.95
110.00	74.95
200.00	119.95

**PRODUCT OF THE MONTH**

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Celestion SL-600 (Bi-wire Conversion) (vgc) s/h	800.00	349.95
Celestion SL 65 (black) (f.c.) s/h	400.00	169.95
Dali S05 floorstanders (mint) s/h	300.00	199.95
Denon SC E 313 (Rosewood) (mint) s/h	160.00	99.95
Epos ES12 (Light Ash) (Mint) s/h	550.00	375.00
Epos ES14H Bi-wire (Black) inc. stands (Mint) s/h	675.00	429.95
Foundation Heavy 18" stands (vgc) s/h	80.00	59.95
Gale 301 (black) (vgc) s/h	300.00	169.95
Heybrook Point 5 Bi-wire (black) (vgc) s/h	179.00	89.95
IPW Monitors c/w stands (black) (vgc) s/h	250.00	139.95
Kef 103/4 Uni-Q Floorstanders (Black) (vgc) s/h	1300.00	599.95
Kef Coda 7 (unused) (mint) s/h	130.00	89.95
Kef 103/4 (unused) (mint) s/h	130.00	89.95
Linn Helix LS 150 (vgc) inc. stands (black) s/h	280.00	179.95
Lumley LM 3 (Natural Pine) (Mint) s/h	1000.00	499.95
Monitor Audio R300 HD (black) (vgc) s/h	300.00	159.95
Monitor Audio R852 HD (gold) (vgc) s/h	450.00	189.95
Ruzark Paladin (Dark Walnut/Soundbytes) (vgc)	1100.00	599.95
Spendor SP2 (walnut) (vgc) s/h	450.00	229.95
Tannoy 625 ALF 100 watt active sub (vgc) s/h	600.00	299.95
Tannoy T185 Dual Concentric (Walnut) (vgc) s/h	loads	249.95
Tannoy DC-200 Dual Concentric (Black Vinyl) (vgc) s/h	loads	199.95
Lois of LS. stands in stock including Target/Alphason etc	-	-

**TAPE DECKS/TUNERS ETC.**

Arcam Delta 100 Dolby S Cassette Deck (vgc) s/h	loads	499.95
Denon DRM 6505 Dolby S etc (Mint) s/h	230.00	149.95
Denon DRM10.HX cassette deck / 3 motor / HX/Pro etc (vgc) s/h	-	119.95
Rega Radio FM Tuner (Mint/As New) s/h	250.00	189.95
Technics ST.GT350 FM Digital Tuner (New)	150.00	119.95

**COMPACT DISC PLAYERS/TRANSPORTS/D.A.C.S.**

Arcam Delta 250 transport/Black Box 50 DAC (mint) s/h	1250.00	795.00
Denon DRM10.HX CD Full Remote (mint/As New) s/h	1000.00	629.95
Cambridge Dismagic I / Dismagic I (vgc) s/h	500.00	269.95
Denon DVD-2000 (region 1 conversion) full remote DVD player (mint)	600.00	429.95

A selection of our ever changing offers for sale (all fully guaranteed)

Equivalent New Price Sale Price

DPA little bit 3 DAC (vgc) s/h	350.00	199.95
Marantz CD.42 (f.c.) s/h	250.00	119.95
Micro Mega CD3 top loader transport (Acrylic) (vgc) s/h	1500.00	795.00
Musical Fidelity X-Ray 24/96 player (superb player) (new)	-	799.00
Musical Fidelity X.24k DAC (new)	-	300.00
Musical Fidelity X-10D missing Link Line Buffer (Mint) s/h	-	130.00
Philips CD1 210 (interactive) (mint) s/h	120.00	90.00
Philips PD5 703 (stable platter) remote (vgc) s/h	400.00	109.95
Pioneer PD5 Basic CD Player (g.c) s/h	150.00	89.95
Pioneer PD5 703 (stable platter) remote (vgc) s/h	450.00	179.95
Rotel RCD.9708X Remote CD Player (Mint/As New) s/h	350.00	249.95
Rotel RCD.9708X Remote (another one)(Mint/As New) s/h	350.00	249.95
Sony CDP 35 Midi player (mint/as new) s/h	-	65.00
Technics SL P550 remote (vgc) s/h	-	129.95
Technics SL P777 remote (vgc) s/h	350.00	129.95
Teac VRDS.7 (mint) s/h	600.00	379.95

**OTHER ITEMS OF INTEREST**

Alphason Glass 4 shelf mini stand (ideal for X Series) (mint) s/h	100.00	69.95
Mordant Short Decoder One (Dolby Pro Logic Processor) (inexpensive route to home cinema) (mint) s/h	400.00	149.95
Yamaha DSP A492 remote Pro Logic amp (mint) s/h	250.00	169.95
Yamaha DSP E1000 remote pro-logic processor/amp (mint) s/h	700.00	249.95
Nordost Flatline 4 Bi-wire Cable 2 x 2m (vgc) s/h	£120.00	£59.95
Puresonic 9010A Posic Interconnects (New)	£100	£79.95
Naga IS Cable s/h	loads	phone
Naim NAC AA Cable s/h	loads	loads

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# Audio Designs of East Grinstead

Mail Order and Export Service

PRODUCT	STATUS	WAS	NOW	PRODUCT	STATUS	WAS	NOW
Arcam Xeta 2	XD	399.90	299.00	Linn Kairn (phono)	SH	1750.00	875.00
ARCAM ALPHA 8 CD	XD	499.00	339.00	Linn Karik	XD	1850.00	1299.00
Arcam alpha 10 Amplifier	XD	799.90	639.00	LinnKaberActive(inc active cards)	XD	2375.00	1950.00
Arcam Alpha 10P Amplifier	XD	599.90	499.00	Linn Klout	SH	2400.00	1440.00
Audiolab 8000S	New	699.90	499.00	Linn Kudos	SH	775.00	465.00
B&W P4	XD	675.00	575.00	Linn Majik Phono	SH	800.00	399.00
Castle Eden	XD	499.00	399.00	Linn Tune Box	XD	-	689.00
Castle Avon	XD	729.90	579.00	Linn Kudos module	SH	500.00	300.00
Castle Howard S2	XD	1199.00	899.00	Linn AV5103 Processor	XD	4850.00	3250.00
Cyrus DAD1	New	398.00	338.00	Linn AV-5105 Amp	XD	1200.00	960.00
Cyrus SL	XD	398.00	298.00	Mission 754F	XD	1298.00	799.00
Cyrus PSXR	XD	328.00	289.00	Naim NAP 135	SH	3410.00	2200.00
Cyrus Pre	SH	648.00	299.00	Naim 92/90	XD	945.00	805.00
Cyrus AV Master	New	698.00	349.00	Naim NAT 03 Tuner	XD	615.00	525.00
Epos ES12	New	550.00	465.00	Pioneer PD05 DAT	New	899.00	649.00
Epos ES22	XD	1350.00	1080.00	Pioneer VSA E06	XD	999.00	899.00
Epos ES30	XD	2550.00	1899.00	Quad 77 Remote	XD	299.90	149.00
Linn Arkiv	XD	1000.00	499.00	Rel Strata	XD	575.00	475.00
Linn LP12 Basik/Akito/K9	SH	1810.00	999.00	Rel Storm	XD	695.00	595.00
Linn Ekos	SH	1500.00	900.00	Sennheiser Lucas Processor	New	160.00	129.00
Linn LK240	XD	750.00	599.00	<b>Constantly changing stocks</b>			
Linn Keltik	SH	6000.00	2999.00	<b>please call with your requirements</b>			

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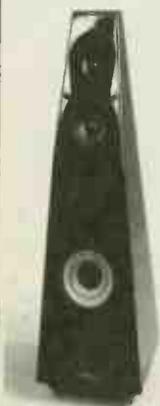
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X-1, Specter, Enigma 500-X, GAP-520X



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Neat Acoustics - full range available	£POA
Ortofon cartridges - full range available	£POA
Selec SVP 350, AWARD WINNING CRT PROJECTOR	£3,500.00
Sharp XV-C20E LCD projector	£1,350.00
SME 20/2 precision turntable	£POA
SME 20/2A as above with series V arm	£POA
SME series II model 3009 pick-up arm	£POA
SME series 300 model 309 pick-up arm	£POA
SME series IV pick-up arm	£POA
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ARCAM	ALPHA	AMPLIFIER	X	1	£550.00	£375.00
BANG & OLUFSEN	AV - 5	TELEVISION - CD & RADIO	X	1	£4,650.00	£2650.00
BANG & OLUFSEN	BEOCENTRE 9300	CD/RADIO AND CASSETTE	X	1	£1,650.00	£1200.00
BANG & OLUFSEN	BEO LAB 2000	ACTIVE LOUDSPEAKER	X	1	£550.00	£350.00
BANG & OLUFSEN	BEO LAB 3500	HORIZONTAL ACTIVE LOUDSPEAKER	X	1	£900.00	£650.00
CASTLE	AVON	LOUDSPEAKERS - VARIOUS VENEERS	N	1	£730.00	£550.00
CASTLE	SEVERN	FLOORSTANDING LOUDSPEAKERS	X	1	£580.00	£480.00
CASTLE	HOWARD	LOUDSPEAKERS - CHERRY	N	1	£1,200.00	£700.00
CASTLE	HOWARD	LOUDSPEAKERS - ROSEWOOD	N	1	£1,400.00	£800.00
CASTLE	ISIS	LOUDSPEAKERS - MAHOGANY	N	1	£250.00	£210.00
CASTLE	TAY	LOUDSPEAKERS - WALNUT	N	1	£350.00	£300.00
CELESTION	100	LOUDSPEAKERS - MAHOGANY	N	1	£540.00	£350.00
CELESTION	300	LOUDSPEAKERS - WALNUT	N	2	£1100.00	£500.00
KEF	C ODDA 9	FLOORSTANDING LOUDSPEAKERS	X	2	£300.00	£200.00
LINK	QUASAR	AMPLIFIER	S	1	£500.00	£200.00
MARANTZ	AC 500	CD, RADIO & PREAMPLIFIER	S	1	£450.00	£150.00
MERIDIAN	500 & 566 DAC	CD TRANSPORT & 20-BIT DAC	S	1	£2425.00	£1400.00
MERIDIAN	502	PREAMPLIFIER	X	1	£1385.00	£1000.00
MERIDIAN	565 7 1 AC-3	AC-3 DOLBY DIGITAL PROCESSOR	S	1	£2850.00	£1900.00
MONITOR AUDIO	MONITOR 3	FLOORSTANDING LOUDSPEAKERS	S	1	£400.00	£200.00
PINK TRIANGLE	LITAJURAL	CD PLAYER	X	1	£2200.00	£1400.00
QUAD	77 AMP	AMPLIFIER - NEXTEL	N	3	£700.00	£300.00
QUAD	77 AMP	AMPLIFIER - CARBON	X	1	£700.00	£300.00
QUAD	ESL 57S	ELECTROSTATIC LOUDSPEAKERS	S	2		£300.00
QUAD	405 MKII	POWER AMPLIFIER	S	1		£200.00
SPENDOR	2040	FLOORSTANDING LOUDSPEAKERS	S	1	£900.00	£500.00
YAMAHA	AV 1	PROLOGIC SYSTEM	N	2	£650.00	£500.00
YAMAHA	DSPA 492	AV AMPLIFIER	N	3	£250.00	£140.00
YAMAHA	DSPA 592	AV AMPLIFIER	S	1	£330.00	£230.00
YAMAHA	DSPA 1000	AV AMPLIFIER	S	1	£1,000.00	£250.00
YAMAHA	DSPA 1	DOLBY DIGITAL/DTS AMPLIFIER	N	1	£1,600.00	£1,400.00
YAMAHA	DSPA 2	DOLBY DIGITAL/DTS AMPLIFIER	N	1	£1,000.00	£850.00
YAMAHA	DSPE 492	AV PROCESSOR	X	1	£250.00	£175.00
YAMAHA	DVDS 700	DVD PLAYER	X	2	£800.00	£475.00
YAMAHA	KX 580 SE	CASSETTE DECK	X	2	£250.00	£200.00
YAMAHA	RXV 562 RDS	AV RECEIVER	N	3	£400.00	£275.00

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Meridian	500 Series	Any Meridian 500 series
QUAD	77 T & 707	77 Tuner and 707 Power amplifier

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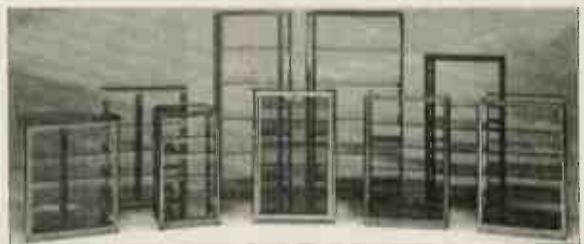
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KRELL FPR200 POWER AMP	£ 5250	XD
DCS ELGAR DAC	£P.O.A.	
PROAC TABLETTE 50 SPEAKERS	£449	XD
KRELL FPB600 POWER AMPLIFIER	£P.O.A.	
NAIM CDI CD PLAYER	£1295	SH
EXPOSURE 17/18	£895	SH
COUNTERPOINT SA100 POWER AMP	£295	SH
PINK TRIANGLE NUMERAL DAC	£499	XD
QUAD 306 POWER AMP	£150	SH
MICROMEGA STAGE 1	£200	SH
AUDIO RESEARCH VTM120 SE PRIVATE SALE	£3750	
AUDIO SYNTHESIS PASSION PRIVATE SALE	£850	
CASTLE HOWARD SPEAKERS LIGHT OAK EX DEM	£795	XD
EPOS ES14 SPEAKERS	£295	SH
KRELL KRC HR PREAMPLIFIER	£4500	SH
KRELL MD10/REFERENCE 64	£P.O.A.	
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# MEASURED PERFORMANCE

## AMPLIFIERS

### ROTHWELL RUBICON

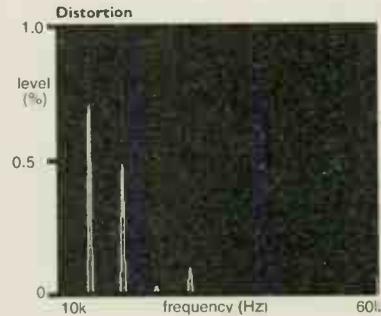
A small, neat power amplifier, the Rothwell delivers commensurately, producing just 8watts in the midband. Like so many valve amplifiers with mediocre output transformers (the most difficult part to design), this one could not deliver as much power at high frequencies, producing a paltry 3watts at 10kHz before severe distortion set in.

Distortion at 1watt measured 1% and at 2watts 2%, both at 10kHz. This sort of performance results in the classic 'soft sound' people associate with valves, even though it is not truly how they should sound.

At low power, bandwidth measured a satisfactory 12Hz-33kHz. Noise was low and channel separation adequate.

The Rothwell may well sound sweet if not pushed too hard. However, at around 3watts before overload distortion starts to set in, it is woefully short of drive and should be used with very high sensitivity loudspeakers. **NK**

Power	8watts
CD/tuner/aux.	
Frequency response	12Hz-33kHz
Separation	36dB



Noise	-94dB
Distortion	0.22%
Sensitivity	220mV
DC off-set	NA

### MVL INTEGRAL A2

The MVL was powerful, producing 84watts into 8ohms and 110watts into 4ohms. Clipping (overload) behaviour was interesting. Into 8ohms sine wave peaks were rounded off, a sign of low feedback. Whilst this looks good, there is a trade-off against distortion amongst other things. Much as expected, the MVL suffered bad crossover distortion. Measured levels were 0.5% at 10kHz, full output, with an extended harmonic structure. I'd expect this to add coarseness to the sound. Transistor crossover distortion is invariably audible and unpleasant. Into 4 ohms clipping was asymmetric, which generates other odd-order distortions.

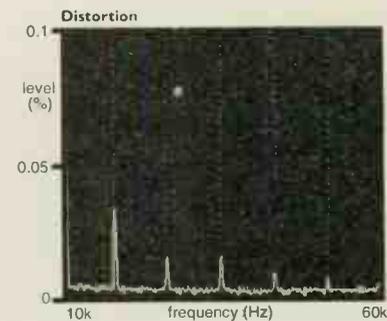
Sensitivity was low at 450mV and noise a little higher than the norm considering the low gain. Much the same situation existed on phono with a poor

8mV sensitivity yet high-ish noise. Equivalent input noise was a high 1.23uV, whereas 0.3uV-0.8uV is closer to standard.

The phono stage has a warp filter which acts below 40Hz, a good point. Unfortunately, equalisation was different on left and right channels, one having treble lift. However, frequency response measurement was approximate in any case because the tone controls have no zero markings or stops, so a flat position had to be guessed.

In measured terms the MVL did not reach the levels set by rivals. **NK**

Power	84watts
CD/tuner/aux.	
Frequency response	12Hz-56kHz
Separation	47dB
Noise	-81dB



Distortion	0.04%
Sensitivity	450mV
DC off-set	-8.5mV/-5.6mV

MM Disc	
Frequency response	40Hz-65kHz
Separation	44dB
Noise	-75dB
Distortion	0.04%
Sensitivity	8mV
Overload	80mV

### MUSICAL FIDELITY X-LP PHONO STAGE

The X-LP offers both MM and MC gain. Switched to MM, gain measured a normal x120, so 5mV in from a moving-magnet (MM) cartridge - quite a high level - gives 600mV out. This is more than enough to drive amplifiers to full output. Moving-coil (MC) stages usually

offer ten times more gain than MM, or around x1000. The X-LP was again on the nail here, offering x1000 gain.

Unusually, MM and MC possessed different frequency responses, MC being slightly narrower than MM. However, both were satisfactory and both had a warp filter operating below 40Hz.

Noise (Equivalent Input Noise) was

low on both MM and MC, but having said that the MC stage was not the quietest available and would not be ideal for very low output MCs, usually expensive models. Ortofons are fine though. Overload (input and output) were fine, again rating as normal!

The X-LP measured well in every area. It is a very competent design. **NK**

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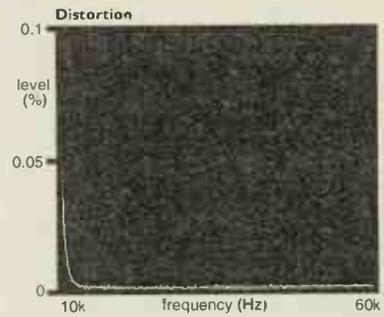
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Separation	76dB
Noise	0.07uV
Distortion	0.006%
Gain	x1000
Overload	9.5mV in/9V out



## CARTRIDGE

### DYNAVECTOR DV20X-H

The Dynavector tracked well, getting through all but the highest level torture tracks at both 300Hz and 1kHz. It should never leave the groove in use.

Whilst lateral tracing distortion was low, vertical modulation distortion was relatively high, measuring 6%, due to a tracking angle of 30degrees. However, since the distortion was second harmonic only it has very little effect upon sound quality, lightning timbre slightly.

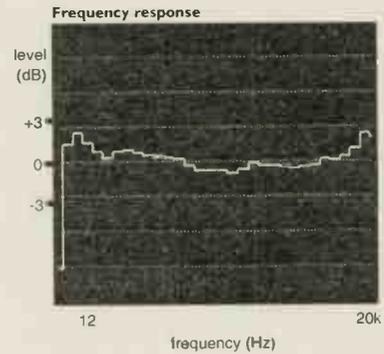
Channel separation was adequate at 23dB and output very high for an MC cartridge, measuring 2.5mV at 3.54cms/sec.

Frequency response was essentially flat, as our response analysis shows. A small peak of +2dB on outer grooves sunk

to -1dB at 20kHz on inner grooves due to tracing losses, meaning the Dynavector achieves good balance overall as it tracks across a record. It will not go dull on inner grooves.

In all areas the DV20X-H measured well, although to achieve good disc clearance Dynavector have given it a steep cantilever angle and high lateral distortion. This could usefully be modified but will not have an unduly bad impact upon sound quality. NK

Tracking force	1.8gms
Vertical tracking angle	30degrees
Frequency response	20Hz-20kHz
Channel separation	23dB
Tracking ability (300Hz)	



lateral	70um
vertical	45um
lateral (1kHz)	23cms/sec.
Distortion (45um)	
lateral	0.75%
vertical	6%
Output (5cms/sec rms)	3.5mV

## LOUDSPEAKERS

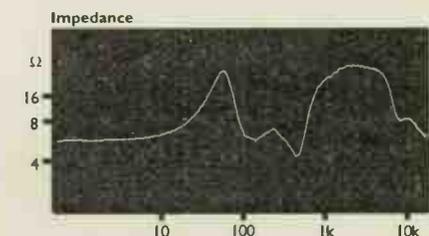
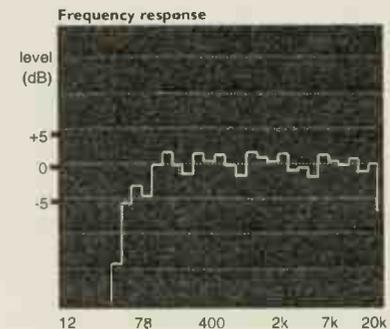
### KLIPSCH HERESY II

The Klipsch Heresy II uses midrange and treble horns. I was expecting a ragged response but got a shock. Not only did frequency response measure incredibly flat, as our analysis shows, but phase coherence was extraordinary. Wherever I placed the microphone I got the same result; phase suck-outs did not appear. Moving my head around in front showed the 'speaker did not change character according to listening position, a strong point. The Heresy II was outstanding in terms of response flatness and phase coherence.

The Heresy also displayed enormous sensitivity, producing no less than 93dB sound pressure level from one nominal watt (2.84V) of input, which is very loud. The Heresy needs no more than 10-

20watts or so to go loud, so it is great for low-power, specialist amplifiers. Since impedance measured 7.5ohms overall it achieves this sensitivity without recourse to low impedance, but the impedance curve is bizarre. The midrange horn is obviously very, very efficient, since it has an unusually high impedance of 30ohms or so yet still provides high sound-pressure level. Unfortunately, the high slopes around it in the impedance trace are indicative of high reactance and may affect amplifier feedback behaviour. However, by drawing little current the Klipsch will not induce current-related problems like increased distortion.

Overall the Klipsch measured well. It has some very strong features, like extreme sensitivity, super-flat frequency response and great phase coherence. NK



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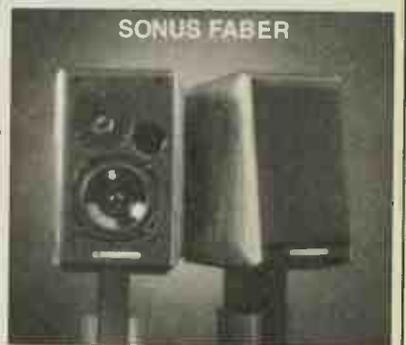


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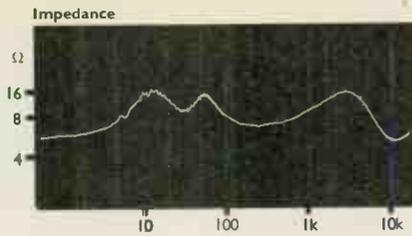
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## CARLSSON 52.2

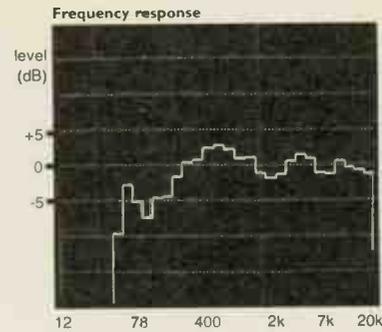
The Carlsson was measured on its intended listening axis, but off the floor to get a smoother low-frequency response. This removes wall and floor gain so bass appears to roll off in our analysis. However, it reaches down to 50Hz, in fact, so there is no problem here once wall and floor reinforcement have been taken into account.

On the intended response axis the Carlsson has a reasonably flat response, albeit with some ups and downs, but it will direct a good balance of sound to the listener. It was quite cohesive too; moving the microphone around showed there was less variation in response due to phase



error than many conventional loudspeakers. Quite a lot of treble energy is directed upward to the ceiling to give a sense of height. For what it attempts to do, the Carlsson proved well engineered in terms of frequency response and dispersion.

A sound pressure level of 87dB was produced from a nominal watt of input

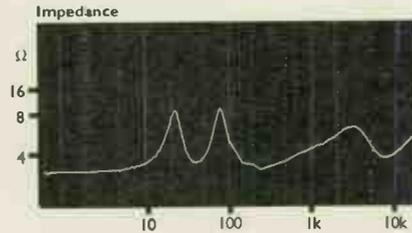


(2.84V), which is about normal. Impedance measured 8.6ohms overall and the curve shows it undulates smoothly about the nominal figure, meaning there is little reactance and low energy storage - a good result. **NK**

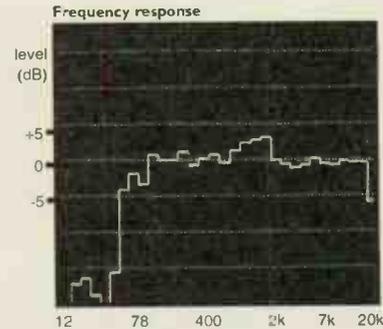
## LIVING VOICE AUDITORIUM

The Living Voices are sensitive, producing 92dB from one nominal watt of input. However, they have a low overall impedance of 4ohms and so draw current to achieve this. Since amplifier distortion rises significantly as a result, there is a price to pay unless a valve amp set to 4ohms is used. High current draw magnifies amplifier differences in effect.

Frequency response was flat on the tweeter axis only. Move up or down off this axis and sound quality changes significantly, listening and measurement showed. So seating height is critical and



listeners must sit on the tweeter axis. This is not especially good engineering nor what is expected from the D'Appolito arrangement. Otherwise, on-axis frequency response was flat apart from a midrange peak and this is almost certainly due to a rear-wall reflection which in turn

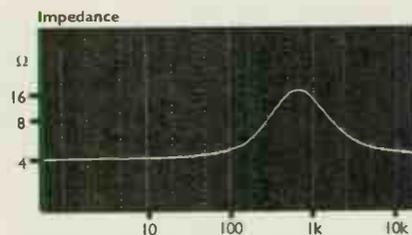


suggests boxiness or box coloration. The Living Voice Auditoriums measure well in some areas but not others due to certain trade-offs. **NK**

## MAGNEPLANAR MG12/QR

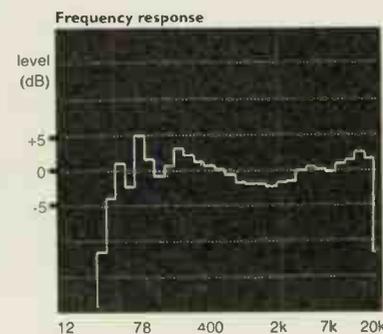
Panel loudspeakers are usually insensitive, ribbons and such like especially so. Unfortunately the Magneplanar 12 fell into this category firmly, producing a paltry 77dB from one watt input (2.84V) - incredibly low output by modern standards. Worse, it draws a lot of current at the same time, so a powerful amplifier is needed to make this loudspeaker go loud.

Frequency response was fairly flat, although even with an attenuating resistor in place to reduce treble output the loudspeaker has treble lift, as our analysis shows. There is some bass lift too, which



will give body and warmth to the sound. Frequency response was stable over a wide range of forward listening positions so the loudspeaker has good dispersion and no phase problems.

The Magneplanars are an easy, primarily resistive load measuring 5ohms over-



all. All the same, a good amplifier will be needed to provide the current they demand to achieve reasonable volumes. **NK**

## DIAPASON KARIS

The miniature Diapasos, like other good, small loudspeakers, give a relatively flat frequency response. A midrange peak is likely caused by rear wall reflection or cone break-up in the bass/midrange unit. The former is very difficult to avoid in a

small cabinet unless a heavy, well-damped cone is used, which then compromises sensitivity. Unusually, these loudspeakers do not rely on a lot of bass peaking to generate an impression of bass. They may sound a little lightweight against other small 'speakers as a result,

although there is some lift around 140Hz and, near to a rear wall, this may be enough to give satisfactory bass balance.

Small loudspeakers are insensitive, meaning they need quite a lot of apparent power (volts) to go loud. Diapason use a low-impedance bass/midrange driver to

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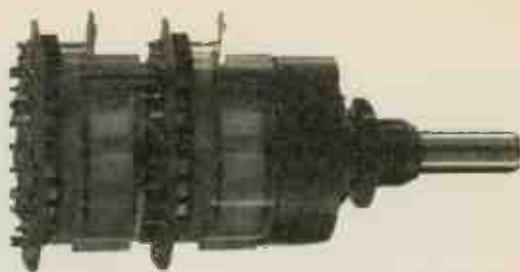
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counteract this, so for any given volume control setting the Karises will draw more current and, therefore, power than 8ohm designs. However, it makes them a more difficult load to drive, especially with minima of 3ohms or thereabouts at low frequencies. A reasonably powerful amplifier of 60watts per channel minimum is best.

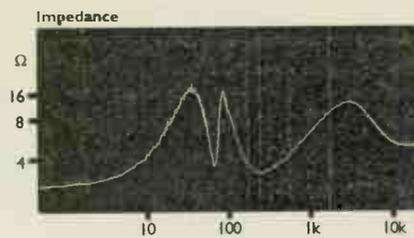
The Diapasons measured reasonably

## CYRUS dAD 1.5

Our response analysis shows a rounded off high-end response and a slow fall in low-frequency output. Both are unusual. The channels were checked with steady tones and our standard impulse test, and this verified the unusual response.

Upper treble rolls off above 10kHz to become -1dB down at 18.8kHz, which will soften the sound and add warmth. It may also make it sound a little enclosed or 'shut in'. Low-frequency output rolled off too, becoming -1dB down at 15Hz instead of the common 4Hz figure. This will lighten but speed up bass. The dAD 1.5 is unusual in these areas.

It is also unusual in more unfortunate ways. Distortion levels were high on both channels from high to low levels. Dynamic range was a poor 95dB. There was a lot of modulation and quantisation

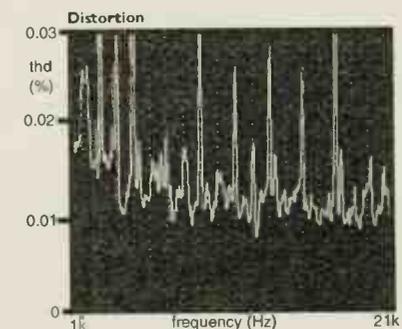
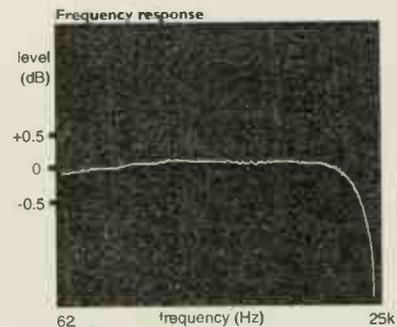
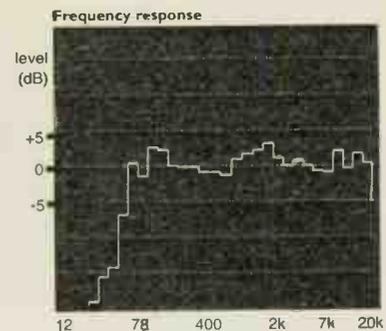


well, although they were not distinguished and are a heavy load. **NK**

noise, making the player's output 'dirty' by modern standards. I would expect coarseness or greyness in the sound.

The dAD 1.5 measured normally in other areas but was poor in measured terms against the competition. **NK**

Frequency response	15Hz-18.8kHz	
	left	right
Distortion (%)		
-6dB	0.014	0.014
-30dB	0.078	0.063
-60dB	1	1.2
-90dB	69	54
Separation (dB)	left	right
1kHz	71	71
20kHz	69	67
Noise		-114dB
with emphasis		-114dB
Dynamic range		95dB
Output		2.36V



# TUNER

## MARANTZ ST 17

The ST-17 is unusual in possessing no pilot-tone filter, so it puts out a lot of unwanted 19kHz pilot tone and 38kHz sub-carrier. This could affect tape recordings, adding a whistle, and will interfere with Dolby operation when recording from radio. It is rare to encounter a tuner without MPX filtering these days as a result. Some people feel a more open and clearer sound results.

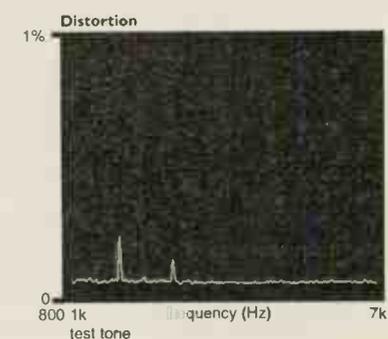
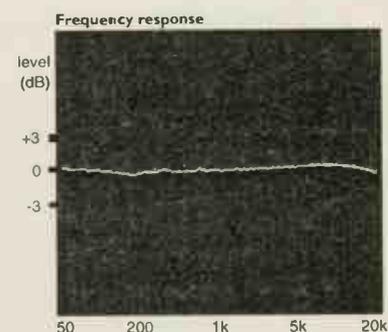
Our frequency response analysis shows clearly the absence of steep pilot-tone filtering and a slight rise in the presence region at high frequencies. I would expect a detailed sound.

Distortion was reasonably low and channel separation on stereo wide. Noise was satisfactory at -73dB, below that accompanying most programme material. Moving from long distance (DX) to Local made no difference to absolute noise

level, but the greater gain of DX mode lowered noise at most signal strengths, except very high ones. Sensitivity was good in DX mode and there was plenty of selectivity in Narrow Band mode.

The ST-17 measured well, although it is not distinguished in any area. Lack of pilot-tone filtering is a curiosity; some might like the sound, others might encounter problems when tape recording. **NK**

Frequency response	4Hz-23kHz
Stereo separation	52dB
Distortion (50% mod.)	0.2%
Hiss (CCIR)	-73dB
Signal for minimum hiss	1.2mV
Selectivity (at 0.4MHz)	80dB
Sensitivity	
mono	1.6uV
stereo	20uV
Signal strength meter:	none



# Previously Cherished Items, Or something new from Choice

## Clearance Items

	Choice Price	Original Retail Price
Audio Research D240 mk II	£ 1395.00	£ 3500.00
Exposure V Active x over	£ 295.00	£ 995.00
EAD 7000 Transport	£ 895.00	£ 2495.00
Tesseract Tala pre-amp	£ 695.00	£ 1495.00
Magnum P200 pre-amp	£ 895.00	£ 1895.00
Sonus Faber Gravis Sub woofer + X-over + power amp	£ 1250.00	£ 3200.00
Kenwood 9010 CD Transport	£ 195.00	£ 500.00
Alon Adriana	£ 3500.00	£ 10000.00
Alon PW1 Subwoofer (Passive)	£ 295.00	£ 750.00
Gale 401	£ 250.00	-
Kinshaw Overture Phono	£ 195.00	£ 395.00

## New in This Month

POWER AMPLIFIERS		
FM acoustics 611X Resolution Power	£ 14995.00	£ 22000.00
Krell KSA 200B	£ 2250.00	£ 5550.00
Audio Research M300	£ 4995.00	£ 12000.00
Naim NAP 250	£ 1150.00	£ 1800.00
Lamm M1 Monoblocks (100W)	£ P.O.A.	£ P.O.A.
Michell Alecto Monoblocks	£ 1295.00	£ 1800.00
Copland CSA 28	£ 995.00	£ 1295.00
Quad 77 Integrated (Quadlink)	£ 495.00	£ 700.00
Meridian 556 (brand new)	£ 810.00	£ 950.00

PRE AMPLIFIERS		
Naim 52	£ 2200.00	£ 3100.00
CAT SL1 mk III	£ 4750.00	£ 6500.00
Conrad Johnson PV10AL	£ 795.00	£ 1195.00
F M Acoustics 266 Resolution	£ 10995.00	£ 17000.00
Meridian 501.2 (brand new)	£ 630.00	£ 740.00

SPEAKERS		
Quad ESL 63 Black	£ 1895.00	£ 3200.00
Sonus Faber Guarneri	£ 4750.00	£ 6500.00

C.D PLAYERS & DACS		
Naim CDS	£ 2250.00	£ 3600.00
Naim CD2	£ 1695.00	£ 2200.00
Krell KPS 25s	£ 13995.00	£ 19995.00
Krell KAV 300 CD	£ 2500.00	£ 3500.00
Matantz CD17 KI Sig (Black)	£ 795.00	£ 1195.00
Quad 77 CD Player (Quadlink)	£ 495.00	£ 700.00
Genesis Digital Lens	£ 1095.00	£ 1900.00
Meridian 506 20 bit (brand new)	£ 1015.00	£ 1195.00

TURNTABLES / ANALOGUE / VARIOUS		
Naim Nat 02	£ 750.00	£ 1200.00
Linn LP12/ARO/Armageddon/Prefex/Hi Cap/17 DII	£ 2500.00	£ 4000.00
LFD MC1 Phono mm/mc	£ 550.00	£ 900.00
Michell Gyro Orbe Platter/Bearing+QC psu	£ 995.00	£ 1500.00
SME V arm	£ 850.00	£ 1500.00
Lyra Parnasus (NEW)	£ 1200.00	£ 2000.00
Clear Audio Master Reference/Clear Audio Insider Reference (Wood)	£ 8995.00	£ 16000.00
Basis Debut Gold/Graham Model 2.0	£ P.O.A.	£ P.O.A.

## Power Amplifiers

Copland CSA 14 Integrated (Silver)	£ 795.00	£ 1195.00
Restek Extract Monoblocks (180 watt)	£ 2495.00	£ 3500.00
Mark Levinson 331	£ 2750.00	£ 5000.00
Krell KAS 2 Monoblock	£ 9000.00	£ 18000.00
Michell Alecto Stereo	£ 995.00	£ 1500.00
Exposure XV	£ 450.00	£ 795.00
Jadis JA500	£ 7995.00	£ 21000.00
Boulder 102 AE	£ 2650.00	£ 3400.00
Boulder 500 AE	£ 3795.00	£ 5000.00
LFD PA1/LS1	£ 895.00	£ 1998.00
Audio Note P1 SE	£ 500.00	£ 950.00
Jadis JA 80 Monoblocks	£ 4995.00	£ 10000.00
Audion Golden Knights	£ 2200.00	£ 4000.00
Audion Silver Knights (Gold)	£ 1200.00	£ 2250.00
Jadis Defy 7 mk III	£ 3250.00	£ 4790.00
Micromega Tempo 2 Integrated	£ 595.00	£ 900.00
Krell FPB 600	£ 8995.00	£ 12900.00
Krell KSA 250	£ 2750.00	£ 6700.00
Audio Note Ankoru Monoblocks	£ 8500.00	£ 14500.00
VTL Monoblocks	£ 1795.00	£ 4000.00
Micromega amp	£ 750.00	£ 1295.00
Audio Research CA50 Integrated	£ 2495.00	£ 3400.00
Audio Research VT50	£ 2095.00	£ 2895.00
Micromega Tempo P	£ 750.00	£ 1250.00
Air Tight AT 1	£ 2600.00	£ 4200.00

## Pre Amplifiers

Jeff Rowland Constate + Phono	£ 3995.00	£ 8000.00
Audiolab 8000S	£ 450.00	£ 700.00
Michell Argo & Hera PSU	£ 495.00	£ 900.00
Krell KRC2 + KPE Phono Stage	£ 2500.00	£ 4300.00
Conrad Johnson PV12 (mm/mc)	£ 1995.00	£ 2590.00
McCormack Micro Line Drive	£ 350.00	£ 595.00
Audio Research LS3	£ 1095.00	£ 1900.00
Audio Research LSS mk II	£ 2695.00	£ 5700.00
Meridian 541 Dolby Surround	£ 695.00	£ 1095.00
Angstrom 200 (Home cinema controller)	£ 1800.00	£ 3495.00
Audio Research LS7	£ 1095.00	£ 1620.00
Audio Research LS15	£ 2400.00	£ 3200.00
Audio Note M2	£ 650.00	£ 950.00

## Quality Speakers

Rogers LS3/5A Black	£ 550.00	£ 699.00
Kef Reference Model 4 (Rosetta Burr)	£ 3200.00	£ 4000.00
Impulse Taus	£ 1800.00	£ 3100.00
Acoustic Energy AE1	£ 550.00	£ 795.00
Ensemble PA1	£ 995.00	£ 2000.00
Alon V mk II Blk	£ 2500.00	£ 5000.00
Wilson 3/2 (Black)	£ 5995.00	£ 15000.00
Alon Lotus SE	£ 2500.00	-
Sonus Faber Extrema + Stands	£ 4250.00	£ 7000.00
Wilson 5.1 (Piano White)	£ 11500.00	£ 19000.00
Thiel CS1.5	£ 1595.00	£ 2700.00
Mini Grand	£ 2995.00	£ 7600.00
Martin Logan SL3	£ 2795.00	£ 3499.00
B & W 801 Series 2 (Black Ash)	£ 1895.00	£ 4000.00
Apogee Stage	£ 995.00	£ 3000.00
Sonus Faber Electa Amator	£ 1495.00	£ 2992.00
Kef Reference 4	£ 2200.00	£ 3600.00

## CD Players & DACS

Krell MD-10 CD Turntable	£ 3495.00	£ 7990.00
Krell Studio Dac	£ 1995.00	£ 4450.00
Theta Data Basic 2	£ 1295.00	£ 2400.00
Theta Pro Basic III (Balanced)	£ 1695.00	£ 2990.00
Cambridge Dac Magic	£ 150.00	-
Mark Levinson No36 Dac+37 Transport	£ 3995.00	£ 8000.00
Audiolab 8000 CD	£ 650.00	£ 1000.00
Mark Levinson No 39	£ 4250.00	£ 5000.00
Wadia 6	£ 1995.00	£ 4300.00
Audio Alchemy DDE V1.0 + psu 1	£ 150.00	£ 300.00
P.S. Audio Ultralink	£ 795.00	£ 2390.00
McCormack DAC-1	£ 450.00	£ 995.00
Acuphase DP90/91	£ 9950.00	£ 20000.00
Forsell Air Ref Transport mk II	£ 4995.00	£ 8000.00
Forsell Air Ref dac	£ 2995.00	£ 5800.00
Mark Levinson 30.5/31	£ 11500.00	£ 24000.00
Meracrus Transport	£ 1500.00	£ 3995.00
Meridian 566 DAC (20 Bit)	£ 895.00	£ 1095.00
DPA PDM 1 mk III	£ 550.00	£ 1000.00
Marantz CD94/94A	£ 595.00	£ 1600.00
Audio Research CD 2	£ 2495.00	£ 3500.00
Audio Alchemy DDS II Transport	£ 395.00	£ 900.00

## Turntables & Analogue

Voyd Reference/Reference Power supply/Helios Cyalene/Audio Note 10 limited + P/S	£ 11500.00	£ 22000.00
Roksan Xerses/Linn Akito/PSIII/DSU	£ 650.00	£ 1200.00
Musical Fidelity T1 FM Tuner	£ 150.00	£ 300.00
Ortofon MC30	£ 450.00	£ 650.00
Linn LP12/Lingo/Cirkus	£ 750.00	£ 1400.00
Linn LP12, Lingo Cirkus, Ittok III, Troika Trampoline	£ 1795.00	£ 3200.00
Piere Lurne J1/SL5	£ 1500.00	£ 4500.00
Piere Lurne J1/Sowther mk III	£ 1800.00	£ 4500.00
Forsell Air Force One	£ 11995.00	£ 25000.00
Quad FM3 Tuner	£ 195.00	-
Clear Audio Sigma	£ 450.00	£ 600.00
Linn Klyde	£ 450.00	£ 600.00
Pink Triangle PT Too Ref Bearing, platter, clamp	£ 850.00	-
Transparent Musiclink Reference (RCA-RCA)	£ 1000.00	£ 2200.00
Transparent Musicwave Ultra Bi-Wire 3.6mtr	£ 1600.00	£ 3300.00
Lyra Parnasus (VdH tip)	£ 950.00	£ 1895.00

## STOCKIST OF:

Acoustic Energy, Rockport,  
Alon, SME,  
ATC, Soundstyle,  
Boulder, Tara Labs,  
Bryston, Target,  
C.A.T., Totem,  
Chord, Trichord,  
ClearAudio, Trilogy,  
Elemental Audio, van den Hul,  
Graham, VPI,  
Helios, XLO,

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## COMPACT DISC PLAYERS

### QUAD 67 SECOND-HAND

One of Quad's best products for a long time, the '67 is warmer and smoother than most, yet is highly musical and revealing. (May 93)

**KENWOOD DP-3080/II £180**  
Has great clarity and presence for the price. Not as naturally expressive as the CD4SE though. (Feb 98)

**CAMBRIDGE CD4SE £200**  
A touch soft in the treble but outstanding in every other respect. (Feb 98)

**ARCAM ALPHA 7 £330**  
This British-built player is extremely good value. Up-front, punchy. Suits Techno and Rock. (Mar 97)

**MARANTZ CD-63MKII KI-S £400**  
Similar to the CD-63SE but more powerful bass and an all-round smoother sound. The famous KI tweaks pay off again.

**PHILIPS CDR 870 RECORDER £500**  
Replay quality is on a par with £250 machines but analogue and digital recordings on CD-R and CD-RW are outstanding. (Jan 98)

**DENON DVD-3000 £699.99**  
The Denon is a fine performer with CD and better still with 24/96. It's sonically strong with a crisp, clean and involving sound.

**ROKSAN CASPIAN £895**  
The Caspian has a smooth, slightly bright sound with some of the clearest treble in the business. Very engaging, dynamic character. (Aug 97)

**PANASONIC DVD-L10 £999.95**  
This mini-marvel with its built-in screen isn't cheap but it's an outstanding portable and a more-than-capable domestic device. (Nov 98)

**MERIDIAN 506 20-BIT £1100**  
Very detailed and revealing player. More cerebral than visceral sounding, however. (May 95)

**MARANTZ CD-17 KI-S £1100**  
The Marantz excels in all areas. Without doubt this is one of the most involving CD players on the planet. Build quality is also exemplary. (Sep 97)

**DENON DCD-S10 £1300**  
A warm, atmospheric and smooth performer that never fails to involve. Silken musicality par excellence. (Jul 97)

**MCINTOSH CDM7009 £2635**  
A thoroughly inspiring machine. One of the most musical CD players around; sweet, open and detailed. (Dec 95)

## COMPACT DISC TRANSPORTS

### TEAC VDRS-T1 £550

Not as substantially built as its chunky looks suggest, the T1 is nevertheless a good entry-level transport with a warm, expansive sound. (Feb 95)

### TEAC P-30 £2500

Cheap it isn't, but then it sounds like a million digital dollars. Nothing short of superb. (Jun 97)

### SONIC FRONTIERS TRANSPORT £6999

Cutting edge design and technology combine to make this one very desirable product. The only problem is the fantasy hi-fi price. (Sep 98)

## CD CONVERTORS

### MIDIMAN FLYING COW £299.99

Excellent as a DAC and doubles as an ADC for archiving to CDR. (Jun 98) Great value, as is junior version Flying Calf at £109. (Feb 99)

### MUSICAL FIDELITY X-DAC £300

A bargain for normal CDs and even better with HDCDs. (Nov 97)

### ASSEMBLAGE DAC-2 £400 (KIT)

Takes little building to produce a clean, clear sound. HDCD filter included.

### MARSTON SILHOUETTE £795

With Crystal Semiconductors' 18-bit DAC the Marston produces clean-cut images and a transparent sound stage. Very rhythmic too. (Aug 97)

### DPA 1024 £6000

Proof positive that today's CDs needn't sound CD-like! Uses an in-house discrete convertor, and DPA haven't skimped on the build either! (Jul 94)

### DCS ELGAR £8500

Future-proof convertor which will handle 24/96 and 24/192. Extremely open and natural performer. (Nov 97)

### SONIC FRONTIERS PROCESSOR 3 £6999

Quality never comes cheap! This DAC oozes class and when matched with the Transport 3 is certainly up with the best. (Sep 98)

## TURNTABLES

### GARRARD 301/401 second-hand

In a decent plinth with an arm of SME 309 calibre, the 301 & 401 have a highly authoritative sound with solid, expressive bass. Very musical, but treble isn't up to modern standards.

### THORENS TD124 second-hand

One of Thorens' best turntables. Needs a modern plinth to give its best. Duly installed, it's good enough to face off the Garrards, swapping some of its bass power for a more delicate, incisive treble.

### ORIGIN LIVE STANDARD £145 (KIT)

Fine in standard form with AC motor, frighteningly good with a DC motor and battery PSU.

### SYSTEMDEK IIX900/RB250 £330

A fine all-rounder and easy to upgrade too. More depth and breadth than Rega Planar 3. (Sep 94)

### PINK TRIANGLE TARANTELLA £680

Not only does the Tarantella have more style than a catwalk full of models, it also combines PT's usual clarity with real authority. (Oct 97)

### VPI HW19 JUNIOR/RB300 £599

With its control and grip on music the Junior never fails to engage. Set-up is a piece of cake and there's a range of upgrades on offer too. (Oct 97)

### MICHELL GYRODEC £875

Stunning looks, build and fine sound. Standard PSU has detailed, architectural, if undynamic sound. With QC PSU, scale and insight excel.

### PRO-JECT 6.1SA £999

The Pro-ject places the listener in the best seat in the control room. Comes with Sumiko arm and Ortofon MC 30 Supreme. (Dec 94)

### ROKSAN XERXES X £1295

DSU or XPS 3.5 power supply £150/170 extra. Excellent pitch stability from a new Swiss motor and outboard power supply. Very tight bass, fine dynamics and revealing clarity. (Jan 97)

### MICHELL ORBE £1995

The Darth Vader of analogue, the Orbe builds on the strengths of the Gyrodec. An ultra-tuneful, expansive sound. (Apr 95)

### SME MODEL 20 £3400

Including the excellent SME V tone-arm, the Model 20 is one of the last great turntables, unless you've got £11000 for the Model 30, that is. (Oct 92)

## STONE-ARMS

### LINN ITTOK second-hand

This early heavyweight arm benefits from fine engineering. Good dynamics and grip.

### REGA RB300 £180

Supremely capable at the price, but not quite humankind's salvation. Some may prefer the simpler RB250 at £130. Detailed, tight, rhythmic sound but tonally rather grey and cold-sounding.

### SME 3009SII £309

This Paleolithic device is no longer state-of-the-art with frequency extremes or detail, but its legendary serviceability makes it a cult in Japan. Can be picked up for peanuts second-hand. (Jan 93)

# World favourites guide

- HADCOCK GH 228 SE** £595  
Venerable unipivot design re-engineered for bang up-to-date performance. Bucks current tone-arm fashions but the sweet sound tells why. (Dec 98)
- SME 309** £689  
A down-market version of the IV and V with aluminium armtube and detachable headshell. Tight, neutral sound with good tonality, but lacks the IV's pace and precision. (Jan 93)
- CARTRIDGES**
- GOLDRING 1012GX** £74  
An accomplished MM with a solid bass, slightly forward midband and clean transients. (Jul 93)
- ORTOPHON MC 15 SUPER II** £140  
Not quite as good as the dearer Supremes but the Super II is a splendid introduction to the joys of moving-coil cartridges.
- DNM MICA** £185  
Better Goldring's 1042 and costs only £135 on trade-in. An assured and transparent MM. (Feb 98)
- GREGORY MUSIC MAKER** £575  
When mated with a good quality arm, this hand finished high-output pick-up gives an ear-boggling account of itself. An absolute gem. (Feb 99)
- ORTOFON MC 2000** £799  
We came across this in an SME IV on a Garrard 401; it gave one of the best results we've heard.
- ORTOFON ROHMANN** £1000  
In a way it's MC 2000 meets MC 7500 with great tonal strengths and a dynamo sound. (Apr 96)
- LYRA LYDIAN** £649  
A truly musical, sophisticated device that makes most other MCs sound frigid. (Jun 95)
- VAN DEN HUL MC-10** £840  
Fluid bass, finely-etched treble and highly tuneful. The MC-10 is a honey, pure and simple. (Jun 95)
- ORTOFON MC 7500** £2000  
Conclusive proof that there's hope for the world. CD lovers would die if they heard it. (May 94)
- INTEGRATED AMPLIFIERS**
- MISSION CYRUS I/II** S/H  
Both versions give a detailed, articulate and dynamic sound. Worth keeping an eye out for second-hand.
- DENON PMA-250SE** £160  
It might not have bags of grunt but the Denon can sound exceedingly natural and open. (Feb 97)
- ROTEL RA-970BX** £250  
With its smooth and powerful sound; sings a seductive song with all types of music. (Oct 96)
- PIONEER A-300R PRECISION** £399  
This is the A-300 tweaked. Rhythm and detail are first-class; the phono stage is not far behind. (Apr 95)
- AUDIO ANALOGUE PUCCINI SE** £595  
This superbly-built Italian integrated has a lucidity and control which leaves others nowhere. Sound stage a wow. (Dec 97)
- ROKSAN CASPIAN** £695  
Smooth, warm integrated with remote control that works happily into most 'speakers. (Dec 97)
- SONNETEER ALABASTER** £995  
Builds on the strengths of the Champion with ample control, colour and drive. (Oct 97)
- UNISON SIMPLY 2** £995  
This single-ended valve amplifier is smooth, sweet & open. An extremely musical performer. (Oct 95)
- UNISON SIMPLY 4** £1495  
Sonically similar to the Simply 2, but with more power and control. (Oct 95)
- MCINTOSH MA6800** £3735  
The MA6800 not so much plays music as takes control of it, with effortless bass drive. (Sep 95)
- PHONO STAGES**
- QED DISCSAVER** £35  
A true bargain that offers a cohesive, musical sound but avoid using it in thin sounding systems.
- NAD PPI** £39.99  
An unassuming little box that nevertheless gets on with it. Comes complete with wall-plug power supply. No provision for battery power.
- 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 many pricier stages sound overpriced.
- LEHMANN AUDIO BLACK CUBE** £395  
Capable of involvement, neutrality and insight normally the preserve of phono stages three to four times the price. (Oct 98)
- SONNETEER SEDLEY** £399  
Combines transparency and fine dynamics with excellent rhythmic ability. (May 98)
- ROKSAN ARTAXERXES X** £950  
With the Attesa PSU the Artaxerxes X MM/MC stage still shines. Great stage depth, neutrality and tonal colour. (Oct 97)
- PRE-AMPLIFIERS**
- AUDIO ANALOGUE BELLINI** £475  
Showcases AA's characteristic mix of clarity and musicality and blasts the competition. (Apr 98)
- XTC PRE-1** £1000  
Almost valve-like in its smoothness, the line-level Pre-1 is warm and seductively clear. (Nov 96)
- CHORD CPA1800** £1800  
Clarity, insight and control are second to none - an addictive mixture. (Mar 98)
- MARANTZ MODEL 7** £3500  
A Sixties reissue, the Marantz pre-amp still sounds superb. Great phono stage. (Mar 97)
- POWER AMPLIFIERS**
- QUAD II** second-hand  
Classic valve monobloc with many thousands still in use. Archetypal warm, smooth valve sound.
- LEAK STEREO 20** second-hand  
The Stereo 20 can sound impressively up-to-date, although power and detail are ultimately limited. The TL10, TL12 and TL12+ monoblocs are also very worthy contenders.
- ARCAM 9** £400  
With 70watts on tap, the 9P will drive most loudspeakers with a spacious and detailed sound. Good bass welly too. (Dec 96)
- MISSION CYRUS POWER** £450  
This power amplifier is a real honey. Rich and smooth, but with a firm grip.
- SUGDEN AU41P** £530  
Extremely competitive at the price with 100W of unusually smooth, full-bodied sound.
- MUSICAL FIDELITY X-A200** £1000/PAIR  
200watts of high-end monobloc power in a grooved tube. (Aug 98)
- NAIM NAP180** £1060  
Partnered with a NAC82, this has classic Naim control, and a superbly rhythmic presentation.
- MICHELL ALECTO** £1989  
Crisp, clean and beautifully controlled. Partnered with the £1650 Orca a winning combo. (Oct 98)
- CHORD SPM400** £1400  
There's a sense of effortless power to the Chord that gives music real scale and presence. (Mar 98)

# World favourites guide

**CHORD SPM1200** £2995  
Like the SPM400 but loads more power on tap. Will drive just about anything. (Mar 93)

**XTC POW-1** £2000  
As smooth and composed as the Pre-1, the POW-1 has bags of power and refinement. (Nov 96)

**MARANTZ MODEL 9** £8000  
Authentic reproduction monoblocs still more than cut the sonic mustard. (Mar 97)

**TUNERS**  
**LEAK TROUGHLINE** second-hand  
Our favourite way of listening to the wireless. A deliciously mellifluous sound will have you junking your transistor radio in seconds.

**NAD 412** £190  
The 412 is remarkably musical and natural sounding. Rich sound and full bass. (June 96)

**SONY ST-SA3ES** £250  
Beguiling RDS tuner for the sonically discerning. Good ergonomics and sensitive too. (Apr 97)

**MISSION CYRUS FM7** £300  
Clear and lucid sound puts it up with the best. Superb build too. (Apr 94)

**CREEK T43** £399  
Excellent detail, separation and dynamics. A great little tuner and unbeatable at this price. (May 98)

**ROTEL RT-990BX** £500  
High-quality Michi-based tuner with a sophisticated, forward sound with great imaging. (Apr 95)

**NAIM NAT03** £595  
The NAT03's warm, atmospheric sound is further proof of Naim's proficiency with tuners. (Sep 93)

**FANFARE FT-1** £1295  
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**NAIM NAT01** £1380  
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**CASSETTE DECKS**  
**KENWOOD KX-3080** £160  
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**AIWA AD-S750** £200  
Sonically a very decent machine at the price. Comes fitted with Dolby B, C and the dead handy Dolby S. (Apr 96)

**YAMAHA KX-580SE** £250  
The 'SE' tag is more than a marketing gimmick. Sound is solid and clear with Dolby S. (Sep 97)

**AIWA AD-S950** £300  
A stable transport, superb head and Dolby S make the AD-S950 an excellent all-rounder. (Feb 95)

**PIONEER CT-S740S** £430  
A great piece of engineering from Pioneer, with first-rate sound. (Jun 96)

**NAKAMICHI CR-7** second-hand  
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**LOUDSPEAKERS**  
**TANNOY MERCURY M2** £140  
A true audiophile bargain which embarrasses many more expensive boxes. Never mind the price, let your ears decide. (May 97)

**KEF Q15** £199  
These stand mounters offer impressive bass and excellent clarity but need a powerful amplifier to perform at their considerable best. (Feb 97)

**MISSION 771** £170  
Characteristically fast, punchy Mission sound from the Aerogel mid/bass and silk-dome tweeter. (Jul 98)

**B&W DM 602** £300  
Deep, strong bass, pure, projected and uncoloured midrange. Treble quality is a little metallic, imaging is precise. A lively, enjoyable sound. (Nov 96)

**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. (May 96)

**CASTLE EDEN** £469  
Impressively vice-free 'speakers that offer great transparency and involvement. One of a select band that simply makes music regardless. (Mar 97)

**EPOS ES12** £495  
Strong, punchy bass is allied to finely detailed, articulate midrange and sparkling treble. (Oct 96)

**REL STRATA** £500  
The Strata subwoofer is not a toy. It offers superb, true hi-fi bass depth and power, and opens up the sound stage depth in particular. (Mar 94)

**HARBETH HL-P3ES** £799  
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**KEF REFERENCE SERIES ONE** £995  
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**HARBETH HL-K6** £1049  
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**JAMO CONCERT 8** £1365  
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**BKS D107 HYBRID MK II** £1500  
Unusual design with reflex loaded bass/mid driver and a ribbon tweeter. Granite side panels and a perspex/MDF sandwich for front and back. Can be a demanding load for an amp but natural sound of great clarity. (Dec 98)

**EPOS ES25** £1505  
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**TANNOY AMS8** £2700  
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**KEF REFERENCE SERIES FOUR** £3299  
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**JBL S2600** £3500  
Smooth, detailed and spacious with great dynamics and fine imaging. Capable of producing a superb performance when used in a big room. (Jul 96)

**TANNOY WESTMINSTER ROYAL** £14920  
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**SONY MDS-JE510** £300  
An impressive sound and unmatched convenience make this MiniDisc player an excellent buy.

**KENWOOD DM-9090** £500  
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**SONY MDS-JA50ES** £1300  
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YAMAHA DSP A592 Surround Amplifier	new	(329)	£195
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SONY SA-VA3 Surround System	new	(699)	£395
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8000CDM+DAC	£2300	£1725
8000DAC	£900	£650
8000MX pair	£1800	£1495
B&W CDM2 r/wood	£400	£320
Copland CDA288	£1999	£1599
Cyrus 111i	£598	£475
Commander remote	£100	£50
PSX-R	£328	£275
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JBL Aquarius S119 LSs	£1250	£625
KEF LS3/5a piano bk. LE	£1800	£895
Krell 250 Pre+power	£5195	£4650
KAV300 cd	£3550	£3195
Marantz CD17 bk.	£800	£650
PM17 gold	£900	£695
Meridian A500 r/wood	£875	£650
M60 r/wood	£2500	£1875
566.20	£1095	£750
500 CDT +566.20 DAC	£2420	£1795
Michell Argo pre.+Hera	£885	£595
ISO phono stage	£420	£320
Mission 753f oak	£898	£750
754f oak	£1498	£1125
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Studio 12 r/wood	£1100	£825
Pink Triangle Litaural CD	£2099	£1675
Tarantella+RB+XLZ	£1054	£750
Pioneer CLD-D925	£800	£595
A300 Precision	£400	£300
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Quad 77 Power amp	£600	£450
77 Pre-Amp	£700	£525
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Yamaha DSP-A3090	£1500	£1125

**Classic second-hand...**

Acoustic Energy AE1 r/w	£495
Audiolab 8000C pre-amp	£375
8000A integrated amp	£350
Audio Innovations Series 1000 monoblox (were £1799)	£750
2nd Audio (was £3000)	£1000
Gale 401 chrome/black	£250
HK Citation 11/12 pre/power & 15 tuner the very first models, in walnut cases	£300
KEF 104/2 r/w (£2000)	£850
Marantz CD63 II K1-S	£275
CD85 (built like a tank)	£250
Mission 776/777 batt pre amp & 2 x 100w power amp	£950
Argonaut bk., big, twin bass	£325
Quad 22 pre & powers	£600
ESL57 pair bk latest spec.	£750
34 pre-amp	£150
44 pre (din)	£185
405 power amp	£200
FM4 tuner (din)	£150
Revox G36 1/2 track 10"	£195
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Tannoy Cheviot 10"	
Dual Concentrics, walnut	£350
609 marble effect inc. stands	£195
Thorens TD124 mk2 +3012	£150
TD125 mk2 +3009	£200
TD150+3012 in SME plinth	£300
Vortexion Series 4 recorder	£100

# Licensed To Thrill

**Jon Marks takes a stroll down memory lane in the company of Meridian's 207 CD player/pre-amp.**

**C**D has come a long way in the years since it originally appeared in the shops in the early Eighties. The number-crunching ability of modern convertor ICs is vastly greater than the crude, 14-bit clunkers fitted to first-generation machines, as even a brief spell in the measurement laboratory will tell. The best of current players put their forebears to shame technically, and yet there's often something missing from their sound, that spark of life and spirit necessary to turn 0s and 1s into real music.

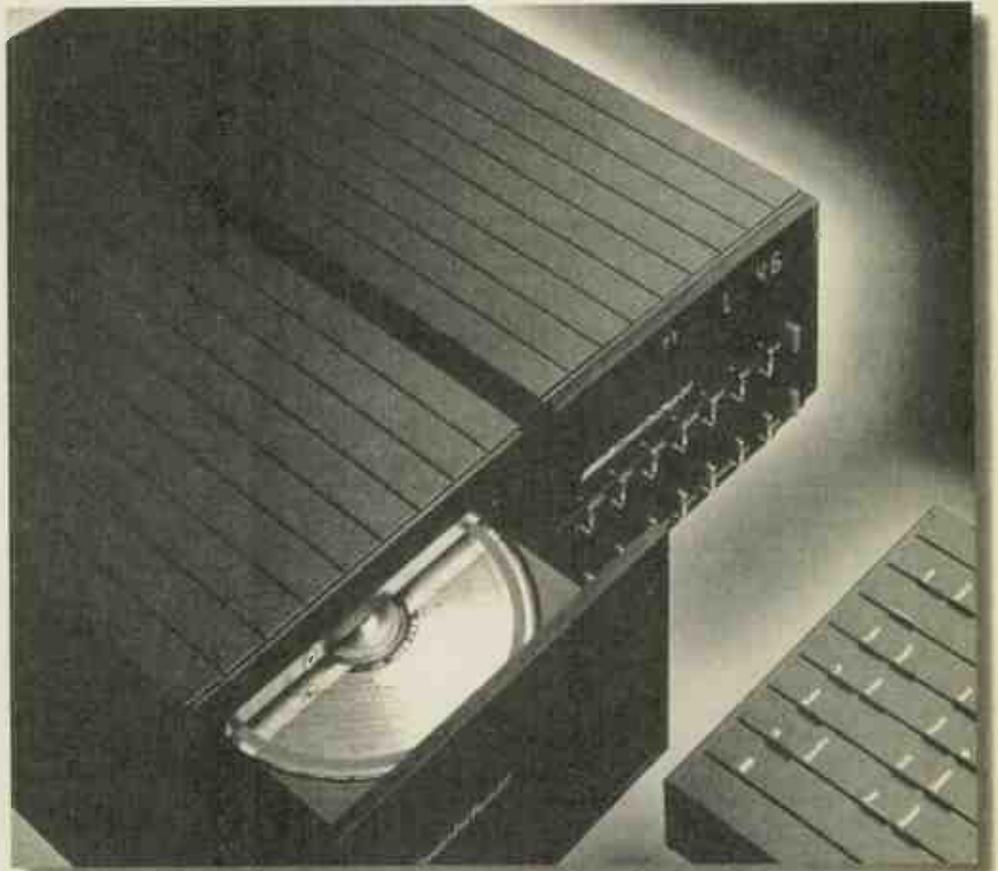
One CD player of mid-Eighties vintage which is an electronic anachronism but can make sense as a second-hand purchase is Meridian's 207.

Although smaller and lighter than Pioneer's massive PD-91 with its Urushi side-cheeks and copper-plated chassis, the two-box 207 is a solid piece of equipment. In one of the glass-fronted, extruded aluminium cases is located the transport, a Philips CDM2 with its swing-arm laser sled. This is bolted to a metal mounting plate decoupled from the substantial drawer on compliant mountings.

Keeping the mechanism separate from the convertor and associated analogue circuits might make sense from the point of view of reducing electrical interference and vibration, but it does mean the signal from the laser has to travel a long way down the interconnect cable to be processed, thereby increasing the chance of the dreaded jitter creeping in.

In the second case are the DACs, a pair of Philips' TDA1540s (14-bit devices with four-times oversampling in the case of the £725 207 Mk1 from 1986). Therein you'll also find outputs in fixed and variable form. The latter combine with the provision for switching two line-level sources (labelled Tape and Radio) to make up a basic analogue pre-amp, volume controlled by a couple of characteristically Meridian push buttons on the fascia.

Aesthetically, the 207 with its glossy



front-panels and dark grey casework has stood the test of time better than many of its digital peers. The same goes for the sound as well, in spite of a few rough edges.

Dynamically a 207 Mk1 certainly poses no threat to even budget players such as Cambridge's CD4SE as it has an air of the pancake about it. There's also a slight coarseness to the midrange and treble which afflicts female vocals and strings. But neither of these can get in the way of the attractively rhythmic presentation the Meridian can muster on most recordings.

There might not be sufficient smack in basslines to flap any trousers in the immediate vicinity, but Moloko's I Am Not A Doctor album of imaginative Drum 'n' Bass had a drive and funkiness often conspicuously lacking from CD. As one of the company's engineers

commented, the 207 was the player which opened up digital to previously vinyl-only audiophiles, and there is definitely something of the melodic flow of a good turntable to its sound.

Handling Classical and acoustic compositions, there's more than just a touch of what could be called 'cosy' sound staging and 'soft-focus' imaging, but such considerations are inconsequential when your foot is tapping and you're engrossed in the music.

Servicing of most problems is still possible and there is, of course, plenty of scope for tweaking with new master clocks and specialist capacitors. Bearing in mind that your money will buy you a fine musician as well as a classily-constructed two-box player with a pre-amp included, the 207 is well worth tracking down as a used bargain.

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XTC DAC 1	1000	799	Dawson DP50 valve	1199	699	Apogee Caliper	3000	995
LFD DAC 2	1990	1299	JDI Monoblock pair	900	699	Castle Avon Oak		499
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TEAC VRDS 10SE	850	650	Musical Fidelity MA50 pair	900	EXCBM 650	Linn Isobarit Walnut		995
<b>PRE AMPLIFIERS</b>			<b>TAPE DECKS</b>			Also available:- Pink Triangle, Michell Wilson Benesch, Oracle, Basis, Thorens, A.R., Systemdek, Project, Ariston.		
Naim NAC 52&PS	5000	3495	Teac 8030 - SUPER BUILD QUALITY -					
Naim Supercap	2200	1499	Champagne gold finish					
JDI Pre & P.supply	1600	999	new boxed	650	NEW	499	A selection of used or ex display equipment from our stock. All equipment can be heard before purchase either in store or in your home, and is guaranteed.	
Meridian 601 digital	3000	1495	<b>LOUDSPEAKERS</b>					
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Musical Fidelity The Pre Amp		99	DCM Time Window 1A	1020	379			
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Canary Audio CA-601 PRE AMPLIFIER - reviewed in this issue -

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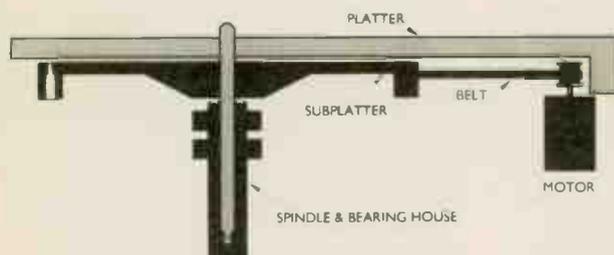
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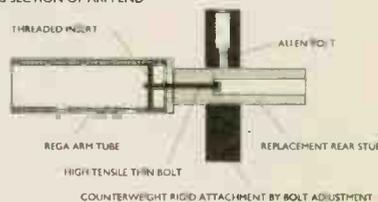
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**ARCAM DELTA Black Box DAC;** multi-bit and still one of the best; excellent condition; £75 Tel: 01978 750 151 (May/I)

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**KEF REFERENCE 4 speakers,** 6 months old, mint £2395. Pioneer CTS 8305 cassette deck. 6 months old £295. Aiwa XK009 cassette deck £95. Tel: 01869 278 249 (May/I)

**AUDIO NOTE phono stage.** M1 RIAA Special. MC, MM, line. mint. 10 hours use. £700 ono. Impulse H2s. Horn loaded, awesome £1175 ono. Tel: 01765 677 639 (May/I)

**ROKSAN DPI CD transport/Woodside DA1 DAC.** Both items £475. Bryston 12B preamp/4B power amp with calibration certificate £975. Roksan speakers. Ojan 3 matt black £375. Rega Planer 3 £110. All items boxed and in excellent condition. Tel: Rob 01600 772 020 (Daytime) (May/I)

**C 37 VALVE Studer tape machine** for sale. A fine machine in excellent condition £1200. Leak TL12.1 two amps with GEC KT66s. £800. Tel: (Dublin) 353 1 497 7643 evenings (May/I)

**WILSON WATT 5/Puppy 2,** glass black, paws, tails, new unused grilles, mint. shipping crates, £6995 (£17000 new) possible p/x Watt 5 for 3 - enjoy System 5 virtues cost effectively! Tel: 0860 850 786 (May/I)

**AUDIO TECHNICA OC9** cartridge, brand new, unopened £200, NAD 1000S pre-amp MC/MM 3 outputs including balanced, THX approved, boxed, instructions £135. Wanted: Assemblage DAC2, Rega RB250/300 any condition. Tel: 01642 594 645 (May/I)

**CD MERIDIAN TRANSPORT 200** with full Trichord upgrade Pink Triangle Da Capo DAC with battery power supply. Great sounding combination so won't split £1930 ono. Tel: 0131 661 6040 (May/I)

**LINN LK1 & LK280 & all connections** £325, Linn Nexus speakers and stands bi-wired with 5 metres of linn K2 £130, Meridian 203 & 206 CD with digital interconnect £275, 5 shelf Target stand £50. All perfect condition. Tel: Mike 0171 376 5335 (office) (London SW3)(May/I)

**EARLY ACOUSTAS (birch-ply)** professionally renovated in matt walnut and fitted with Lowther's latest neodymium cored DX3s, (new & warrantied). Redesigned front panels. Style-2000 compliant. £1050. Tel: 01483 268 804 or Email: ano@zsizsi.demon.co.uk (Jun/I)

**AUDIO RESEARCH Classic 30** amp £850; Robertson 4010 amp (IAR rated class 1a! review available) £395; Z-Man audio signal enhancer (for CDs) £80; California Audio Lab Sigma II tube DAC (120 volts, transformer available) £300. 0.75m Kimber Select 1020 £295; 1.5m Audioquest Lapiz £195; 1m Straightwire Virtuoso Gold £225, 5m Audioquest Crystal+ £195. All excellent condition, ovno. WTB or p/ex: Symo speaker cables (4-5m). Tel: 01865 558 075 or E-mail: cyril888@aol.com (May/I)

**LINN LP12 Cirkus/Lingo/Ekos 2/Archiv.** Top spec (£4450) £1700, serviced and upgraded from new by Grahams. Naim 82/180 (£3375) £2200. Naim NAT 02 (£1130) £700. Nakamichi Dragon (£1890) possibly the last one bought in UK! £1400. Rega Ela's £295. Tel: Lawrence 0181 941 9196 or 07050 053 153 (May/I)

**OPERA DUETTO loudspeakers,** cherry finish, as new, 8 months old, cost £400, want £200. Tel: Ben 0181 488 0987 (May/I)

**LINN MAJIK amp (phono) £500,** Linn LK85 power amp £350. Both only 4 months old, boxed, etc. Linn Active cards (Keilidhs) £125 or £50 if bought with amps. Tel: 0141 649 813 (May/I)

**LINN KAIRN, phono & Brilliant** £800. Linn Karik III (Brilliant version) £1000. A&R A60 amplifier £85. Audio Tech hi-fi wall shelf £60. Tel: 01622 858 085 (May/I)

**NAIM CD3 mint, serviced incl.** silver DIN/phono int. £495. Mana 2 tier amp stand £245. Soundstage £145. Target HJ24 speaker stands £65. Tel: Simon 01307 840 248 (May/I)

**LINN KARIK CD £1000 ono,** Linn Kairn Pre £1000 ono. Linn LK100 power 3 off £400 ono, Linn Keilidh speakers £450 inc. cable, Linn Majik £450. Tel: 01332 263 645 day, 01332 740 013 eve (Derby)(May/I)

**PASS ALEPH 0 monoblocks** (Stereophile amp of the year 1995) and Aleph P preamp. Both are single ended and balanced. Mint cond. superb high-end sound. Can dem £6500. Tel: 01582 629 556 eves (St. Albans area) (May/I)

**NAIM NAC 72 boxed with instructions** purchased April 1996. Excellent condition £350. Tel: 01803 556 536 (Devon) Email: DrMHuman@compuserve.com (May/I)

**SENNHEISER HD580 Jubilee** headphones, £140, EARmax OTL valve headphone amp £230. KEF Reference 4 speakers, rosetta burr finish, £2500. All boxed, mint condition. Audio Analysis Epsilon ribbon speakers, £2300. Tel: 01474 742 236 (Gravesend)(May/I)

**QUAD ESL 57 speakers on Arcici** stands £400. Musical Fidelity A100 Class A integrated amplifier £170 ono. Tel: 0131 220 0780 (Edinburgh) (May/I)

**AUDIOLAB C&P 8000 1991** models £395, Beard C35MkII & P35 mint £795, Copland CSA14 £650, Linn Axis, Akito & K18 £285, Linn Majik phono £395, Linn Keilidhs as new £395, Linn Mimik Anniversary 3460. All items P&P. Tel: 01505 359 572 (May/I)

**ROTEL MICHI pre & Sugden DAC,** Michi active pre amp RHA10 with remote (mint), absolutely stunning (boxed/manuals) £695, Sugden AU51 Reference DAC as new, superb (silver wired/crown DACs) £595 ono. Tel: 01492 580 201 (N. Wales) eves (Jun/I)

**QUAD 22 control & twin** amplifiers £475. Quad electrostatic speakers ELS57 £400. Garrard 301 £225. SME pickup & BJ super 90 tangential tracking arm - offers. All in oak cabinet. Revox A77 £400. Tel: 01684 560 510 (May/I)

Suppliers and installers of High Quality Audio Systems

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## 5/hand and ex-demo clearance items - April '99

	Was	Now		Was	Now
Audio Innovations 1000 Passive Controller	199	99	Naim Audio NAC32.5	N/A	225
Audio Innovations 400 Integrated Valve Amplifier	1099	450	Naim Audio NAP 135 monos (old style)	N/A	1650
Audio Note IO II Cartridge Kondo (re-tip)	1800	750	Naim Audio NAP 140 (old style)	N/A	295
Audio Note TTL/RB250/IQ1	750	495	Orelle DAC 180 DAC	599	195
Audio Research LS3b Remote Volume (black)	2750	1495	Orelle SA 100 Amplifier	449	329
Audion Premier 2.0 2 box preamp inc. phono stage	1700	995	Pink Triangle Cardinal/DeCapo 1307/HDCD	2500	1295
Basis2000 series /Air tangent 1B Turntable	4000	2500	Quad 33/303	N/A	175
Boulder MA500 mono's	10,000	4995	Quad 33/303/FM3 V.G.C	N/A	250
Cable Jackets The Original	85	39	Radford / Woodside WS2 CD Player	1200	399
Cary Audio CD955 valve compact disc player	1095	399	Rega ELA Cherry (latest spec.)	535	399
Celestion SL600 Loudspeakers	679	249	Rega HAL Pre Amp mm/mc + remote	998	599
Cogan Hall Intermezzo REF 0.5M	375	95	Rega RB250/Goldring 1012	204	119
Conrad Johnson PV10 AL SE	1299	750	Revox A77 fi Track 3fl - 7fi MK3 Reel to Reel	N/A	250
Decca London cartridge (re built)	N/A	199	Revox B77 fi Track 3fl - 7fi MK1 Reel to Reel	1600	595
Dual CS503/1 Turntable	129	49	Roksan Attesa DP2P CD Player	1595	699
Electrocompaniet ECI-2 Class A Amplifier	995	699	Roksan Attesa DP3T Transport	1295	699
Goldbug Brier Cartridge Boxed 400 hrs.	N/A	350	Roksan Caspian CD Player	895	650
Harbeth HL - K6 Cherry	1049	599	Roksan DA2 DAC	595	449
Heybrook TT2 Rega RB250 Goldring 1012	N/A	249	Roksan DS 5 Power Supply	549	429
Impulse Lali Cherry Loudspeaker	1750	1295	Roksan L1.5 Preamplifier	2250	1495
Impulse Maya Loudspeaker	695	459	Roksan Rok-1	650	279
Koetsu Red Signature Cartridge vgc.	1391	599	Roksan Shiraz 350 hrs use	1000	375
Krell KPS 20i/L CD/Pre	11,000	5999	Roksan Xerxes Tabrizi XPS 3.5/DSU	1650	699
Krell KRC HR Remote Preamp	6950	4550	Roksan Xerxes XPS3.5/DSU/Tabrizi/Corus Blk.	1799	795
Krell KSA150S Poweramplifier	5889	2495	Roksan Xerxes/Tabrizi/MC25FL	1295	695
Madrigal HPC Digital 0.5M RCA/RCA	N/A	50	Rotel RC 970 BX Pre Amp (new)	175	99
Mana 5 Tier Equipment Rack	800	500	Ruark Talisman II (dark oak)	750	599
Mana Reference T/T Stand	350	225	SME Series V tonearm	1400	850
Martin Logan SL3 Electrostatics Oak	3399	2499	Sonic Link Vermilion Titanium Interconnects	199	99
Meridian 203 DAC 7	499	169	Sonus Faber Extrema's	6500	3750
Michaelson Audio Chronos 2 box valve Preamp	4700	1250	Stax Sigma Electrostatic Headphones/SRD 7	499	250
Micromega CD3/ Duo Pro DAC	3000	1099	Sugden SDT-1 Special Edition CD Player	1499	895
Mission 754 Freedoms Primivera	1499	749	Tannoy Series 10 DTMLI studio monitors	1200	575
Mordaunt Short MS25 I Black	349	99	Teac DT 1DAC	500	250
Musical Fidelity E20 Remote Preamp	399	175	Transparent Reference Balanced Music Link 1.5m	2895	1495
Naim Audio 2/4 (X-over new style)	650	350	Unison Research Smart 845 mono's	3250	2199
Naim Audio CDI compact disc	1889	1299	XLO Signature Digital 0.6M RCA/RCA	200	100
Naim Audio Hi-Cap New Style	780	450			
Naim Audio NAC 32mm/mc Preamplifier	N/A	149			
Naim Audio NAC 52/NAPS 52	4000	2500			

Midland Audio X-change is looking for good used British & American Hi-fi. cash paid call John Roberts on 01562 822236

### Audio Note UK Ltd

As leading manufacturers in single ended triode valve amplifiers and CD players, Audio Note have introduced a complete new range, The Zero Series now makes Hi-end audio affordable and very desirable.

The CDT Zero CD Transport is fully remote controlled, has a CD1 mechanism and is available in either black or silver, the price - £399.00

The DAC Zero digital to analogue converter has 24 bit 96 kHz delta sigma chip fitted, the output stage uses a 6111 WA valve with copper coils in the filter network, the price - £369.00

The M Zero Line level preamplifier has 4 inputs and tape out, utilises a 6111 WA valve, Also has multiple outputs for bi-amping at a later stage, The price - £299.00

The P Zero mono power amplifiers use 2x ECL82 per channel with a pure 8 watt SET output, The price - £600.00 per pair.



### Michell Engineering Ltd

Those guys in Borehamwood have done it again; The Gyro SE takes the bull by the horns at the sub £800 turntable market. They have taken the Gyro off it's Perspex plinth and given it a stand alone motor, (this can be upgraded to a full gyro at a later stage) the price without tonearm and with a standard power supply - £775.00

Aria S2 a single ended triode valve amplifier, the sweetest little thing you ever saw with a superb sound quality to match. From the Unison Research factory in Italy this EL34 10 watt per channel amp has stunned everyone who has heard it. It's level of build quality is second to none - stainless steel and mated walnut meet in a heavenly combination and all for the angelic sum of - £1050.00

### Roksan

**Xerxes X Special Offer - Limited numbers available.**

Due to overstocking on Roksan Xerxes X Turntables, we have devised a special price on a complete package from this top turntable manufacturer:

Xerxes X in Rose/w or Black.	£1295.00
XPS 3.5/ D.S.U.	£320.00
Tabriz Tonearm	£320.00
Corus Black Cartridge	£130.00
<b>Total Price</b>	<b>£2072.00</b>
<b>Our Price Complete</b>	<b>£1200.00</b>

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QUAD 34 pre amp 306 power amp. Boxed with manuals £275. Pair Bi-Cor horn speaker cabinets Lowther design in oak veneer £75. Tel: 01279 426 046 (May)

ROTEL RC972 pre amp (remote) mint, boxed £120. Arcam BB 2 DAC ex. cond. boxed £95. AQ Ruby 1m £35, 0.5m £30. AQ Vid 2 (019) 0.5m £30. Tel: 0113 256 0318 eves (Leeds)(May/1)

**AUDIO RESEARCH D130** power amp silver front (solid state) 1 year old balanced or phono (130watts per channel) £975 ono (new £1900). Audio Research L57 pre amplifier silver front, 3 years old (re-valved) £825 ono (new £1800). (free Townsend Sink isolation platform to buyer of both of the above). Sonus Faber Electa Amators on stonewood stands by Sonus Faber £1650 ono. Transparent Audio Super interconnect £195 ono (new £400). Transparent Audio Plus loudspeaker cable (10ft bi-wire terminated) £395 ono. All excellent condition, boxed, manuals (free delivery anywhere in the UK) Tel: 01900 826 400 work or 07887 991 500 mobile anytime (May/1)

CASTLE HOWARD S2, natural oak, 3 years old, immaculate, boxed £720 (£1200), Cardas Quadlink 5C, RCA interconnect 1M pair, £100 (£200) Tel: 01794 511 407 evenings, e-mail: obd@soton.ac.uk (May/1)

SPEAKERS - MONITOR Audio / R352, teak/teak stands, vgc, boxed (Dimms-h 30"x10" w x12"d approx.) £160 ono can deliver. Tel: 0121 445 1323 (May/1)

WANTED - QUAD 67 CD player. Good price paid for mint example. Tel: 01382 667 873 (May/1)

"CARTRIDGE MAN" cartridge, very little use, perfect condition £280. Dynaco stereo 70 valve power amp. Superbly restored using 'Audio Note' components. Hundreds spent! £495. Tel: 01296 623 573 (May)

AVI CD player, AVI pre-monoblocks good condition £1500 may split. Tel: 01489 796 147 (May)

CYRUS POWER amplifier £300, PSX-R power supply £220. Pioneer 400-X amplifier £150. Pioneer PDS-703 CD player £100. QED Profile 12 bi-wire cable, 2x6 ft., 3mm terminated £40. All boxed, mint, instructions. Tel: 01480 422 337 or 01480 412 464 (Jun/1)

WANTED. QUAD ESL 57 electrostatic speaker, any condition. For sale, valve tuner fully reconditioned. Tel: Tony Ryan 01203 460 729 home or 01203 216 650 work (May/1)

VOYD VALDI with Linn arm £550 ono. Aiwa ADF810 cassette deck £100. Cambridge P70 preamp £100 ono. Marantz ST40 tuner £50. Musical Fidelity MC4 speakers (inc Apollo A820's) £350 ono. Denon CDC 425 £60 boxed. Apollo 4 tier rack £100. All vgc. Tel: 0181 599 2158 (May/1)

LEAK TROUGHLINE III Stereo tuner £50. Leak Stereofetic tuner £20. Armstrong 626 receivers (2 of) £50 the two. Hacker valve record player £25. Pioneer PL12D £25. Sansui 2900 £30. Celestion Ditton 15s £30. Celestion Ditton 10's £25. Tel: 01908 674 193 (May/1)

SONY TCD-D100 DATman (£799), 10 hours. £345. Pioneer TX-7800L high end analogue tuner (cost same as LP12 in 1980), £75. Pioneer A400x amp, (£299), £110. Sony ST-J60 high end digital FM tuner, £65. DPA BlackSlink, 0.5m, £40. STD305S turntable £50. Wanted: Mission 752, old hi-fi mags. Tel: 016974 78537 or 07899 816 120 (May/1)

ARCAM ALPHA 8 CD player 3 months old, mint condition, boxed £300, Mission 750LE speakers, light oak, mint condition, £150, matching Mission stands, platinum finish £60. Tel: 01295 710 127 (May/1)

NAIM OLD style: NAC 32.5(K) £175; HICAP £350; NAP 140 £325. Sound Factory Tripod speaker stands, record box, 4 levels, turntable rack £100. Jeffries turntable table £10. Tel: Les 0171 488 1895 (Wapping) (May/1)

AUDIO NOTE Meishu, 2 years old ex. cond. £2250 onvo. Also Impulse H2s, Audio Note wired £1000 ono. Can dem. Tel: 0181 239 0409 (May/1)

NAKAMICHI LX5 3 head cassette, serviced £325; two Yamaha A100 stereo studio amps £120 each; Rel Q100E subwoofer £275. Tel: 01203 679 165 (May/1)

HEYBROOK TT2/II (electronic power supply) turntable. Moth 250 arm, new (guaranteed) Corus Black (£125) boxed, immaculate. Sale due to upgrade £285. Mission 180s, black vgc £85. Tel/Fax 01934 417 954 (Weston S. Mare)(May/1)

**AUDIO ANALOGUE** Bellini/Donnizetti pre/power, 1 year old, £810. Linn Kairn, pre Brilliant, £620. Ruark Sceptre £390. HPV HD83 headphone amp £150. (Built, upgraded) Tel: 01530 831 357 or mobile 0831 565 010 (May/1)

GARRARD 401 in homeade plinth plus spares £110. Croft Series 5 Golden amp plus matching pre amp £450. Odysseus integrated valve amp £450. Pink Triangle turntable £250, EAR 859 (£2500) £950. Tel: 01386 442 274 (May/1)

TAG McLAREN Audio PA20R pre amp and 2x125m monoblocks. 3 months old excellent condition with boxes etc. House move forces ver reluctant sale £2950 (£3900) onvo 01703 283 191 (Lyndhurst)(May/1)

AUDIO RESEARCH SP9 pre amp £600. Pioneer PD91 Reference CD player £400 ono. Audion Silver Knights monoblock power amps 300B £1300. All mint, boxed with manuals. Tel: 01922 402 320 (May/1)

AUDIOLAB C&P 8000 originals £395, NAD 533/Rega 2 boxed, 9 months £125, Linn Axis, Akito & new K18 boxed £250, Copland CSA 14, 14 months, boxed £650. Meridian 206 Delta Sigma 1994 £325. Various cables, Rubies, MITs etc. Tel: 01505 359 572 (May/1)

ARCAM ALPHA 7 CD Player, as new £200. Audiolab 8000 amplifier, excellent condition £200. Tel: Paul 01763 853 102 evenings (May/1)

CREEK P42M pre, A42 power x 3, £200 each, Akai 4000DS £125, Leak Delta 30 £75, Mantico RE t/t & arm & cart £300. Tel: Peter 0161 784 767 after 4pm (May/1)

PIONEER GENESIS CD player £449. DNM speaker cable £4.95 per metre. DNM 610C preamp and CS630C monoblocks £630. SME 309 totemarm (new) £549. Sony 715E CD player £125. Tel: 01582 724 414 (May/1)

STAX SRM-TIS Energiser plus SR Lambda Signature phones with Signature extension lead. All boxed (£1600) £610. Lexicon CP2 processor £50. Tel: Ken 0131 229 8514 (Edinburgh)(May/1)

CELESTION A2 cherrywood floorstanding speakers, hardly used, boxed, 11 months old £995 (£1500). Marantz PM17 KI black, remote, 6 months old £995 (£1300). Heybrook Quartets walnut 18 months old, Heybrook stands £450 (£850). Tel: 0115 952 1820 (May/1)

CYRUS aCA7 pre amp, latest model, stunning performance. Built in phones amp, balanced & SE outputs. Remote commander operates all Cyrus gear. New, under warranty, boxed with manual, £650. Tel: 016974 76398 before 8pm. (May/1)

CASTLE HOWARD loudspeakers. Top of the range (Santos rosewood), (What Hi-Fi 5 star rated) cost new £1400. £695 boxed. Wanted active crossover kit for Linn Kabers. Tel: 0121 358 0459 (W.Midlands) (May/1)

KOETSU BLACK 'K' boxed, mint, unused, in storage six years. Absolute Sounds check up. Rare opportunity. Offers around £700. Lyra Clavis D.C. boxed, mint, little use, perfect. £800 ono. Tel: 0171 833 1793 (May/1)

TEAC X-3 Reel to Reel tape deck. 7.5 ips, loads of good quality tape, little used, honest, vgc, sensible offers only. Or would exchange for 'Separate' DAT machine (Tascam or Sony DTC960 or like) WANTED: Arcam Delta 290 amplifier (integrated or power. Tel: 01275 858 156 (Nailsea) (Jun/1)

AUDIONOTE MEISHU 300B line integrated amplifier using Vaic AV32 BSL valves, originally priced at £375 per pair. Awesome dynamics and superb detail make this a truly high end amplifier. 120 hours use only. Boxed and mint. Gladly demonstrate. £2000 onvo (£2750 + valves). Tel: Mark 01765 677 639 eves/weekends (May/1)



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MERIDIAN 200, DPA PDM II (cost £3500). Musical Fidelity F22 preamp. Micro Seiki DDX1000 T/Table. Pioneer C73 & M73, all boxed & mint. Technics SLPI200 CD & remote. Teac X10 reel/reel & DBX unit. Kelly KT3. Celestion SL6i. Tel: 01992 718 265 (Jun/1)

LINN KAN Mk1 speakers black with MkII stands £150. Sound Organisation table 3 tier black £30. Target wall shelf £30. 2x5m K20 and Cabletalk 4 speaker cable terminated £25 per pair. All items mint. Tel: 0118 978 3410 evenings (May/1)

OPERA CALLAS Gold loudspeakers, mahogany finish. Excellent condition, look and sound superb. Including Atacama stands £700. Tel: 0121 344 3598 (Birmingham) (May/1)

WANTED: CYRUS Disc Master, preferably boxed and can demonstrate if possible. Tel: Martin 0115 913 4579 (May/1)

LINN LP12, Ekos, Lingo, MC10 £1200. Naim CD2 £1250. NAC82 £1300. NAPI35 £950. Hi-Cap £450, old Hi-Cap £250. SBL speakers £650. Tel: 01905 640 422 (May)

AUDIO NOTE OTO SE Integrated amp with phono stage. Excellent condition. £800 ono. Tel: 01407 765 294 (May/1)

STAX LAMBDA Nova Signature headphone with SRM-TIS valve energiser, boxed with manuals. Totally original and superb sound £750. Soundfield ST250 microphone system. This infamous microphone system has been used on three occasions only and is totally original, £1500 no offers. Tel: Mike 01758 741 026, Email: m.davis@virgin.net (May/1)

ALBARRY M1008II monoblocks £525. Pioneer PD-75 Reference compact disc player £375. Both sound units major upgrade forces sale. Tel: 01904 763 157 (York) (May/1)

QUAD VALVE II's (pair) and 22 control unit. Unused. KT66's fitted. Nice condition. Reluctant sale. Offers around £395. Also 3x KT66 boxed/unused £25 each. Tel: 01484 689 115 after 6.30pm (May/1)

NAIM SBL's. Latest. Cherry walnut finish. Absolutely immaculate. Boxed £900. Various interconnects: Transparent Musiclink Plus, Chord Solid, Naim (DIN). Aiwa ADF850 cassette deck, top reviews, retails £230. Virtually new, boxed. Offers? Tel: 0181 566 5293 (May/1)

FOUR MOTH 100w mono amps, little used £950. AVI 2000MP preamp (superb MM/MC phono stage) £495. XTC line preamp £495. Garrard 401 £90 or in plinth with SME 3009 and unused Goldring 1042 £195. Garratt Decca stylus unworn £75. Tel: 01483 284 997 (May/1)

LINN CD12 £9950. Linn Karik (brilliant power supply) £950. Numerik £595. LP12 (black) Ekos. Klyde £1195. LP12 (Afro) Ittock, OC9 £495. Linn Klout £1100. Various LP's rock/classical. Tel: 01582 456 137 (May/1)

NAKAMICHI 681ZX 3 head auto azimuth £395. Nakamichi CR3 3 head, boxed £395. Aura TU50 tuner £95 boxed. Tel: 01923 822 580 or 0956 663 178 (May/1)

ARCAM ALPHA 9 + 9P amplifiers, as new, plus Ixos 100 X03 studio interconnect (£150) £550 the lot. Tel: Chris 0181 592 9797 after 6pm (May/1)

AUDIO ANALOGUE silver front, Bellini preamp, Donnizetti power amp, boxed, mint condition, genuine reason for sale. 10 months old £675. Tel: Paul 01283 716 501 (May/1)

SUPERB THORENS TD124 MkII & RB300 in heavy plinth £295. Art Audio VPI valve preamp with phono, active/passive with twin outputs £295. Lowther Super Acoustas, dual PM6A's, boxed £475. Tel: 01709 555 403 (May/1)

WOODSIDE/RADFORD SC26/STA35 Combo £895. Rogers LS3/5A/Stand £250. Roksan Xerxes (rosewood) Rega RB300, mint £320. Musical Fidelity MVX pre with power supply £600. P270 power £450. Large (Swedish) subwoofer (20" cube!) Audio Pro Ace bass £350 (offers) Revox A77 only £145. Tel/Fax 01452 750 242 (May/1)

KLIPSCHORNS. BIG Beautiful corner speakers. American oiled walnut. Immaculate and rare. House move forces reluctant sale £3000 (£6250 new). Single Klipsch Cornwall (centre channel) £250. Tel: 01202 487 000 (Dorset) (May)

SUGDEN A21a Amplifier £520 (hardly used) Project 6.1 turntable £230 (no cartridge, buyer collects) Nordost Blue Heaven interconnects 1m £75; 0.6m £65. Tel: 01234 824 682 (Bedford) (May/1)

ARCAM CD 170 transport with Arcam BlackBox 2 digital converter, boxed as new £400. Kef 104 AB speakers £150. Naim NAC42 preamp £140. Linn LK1 preamp with Linn Dirak power supply £260. Wharfedale 312 speakers £130. Technics tuner £35. AR60 amplifier vgc £60. Tel: 0181 681 1054 (Croydon) (May/1)

QUAD 33/303 and FM3 excellent condition, mostly boxed, all have instructions £240. Leak Troughline 3 £70. Technics RSM 250 cassette deck £30. Tel: 01582 575 673 (Luton) (May/1)

PASS ALEPH 3 £1800 ono. Also Audio Analogue Bellini preamp £400 ono. Both mint condition. Financial reason forces reluctant sale. Tel: 0116 267 5113 eves/wkends. Email: panda@orangenet.co.uk (May/1)

STAX ELECTROSTATIC Headphones, Lamda Novo Pro 'Classic', mint, boxed, with energiser, battery option £450. Collectables: Yamaha TC8000D cassette Bellini design £175, JBE Series III slate record deck and arm £200. Tel: 01733 350 681 (May/1)

WANTED: GARRARD record deck, Zero 100 or Zero 100SB or GT55P. Must be in good condition. Tel: 01843 585 968 (May/1)

THORENS TD160 with Roksan Tabriz and AT F5/OCC, mint £150. Tel: 01296 583 788 evenings. Mobile 0370 234 263 (May/1)

TEAC D-TI DAC £350. Marantz CD42 (SPDIF/RC) £35. QED Digt £75. Positron £35. Garrard 401/SME Plinth £175. SME3009II £50. Goldring-Lenco GL75 original plinth, motor, idler, bearing vgc. Tel: 0171 394 1271 (May/1)

NAIM 250 Power amp, new style, mint condition, with all leads, manual and box £900. Tel: 0589 132 007 days, 0181 270 9393 evenings (Essex) (May/1)

IPL S5 Mk2 DIY Transmission line speakers. Size 1080mm (h) inc stand x 320mm (w) x 400mm (d) Immaculate construction, must be seen and heard to be believed. Sound quality of these speakers matches up to anything costing not less than £2000. £350 ono. Moving abroad hence sale. Pick up a bargain! Tel: George 0181 699 0911 (May/1)

CYRUS IIIi Amplifier/PSXR power supply, brand new, unused, genuine reason for sale, can demo. Buyer to collect. Retails £930. Bargain £730. No offers. Tel: 0113 288 9411 anytime (Leeds) (May/1)

LOWTHER ACOUSTA Twin speakers wanted, made 1960's. Also wanted: working drawings, leaflets. Also Lowther speaker drive units wanted, twin Lowther speaker feet and drive units screws. Tel: Jeff 0181 924 0207 (Barking) (May)

LINN LP12, Affro, Lingo, Trampolin, Akito, K9, mint condition £800. Tel: 0181 561 5315 (Middx) (May/1)

MARTIN LOGAN SL3 Hybrid electrostatic moving coil speakers £2250. Michell Gyrodec 'Bronze' Alphason HRS 100 MCS silver wired arm, Denon 304 cartridge, Gyropower supply/speed regulator £1100. Michell ISO Hera power supply £300. Tel: 0181 969 9690 (May/1)

BEARD BB101 50 watts/channel dual mono remote controlled integrated valve amplifier with separate matching power supply £1350. Roksan DPI transport, recently refurbished by Roksan including new laser £500. DPA Bigger Bit originally £700. £150. Tel: 0181 969 9690 (May/1)

ARCAM ALPHA CD Player, '94 model £190 (£420 new). Musical Fidelity Reference 2 speakers + stands, 15" h x 10" w x 9" d '94 model £99 (£240 new). Denon TU-260L tuner '97 model £70 (£120 new). All new condition. Must sell, best offer accepted. Tel: 01923 712 100 eves/wkd (May/1)



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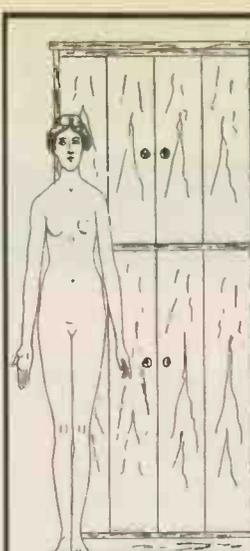
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...Jason Kennedy Hi-Fi Choice April 97

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ATC SCIA2/150	1984.00	1,784.00
ATCSCM 10 Blk	999.95	799.00
ATC SCM 20 Pro Active	3,049.12	1,495.00
ATC SCM 20 T Walnut	4,249.99	3,399.00
ATC SCM 50 A Walnut	5,875.00	4,699.00
ATC SPA2-150 Power	2,699.00	1,999.00
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Boston CRX Dipole Speakers	199.00	99.00
Boston VRS Pros	299.99	149.00
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Cyrus Disc/DAC Master	1,790.00	950.00
Cyrus Pre	648.00	299.00
Linn 5103 Processor	5,499.00	2,999.00
Linn Kaber Active	3,000.00	999.00
Linn Kairn Phono	1,700.00	999.00
Linn Kairn Pre Line	1400.00	799.00
Linn LP12 Mechanic (W)	1,750.00	1,500.00
Linn Majik 1 Phono	800.00	4,999.00
Linn Sekit in Wall	395.00	85.00
Mission 70 A Sub (Black)	299.99	249.00
Monitor Active SW	499.99	299.00
Monitor CC900 Blk	499.99	249.00
Myryad MA120Pre/MP100PO	1079.00	599.00
Pioneer A 300R Precision	400.00	199.00
Pioneer CLD 515 Laser Disc	899.99	299.00
Polk SW3000 Mk2	499.99	299.00
Rotel RDP980 DAC	450.00	299.00
Yamaha DSP-A2070 A/V Amp	1499.99	699.00
Yamaha DSP-E1000 Proces	699.95	399.00

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## New Items & Old Items Sale

In the December issue we referred to the new AVI Gravitron speakers, the Inner Sounds Eros Electrostatic Hybrid's and the Michell Orca/Alecto pre-power combinations, so please refer to that issue for more detail. The Gravitrons should be here next week, so by the time this comes out we should have had time to have a good listen, so do ring and enquire! Both the Gravitron and Eros cost £4K, but early next year there will be a new smaller version of the Eros, called the Isis at £2K, but will be purely passive.

Sale of Ex-Demo/P.E. Equipment	Price	Retail
ATC 50A's (Mk1's to SL)	from £2000 to £3500	£5800
B&W 802 Mk1 in walnut	£900	n/a
Tanderg 3016A 200W/CH power amp	£900	n/a
Electrocompaniet EC4/AW100 in Larvakit	£2800	£3800
Quad 57's with MAF stands (Bronze)	£450	n/a
Ruark Accolades in walnut	£1200	£2700
Alon II's (black ash) ex-demo	£1400	£2200
Audiomeca Talisman Clock 3, ex-demo	£1500	£2200
Audio Research D200 P/Amp	£1500	£3500
Heybrook Quartets (walnut) ex-demo	£350	£600
Heybrook Heystak (rosewood) ex-demo	£300	£500
Triangle Zays (black & walnut) ex-demo	£800	£1400
ATC 20's (original version)	£800	£1500
Michell Micro + RB300 - as new	£400	£600
Spendor SP1's (old version) + stands	£300	n/a
Ruark Equinox in oak	£1100	£1850
Ruark Crusader II's in walnut (ex-demo)	£1000	£1600
Celestion Kingstons + stands in white (ex-demo)	£1200	£1800
ATC 10's + stands (teak) ex-demo	£800	£1300
ATC 50SL (passive) (Black)	£2800	£4200
Seleco 195 CRT Video Projector	£2200	£4000+

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**MIT TERMINATOR 2**  
Interconnect, 1m £60 (£130). VDH C122 speaker cable bi-wire 4x 2.5m £60 (£130). Only 6 months old. Upgrading. Tel: 01865 792 020 (May/I)

**NEAT CRITIQUE II** Speakers in cherry finish £280 ono (£440 new) Creek CD43 CD player £350 ono (£600 new) Both items boxed as new. Tel: 01244 315 023 (May/I)

**PINK TRIANGLE Ordinal DAC**, boxed with 20 bit filter, Hi-Fi Choice Best Buy, cost £950 new, accept £375. Pink Triangle HDCD Filter for Ordinal/DaCapo, cost £400, accept £200. Tel: 01634 268 660 (May/I)

**APOGEE STAGE** Speakers, mahogany sides £800. Tel: 01604 645 590 (Jun/I)

**MUSICAL FIDELITY F19** Power 75W 'A' 300W 'AB' superb £2250. Thorens TD160 good £40. Sumiko BPS, little use £100. Shure ED75 and unused Musonic stylus £20. Goldring Eian unused £20. Tel: 0161 633 6130 (May/I)

**PINK TRIANGLE Anniversary** (black) latest specification with Battery PSU (£2500) £950 ono. Also Roksan Atessa ATT-DP2/DA2/DS5 (£2500) £900 ono. (Can split), all mint. Tel/Fax: 00 353 21 841 576 (Ireland) (May/I)

**GAMMA SPACE Reference Mk I** single ended 300B power amplifier. Fully overhauled and upgraded by GT Audio £750, including spare 4 300B's. Excellent sound. Moth monobloc power amplifier £50 ono. Rotel RQ970BX phono preamp £45 ono. Tel: 01962 851 802 (May/I)

**SUGDEN A21A Integrated Class A** amplifier with phono stage £450 ono. Tannoy Cheviot 12" dual concentric loudspeakers, mint £400 ono. Tannoy Berkeley speakers 15" dual concentric £350 ono. Tel: 01642 479 814. Email: andy.robertson@onyxnet.co.uk (May/I)

**LINN KEILIDH** Speakers £425. Sugden 51 preamp and 51 poweramp £1300. ATC preamp with remote £1250. AVI Stereo poweramp £425. Rotel 6 channel Pro Logic pre/power £325. B+W CC6 centre channel speaker £140. Tel: 01977 643 629 (May/I)

**NAIM 32.5 HiCap 250** pre power, excellent sound and condition, MC/MM boards £975. Linn LP12 Valhalla, Basic, walnut, absolutely mint £399. Yamaha DSPE 390 unmarked £70. Tel: 01933 318 823 evenings (May/I)

**AUDIO SYNTHESIS DAX Decade DAC/Preamp**. Balanced version. Mint, boxed, guaranteed £1950 ono (£3600). Audio Synthesis DAX Mk1 balanced £950 ono (£2700). Must sell one! Tel: Salman 0131 535 4307 day. 0131 556 7545 evening. Email: s.hussain@ed.sac.ac.uk (May/I)

**WADIA 16 CD Player**, boxed, mint £3200. Rowland Research Model 5 poweramp, silver wired, boxed, mint £2200. Alon V black ash finish £1500. Tara Labs balanced interconnect £200. Black Orpheus tri wire speaker cable £125. Beautiful, dynamic high end system. Sell complete for £6500. Tel: Dave 0116 277 3437 (Leicester) (May/I)

**ARCAM 170.2 CD Transport** (Trichord Clock 2 modified). Audio Alchemy DDE V1.0 DAC Power Station One + superior custom built power supply. Clearstream digital interconnect £595 ono. Tel: 01483 271 669 (Surrey) (May/I)

**QUAD ESL63** loudspeakers, LABS63 stands, brown, still mint after 12 years cossetting by 75+ owner. Updated by Quad October 1997. Receipts/boxes. Musical heaven for £990. Tel: 01752 773 369 (May/I)

**LINN KABER** Active speakers, latest spec including cards and stands, boxed £995. LK100 x3 £900. Passive X-Overs available. Wanted: Linn SI40, SI03, Klout & LK140. Cash waiting. Tel: Jerry 01702 545 622 (May/I)

**NAD 402 Tuner** £125. Denon DR-M10HX cassette deck with HX Pro £105. Headcase headphone amplifier £65. Goodman's Maxim loudspeakers (modified à la Hi-Fi World) £65. Tel: 01372 725 935 (Surrey) (May/I)

**REL Q50** Active sub woofer. Very little use, boxed as new. Re-advertised £265. Tel: 01788 544 889 or 813 076 (Rugby) (May/I)

**CLEARAUDIO REFERENCE** Turntable, Souther arm, mint, boxed £2975. Nakamichi Dragon, recent serviced, mint, boxed £1350. Luxman 5T50 Laboratory tuner, mint £495. Koetsu, black, mint £300. Tel/Fax: 01747 853 372 (Dorset) (May/I)

**NAIM CDX** Only four months old in mint condition. Boxed with manual and Chord Co. DIN to 2 phono interconnect. Cost £2200. Accept £1750. Tel: 01494 534 444 (Bucks) (Mar/I)

**DPA RENAISSANCE CD Player**, 24 bit model, silver and black £500. Enlightenment DAC £300. DPA Black Slink interconnect £50. Tel: 01325 301 618 (May/I)

**CYRUS POWER/PSXR x2** wanted. Tel: 01803 606 331. Email: su2337@eclipse.co.uk (May/I)

**GARRARD 401** Turntable. Excellent original condition. No plinth. Acos Lustre arm with Shure M55E included £200 ono. Tel: 01483 726 2534 evenings (Surrey) (May/I)

**PIONEER CT95** tape, flagship model, eats Naka's for breakfast, 18 months, boxed, manuals (£1000) £630. Sugden AU41 pre + power, inc. phono, superb (see World Favourites) (£1000) £640. Quad 33/303 good condition £130. Tel: 0161 762 9884 (May/I)

**MUSICAL FIDELITY NuVista** £1000. X-A200's £600. X-Ray £500. Yamaha NS100M £600. Garrard 401 £150. Michell Transcription £500. Kimber Power Cords, van den Hul 'The Wind' cable. All as new. Tel: 0181 520 6981 (May/I)

**ATTRACTIVE FULL Voiced pair of Heybrook Quartets** seek caring audiophile for lasting relationship. Will provide own means of support. Payment of £325 will secure release from current situation. Tel: 01793 790 072 (Swindon) Email: prsjnb@bath.ac.uk (May/I)

**ALIANTE PINIFARINA** speakers, metallic black with matching Vela sands, cost £3700 2 months ago, will accept £1850. Mission 753 rosewood boxed £365 ono. Soundstyle 3 legged rack, black £110 ono. Tel: 01302 820 815 (May/I)

**ROKSAN XERXES** with DSU and XPS 3.5 + Tabriz - ZI + Roksan Subtable. Excellent condition £395. Tel: 0181 556 0606 (May/I)

**QUAD ESL 63** speakers. Brown. Excellent condition. £975. Marantz CD17, champagne gold. Mint. Boxed. £425. Musical Fidelity preamp 3A. External PSU £175. wanted: Townsend Excalibur tonearm in vgc. Tel: 01705 291 290 (Portsmouth) (May/I)

**LINN LP12B** Ekos Lingo, rebuilt Troika, serviced regular, £1500. Naim CD3.5, 10 months old £750. Tel: 01993 850 439 after 7.30pm (Oxon) (May/I)

**MERIDIAN SYSTEM** remote (MSR) control unit £25. Kube 200 equaliser for Kef 105/3 generation reference speakers £100 ono. van den Hul D102 MkIII interconnects 4x1m, 10x0.86m, 4x0.75m 4x0.5m. Cost over £400. £100 the lot. Tel: Alex 01794 830 111 (days) 01703 769 175 (eves) (May/I)

**AUDIOLAB 8000Q**, £800 ono. Audiolab 8000CD, £650. Castle Winchester, rosewood, £800 ono. Monitor Audio Studio 2SE rosewood £300. All items boxed and in mint condition. Tel: 07887 821 105 anytime (May/I)

**KRELL FPB 200** power amp £3800. Krell KRC-3 preamp £1800. Both only one year old. Mint condition with boxes and manuals. Tel: 0161 941 4573. Email: mvh@netcom.ca (Manchester) (Jun/I)

**NAIM NAIT 3**. Boxed, in excellent condition £400. Tel: Iain 0973 385 797 (Surrey or Central London) (May/I)

**RUSS ANDREWS** integrated amplifier Kimber KAP Vishay resistors, £850. Russ Andrews Disc 60 MC phonostage Kimber KAP Vishay resistors £495. EAR 834P MM/MC volume control £265. Tel: 01242 231 766 (Cheltenham) (May/I)

**EAR YOSHINO 859** integrated amplifier. New, boxed, receipt and guarantee. £1275 ono (£2000). Ferrograph Series Seven reel to reel light domestic use. manuals, original purchase receipt £295 ono. Tel: 0171 582 0543 (May/I)

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LINN INTLK Integrated Amplifier	VGC S/Hand	£195
MARK LEVINSON no. 27.5 Power Amplifier Still under warranty - As new	Mint S/Hand	£5400 £2650
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M-490s 2 Way Tuned Vent Magnetically Shielded Floorstander (Piano Black)	Mint Ex. Demo	£650 £395
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# CLASSIFIED ADS

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MERIDIAN 207 CD and preamp £375, KEF 104/2 and Kube £750. Rega Planar 3, A&R P77 £50. Pioneer F90 tuner £20. Wall mounted turntable stand £5. Tel: 01494 758 743 (May/I)

SONY TCD D100 unused £395. Marantz DD 82 DCC deck unused plus ten digital tapes £395. Pioneer A400 amp £139. Mint. Pair JBL control IG £99. All items boxed. Tel: Alan 01279 656 082 (May)

AUDIOLAB 8000Q £600, 8000P £400, Microega Stage 3 £400. All in mint condition. Offers considered. Polk Audio RT-11, black, good condition £450. Tel: 01403 734 377 (Horsham) (May/I)

DRIVE UNITS Wharfedale RS12/DD model 12 to 15 ohms. Wharfedale Super 8 RS DD 6 to 8 ohms (two). Audiom 100 high fidelity low freq. Goodmans constructor range. Richard Allen CG12 super 15 ohms. Offers Tel: 0161 794 7693 (May/I)

COMPONENT CLEAROUT: Z System Rdp 1 digital preamp (almost new) (£5000) £3500; Sonic Frontiers 2 MkII Dac (two months old) (£5999) £3000; Audio Research LS5 MkIII (preamp) black (£5000) £2800; Theta TLC (£300) £150; Preamp SP 1.5 (£2000) £800; Theta Pro Basic Dac (£1500) £600; Theta Pro Gen V A Dac (£5999) £3000; Theta Pro Basic II Transport (£2500) £1500; Theta Universal Transport (£2000) £950; Sonic Frontiers 3 (almost new) Transport & Dac (£6999) £4000; Audio Synthesis Dax Dac (£2000) £650; McCormack Power Drive 1 (175W) (£2000) £950; Meridian 203 Dac (£500) £150; Marantz CD 85 (Tricord upgrade) (£700) £350. Interconnects/Accessories: Synergistic Research cables (reference) (1 metre pair) (£2000) £1000 ono; Sonic Link Digital £50; Kimber Cable PSB £50; AudioQuest Emreald (balanced/single ended, 1 metre £200; LAT 200 MkII (balanced) £100; Silversound (spk) 3 M pair £250; AudioQuest Video Z (Digital) £20; Naim 4 M pair (spk) £50. Tel: 0956 805 572 or 0181 594 6641 or 0956 969 282 (day or evenings) (May/I)

EPOS ES30 Speakers brand new £1500 ono. Epos ES22 speakers £700. Tel: 01344 872 568 (May/I)

ROGERS E40 valve amp £1000 (as new). ABI Subwoofers £250. Avanti 625 loudspeakers £250. LS3/5A loudspeakers (walnut) £350. All items mint. Tel: 01344 872568 (May/I)

BRAND NEW in sealed boxes. Meridian 500 transport, Meridian 504 tuner. Unwanted Christmas presents. Come and open the boxes!! Excellent savings on MRP. Tel: Michael 0181 364 2478 (May/I)

LINN SONDEK LP12 with Ittok and Assak arm and cartridge. Walnut finish, absolutely perfect. Purchased from new. A gift at £350 for quick sale. Tel: 01342 321 918 (Sussex) (May/I)

ARCAM DELTA 290P Power amps (x2) £225 each (£400 pair). Cyrus pre £400. Cyrus PSX-R £200. Rega Planet CD player + handset £350. All perfect, boxed with manuals. Tel: 0780 189 4719 (Suffolk) (May/I)

WANTED: AIWA Silver Midi separates (P50/30 power amps etc) Sony TA80 amplifier and tuner and Videoton Minimax speakers. Cash waiting! Tel: Jon 0181 904 8023 (May/I)

TANNOY III LZ £225. Stands for above £40. Cambridge C75 preamplifier, Alps £100. Collaro 47R200 £15. Swap for Mission 752/KLS4 or similar. Wanted: CD player and motor unit turntable. Tel: 01837 55780 (Okehampton) (May/I)

NAIM 250 Power amplifier, latest model £950. Naim CDI CD player £895. Both immaculate condition. Tel: 01260 275 902 (day) or 01260 279 528 (evenings) (May/I)

KEF REFERENCE Model 3 speakers. Black ash finish. 18 months old. sound and look superb. Demo's welcome. £1350. Tel: 01622 763 741. Email: gcooper@netcomuk.co.uk (Kent) (May/I)

QUAD ELECTROSTATICS. Tannoy Berkeley speakers both excellent condition. Also for sale, Teac reel/reel (Tascam), Revox G36 reel/reel, Quad 40S, Garrard 301, Leak TL12.1 (BBC modified) test equipment. Tel: 0131 332 7536 (Edinburgh) (May/I)

F18 MUSICAL FIDELITY Class A poweramp, 200wpc £1995. Audio Research preamp, LS3B balanced output £1395. ProAc loudspeakers Responce 3.5 in rosewood £2750. All immaculate, must sell. Tel: 01276 858 481 (Surrey) (May/I)

LOWTHER PM2 Hi-Ferric pair as new, half price £200. Transcriptor (Michell) Hydraulic Reference turntable and arm etc £300. Sony CDP491 CD, HFN 'knockout' review (plus free Hitcachi DA1000) £75. Tel: 0181 991 0762 (May/I)

ENTHUSIAST'S CLEAR Out. Over 8,000 NOS valves, transformers, valve testers and equipment, Garrard 301's, 401's, books. Please fax me for a complete list on 01872 571 712 (May/I)

ROGERS LS3/5A as new, boxed £500. Linn Kan II speaker stands £50. AVI Nu-Neutron speaker as new, boxed £400. Magnum Dynalab FT11 tuner, as new £350. Tel: 0181 856 1047 (May)

MICROMEGA, T-DRIVE, T-DAC. £2000 new, fabulous sound, full demonstration, must be heard, excellent condition, instructions, remote, original boxes. First offer £695 secures (bargain) Tel: 0131 538 9073 (Jun/I)

WANTED: KIMBER 6 way block and powerkords, Mana sound bases, quality interconnects (vdH, Chord Co., Audioquest). For sale: Kef 104/2 teak £450, Arcam Alpha 6 CD and 6+ amp (R/C and boxed, £950 new) £450, Linn Kaber (black, mint) £575. Tel: 01132 824 428 (Leeds) (May/I)

UHER 4200 Report stereo with mains adaptor. Good working order £150. Tel: 01243 370 152 after 6pm (May)

KEF 104/II black, bi-wired £525. Quad IIs and 22 genuine pair, original KT66 valves, Holco resistors otherwise standard £385. Leak Sandwich speakers with 12 inch drivers £70. Any demonstration. Tel: 01623 812 455 (Mansfield) (May/I)

MICHELL MYCRO / RB300 very good condition, boxed etc £360. Tel: Roger 07957 120 829 (May/I)

NAIM 42 pre; 160 power recent service, new caps and trans, upspecked to 180, interconnects, boxed, £475 ono. Spondor BCIs walnut, heavy duty Atacamas (new) £195 ono. All excellent. Tel: 01942 812 190 (Lancs) (May/I)

ORACLE DELPHI III rock plinth/lid £95. Audio Innovations 800 power amplifier £350. matching preamp £250. Both £550. Snell Ks £250. 1950s 7868 valved power amplifier. Altec Lansing 811B horns. Walker CJ55/SME/cartridge £175. Tel: 0113 255 9475 (May)

SONIC FRONTIERS Anthem CD I - hardly used, only 4 months old, valved, 6 play. Original packing kept. 1 pair Acoustat Electrostatic speakers, rrp £2500, quick sale £550. Tel: 01372 739 356 (Epsom) (May/I)

NAIM CD3.5 £675, NATO2 £700, NAIT3RMM £550, Credo beech £675, Linn Axis, K9 Basik Plus £300, Sony TCK6AES £275, Target VR6 £150, al new style, mint, boxed. Tel: 01932 353 529 eves. (May/I)

MERIDIAN DIGITAL Theatre 565 (£2250) £1750. DSP5000C (£1650) £1250. CD200 transport £350. M2 active speakers £300. Soundstyle black X120 stand (£250) for Meridian, Linn etc £150. Tel: 0181 442 1547 (Jun/I)

PAPER IN Oil reservoir capacitor clear out. NOS Dubilier 0.25µF at 2500V, perfect for EHT power supplies, unused, £12 each. Kenwood KA1000 integrated. 100 watts per channel, outboard power supply, dual mono with Sigma drive loudspeaker feed back, £250.ono. Meridian 207 CD player, vgc, £250 (cost £725). Ferrograph S1 monitors with stands, immaculate. £250. Tel: Jon 0181 904 8023 (May/I)

ACOUSTIC PRECISION Eikos CD player. Uprated power supply, boxed and as new, superb £1150. Tel: 01384 271 571 (W. Mids) (Leave message if necessary) (May/I)

SONIC FRONTIERS SFD 1 DAC (balanced option) HDCD compatible. Boxed as new with 2 year warranty £1000. No offers at this price. Theta Data Basic also available. Tel: 01623 871 950 (May/I)

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T-Vac Line level valve pre-amplifier. Ex condition	£ 350	Quad 34 pre amplifier. Excellent condition	£ 250
Sugden AL51C pre-amp Mint. Boxed. Cost £1000	£ 550	Arcam Delta 60 amplifier. Mint. Boxed	£ 150
Royal 97018 X pre-amplifier. Mint. Boxed	£ 100	Sugden A21A power amplifier. Mint.	£ 380
Aurax SY530B pre-amplifier. Ex condition	£ 70	Aurax SB530B power amplifier	£ 80
Luxman M03B power amplifier. Black. Ex condition	£ 450	Sound Design S122 pre-amplifier. Valve. Amazing	£ 495
Croft Micro S11 Valve pre-amplifier. Ex condition	£ 125	Leak stereo 20. Refurbished. 12 months warranty	£ 350
Quad 305 power amplifier. Good condition	£ 195	Croft integrated valve amplifier. Ex condition	£ 175
Pye 110 58 integrated valve amplifier. As new. Mono	£ 195	Audio Innovations 1.1 valve pre-amp. Line level	£ 195
Armstrong A10 mono valve power and pre-amp	£ 180	Sugden CS1 pre-amplifier. Good condition	£ 95
Audio innovations Allo integrated amplifier. Mint	£ 180	Beard BB100 integrated valve amp. Mint	£ 600
Sugden V48 integrated amplifier. Good condition	£ 100	Camra 12a Standard valve pre-amp with phono	£ 450
Creek 4040 MK1 amplifier. Excellent condition	£ 75	Denon PM150 amplifier	£ 75
Naim Na. 42 5K pre-amplifier with MC board	£ 195	Naim 22 pre-amplifier & 110 power amplifier	£ 240
Concentium modified Quad 22 pre-amplifier	£ 75	T7Vac Model T40H Int valve amp. 50W. Cost £180. £695	£ 199
Herman Kardon H1610 integrated amplifier	£ 90	O.A.C. M1640 int amp. 55W. Cost £450	£ 130
Fisher N100A integrated valve amplifier. C/P	£ 250	Rogers Cadet 2 pre-power amplifier. Ex condition	£ 199
Rogers HG85 MK2 integrated valve amplifier	£ 40	Cy-nosieur/Sugden stereo pre-power amp. Very rare	£ 199
Musical Fidelity E200 pre-amp with remote	£ 299	Dynaco CA35 integrated valve amplifier. Ex cond	£ 160
Quad 11s various conditions. From £150 pair	£ POA	Richard Allen class A integrated amplifier	£ 150
Quad 33 pre-amplifiers. Various from	£ 75	Rogers cadet mono valve amplifiers. Pair. Reduced	£ 100
Leak Stereo 20 power amps. Various condition from	£ 200	Leak TL25 mono valve power amplifiers. From	£ 150

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Linn LP12 with Asoto tone arm. Good condition	£ 499	Linn LP12 with Linn Bask + tone arm. Good. (read: 350)	£ 500
Garrard 301 & 401 motor units. All Serviced. From	£ 125	Thorens 124 motor units. Serviced. From	£ 200
Thorens 125 with plinth. No arm cut out for SME	£ 95	Thorens TD 150 chassis only. Good condition	£ 50
Royal RP960 turntable. Ex condition	£ 75	Arston RD40 with Mission tone arm. Ex condition	£ 160
Thorens TD160 and Thorens arm. No hd.	£ 65	Thorens TD160 and Thorens arm. Good condition	£ 95

### SPEAKERS

Snell J2 speakers. Bi-wireable. Audionote wired. Mint	£ 425	Kef 105 loudspeakers. Boxed. Good condition	£ 495
Par Whitley Electrical Sinterium corner speakers	£ 75	Rogers Studio 5 speakers. Ex condition	£ 150
Mortlum Short VS100 in rosewood. Mint. Boxed	£ 60	TDL RTL2 speakers. Mint. Boxed	£ 360
Gale 301 speakers in black. Mint. Boxed	£ 150	Kef Coda 9 speakers. Ex condition. Boxed	£ 125
Cyrus 781 speakers & stands. Mint	£ 150	Par Lawther Acoustic speakers. Good condition	£ 250
Kef 102/2 speakers. Ex condition. Cost £750. Bvd	£ 295	Gradient subwoofer for HL563 BND. Cost £1700	£ 750
Richard Allan Monitor 80 speakers. Ex condition	£ 175	Magneplaner SMGB loudspeakers. Mint. Boxed	£ 550
Quad Electrostatic speakers. From £400 pair	£ POA	Single Lowther acoustic using PM6A. Early style. (abl. 150)	£ 150
Mortlum Short M5000 with Decca Kelly Ribbons	£ 195		

### OTHER ITEMS

Marantz CD6 V2. Mint. Boxed	£ 100	Shure V153 cartridge. Excellent condition	£ 50
Dynavector Ruby Karat-Mc cartridge. Ex condition	£ 85	Arcam Alpha 5 CD player. Mint. Boxed	£ 250
Marantz CD80. Mint. Boxed. A real heavy weight	£ 249	Cambridge Audio Dm1 mgk1 & silver mains lead	£ 100
Revox A77 2 track. 3.75x7.5 good condition	£ 225	Revox A77 replacement wooden case. As new	£ 100
Marantz CD67SE cd player. Mint. Boxed	£ 150	Quad FM3 tuner. Good condition	£ 75
VDM The First. Digital Intercomex. Cost £125	£ 65	Phillips CD960 Cd player. Cost £700. Make ex trans	£ 199
Quad FM1 Mono tuner	£ 20	Quad FM1. Mint. Boxed	£ 60
Leak Troughline 2 & 3 Mono/Stereo. From. ...	£ 75	Marantz CD52 MK2. No remote	£ 49
SME 3009 tone arms. Various. From	£ 60	Sony CDP 5611 CD player	£ 99
Aurax T108. In AT1005 case from Brand nest BND	£ 100	QED D1000. Ex condition. (see supply)	£ 75

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Clamp boards. (price per pair).	£ 25
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AUDIOLAB 8000LX	469.90	299.00	D+N
AUDIOLAB 8000A	499.90	379.00	D
AUDIOLAB 8000Q	1,249.90	799.00	D
HARMAN KARDON AVP 1A THX PROC	1,499.00	349.00	S/H
KRELL KRC3	2,998.00	1,999.00	D
KRELL KSA 200S		3,499.00	S/H
LINN 5105 POWER	1,200.00	779.00	D
LINN 5103 AV Controller	4,850.00	2,999.00	D
MERIDIAN 555 POWER	695.00	449.00	D
MERIDIAN 501 PRE	695.00	489.00	D
MICHELL, J.A. ALECTO stereo	1,150.00	849.00	D
MICROMEGA TEMPO2 int	899.90	599.00	D
QUAD 77 int	650.00	449.00	D+N
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AUDIOLAB 8000CDM	1,399.00	899.00	D
AUDIOLAB 8000CD	999.90	699.00	D
AUDIOLAB DAC	899.90	449.00	D
MARANTZ CD67	269.90	189.00	D
MARANTZ CD67 SE	349.90	269.00	D
MICROMEGA DAC 1	699.90	379.00	D
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# HI-FI WORLD CLASSIFIED ADS

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.

SPECIAL INTERNET OFFER SEE PAGE 138 FOR DETAILS

## WANTED - EARLY HI-FI LOUDSPEAKERS

Tannoy, Lowther, Parmeko, Voigt, Vitavox, RCA etc  
TURNABLES

Garrard, BBC301, EMT SME, Ortofon, Decca, etc.

## VALVE AMPLIFIERS

AEI, EMI, Leak, Rogers, PYE-Quad, WE etc

## AUDIO VALVES

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## ROGERS SPEAKERS (new and ex-demo) still for sale,

massive discounts. Studio 9 £550, Studio 7 £350, Studio 5 £250. BBC, Gold and LS ranges available. E40A valve amps £1000. Spares and servicing. Mitcham Loudspeakers Tel: 0181 648 0743 or 01344 872 568 (May/1)

TECHNICS SP10 £280, EMT 948 £550, EMT 950 £750, Nagra IVS £1200, Uher RM4200 £280, Studer B62 £800, Studer A80 £1200, Studer B67 £800, Studer A710 £550, Revox PR99 £900, Revox G36 £600, Revox E36 £500. Tel: 01246 235 024 Fax: 01246 550 421 (May/1)

ANALOGUE ELECTRONICS design engineer Bsc (Hons) valve/transistor audio equipment designed, built to specification; stereo/monoblock amps, line and phono stages, power supplies. Also, repair, modification, restoration, technical writing. Tel: Theo 0181 881 1623 (Jul/1)

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QUAD 22 Valve preamp £200. Quad 44 power £150. Quad mono pre £50. Marantz CD67SE boxed, new £199. CD6311 KISI £349. DPA DAC £139. TDL T Lines rosewood £399 (£600). Stax SR34 £85. AR speakers floorstanding £85. Trio 1033 T/T £39. Arcam 3 amp £150. P/X Tel: Jim 01206 510 392 (May/1)

OLD DAYS Vintage/Audio. Tel/Fax 0171 349 9675 - 0958 607 613 - Email: old days vintage audio@callnetuk.com - Quad Amplifiers/FM22, manuals £600; BBC AM8/4a amplifiers £POA; Armstrong A10/pre £POA; Pye HF25, restoration £200; Eml amplifiers £700; Goodsel Williamson amplifiers £POA; W. Electric 2040/2045 £POA; W. Electric Triode £POA; HMV PX25 amplifier £POA. VALVES: Mullard EL34s x20 £35 ea; Mullard EL34s x12 £20 ea; GE KT88 £18 ea; Balloon DA30 x4 £225 ea; Balloon PX25/PX4 £POA; Telefunken EL34s £30 ea; Siemens/Telefunken E88CC (gold) ECC81, ECC83, CCA £POA; Garrard 301/SME 12" mint £500; Garrard 301/ACOS lustre, mint £395; Nakamichi ZX7 cassette £650; Ortofon SPU-GT/boxed £350; Tannoy 12"/15" £POA. AUDIO: Krell Kav300 CD F/Balanced HDCD £3000; Krell KPS 25s CD/preamp/DAC, F/Balanced, 5 years warranty, £18,500. (May/1)

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Audionote, Leak TL12.1, Quad II, Pye, Radford, Lowther loudspeakers. WANTED: Audio valves, Mullard, GEC, Brimar. FOR SALE: Audionote Shirri silver 300B plus ANE/SPX loudspeakers, Quad, Leak. Ex-Dem Sonus Sabre loudspeakers. Tel: 0181 349 1311 or Mobile 0790 1976 441 (May/1)

AUDIO RESEARCH SP9 MkII boxed, superb condition £900. All valves 100%. Audio Research Classic 60 power amp, boxed, manual, as new £1200. DPA Renaissance CD, black, mint, guaranteed £500 ono. Marston Audio Silhouette CD player, ex-dem, boxes, as new £450. Denon TU 425 RD tuner, boxed etc £100. Audio Research SP9 MkI, black, boxed as new £700 ono. Electrocompaniet EC-4 & AWP 100 pre-power £1600, boxed as new. Quad 33/303/FM3 £150 ono. Brand new Musical Fidelity F25 unopened box (£1500) £600. Marston Audio Silhouette DAC & PSU, boxed, new, never used, just burned in (£900) £700 ono. Tel: Jules 01792 280 061 (May/1)

## SITUATIONS VACANT

JOB IN Secondhand Hi-Fi shop. Applicants should be articulate and familiar with a broad range of hi-fi. Driving license and soldering skills preferable. Wages meagre at first. Please submit a C.V. and list of all the hi-fi you have owned. The Emporium, 28 St. Nicholas Street, Diss, Norfolk, IP22 3LB (May/1)

OFFICIAL SUGDEN Service, repairs, and upgrades. Sales of new and reconditioned SUGDEN audio products. Prices from £150 including carriage for recons with guarantee. Full details available. Tel: Audio Synergy 01924 406 016 (Jul/99/1)

NAIM CDS, as new £2250. Audionote CD3 (new) £1300. Quad 77 pre/power + remote (new) £850. Meridian M2 active system 101 preamp + 104 tuner + balanced leads £400. Tel: 01952 502 097 (Telford) (May/1)

OLD DAYS Vintage/Audio, Wanted: Tannoy, Lowther, Quad, Telefunken, Siemens, Radford, W/Electric. Garrard 301, Thoren 124/135, SME 12" Ortofon. Valves, DA30, DA60, DA100 PX25. Audio New/used: Krells, Mark Levinson, latest spec, Nakamichi ZX-7, Nakamichi Dragon. Tel: 0171 349 9675 or 0958 607 613 (May/1)

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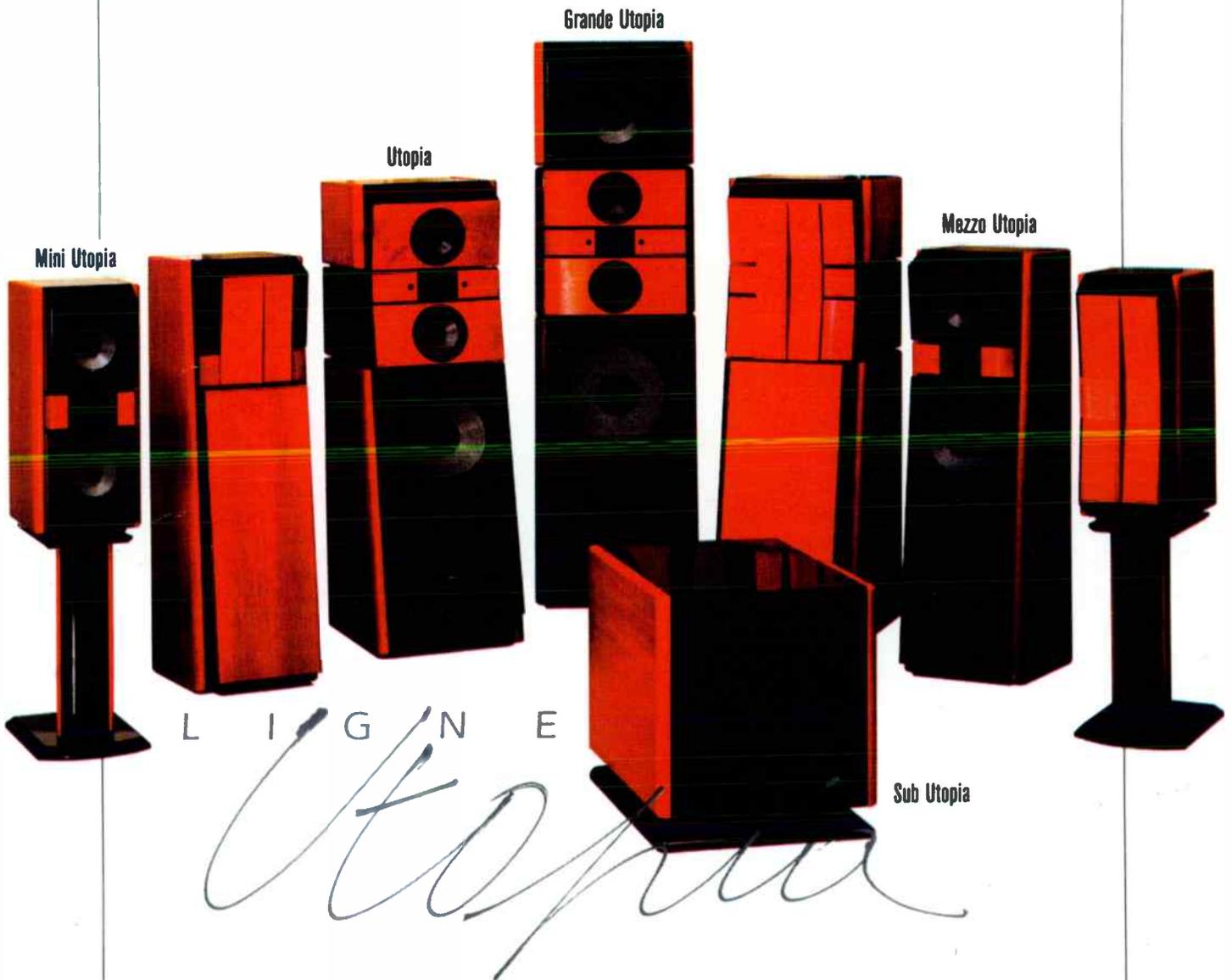


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