

**Hi-Fi**  
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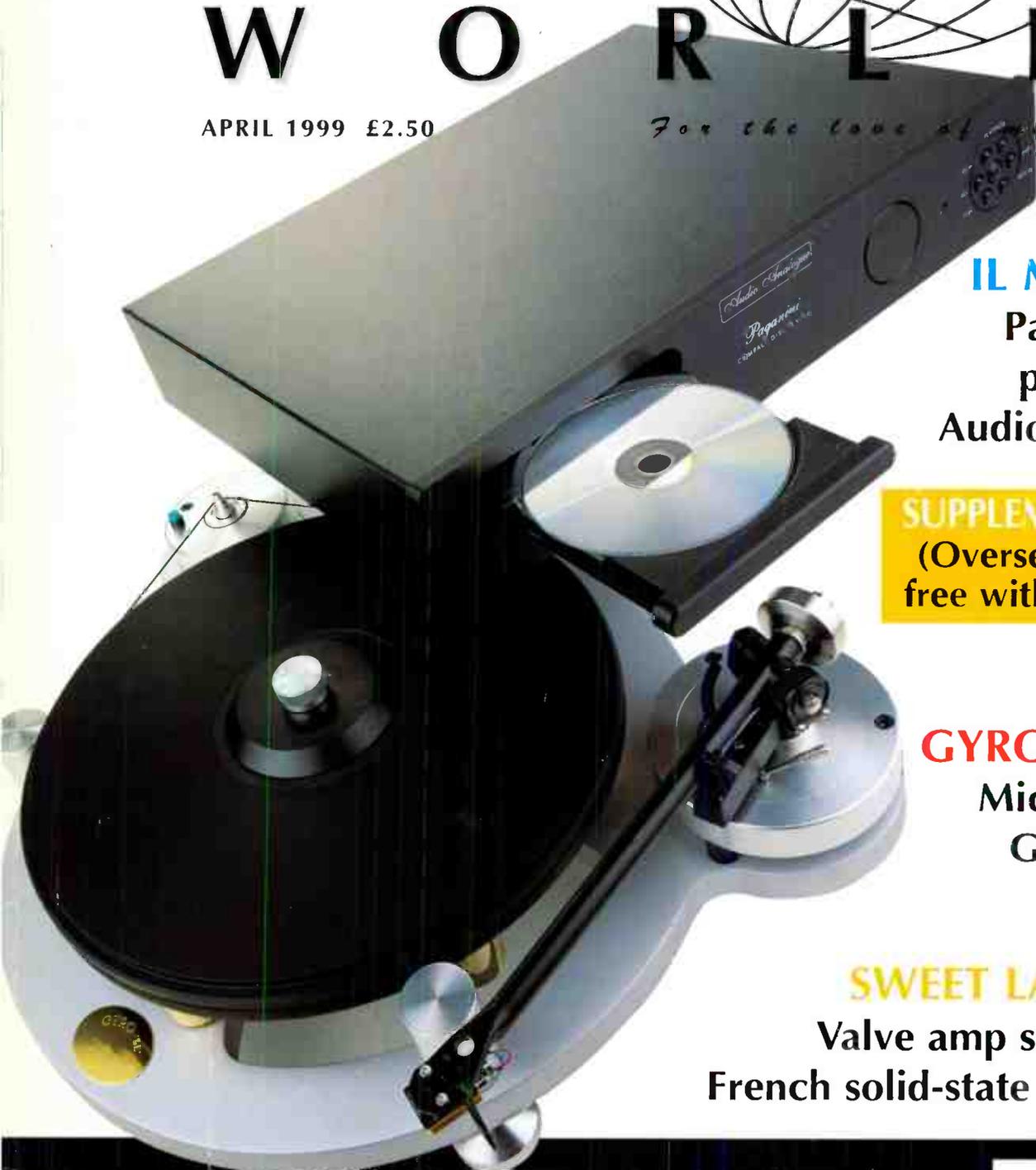
**Hi-Fi**

**Hi-Fi**

W O R L D

APRIL 1999 £2.50

*For the love of music*



**IL MAESTRO**  
Paganini CD  
player from  
Audio Analogue

**SUPPLEMENT No44**  
(Overseas inside)  
free with this issue

**TOTALLY  
GYRO-SCOPIC**  
Michell's new  
GyroDec SE  
turntable

**SWEET LAVARDIN**  
Valve amp sound from  
French solid-state integrated

**£1400** WIN A STYLISH CLEARAUDIO  
TURNTABLE AND A  
VPI RECORD CLEANER

**SIX PAGES OF CLASSIFIED AD BARGAINS**

ISSN 0961-7663



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*...to reality*



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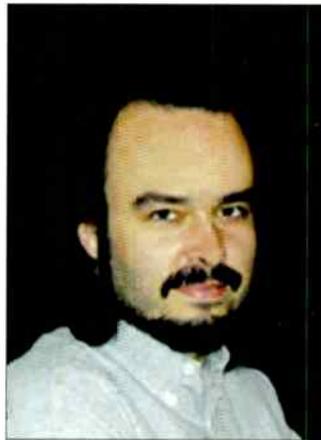
**B&W**

LISTEN AND YOU'LL SEE

World Radio History

**T**his month we have a true star cast heading up *Hi-Fi World's* reviews list. One for fans of vinyl is Michell's brand new turntable, the £700 GyroDec SE. A cut-down version of the original Gyro without its expensive perspex base-plate, the SE has an outboard motor attached to a solid aluminium cylinder to minimise the amount of noise reaching the sub-chassis. This last remains a gorgeous aluminium casting supporting an inverted bearing and brass-weighted platter in the sort of stylish design audiophiles have come to expect from this respected company.

Flying the flag for digital reproduction is Audio Analogue's £600 Paganini CD player. The superb Puccini SE integrated amplifier from Italy would be a difficult act for anyone to follow but Tim Liu reckons AA have come up with the goods. Separate transformers for analogue and digital sections as well as plenty of audiophile components are typical of this manufacturer's attention to detail.



**JON MARKS**

Third in the front-line is Lavardin's Reference IT integrated amplifier. This flagship one-box relies on special circuitry to eliminate Memory Distortion which, Lavardin say, gives transistor amps their characteristic hard, mechanical sound. Trannies that mimic the natural smoothness of valves have been a holy grail almost as long as solid-state has existed, but no designer has yet succeeded in assembling an amp that really cuts the mustard. The IT could be the one that finally reaches this goal.

Two more components are also sure to make waves - Canary's 601

Mk2 valve pre-amplifier and Pink Triangle's latest revision of the Da Capo Digital-to-Analogue Converter.

American outfit Canary have chosen the minimalist route in the 601 Mk2 - the slim metal case of this line-level device isn't exactly bulging with parts. The advantage here is that some of the best bits and pieces could be included: TKD's excellent stepped attenuator serves as the volume control, while Sprague and MIT supply many of the capacitors. The results have a clarity and control beyond the capabilities of the majority of valve equipment.

The same could be said of Pink Triangle's 24-20 digital filter for their Da Capo DAC. This small metal box is a plug-and-play affair which transforms the performance of this long-lived convertor, bringing it bang up to date. Partnered with an able transport and an amp like the Lavardin IT, affordable digital doesn't get much better.

## 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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CONSUMER PRESS

# 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.

**TDK**

*at the heart of it*

<http://www.tdk-europe.com>

World Radio History

## NAD DRAW THE SILVERLINE

NAD have decided to break with tradition in their new SilverLine range of electronics. Gone is the hallmark grey, replaced by matt silver; the usual budget price tag has been supplanted by figures that start at £750 (\$400 tuner) and rise to £1900 (\$300 integrated).

Heading the roster is the £800 S100 pre-amp. The four line inputs (one of which is balanced) and two tape loops feed class A circuitry powered by a low-noise toroidal transformer and 20000uF of reservoir capacitance. Vinyl fans can sate their lust for the black disc with the optional phono module. Output to the power amp comes in a choice of RCA and XLR.

The £1600 S200 is that matching power amp. With 200watts per side drawn from a pair of Holmgren transformers, NAD claim the S200 is "stable and musical into even unreasonable low-impedance loads."

Putting out a more humble 100watts is the S300 dual-mono integrated with its mirror-image PCBs. All signal switching is effected by relays with gold-plated contacts, which are controlled by a logic system operating from its own dedicated PSU.

Eitherphiles are catered for in the S400 FM/RDS tuner. Two fully-independent antenna inputs permit reception via cable as well as aerial, with Wide/Narrow IF filtering to get the most from stations far and near. 30 presets store not only the fre-



quency but also the selected antenna, IF mode and mono/stereo status. Keeping noise down are the separate supplies for analogue audio, RF and logic sections.

In the £1100 S500 CD player a 24-bit DAC from Crystal Semiconductors joins a five-pole analogue filter and all-discrete, class A output stage. Easing upgrade worries is the convertor's modular construction, which allows dealers to fit next-generation DACs at minimal cost. Interfacing with the outside world is accomplished digitally with BNC and AES/EBU sockets; RCA phono and XLR balanced handle analogue signals.

**NAD**  
**15 Faraday Road,**  
**Aylesbury,**  
**Bucks. HP19 3RY**  
**Tel: 01296 482017**



## SONY'S TOP DOG

Sony have announced the launch of their new flagship DVD player, the DVP-S7700. Compatible with Dolby Digital AC3 and MPEG Audio formats, the player also has a digital output for DTS.

The designers of the '7700 concentrated on points such as "wider sound field and excellent rendering of vibrations in the low frequency range". Price is yet to be confirmed, but the Sony is available from dealers now.

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

## KEF GO FOUR IT

If you happen to be a wealthy audiophile with a craving for bass, KEF's new flagship, the £12000 Maidstone 109, might be of interest. No less than four drivers per side are knit together by a computer-designed crossover which operates at 100Hz, 400Hz and 2.8kHz.

Underpinning the Maidstone is a 15in. reflex-loaded woofer with a doped-paper cone, cast-aluminium chassis and a low-distortion, short-coil/long-gap motor system. The same technologies feature in the 10in. mid/bass which sits higher up the cabinet (which is tilted backward to enable correct time-alignment of the drive units).

Topping off the 109 is a fifth-generation Uni-Q point-source driver consisting of a 6in. polypropylene midrange and 1in. fabric-dome tweeter.

All of the above are housed in their own enclosures of braced 25m MDF, which adds up to a not inconsiderable 87kgs per cabinet. Impedance is quoted as 4ohms and sensitivity as 91dB.

**KEF**  
**Ecclestone Road,**  
**Kent ME15 6QP**  
**Tel: 01622 672261**



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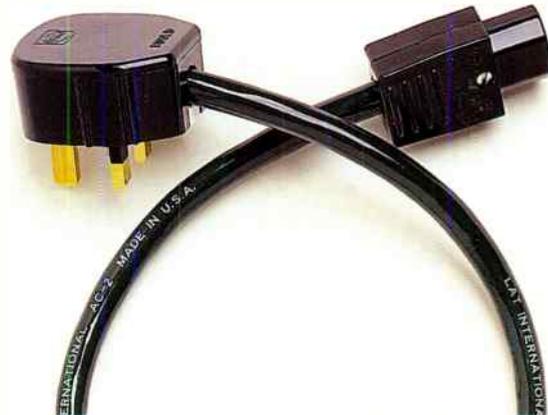
email: [helpdesk@tagmclarenaudio.com](mailto:helpdesk@tagmclarenaudio.com)

products featured: cd player CD20R, tuner T20,  
preamplifier PA10, amplifier 100P

## GOING TO GREAT LENGTHS

LAT International of New Jersey, manufacturers of the AC-2 mains lead, have had a change of heart. Until recently, said cable has only been available in a 6ft. length at £89. Now, however, you can buy this Teflon-dielectric, shielded wire in 2ft. (£49), 3ft. (£59), and 4ft. (£69) runs, all topped off with IEC plugs. Other terminations to order and subject to the practicalities imposed by the 10awg conductors.

**Audusa & Co**  
**4 Arundel Road,**  
**Kingston-upon-Thames,**  
**Surrey KT1 3RZ**  
**Tel: 0181 942 6241**



## PICTURE THE SOUND?

The Japanese electronics firm NEC have produced small, flat-panel loudspeakers that double as photo frames. The technology has been licensed from the British company NXT Ltd. Available only at present in Japan, these have built-in amplification with plastic frames. A special adhesive allows photos to be removed and replaced on the panels numerous times.

The 'speakers are intended to be used in conjunction with portable CD and MD players or PCs. With two AA batteries the output is 0.5watts, with an AC adaptor a thunderous 1.5watts. The photo frames currently cost about £295 in Japan; a world-wide launch date has yet to be finalised.

## DIGITAL CABLE-FEST

QED have added to their catalogue two digital cables which are designed to achieve an impedance of exactly 75ohms, which QED describe as being crucial for the optimum transmission of digital signals.

This impedance is guaranteed by QED in their new cables, the Qnect D and DS. The cheaper of the two is the £25 D which uses 99.999% Oxygen-Free Copper conductors. A PVC outer jacket absorbs vibration, leaving the triple-screen aluminium/mylar foil and copper braid to prevent magnetic and static interference. The phono plugs are QED's own, hewn from zinc alloy with gold-plated pins.

The £50 DS employs silver-plated OFC conductors and braids to improve on conductivity and noise exclusion. QED's Reference plugs, which have a split centre-pin and locking mechanism, finish off the package.

**QED**  
**Ridgeway House,**  
**Ridgeway Close,**  
**Lightwater,**  
**Surrey GU18 5XU**  
**Tel: 01276 452211**

## CHIPS WITH EVERYTHING!

News comes from electronics firm Mediamatics of an integrated "DVD-on-a-chip" solution for DVD players. Most of these require a large number of different ICs to perform functions like data-stream processing, CSS decoding and MPEG video decoding. The Pantera-DVD brings together these 'back-end' functions on a single chip.

This technology has been developed in close co-operation with manufacturers, so the first consumer players incorporating the chip should be on the market in March. With the reduced production costs the Pantera brings, future DVD equipment in the region of £150-£200 could rival the sound of existing £500 players.

**National Semiconductor GmbH**  
**Livry-Gargan-Strasse 10,**  
**D-82256 Fürstfeldbruck,**  
**Germany.**  
**Tel: +49 (0) 180 532 7832 (English)**



# It was 20 years ago today....



In November '77, the design team of Bob Stuart and Allen Boothroyd launched their first Meridian product, an active loudspeaker of course!

Since then, Meridian Audio has continued to pioneer advanced audio design in products such as the first high end CD player, the first CD transport, the first DSP domestic loudspeaker, the first digital home theatre and now, high end DVD.

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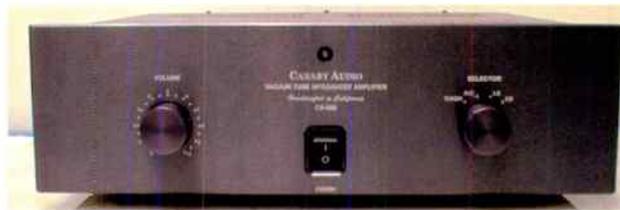
Tel (0) 1480 434334 Fax (0) 1480 432948

<http://www.meridian-audio.com>

## CANARY'S SONG

Audio Connoisseurs are pleased to announce the arrival of Canary Audio's first integrated valve amplifier, the CA608. Offering 35watts of class A power per channel from four 6CA7 (EL34) valves, it's positively bulging with audiophile parts. These include an Alps volume control, Teflon-coated silver wire, Mallory capacitors, oversized transformers and gold-plated binding posts. All these goodies bring the CA608's price up to £1295.

**Audio Connoisseurs**  
Unit 7,  
Claremont Buildings,



Old Clatterbridge Road,  
Bebbington,  
Merseyside L63 4JB  
Tel: 0151 343 0007

## ROTHWELL AMP REVAMP

Rothwell Electronics of Bolton have readied their Indus pre and Rubicon triode power amplifiers for the Millennium with a spot of restyling and under-bonnet tidying. As a result, both now have hand-finished solid-hardwood fascias and shorter signal paths. The Indus retains its stepped attenuator for volume control, while the Rubicon gains an internal bridging switch.

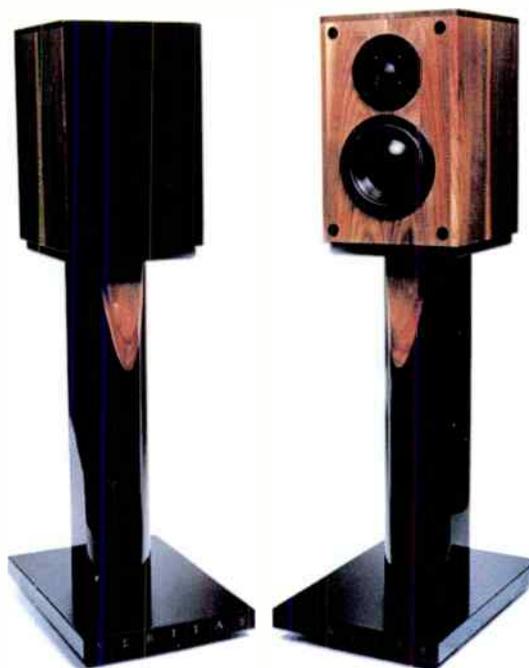
**Rothwell Electronics**  
60 Pennington Road,  
Great Lever,  
Bolton BL3 3BR  
Tel: 01204 654614

## VERILY VERITAS

John Hullah, one of Veritas Horn Systems' co-founders, has spent the last 20 years producing quality acoustic guitars, so squeezing sound from wooden boxes is not exactly alien territory.

The core of Veritas' new transducers is an enclosure whose inner 18mm MDF shell is encased in 10mm bookmatched hardwood. The hand-assembled crossovers are made with high-quality capacitors and hardwired to gold-plated bi-wire terminals. Veritas say the loudspeakers' fortes are spacial imagery and bass. Prices are £1000 for the 7s, £1400 for the 20s and £1900 for the 40s. External crossovers are available for £400 extra, which includes stands for the 7s and 20s.

**Veritas Horn Systems**  
2 Manor Farm Barns,  
Glandford,  
Norfolk NR25 7JP  
Tel: 01263 741417



## NEXT MONTH'S ISSUE

In four weeks' time the following will be on show in a Hi-Fi World near you:

### LOUDSPEAKER GROUP TEST

We rustle up five £1100-£1500 'speakers that are a little different from the norm, including the Magneplanar 1.2s, B&W 805s and the Carlsson 50.4s to name but three.

### NAD S400 SILVERLINE TUNER

The new high-end SilverLine range from NAD includes this sleek £750 tuner. Will it sound as good as it looks though?

### YAMAHA MSP5 ACTIVES

The new MSP5s are the latest active

studio monitors from Yamaha. At £400 they could be a bit of a bargain.

### BASIS 2000 TURNTABLE

Does the new breed of turntables warrant their prices? Our vinyl contribution continues with this £2000 perspex design from the US of A.



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World Radio History

# WEBBED WONDER

David Price listens to Michell's latest evolution of the popular GyroDec turntable, the Spider Edition.

It isn't every day that Britain's longest-lived turntable manufacturer brings out a new disc spinner. The Orbe was the last, back in 1994, while Michell's original GyroDec appeared 13 years prior to that. So, all things considered, the launch of the Gyro Spider Edition is a bit special.

Designer John Michell says his new baby came about for several reasons. First is the huge sound quality gain from physically detaching a turntable's motor from its base. To wit, the new Spider gets an Orbe-style separate motor unit. Second is the current fashion for stripped-down decks that Clearaudio and Pink Triangle have so astutely identified. Thanks to their minimalist design they offer a high sound-per-pound ratio, but John was unimpressed by the former's lack of in-built isolation and believed he could do better. Third, all those acres of beautiful Danish acrylic that the standard Gyro uses in its base and cover cost a packet. By offering a naked version, he found he could knock £200 off the purchase price. And so the £775 Spider Edition was born.

For those unfamiliar with the original Gyro, it has a cast-aluminium chassis holding an inverted bearing. On this sits an acrylic platter, from which gold-plated brass weights hang to add mass. This is driven via a long rubber belt by a Papst motor housed in a large billet of aluminium.

The chassis rests on three height-adjustable springs attached to the base. In the 'classic' version of the GyroDec, which is still available for £975, this is a full-size affair with a dustcover and comes in a variety of finishes. The Spider Edition does away with all this, using a simple acrylic 'spider' (similar to the base of



Clearaudio's Solution) to hold the deck's feet and suspension mounting points instead.

Finally, all Gyros come with aluminium armboards, each tailored to suit the user's choice of tone-arm. These are designed so that, together with the arm, the total mass is a constant one kilogram. To counterbalance this armboard and arm mass, the underside of the Gyro chassis carries lead weights, meaning the sub-chassis is correctly levelled even when arms and boards are swapped.

Off-board motor aside, the Gyro SE brings two further tweaks. First is a 40VA power transformer, which is a considerable improvement on the previous 10VA wall-plug affair. This is just as well, because before its introduction there was a yawning chasm between the standard PSU and the £399 Gyropower QC. (The latter uses a 100VA toroid and

extensively-regulated, quartz-synthesised circuitry for a clean power feed).

The second change is the new spring assembly, which offers considerably better isolation and easier adjustment. This upgrade is also retrofittable for around £40.

## SPINNING THE WEB

Setting up the Spider is a breeze if you've dealt with a GyroDec in the past. If you haven't, the diagramless instructions can take some fathoming. Basically, you screw the three feet to the Spider's underside and fit the three spring assemblies above. Then fix your arm to its mounting plate and bolt the two to the chassis. The bearing assembly screws in from underneath the chassis before the whole caboodle slips over the motor onto whatever platform the deck will be sitting on. All that's left is to lower the platter

onto the bearing, level it using the spring adjusters, plug the motor into its power supply, fit the belt and you're away!

There's rather more than this to getting the best from the Spider, however. A decent support like Audiophile Furniture's Base or a Townshend Seismic Sink is essential. The turntable must also be dead level - you can see how the Gyro's springs float better when it's sat perfectly true. By the way, the spring adjusters not only set the chassis height but also its alignment relative to the motor. This is critical and should be set for the most fluid bounce possible. Lastly, as the Spider Edition has no P-clip you have to improvise a way to get the arm cable hanging freely, touching nothing on its way from deck to pre-amp.

## THE LISTENING

Fitted with an Origin Live Rega RB250 tone-arm and Ortofon MC30 Supreme cartridge, first impressions were very positive. The Gyro SE has an extremely clean, open and even sound with remarkably few vices. Bass is fast, firm and extended yet totally lacking in coloration or lumpiness. The midband is a treat, with cinematic stereo imaging, huge levels of low-level detail, neutral tonality and strong, if not peerless, dynamics. Treble is clear and detailed and possesses excellent extension. By any standards, let alone those of sub-£800 turntables, the Michell produces winning results.

The smooth Soul of 4Hero's 'Universal Love' saw the Gyro SE set up a wide open acoustic, laying the instruments out in front of me clear as day. Double-basses had great power, while the cello and violins had a wonderfully rich, resonant quality that only high-end vinyl does properly.

Rock was no less fun, as REM's 'The One I Love' proved. Here, the Gyro SE really homed in on the song's huge, Eighties-style production. Those crashing power chords were absolutely thunderous, yet had a master tape-like composure.

This was the Spider on top form -



Bits and pieces - there's rather more self-assembly to the GyroDec SE than your average turntable. In this picture you can clearly see the three-legged acrylic 'spider' which supports the sub-chassis.

given a modern hi-fi recording it is dynamite. But when you move to subtler, less audiophile climes, things start to change a bit. You see, the Gyro SE is essentially an analytical device. With older recordings, such as Art Blakey and The Jazz Messengers' 'Gypsy Folk Tales', it made a nice enough noise but was too cerebral and deconstructed. Individual instruments were conveyed well enough, yet their players sounded dispassionate and uninvolved. I got the sense that these great musicians were technically gifted but not really into the rhythm.

Curious as to the difference the Gyropower QC would make, I plugged it in and cued up 'Gypsy Folk Tales' again. Whoah there! Now this was special - all the deck's fine qualities remained in abundance but things really began to swing.



On the underside of the Gyropower QC is a spike to ground the transformer's vibration.

Suddenly the music was so much better syncopated and more emotively performed. Rather than just giving the big picture, the Spider at last got into the groove and communicated on a human level.

From a late Karajan recording of Beethoven's Fifth to the pounding Drum 'n' Bass of LTJ Bukem, the QC Gyro SE was consistently light years ahead of its cheaper, conventionally-powered stablemate. Indeed, it moved embarrassingly close to Michell's top Orbe. Ultimately there was a gentle flattening of depth perspective and a slightly mechanical feel to rhythms, but it still wasn't so far off.

## CONCLUSION

The standard Michell GyroDec SE is a super performer which excels at conveying the scale and power present on modern vinyl LPs. But give it clean mains from a Gyropower QC and it really grows in stature. High-end turntables are an emotive subject, but even the most ardent devotees of rival marques would have to admit the Spider is a gem. By any standards it's a powerful package but at £775 it's nigh-on unbeatable. Add the £399 QC power supply, a top arm and a decent cartridge and the stratosphere's the limit. It may have been a long time coming, but the Spider was well worth the wait ●

Michell Gyrodec SE  
£775

Michell Engineering  
2 Theobald Street,  
Borehamwood,  
Herts. WD6 4SE  
Tel: 0181 953 0771

### WORLD VERDICT



Great sound, superb build and excellent upgradability make the Spider corking at the price.

# ITALIAN STALLION

Named after an Italian composer, can Audio Analogue's Paganini CD player live up to its illustrious name? Timothy Liu investigates.

The world of hi-fi sometimes operates in strange ways. In a manner reminiscent of the quantum leaps made in LP's reproduction as CD started to take over, with DVD-Audio and Super Audio CD apparently months rather than years off, the mind boggles at how the boffins continue to devise new means of squeezing ever higher performance from CD.

The Dons at Audio Analogue, doubtless still beaming from the success of their Puccini SE integrated amplifier reviewed in September 1997, have just released their first CD player, the Paganini.

The Paganini shares the 10mm aluminium fascia and heavy-gauge, folded steel casework which houses the Puccini. The round display and circular button cluster resemble the chamber on a Smith and Wesson revolver. Perhaps the inspiration came from those classic Sixties Spaghetti Westerns. . .

A peek at the rear-panel socketry shows the Paganini is a no-frills affair. Two gold-plated RCA phonos deal with the analogue output; a single co-axial digital out enables the Paganini to double up as a transport.

As is typical of all Audio Analogue products, construction inside and out is first rate. Lifting the lid revealed a beefed-up Sony transport bolted through the PCB to the base-plate. Behind this sit two Talema toroids feeding separate digital and analogue supplies.

The number crunching is handled by Crystal Semiconductors' flagship 24-bit, dual-differential chip. The analogue output circuitry, however, is Audio Analogue's own and relies on quality discrete components such as metal-film resistors and polypropylene capacitors.

After the recommended 100-hour burn-in, it was time for some sibling

rivalry. The Paganini was duly slipped into a system with a Puccini SE and a pair of Sonus Faber Electa Amator 2s.

First disc to hit the drawer was Led Zeppelin's Houses Of The Holy. The Paganini captured intact the acoustic guitar opening the track 'Over The Hills And Far Away', showing off the speed and intensity of Jimmy Page's strumming. Treble was sweet and free from grain or smear but not rolled off, as a real sense of air and space confirmed. When things really kicked off, the Paganini's deep, tuneful bass lifted this track into overdrive.

What struck me about CDs played on the Paganini was their effortless, wholly musical delivery; music flowed with an ease that allows you to sit back, relax and take in the performance, whatever the type of music or recording.

With XTC's Nonsuch album, the Paganini left me in no doubt as to its ability to scavenge for subtleties and detail on tracks like 'Wrapped In Grey'. The Beach Boys-style vocal harmonies on this number were individually-layered and separated but musically homogeneous. Set behind them was a scintillating string section well to the rear of a broad, deep soundstage. Although not from the clinical or analytical schools, the Paganini repeated this enviable trick on countless discs; details like triangles and percussion on CDs I know well were not heard for the first time but in a different light, with added freshness and immediacy.



The real acid test for the Paganini came in the form of Kate Bush's 'Rocket's Tail' (from her Sensual World album). The haunting vocals of Trio Bulgarka competed with Dave Gilmour's guitar to bring on the goosebumps. The sibilance and brightness in this song's production can have you leaping for the volume control but the Paganini remained controlled and neutral, revealing the cool tonal balance of the track without sapping its musicality.

The Dons at Audio Analogue haven't let success go to their head - they have produced another class-leader in the Paganini. Saving the best till last, this piece of delectable digitalia sits the right side of a grand at £750. In terms of sheer musicality the Paganini leaves competitors this side of the Atlantic looking worried, and is bound to bring a wide grin to many a face, especially those looking for a CD player to take them into the next millennium.

**Audio Analogue Paganini**  
£749

UKD  
23 Richings Way,  
Ivor,  
Bucks,  
SLO 9DA  
Tel: 01753 652669

## WORLD VERDICT



The Paganini does for CD replay what the outstanding Puccini SE does for amplification.

Measured Performance  
see p111

# SUPERIOR SILICON

**Jon Marks discovers transistors that sound like valves in Lavardin Technologies' IT Reference integrated amplifier.**

One of the oldest questions to puzzle hi-fi designers is why valves and transistors sound so different. Glass bottles have a tonal sweetness and lack of artificiality which, at its best, is a revelatory experience. Unfortunately, the circumstances for this revelatory experience tend to include silver-wound output transformers the weight of a canon ball and horns the size of a potting shed. Speakers on a smaller scale which provide some of the speed and impact of such horns often don't fulfil their promise unless driven by a huge black box with enough heatsinking to cool the Gobi desert and a power output approaching the requirements of a small city. In the world of amps, it seems, you can have natural and sweet or grunt and control but not a combination of the two.

Despite the efforts of a legion of hi-fi designers, this riddle has remained unsolved. Until now, that is, if you believe the claims that Lavardin Technologies make for their IT Reference integrated amplifier. Naming a component "IT" is possibly not the brightest start in life from a nomenclature point of view, but this French company are rather confident of their large box. A brief rifle through the literature explains: "The elegant flagship of the Lavardin Technologies range, the IT is of minimalist design utilizing a highly accurate, high-performance Memory-free design. . . This is the secret of "tube sound". We are proud, at Lavardin Technologies, to have full control on that which remains "the mystery of tube musicality" for previous audio designers (sic)."

Lavardin believe that "Memory Distortion" is what gives transistors their characteristic hard, mechanical edge. Like many others, LT suspected



that the vacuum inside a valve's glass envelope, which allows electrons free passage, was at the root of the more fluid, relaxed presentation of thermionic amplification. In contrast, an audio signal has to battle its way through silicon, leaving behind an impression of its passage which affects the electrons which come after it.

The goal of eliminating Memory Distortion set LT on the path to 12 years' research which revolved around developing a measurement system which would permit them to quantify MD and thereby come up with a circuit topology to eradicate it. The result is the S and Reference series, each of which includes an integrated, pre, stereo power and monobloc amplifiers.

## ACTIVELY SEEKING AMNESIA

Look inside the IT and it's obvious there's something a little out of the ordinary going on here electronically. For a start, many of the transistors and some of the ICs have had their numbers filed off to protect their identities. Then there are the parts potted inside the four mystery black

boxes, each about 1.5in. square, a pair of which sits in each channel. The cables carrying the input and output signals are also unencumbered by PVC or Teflon jackets - they appear simply to have been given a coat of urethane.

More familiar are the Alps Blue potentiometer and four-way selector switch (for the line-level, unbalanced inputs) shaft-driven from the thick front panel. The mains transformer is hidden away under an alloy cover mounted on large grommets to reduce vibration.

The IT's internals have a look of purposeful high-quality akin to what you might find inside the pricier products from smaller Japanese companies where the character of every single part is examined before its use is contemplated.

## AMP ANONYMITY

To determine if Lavardin were either guilty of Gallic hyperbole or discoverers of a major step forward in transistor sound, I lined the IT up against a modified, battery-powered DPA 50S (which is on a par with pres at around £2000). Power amplification was provided by

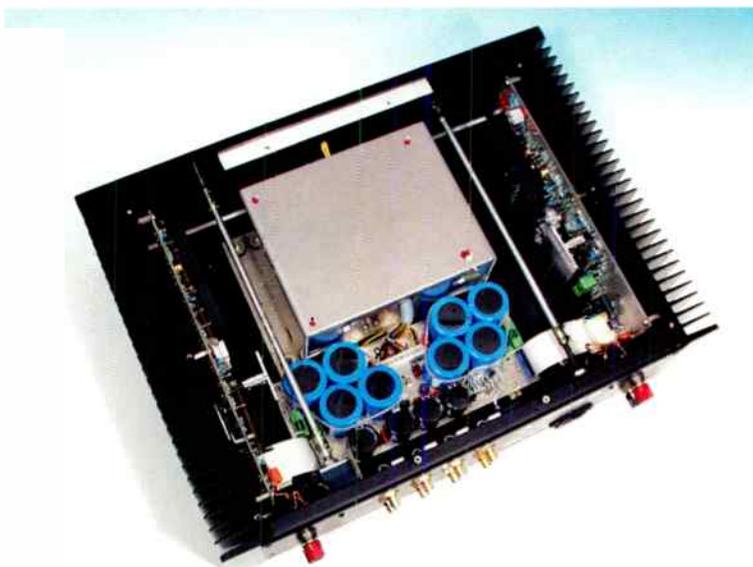
Musical Fidelity's X-A200 monoblocs. Loudspeakers were Magneplanar SMGas, refurbished Quad ESL 57s and Kelly KT3 floorstanders. Sources came from Trio (L-07D turntable with SME V arm) and Pioneer (tweaked DV-505 DVD player).

## ANTI-POLLUTION SQUAD

Powering up the IT for the first time, I was greeted by a clean but not particularly earth-shattering rendition of Tori Amos' Boys For Pele CD. However, within 10 minutes the IT was beginning to unveil its true capabilities as the sound became ever clearer and more natural. After about half an hour it had evidently warmed through, judging from the outstanding clarity and purity of the music emerging from the Quads.

The ESL 57s are renowned for their pollution-free midrange and treble, which makes them a great yardstick of what an amplifier is doing to vocals especially. The answer with the Lavardin was very, very little indeed. When you compare what 'normal' transistor amps do to the signal next to the impact of the IT, Lavardin's assertion that they've succeeded in eliminating transistor nastiness has a ring of truth to it.

Running from its four lead/acid batteries, the DPA 50S and the X-A200s are smooth, detailed performers by the standards of most transistor amps, but the IT made them sound coarse, grainy and very



The main PCBs are bolted to the heatsinks over the single pair of output devices per channel.

coloured. These aberrations stood out like sore thumbs on vocals, harpsichord and cymbals, which all had a tonal naturalness through the Lavardin which made sitting back and listening to the music an addictive activity. On the other hand, switching back to the DPA and MFs in the wake of the French challenger was hard work, a husky nasality on vocals and a bright, spiky 'break-up' on percussion (neither obvious before listening to the IT) making it difficult to relax.

Other areas where this skilled integrated pulled well ahead of the pack were imaging and soundstaging. Where the DPA and MFs can produce an image of a vocalist which would cover about three pages of A4, the IT's focus was roughly twice as precise, as Tori

Amos' head and shoulders hung lifesize between the Quads.

The same was true of orchestral pieces, the IT yielding a much more coherent and convincing overall picture. Strings and woodwind had a smoothness and harmonic richness close to those valves are capable of, but I suspect the best of thermionic would still leave the Lavardin with some catching up to do. The tables would turn when it came to coloration, though, the IT sounding fabulously neutral without ever being clinical or mechanical.

Heavyweight Dance albums like Johnny Magnetic's L, Asian Dub Foundation's Rafi's Revenge and Axiom Dub's Mysteries Of Creation benefited from what the IT had to offer as much as more acoustic recordings. The purity of hi-hats and synths had me reappraising the production quality of some of these discs, as did the crisp bass and effortless control of the IT.

Lavardin Technologies have made some bold claims for their IT amp, but on the basis of what flows from the 4mm binding posts on the rear panel, they're putting their Francs firmly where their mouth is. This is certainly one of the most self-effacing, natural amplifiers I've heard, almost regardless of price. But beware, once you've heard it, returning to run-of-the-mill solid-state which has a memory is a difficult task●

Lavardin Technologies IT  
£3200

Absolute Analogue  
PO Box 1532,  
Fordingbridge,  
Hants. SP6 1SB  
Tel: 01425 654488



To the left of the PCB are the two black boxes which play a part in eliminating Memory Distortion. Shaft drive of the selector switch helps keep signal paths short.

### WORLD VERDICT



The IT has clarity in spades and an extremely rare tonal purity. Outclasses transistor alternatives at the same price easily.

Measured Performance  
see p111

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# SENSATIONAL SAVINGS IN-STORE

# THREE RING CIRCUS

Choice for the home recordist as never before, but which format? Ringmaster Richard White puts CD-R, MiniDisc and Cassette through the hoop.

To a certain degree, audiophiles are spoiled rotten when it comes to recording media nowadays. Compared with the not-so-good old days of tape, tape or tape, there is an immense and potentially confusing array of systems which sail close to the copyright laws. Of course the day when genuinely high-fidelity solid-state recording is available cheaply to the average enthusiast is still a way off. Similarly, the demand for direct-lacquer cutting has fallen off a bit recently. Which leaves, as always, the middle ground to be filled.

Ignoring the weeping, wailing and gnashing of teeth of all Digital Compact Cassette owners, there are now arguably three main contenders in the domestic recording picture: MiniDisc, CD-Recordable and, fighting a brave rearguard, Compact Cassette.

Since the above are sold primarily as domestic recording machines, we decided that an informal group test was in order. As regular readers of these pages will be aware, we feel that levelling the analogue/digital playing field can be something of a tricky task. For instance, if a tape recorder hisses can it be excused on the grounds of being "lovely analogue technology"? Likewise, with digital formats, can car-crusher compression be counted as "the price you pay for convenience"?

To give the three competitors as fair a chance as possible, we made the primary comparisons chiefly on sound quality whilst also weighing up some of the other pros and cons that go with each.

Let's meet our lovely contestants (thank-you, Anthea). First is Philips' CDR 870 recordable CD machine, coming to you at about £500 (applause). Next, looking as though it's got everything taped, is Pioneer's CT-S550S Precision cassette machine at £339.95 (applause). Finally, bringing up the rear, in the end, eventually, last but by no means least (laughter), is Kenwood's fine DM-5090



Philips' CDR 870 can record onto both CD-Recordable as well as CD-ReWritable discs.

MiniDisc recorder wearing a fetching £329.95 price-tag (applause).

## THE RULES

Each recorder was tested with the following source materials: Diana Krall (Jazz vocalist) with acoustic instrumental trio on an Impulse CD; Radio 4 via Leak Troughline; a commercial Rock station; the third movement of Elgar's first Symphony on vinyl; DGG Archiv LP, Concert Music Of The Baroque Court.

The reason for most of these choices is fairly obvious, but Miss Krall was chosen for the somewhat aggressively digital sound of the disc, Radio 4 for the spoken word, the Elgar for a touch of complex orchestral thunder and the Baroque Court record because it has some of the most piercing recorded harpsichord in the catalogue and is thus a good provider in the 15kHz+ region.

## CD-RECORDABLE

The Philips CDR 870 was the front-runner in the field of affordable, domestic CD-R/CD-RW machines. Studio bugs had been working with the format for a few years beforehand so that by the time things went domestic, a nicely ironed-out component was ready for sale.

First in to bat was Diana Krall, whose

husky, slightly sibilant delivery I hoped would inform me of the CDR 870's transient signature. This recording has a lot of space round it and the initial effect of the CD-R copy was close to the original. Listening hard revealed that the full extent of the recorded sound was captured with practically nothing added (apart from a tiny amount of hiss) and even less taken away.

Radio 4's non-stop talk proved to be an easy task for the Philips - vocal colours were realistically reproduced with apparently 'full' spectrum warmth.

On commercial broadcasts there can be so much distortion in the first place it's often a fruitless task listening out for subtleties, but they have their uses nonetheless. This indeed was the only source which regularly pushed the CDR 870 anywhere near over-recording. As a whole, the machine took everything in its stride, recorded level setting being fairly non-critical.

Now to the difficult bit, full-bandwidth vinyl. Actually, the results were surprisingly good considering the battery of tonal colours the late-Romantic orchestra is capable of firing off. Frequency extremes, both on the Elgar and the Baroque record, failed to trip the Philips.



Pioneer's CT-S550S Precision shows what some audiophile tweaking by Tom Evans can do for cassette.

Criticisms which could be levelled at the '870 when recording vinyl (if not other sources) were a slight 'papery' quality and loss of life.

### COMPACT CASSETTE

When we reviewed the Pioneer a month or two ago, it gained top marks for its sound quality. Add to this the late-burgeoning convenience of track finding arrangements and we felt the CT-S550S Precision to be fighting fit.

One of the interesting features of this test was the confirmation that analogue and digital recorders do actually have complementary vices and virtues. The heavy guns of the Elgar artillery offered no problem to the Pioneer and a Maxell Metal tape as long as a close eye was kept on the level indicator. A sense of almost 'unlimited' bandwidth pervaded the recording, bass and treble stretching off into the distance rather than being stuffed into a cramped package.

Recording from CD was a marginally different story with some hiss apparent on quiet passages; as ever, an eagle eye on the recording level can pay dividends here. There was in any case very little discernible amplitude distortion over the frequency range, so the sound remained as natural as the studio had managed to leave it.

Radio 4 gave the CT-S550S a little more to think about. With the prevalence of speech and silence on this station, tape hiss could become a real issue. As we noted in our review, the Pioneer is a very strong performer in this field, but there is still hiss. Of course using Dolby would help here but the overall sound quality suffers; in an extreme case, noise reduction can produce sonic symptoms similar to those of the MiniDisc compression noted below.

### MINIDISC

Playing pre-recordeds seemed to be the great strength of the Kenwood DM-5090 when it was reviewed in our February issue. Now it was about to meet its peers in a rather different battle.

Given that MiniDisc is an unashamedly data-reduced medium, we slung it in at the deep end with the Elgar on vinyl. Again, as we had found with CD-R, level setting was not a matter of life and death: obviously it makes sense to put in as loud a signal as possible, but the display seems to suggest that the working bracket is many decibels better than can be tolerated with tape.

To be honest, quality was not over-special working from vinyl. Without a doubt, recording of this standard would have seemed near-miraculous from a domestic cassette machine not so very long ago, but time moves on. There was a noticeable lack of 'air' which suggested that numbers were being squeezed to crunch point. The recording remained 'clean' inasmuch as there was no appreciable noise (aside from surface noise) but the performance remained unconvincing. Bandwidth was good, with little obvious compression at the extremes of treble and bass, and it handled the

small-scale orchestral work of the Baroque Court quite adequately compared with the Elgarian cannon-fire.

Feeding the Kenwood from a CD source was a different and happier story. Maybe because the CD had been digitally processed from birth, Miss Krall's Love Songs took much more kindly to the inevitable compression. The true drive of the double-bass was passed on without a murmur and the vocal sibilance, albeit slightly emphasized, was easily accommodated within the context of the music.

What MD lost in sound quality it made up for in trumps with convenience. The sheer ease with which the blocks of our test recordings could be shuffled or deleted made an all but unanswerable case for the medium as a quick fix for fuddle-fingers and level-forgetters everywhere. As the sound quality continues to rise, this format is unquestionably one to keep an ear on.

### GRAND FINALE

In an overview of this sort, it is a surprise to find the three formats with such complementary merits. Better still, none has insuperable demerits. Cassette remains cheap, popular and capable of exceedingly good work with quality tape and careful setting. CD-R combines almost indistinguishable sound quality when copying from digital recordings with universal playback compatibility. MiniDisc, the somewhat poorer relation for sound quality, has nonetheless a degree of programmable convenience which makes splicing blocks look mediæval.

All this is to the benefit of the enthusiast; the world is his oyster as never before, except that it currently contains at least three pearls.



Kenwood's DM-5090 MiniDisc recorder demonstrates just what a convenient format MD is.

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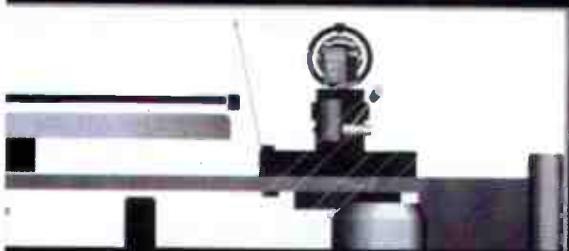
The CAP-151 has the typical beautiful Classe contoured, slimline chassis with special faceplates in either Soft Shadow Silver or Anodised Black.

Remote controls include: Power On/Off, Volume, Mute, all Input Selections. Tape and Display Brightness. Front panel controls include: INPUT SELECTION, VOLUME, TAPE MUTE and POWER.

The CAP-151 is a very substantial integrated amplifier, quite capable of driving speakers well above its price range.

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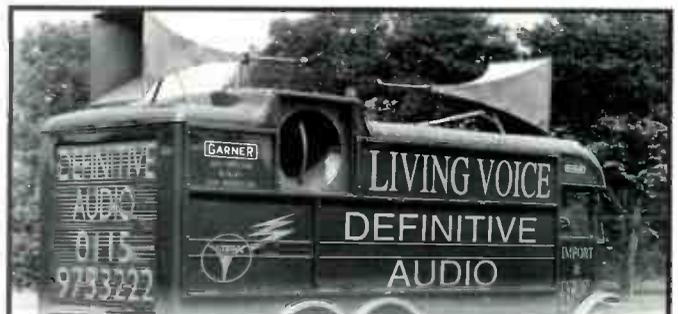
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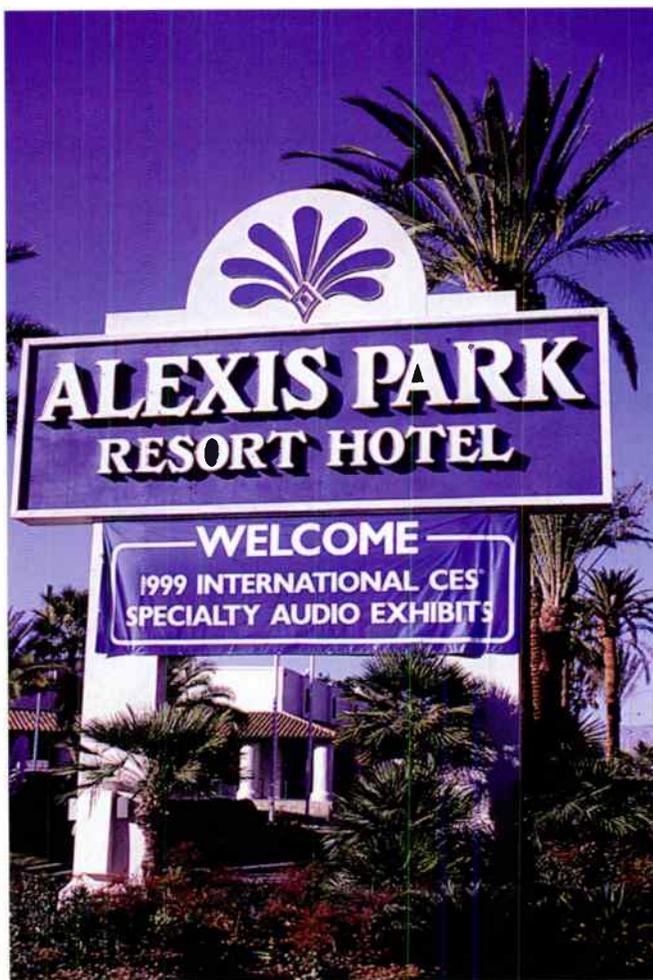
# ALL CHANGE AT LAS VEGAS 1999?

Tony Hamza ponders the future of hi-fi at the Las Vegas Consumer Electronics Show.

As I walked down Las Vegas Boulevard, locally called the Strip, I became aware of the huge transformation that's taking place in America's playground city. All around me new hotels were emerging from the desert sands. Every creation is designed to outdo last year's sensation. Behind me was the Luxor Hotel (a huge black pyramid with the Sphinx guarding its entrance) and across the way was New York, New York (with a quarter-scale model of that city's familiar skyline). These will soon lose their appeal as the Paris Hotel is finished (complete with the Eiffel Tower, Arc de Triomphe and Louvre) and the Venetian Hotel opens (with a full-scale rendering of St Mark's Square, water-filled canals and floating gondolas).

Amongst all the new glitter were the faded palaces of former glory. The Dunes, the Sahara and the Stardust are all hotels well past their best and I wondered how they'd survive with so much new glamour around.

As I began to explore the Consumer Electronics Show the next day, I couldn't help feeling that another great transformation was taking place. Of course audio has always been a small part of the CES, but this year I could feel the pull of new technologies seducing the consumer away from good, old two-channel audio. There's high-definition digital television, MP3, movies on DVD, computer games and the Internet.



The Alexis Park welcome in palm-decked Las Vegas.

These are also taking away the money that, 10 years ago, would have been spent on audio.

Finding real hi-fi in the main Exhibition Halls was almost impossible. The Panasonic display was at least 100metres long but only a few of those were devoted to pure audio products. There was a closed demonstration for

DVD-Audio (with up to six channels at 24 bits and up to 192kHz sampling), the proposed high-resolution replacement for CD. Panasonic promised its launch within a year. The format is incompatible with existing DVD-Video players and current CD players. The first machines will be devoted to DVD-Audio only. "Universal" players, capable of working with both DVD-Video and DVD-Audio standards, will follow shortly afterwards.

On the Philips stand I found a static display of a Super Audio CD player that will use dual-layer discs to store DSD data as well as conventional CD data. Again, the promise was that the format would be launched towards the end of 1999.

Sony's exhibit focused on the future of digital technology in the home and included a proposed 8Megabyte "Memory Stick" to transfer data between cameras, audio devices and computers. Sony also featured Super Audio CD and tried to explain, to a con-

fused audience, how the format would make CDs sound even better.

Before leaving the main Exhibition Hall I headed for an interesting flat 'speaker being produced by Infinity. The FPS-1000 is only 38mm deep and uses conventional moving-coil technology. Sound quality (with an additional sub-woofer) was actually quite decent.

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Alex Garner of Tannoy transported to Saturn.



The KEF heavies including the 109 Maidstone.

Wharfedale were demonstrating their "Loudpanel" using NXT technology. These hang-on-the-wall picture/loudspeakers were only 27mm deep but a subwoofer, set too high, spoiled the sound.

My next destination was the Las Vegas Hilton where I found many of the larger, true hi-fi companies. Tannoy was unveiling the Saturns, a new range of five dual-concentric loudspeakers. The Saturn 6lcr (£199 each) and Saturn 8lcr (£249 each) are bookshelf models whilst the Saturn 6 (£499 a pair), Saturn 8 (£699 a pair) and Saturn 10 (£899 a pair) are floor standing. Judging from the demonstration, all the models are capable of very high SPLs.

The company's Prestige models have been re-engineered using stiffer suspensions and now include earthing terminals. Earthing terminals on loudspeakers? Alex Garner (Tannoy's Technical Director) explained: "It's all the rage with Japanese audiophiles. We've done our own research and found that the improved sound quality comes from cutting down RF pick-up in the voice-coil. By using shielded cable connected to the earthed 'speaker-chassis, there's a 6dB to 25dB reduction. This means that the amplifier doesn't have RF entering the loudspeaker cables and messing up the sound."

Meridian had a very impressive stand demonstrating MLP (Meridian Lossless Packing), which compression system has been adopted as a standard for DVD-Audio.

Krell Industries were showing the

Master Reference Amplifier, a monster monobloc capable of putting 16000watts into a half-ohm load. It stood on a massive pedestal looking like a giant sculpture. At \$120000, a pair of Henry Moores might be cheaper.

My next stop was the Alexis Park Hotel to see what's called the "Specialty Audio Exhibits". This hotel is one of the few in Las Vegas that doesn't have a casi-



Inversion from Castle Acoustics.

no, and its cabana-style layout means that it was possible to enjoy a breath of fresh air between demonstration rooms. Here I found some very familiar names. Creek Audio was launching a neat £199 D-to-A convertor called the OBH-14. Housed in a small box is a Crystal 24-bit chip that accepts sampling rates up to 48kHz. It made some nice sounds using the optical output from a portable CD player.

At the other end of the scale dCS

showed the Purcell sampling-rate convertor that steps standard 16-bit 44.1kHz up to 24-bit 192kHz. If you then use a dCS Elgar DAC (working at 24/192) the results are said to greatly increase the sound quality of a standard CD. The Purcell will be available in February at £3500.

Continuing with out-board convertors, Chord Electronics were showing the DCS1500E Digital pre-amplifier with its six inputs and three outputs. On board are two DAC chips, one from Analogue Devices and the other from AKM. As each has a slightly different sonic characteristic, the user can remotely switch between them for optimal results with different digital sources.

Castle Acoustics launched the complete Inversion range of loudspeakers that represent a bold design statement. The Inversion 100 floor standing loudspeakers (at £1975 a pair) will be followed by the smaller Inversion 50 (in April, at £900 a pair) plus a supporting cast of rear, centre and subwoofer models. The 'speakers on display looked stunning in Maple.

KEF launched their new loudspeaker, the 109 Maidstone. This is a four-way system using a 15in. woofer, 10in. lower-mid and 6in. Uni-Q mid/high-frequency unit. The loudspeaker was capable of very high SPLs whilst remaining totally in control. It is expected to cost £12000.

Cambridge Audio launched a new range of electronics that included two

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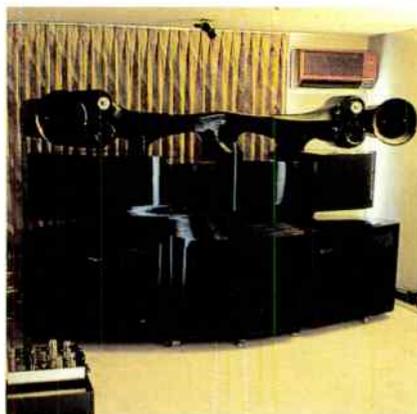
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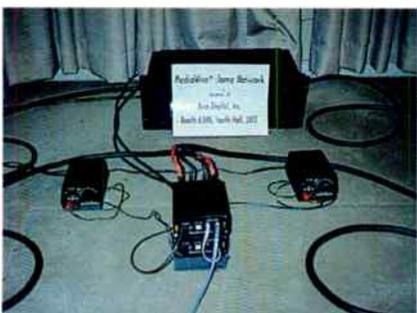


How did Acoustic Design get the SERIES-1 in the door?

power amplifiers (the A300 at £149 and the A500 at £199) and two CD players (the D300 at £149 and the D500 at £199). All share the same remote control and sounded very good playing through a pair of Mordaunt-Short 815 loudspeakers. This choice came as no surprise as Audio Partnership (who own Cambridge Audio) announced, just before the show began, that they'd bought Mordaunt-Short.

Arcam are doing very well in the USA having had rave reviews for the Alpha 9 CD player which uses the dCS-patented Ring DAC. However they're very aware of the importance of Home Theatre and Multi-Room for the future and have extended the facilities of the Arcam 10 amplifier to include the DAVE card for decoding Dolby Digital signals. Asked about Arcam's plans for a DVD player John Dawson (Managing Director) points out, in the Arcam Newsletter, that they will not release any products until a "Universal" DVD player is possible.

German loudspeakers are hardly common in the UK but that may be changing soon. Steve Harris (formerly with Mordaunt-Short and Epos) announced the distribution of ALR Jordan in the UK. Of special interest was the NOTE 3, a two-



The scary phone-line interconnect and digital amps.

way stand mounter with metal basses and tweeters which incorporates an elliptical ABR on the rear. Steve explained: "There are weights you can add to the ABR that allow you to optimise the bass response to your room and musical tastes. The two extremes are: the heaviest weight for maximum bass extension, perhaps for Classical music in a large room, and the lightest weight for a snappier bass with Rock and Jazz in a smaller room."

There were a few products that I'm sure will never make it across the Atlantic. One was the TLG Acoustic Design SERIES-1 'speaker. This all-in-one horn-loaded stereo loudspeaker took up a whole wall in one of the hotel rooms. It must be very efficient but I'd like to know how they managed to squeeze it through the door.

Something that will make it across the Atlantic in a big way will be the new breed of digital amplifiers. These achieve high efficiencies (95% compared to 50% for an average amplifier) so there's no need for large heat-sinks, exotic casing or massive power supplies.

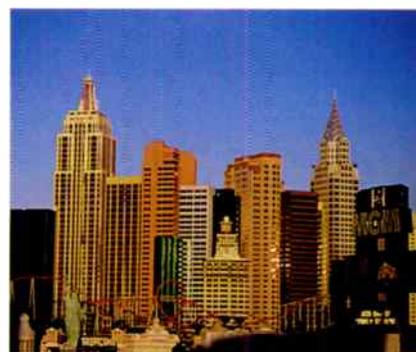
Linn showed a prototype digital amplifier called the Klimax and Apogee



Russian Trawler 6C33s on the CR Developments Artemis.

Technology were showing a 25watt module about the size of a matchbox. They directed me to the Huff Loudspeaker room to listen to a pair of omni-directional Huff System Three loudspeakers driven by the tiny tots. When I got there, I found that the digital signal from the source flowed to the amplifiers down a piece of cheap telephone cable (using a technology called MediaWire Home Network). The results were impressive - incredibly transparent and completely free of glare and grain.

MediaWire claim that their system can



New York, New York on the Strip.

distribute many channels of DVD-Video and DVD-Audio around a house via the cheapest cable or an existing phone network. It's perhaps unfair to judge a system on just one demo, but if I were a cable manufacturer or a builder of monster amplifiers, I'd be very worried indeed.

In the Ballroom of the Alexis Park there were lots of stalls selling tubes (valves) from many exotic locations, 180gm vinyl discs, audiophile CDs and 24/96 audio discs.

Next door in the St Tropez Hotel was a breakaway show running in parallel with the CES. There I found Chris Lanham showing CR Electronics' impressive Artemis power amplifiers (£6000 a pair). These beautifully-finished units come with huge Russian 6C33 valves that were originally designed for "Russian trawlers!" They were producing very liquid sounds with loudspeakers from Jean-Marie Reynaud. These French works of art have drivers with double-voice coils, each of which is fed with different frequencies.

Utterly exhausted at the end of the show, I found myself back on the Strip. There's no doubt that Las Vegas is about to change but what about audio? The show indicated that several technologies were waiting in the wings to revolutionise the industry over the next few years. Manufacturers will really have to keep their eyes on the ball if they want to survive.

For myself, I find the prospect of multi-channel, high-resolution audio both exciting and a little scary. Would I have to buy my CD collection all over again in a new format? I don't think so. However, the prospect of the computer industry taking over audio is much more worrying; after all, they have yet to demonstrate any great understanding of sound quality ●

# CANNED LAUGHTER

Simon Pope seeks headphone solace in Ergo's Model 2 and Jecklin's Float 2. Joining the fray is Creek's OBH-11SE headphone amplifier.

There are certain members of society who, when taking a personal stereo out of its box for the first time, file the supplied headphones under 'Emergency Use Only'. If these low-budget, in-the-ear boom 'n' tizzers are supplanted by Ergo's Model 2 or Jecklin's Float 2, suffice to say their, erm, non-conformist appearance would probably be greeted with much merriment from fellow commuters.

Both Ergo and Jecklin are Swiss designs which incorporate little or no (depending on cranial dimensions) contact between the ear and the 'speakers. They stay put thanks to a foam strip that sits behind each ear, resulting in an air flow between the ear and the 'speakers which reduces discomfort and listening fatigue. The sort of presentation that both of these open-back headphones aim to create through this arrangement is supposed to be close to that of an electrostatic design.

## ERGO MODEL 2

Of the two, the £140 Ergo 2 actually looks slightly less daft, to be blunt. The drivers possess neodymium magnets, very thin membranes and aperiodic damping to reduce distortion. Frequency response is quoted as 20Hz to 20kHz and Total Harmonic Distortion at less than 0.3%.

The Ergo's bass and soundstaging are very different from those of closed-back headphones, where both can sound flat and processed. This talent for revealing meant these 'phones could be unforgiving of poor source material. Conversely, well-produced recordings sounded very good indeed. Talvin Singh's Anokha album impressed with its wide soundscapes and deep, precise Drum 'n' Bass tracks. Every nuance across the frequency range was



The Ergo 2s.

cleanly executed, with close-mic'd vocals atmospheric and high frequencies smooth and airy.

Where this open sound really makes its presence felt is on acoustic music. Bach's meditative sonatas for solo cello, played by Yo-Yo Ma, were beautifully lucid and uncoloured. In addition to the notes themselves, the sound of the bow digging into the strings gave an

almost frighteningly realistic performance.

## JECKLIN FLOAT 2

The £100 Jecklin Float 2 builds on the shape of the Ergo and takes it to a full-blown helmet design (if you wish to complete the look, simply do your listening in a suit of chain-mail). The claimed response is slightly reduced next to that of the Ergo at 30Hz-20kHz, and the distortion higher at around 0.8%. Not as sturdy as the Model 2 but still comfortable, the Float 2's 400gms of weight are very evenly spread out. The only problem with the loose fit is that it can wobble about if you nod your head to the beat!

The Jecklin has a cooler, thinner tonal balance than the Ergo. Talvin Singh's CD had plenty of space and colour but there was a lack of deep bass compared to the Ergo. Despite



Inside the OBH-11SE, all circuitry is discrete.

this, what there was remained enjoyably fast and controlled.

With Yo-Yo Ma's inspired Bach interpretations, the Float brought out the delicacy in the music, endowing this complex piece with an effortless elegance. Overall, the Float turned out to be truly transparent with the caveat that, with bad recordings, the mid and treble is weaker than the Ergo's.

Whatever their shortcomings, the music emerging from the Jecklin is infinitely preferable to what a lot of closed-back designs manage. It's a bit like comparing panel 'speakers to boxes; the panels take the honours when it comes to airy acoustic reproduction (especially Classical), but if you want more punch and bass, artificial though they may often be, then your best bet is a box.

## CONCLUSION

Looks apart, these sci-fi headphones have an awful lot to offer the music lover with the amount of detail they dig from recordings and the uncoloured way in which they present it.

Although they are of extremely similar design (and share the same country of origin - Switzerland - and distributor), the Ergo and Jecklin do have different sonic characteristics. The Model 2 has an extra refinement reflected in its price; the bass goes lower and the tonal balance is more even as well. Both, however, have a kid-glove touch which more traditional 'phones at the same price have a hard time getting near. And as for the fatigue factor, you can actually listen to either for hours without your ears getting sweaty, itchy or bored.

## IN THE DRIVING SEAT

The lack of a headphone output on a lot of mid-price and high-end equipment has given amplifier manufacturers like Creek a chance to plug the hole with some dedicated headphone stages. One benefit for the audiophile is that the latter tend to be sonically leaps and bounds ahead of the former. In fact, if you're an avid headphone listener, a

stand-alone box is an essential accessory.

Of the relatively few headphone amps available at present, two are made by Creek, the £129 OBH-11 and the one reviewed here, the £199 OBH-11SE. One major difference between the two is that the SE possesses a pair of 0.25in. jacks, so your musical edification can be shared with a loved one. Another is that it works in class A with zero feedback, powered by Creek's own high-quality OBH-2 DC power supply in a bid to deliver optimum sound quality. Also featuring on the front panel is an Alps Blue volume potentiometer.

Like the standard OBH-11, the SE is compatible with any line-level source, so components can be connected directly to it. There are two pairs of phono sockets at the back, one the input and the other an output for linking the OBH-11 to another component, such as an amplifier or recorder, for monitoring. I duly warmed up the amp for the recommended 24 hours and set to work with two pairs of headphones, the Sennheiser HD565 Ovation and Ergo Model 2.

Kicking off with Bjork's Post spinning inside Thule's CD100, I was greeted by a full sound with crystal-clear imaging, vocals centred just above the horizontal. Tonally the Creek was neutral without veering towards the clinical due to its treble and midrange smoothness.

With Rameau's Suites from Plâtée And Dardanus the OBH-11SE responded with a splendid rendition. Detailing and transparency were top-notch, the liveliness of the tambourines and tambour drums



Two headphone sockets enable shared listening.



Jecklin's Float 2s.

lending the performance a rhythmic 'lilt' that made for engrossing listening. The demanding sound of the period violins was tamed by the natural warmth of the acoustic and unexaggerated by the Creek so that none of my fillings fell out. This contrasted strongly with the brittle, sour version of these instruments which a lot of solid-state gear stoops to.

The bass of acoustic string instruments is never going to be as pronounced as a studio bass guitar or kick-drum, but it was neatly balanced by the Creek against the rest of the orchestra to give it just the right amount of weight.

U2's new Best Of compilation proved a sterner test for the Creek. The early singles with their metallic, bass-light Eighties production style sounded unremittingly hard, with a very prominent midrange. All this was down to the engineers rather than the Creek, but then this little black box doesn't take any prisoners.

The OBH-11SE is a very lucid, natural headphone amplifier which scores just as highly on acoustic and Classical music as it does on competently-produced Pop and Rock. The only time it might not suit is if your collection contains a lot of poorly-engineered discs whose faults it won't hesitate to show up.

**Ergo Model 2** £140  
**Jecklin Float 2** £99  
**Creek OBH-11SE** £199

**May Audio Marketing**  
Aireside Mills,  
Cononley,  
Keighley,  
West Yorks. BD20 8LW  
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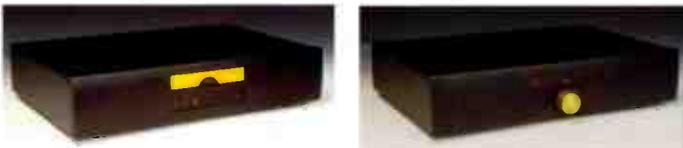
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# THE MAGNIFICENT 7?

Do Mission have another loudspeaker success story on their hands with the new 772, asks Jon Marks.

It takes a certain degree of corporate muscle-flexing to produce a budget 'speaker that looks like more than just a biscuit box with delusions of vinyl-wrapped grandeur. However, Mission have managed this tough trick where many others have failed; the name on the enclosures trundling off the conveyor belts is the 77 series.

Proving that these attractive transducers are more than merely pretty packaging are the drivers bolted to the MDF front baffle. Below a 25mm silk-dome tweeter with leaf-spring suspension moulded into its face-plate is a 130mm mid/bass unit with Aerogel cone and phase plug. This is loaded by the reflex-ported, 11 litre enclosure.

It comes as no surprise sonically that the 772 is a very close cousin to the 771 reviewed back in the July 1998 issue. Though the cabinet may be more coffin-like this time around, there was that same precision imaging and soundstaging which, on Eric Bibb's Good Stuff, breathed life into the acoustic and the band members.

Another welcome trait was the tonal evenness that comes from an able silk tweeter and Aerogel mid/bass unit linked by an unobtrusive crossover. It was in this area that the 771s had pulled ahead of the all-conquering Tannoy Mercury m1s, whose treble is a touch bland and fizzy by comparison. Returning to EB and co, the Missions' clarity and tonal richness were undeniably impressive as they set cleanly-outlined and three-dimensional images within a deep acoustic, and this went for heavyweight numbers as well as voice-and-guitar tracks.

The 771s' sole flaw (although that's possibly too strong a term) was



bass extension, or rather the lack of it. If Classical is your favourite genre and you have a penchant for orchestral pyrotechnics, the way in which the 771s' mid/bass drivers could crack against their end-stops would be a disappointment. While their bigger brothers employ a cone of the same diameter, the greater box volume allows them to delve deeper without running out of steam. Large-scale orchestral works like Stravinsky's Firebird Suite and some truly heavyweight Dance and Dub CDs went to show that the 772s don't suffer the same limitations, although cranking the volume too high will eventually have the drivers protesting.

The enclosure volume of 11 litres may allow lower bass frequencies to be explored than was the case with the 771s' 6.5 litres, but it does

involve a small penalty. Larger boxes mean larger panels mean more cabinet honk, with the 772s becoming occasionally overenthusiastic in the upper bass. Mission have kept this type of coloration to fairly innocuous levels in the 772s, and part of the reason it sticks out here is because of the lack of cone and dome anomalies adding to the sonic pollution.

Bi-wired with quality cable and happily resident on heavy stands like Atacama SE20s or SE24s, the 772s repay investment in a source of real budget calibre. Partner them with amplification at least as good as Denon's classic PMA-250SE and either a Pro-ject 1.2 turntable or Cambridge CD-4SE CD player, and you won't feel that your wallet's been emptied in vain.

**Mission 772** £229.90  
**Mission,**  
**Stonehill,**  
**Huntingdon,**  
**Cambs. PE18 6ED**  
**Tel: 01480 451777**

## WORLD VERDICT



Civilised standmounters which lack nothing in control, finesse or transparency.

Measured Performance see page 111

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You are welcome to turn up whenever you like (between 11am and 7pm), no booking necessary, with your favourite cds and records, to just enjoy yourself. Whenever possible, there will be a manufacturer's or distributor's representative on hand to give you detailed information, as well as the usual help from Les and Pete.

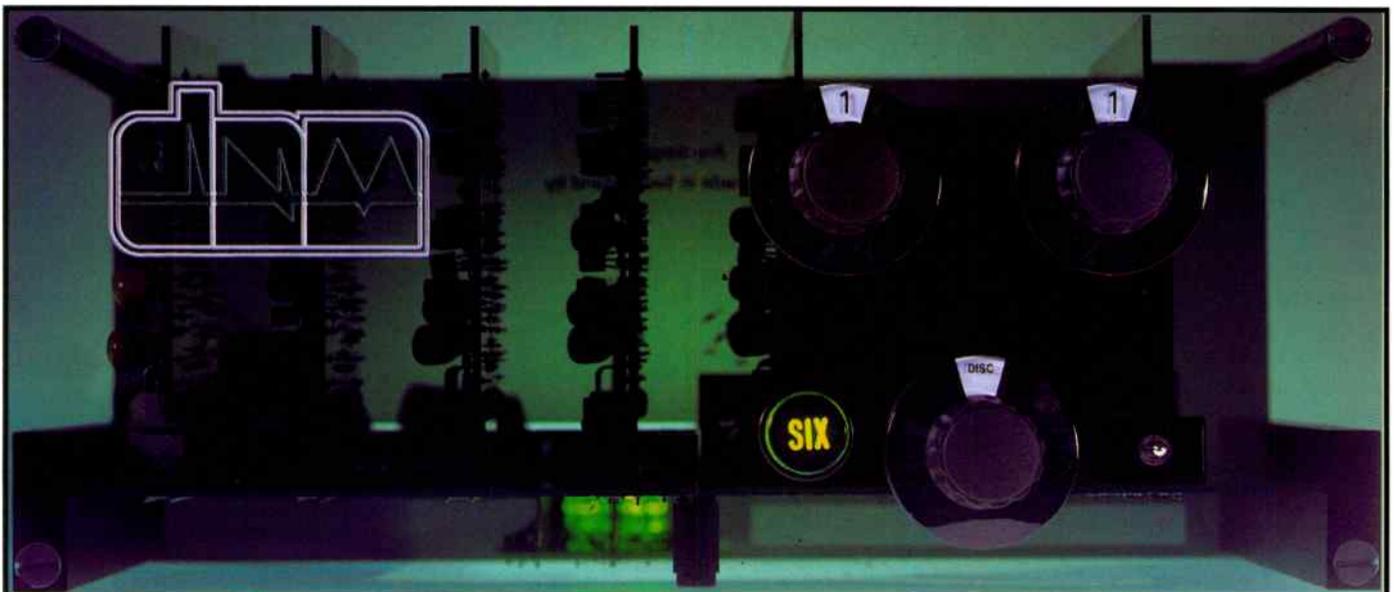
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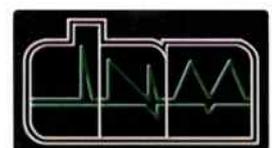
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# FLAT RESPONSE

Simon Pope tests a pair of 'speaker cables that won't make your living room look like a hosepipe shop.

## NORDOST SUPER FLATLINE £17.95/m.

The Super Flatline was specifically developed as a bi-wire cable with its 16 solid-core, Oxygen-Free Copper rectangular conductors. Bass frequencies are isolated on a separate cable to reduce inter-frequency interference.

This cable's most obvious trait is its exquisite openness, Classical music benefiting greatly. Carrying a well-recorded CD of Messiaen's orchestral music as performed by the Cleveland Orchestra under Pierre Boulez, the Super Flatline showed off a class-leading clarity and detail.

Shimmering percussion, airy woodwind and rasping brass all contributed to some highly enjoyable listening. Timpani strokes were fast and clean, and the treble percussion sweet and smooth without sounding veiled. The root of this clarity was the Super Flatline's ability to create real space between orchestral instruments.

With a Dance album (Second Toughest In The Infants by Underworld) the Flatline displayed an adept handling of bass. Isolating the lower frequencies on a separate cable really seems to work, as the drum machine had a new-found depth and precision which added pace to the music.

The Yank Rock of the Screaming Trees was next in line, and yet again

instrumental separation was excellent - bass and drums proved tight and powerful, vocals crystal clear. The acoustic guitars of some tracks were eerily atmospheric, leaving the electric guitars to Rock like crazy.

This cable manages to combine both delicacy and clout with clarity and is highly recommended.

## CHORD COMPANY MYTH £14.95/m.

The Chord Company Myth is constructed from two sets of seven strands each for the bass (which requires relatively large amounts of current) and two sets of four strands each for the treble. The Chord Company say the conductors are spaced to provide optimal capacitance and inductance values; polyethylene is used in the jacket because of its low dielectric constant.

Returning to the Messiaen CD, I discovered the Myth had a brighter

top-end than that of the Nordost. The rasp of the brass was slightly too harsh for my tastes and percussion such as triangles and cymbals had an artificial metallic edge to it. This aside, the rest of the tonal spectrum and detailing were very good - bass drum, timpani and bass clarinets had deep, realistic resonance and I could easily make out the frenetic fingerwork of the woodwind players.

Underworld's album got along fine with the Myth, its crisp treble bringing out the best in what is a 'dark' recording and lifting it out of the doldrums it can fall into with poor equipment. The classic track, 'Pearl's Girl', stomped out of the Heybrooks, small details which are usually difficult to pin down clearly defined among the musical melée.

The Myth's treble emphasis raised its head once more when I plied it with the Screaming Trees. Although everything else was present and correct, the guitars and vocals often had a steely edge to them which, although in keeping with this sort of guitar-based Rock, could become fatiguing.

The Chord Company's Myth has its fortes in detail and imaging. If you like your treble hard and crisp too, it could be right up your street●

**Nordost**  
1st floor, Unit 7,  
Aber Park Ind. Estate,  
Aber Road,  
Flint,  
Clwyd CH6 5EX  
Tel: 01352 730251

**The Chord Company**  
30a Sarum Business Park,  
Portway,  
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Wilts. SP4 6EA  
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# WIN A STYLISH TURNTABLE AND A RECORD CLEANER WORTH £1300

**This month's competition is definitely for lovers of vinyl with a Clearaudio Solution turntable and VPI HW16.5 record cleaner.**

**J**on Marks auditioned the Clearaudio Solution turntable back in February 1999 when all at World Towers were taken by its skeletal looks. What endows the Solution with such eye-catching aesthetics is a low-mass perspex base and a matching platter standing on three brass cones. The inverted bearing on which the platter rotates is also machined from brass and bolted through the chassis.

Upholding a tradition reinforced by Japanese decks in the Seventies, three tone-arms can be bolted to the Clearaudio. In a



bid to minimise noise from the motor, the AC synchronous unit is bolted to a free-standing brass cylinder. This makes swapping between 45rpm and 33rpm easier than on many decks where you have to go in for a spot of dismantling just to get at the belt.

Sonically, the Solution scored for its powerful presentation which manifested itself in a very musical way; with a little attention to set-up, it began to produce fine results. Going under an RB300 (supplied along with Clearaudio's Alpha MM with the Solution in this competition) and Clearaudio's own Sigma MC, Heaven 17's *The Luxury Gap* produced "an airy, open sound and meaty bass". Lou Reed's *Transformer* was equally impressive, Jon Marks noting that the clarity of the vocals and detailing were "unpolluted by their passage from groove to loudspeaker. Tracks like 'Vicious' and 'Walk On The Wild Side' had a weight and imaging precision that made for some very convincing replay".

With Classical recordings the Clearaudio managed to turn in similar results. The neutral tonality of perspex suited Britten's *Young Person's Guide To The Orchestra*; "Strings and brass were both incisive and crisp, set within a soundstage of commendable size". To top it all off, the Solution homed in on rhythms and beefy basslines to bring out the excitement in performances.

This month's second competition prize is the HW16.5 from American manufacturer VPI. While it might bear more than a passing resemblance to an old gramophone unit minus the horn, this device makes cleaning records a painless process.

Cleaning fluid is evenly applied with a small brush to an LP clamped to the platter. As the platter revolves, a flick of a switch gets the vacuum motor going. This draws the arm with its velvet pad down onto the record and sucks the used fluid from the groove and into a dedicated container. The one thing to remember is that the VPI has to be used in conjunction with the supplied fluid - it's not a 'dry' cleaner.

Richard White found that most records needed only one sweep to regain their former pristine condition. Once finished, he adjudged the VPI to have done "a splendid job". Surface noise was reduced considerably, the added bonus being extended stylus life due to the diamond not having to plough through so much grunge in the groove.

To qualify for the opportunity of winning one of the above, all you have to do is answer the questions below correctly and follow this by completing our Miltonesque 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 April 5th:

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



## COMPETITION ENTRY QUESTIONS

1) From what substance is the base of the Solution made?

- A. Perspex                      C. Gravy  
 B. Solid hardwood          D. Polystyrene

2) What type of outboard motor does the Solution use?

- A. AC synchronous          C. Induction  
 B. DC                              D. Perpetual motion

3) How many tone-arms can be mounted on the Solution?

- A. 1                                C. 3  
 B. 2                                D. 5

4) How does the VPI remove rubbish from the groove?

- A. Vacuum suction          C. Sand blasting  
 B. Magnetism                  D. Eviction notice

5) What is the VPI record cleaner called?

- A. TV21                          C. HW16.5  
 B. Rambo-4x4                  D. The groover

## COMPETITION VERSE (obligatory)

Complete the following in fewer than 30 words

*This month, we've a couple of spinners*

*So pause now, and reflect - if*

*You're amongst the lucky winners,*

*Will you keep things in perspective. . ?*

## COMPETITION WINNERS

February's prizes have been snapped up thus: Victor Story of Middlesborough nets the Musical Fidelity X-Ray CD player; Mick Page of Birmingham takes home the Black Box loudspeaker stands; Mr R. Heyward of Herts. is the new owner of a Sonneteer Sedley phono stage; Andrew Chapman of Surrey collects the Midiman Flying Calf DAC. **Congratulations!**

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# MAGNETIC PERSONALITY?

The competition is stiff, so how does the Alpha, Clearaudio's entry-level MM, shape up? Simon Pope rides the groove.

The current World team may unfortunately be of the last generation to grow up taking vinyl for granted. In our search for current products to keep the black stuff spinning, we came across the Alpha MM cartridge from Clearaudio, whose stylish perspex Solution turntable we reviewed in our February issue. Once you've struggled through the chic plastic pyramid of a box, you can appreciate the hefty construction (10gms!) - for a change the metal body is real and not a tin-foil casing.

For its first spin, the Alpha was screwed to a Linn Akito arm on an Axis turntable. No colour-coding on the output pins, unfortunately, so it took a few more minutes than usual to set up. Ready to Rock, I put on my new reference Dance LP, Talvin Singh's OK with its esoteric mixture of Indian Classical music and Drum 'n' Bass.

This is a superbly-engineered album with high levels cut into its grooves. The Alpha immediately picked up the detail in the production, the acoustic contribution from the Madras Philharmonic Orchestra tidily presented alongside clear strings and precise mechanical syncopation. In the bass the Clearaudio didn't dig as deep as the Goldring 1042 or the DNM Mica, but it remained musical.

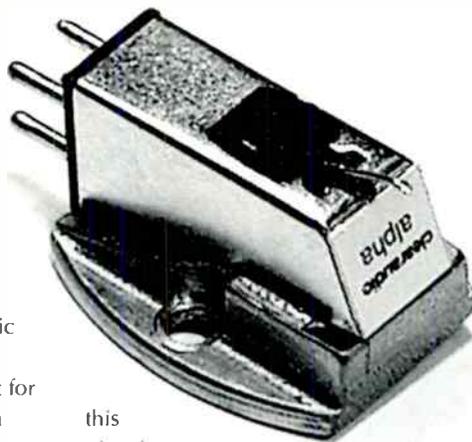
Moving on to Paul Weller's greatest hits produced a rather different outcome. This poorly-mastered record has eight tracks per side. The result? Lower levels due to tighter groove spacing, which meant

the Alpha had a hard time teasing subtleties from the vinyl. While vocals and guitars were detailed the rest of the musical canvas was a bit of a blur. Rhythm lost out too, with the kick-drum late in delivering its thud and cymbals a little too splashy for comfort.

Kleiber's Vienna Philharmonic recording of Brahms' Fourth Symphony on DG is an acid test for pick-ups, and it found the Alpha floundering a little on rhythmic grounds. This pressing contains some of the best playing and musicianship ever committed to disc, although admittedly its engineering is not the most polished. The woodwind and rich Vienna strings were fine, but the overall performance lacked essential drive, the strings attack and timpani that spark of precision.

A session with the slightly more sympathetic combination of an LP12/SME 3009 showed a marked improvement. However, a failing which had been a mere background feature before now became more prominent. The upper registers of violins picked up a steely edge that stood in stark contrast to the triangle, which was bright, open and natural. Bass was again light, but massive extension is not a prerequisite with this music anyway.

Crystallising the Alpha's way with Classical LPs was the Borodin Quartet performing Borodin's Second String Quartet. The tonal balance was on the cool, light side and lacked the warmth to highlight



this piece's brooding melancholy. This isn't an obstacle with the academic precision of the likes of Webern, but it doesn't cut the mustard on Brahms or Borodin.

Picking up some Pop with the Depeche Mode singles compilation I encountered a less flabby bass response. The tight electronic rhythms pounded out with verve but the vocals, although prominent, were sibilant in places. This became slightly annoying after a while, but at least my feet were still tapping away.

The Alpha is by no means a bad cartridge, it just isn't too fond of poor recordings. The imaging and soundstaging have decent focus and openness, and there's a certain amount of finesse with more delicate recordings. However the Clearaudio's occasionally clinical sound can fail to communicate musically, especially with Classical fare. In the face of competition from Goldring's 1042 at £120 and Reson's Mica at £135, the Alpha comes close but no cigar●

Clearaudio Alpha  
£130

Absolute Analogue  
PO Box 1532,  
Fordingbridge,  
Hants. SP6 1SB  
Tel: 01425 654488

## WORLD VERDICT



Tends to sound quite hard at the top, but imaging and detail are good. Best in a warm system.

Measured Performance  
see page 111

# HIGH END OPEN WEEK

VINYL AND CD : NO HOME CINEMA : JUST PURE HI-FI

Mon 5th April	Tue 6th April	Wed 7th April	Thu 8th April	Fri 9th April	Sat 10th April
DNM amplifiers	ATC amplifiers and/or	EAR YOSHINO and FINAL amplifiers	TRILOGY amplifiers	PASS LABS amplifiers	CAT preamplifier
REHDEKO loudspeakers	ATC active loudspeakers	AVANTGARDE loudspeakers	AUDIO PHYSIC loudspeakers	HALES and JM LAB loudspeakers	PASS LABS power amplifier
					EGGLESTON loudspeakers

The following source components will be available for all days: **AUDIO SYNTHESIS (DAX DECADE) BAT MORCH PASS LABS HELIOS (STARGATE) (cd), VERDIER MORCH CLEARAUDIO GRAHAM TRANSFIGURATION AMAZON (vinyl).**

You are welcome to turn up whenever you like (between 11am and 7pm), no booking necessary, with your favourite cds and records, to just enjoy yourself. Whenever possible, there will be a manufacturer's or distributor's representative on hand to give you detailed information, as well as the usual help from Les and Pete.

ARS Acoustica ATC Audio Physic Audio Synthesis Avantgarde Balanced Audio Technology Clearaudio DNM EAR Yoshino Eggleston Works Electrocompaniet Final Graaf Hales Helios JM Lab Living Voice Morch Musical Fidelity Nordost Pass Labs Rega Rehdeko Stax Sugden Trilogy Unison Research Van den Hul Yamamura Churchill



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*Walrus*



# 320 NAD OUT

Can history repeat itself with a new NAD budget amp to frighten costlier rivals?  
Richard White is our man on the scene.

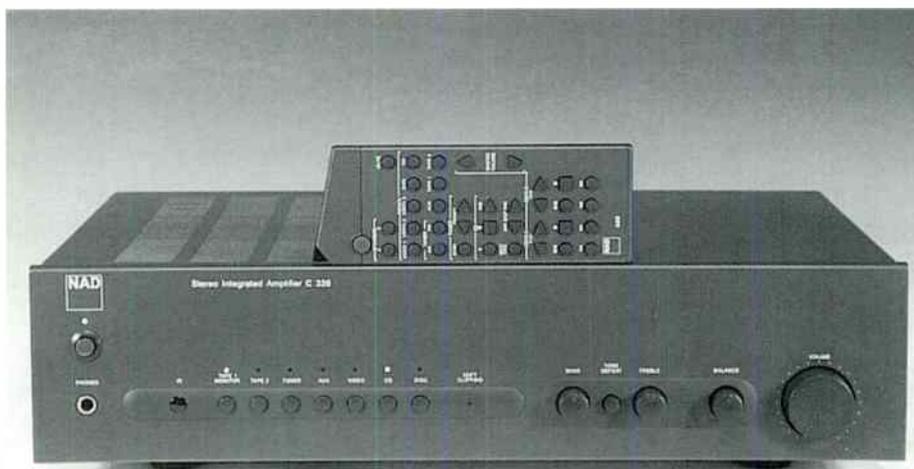
When it first appeared in 1978 the NAD 3020 quickly gained an enviable reputation as an inexpensive integrated with a difference; in short, it was a fine product at a decent price. With its handy seperable pre and power sections, tone and balance controls as well as an output power indicator, the 3020 quickly won itself friends in all quarters.

As the years have rolled by, NAD has found that imitation may be flattering, but elbow room is becoming a little less easy to find. Although the 3020 has been steadily updated, it is fair to say that the splash of glory kicked up by the original has quietened to a ripple of approval.

To give this situation a prod in the right direction, NAD have produced the C320, an integrated amplifier which, according to the press release, bears the mantle of "the 3020 of the Millenium". The updated layout springs few surprises - the grey fascia has weathered too many changes of fashion to be lightly abandoned. There is input provision for CD, Tuner, two Tape inputs (one monitored), Video, the inevitable Aux and Disc. For one glorious moment I took the last to be a phono stage, but remembering NAD's PPI equaliser, I realized this was another line input.

Treble and bass controls are still provided in addition to the Pre Out and Power In links. The manufacturers claim 40watts per channel driving an 8ohm load so, although not bursting with power, the C320 should provide a comfortable reserve of power when coupled to moderately sensitive loudspeakers (>88dB/1m).

Although not exactly the zenith of recordings, the Naxos CD of Haydn's



Prussian Quartets was given a very fair hearing by the C320. When not among friends, this disc can sound painfully brash, and since string music is a hanging judge for the midrange, I was pleased to find the NAD laying down the foundations solidly, without painful accentuations in the treble.

Diana Krall was set to woo with the aid of some old, Jazzy dinner music favourites. This Impulse CD has some odd equalization in places but the double-bass is recorded with a clarity the NAD capitalised on - there were no booming 'car stereo' effects or one-note phenomena. Although the rhythm guitar remained well back in the mix, the amp made no bones about bringing out its essential (and intentional) blandness. The icing on the cake was the smouldering huskiness of Ms Krall's voice, the NAD's controlled top-end never pushing it towards dry roughness.

As my acquaintance with the C320 deepened, there was evidence of real refinement in places. The only stumbling block here is that it could lead you to forget the NAD's modest price and instead unfairly find it a bit lacking compared to

more expensive machinery.

Our old friend Eric Bibb on Opus 3 obliged with 'Walking Up To Heaven'. While I've heard weightier double-bass, the midrange and lower treble proved once again that the NAD remained an engagingly musical performer when handling pizzicato mandolin and mouth organ obligati.

With my earplugs in place, I travelled around the volume control to way beyond normal listening levels but found that there was plenty of power to spare. Adding some bass boost lent a touch more chunkiness without spoiling the balance of the recording. This could be beneficial if you're listening late at night and don't want the neighbours banging on your door.

NAD's C320 is an unflappable all-rounder at a very tempting price. Even dedicated high-end fans might fare worse if they're after a second system. As for the not so comfortably off, this amplifier has many virtues and no major vices. Whether it will have the impact of its illustrious predecessor remains to be seen: making a budget amplifier worth its sonic salt is a good trick if you can do it at all, let alone twice.

NAD C320 £199.90

NAD Marketing Ltd  
Unit 15, Faraday Road,  
Aylesbury,  
Bucks. HP19 3RY  
Tel: 01296 482017

## WORLD VERDICT



The C320 fills the boots of the famous 3020 in fine style thanks to its balanced, natural character.

Measured Performance  
see p111

## Jecklin float and Ergo headphones ... a revolution in sound

Sonically quite exceptional, for my money these are the best headphones in the review. (Hi-Fi choice, England)\*\*\*

Distinguishing the Ergo AMT from my reference AKG 1000 (costing twice as much) was an extremely difficult task. (Audio USA) \*\*\*

Ergonomic headphone without any pressure, ideal for long term listening. Exceptional clean and transparent sound. (Sound Switzerland) \*\*\*



The Ergo AMT can be viewed like the best combination between a dynamic headphone and electrostatic, with a total absence of distortion and a complete balance in its timbre. (Audio Review Italy). \*\*

Hours of listening pleasure for everyone without the typical headphone fatigue. (New HiFi Sound, Australia) \*\*\*

The balanced advantages and excellent sound image make the J Float 2, without question, the headphone I would like for myself. (Audio Ideas, Canada) \*\*

Their lightweight comfort and effortless sound make the Float 2 a joy to use (What Hi-Fi, England).

Ergo and Float headphones present a natural soundfield to the ear, the unique construction ensuring no direct contact with the ear, unlike conventional headphones that can deprive the human of its natural function by pressing on and distorting the outer ear.

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# THE CAGED BIRD SINGS

Jon Marks steps out with Canary Audio's new 601 Mk2 valve pre-amplifier.

While I'm a fully-paid-up member of the valve appreciation society, there are times when I find myself wishing for the crisp insight and incision of well-engineered solid-state to counterbalance the likeable but oft-overdone sweetness so frequently a part of valve pre and power amplifiers. Some companies throw a little odd-order distortion into the recipe to sharpen the taste, others reach their goal by carefully selecting components with a bright signature. In most cases, the latter boils down to capacitors and resistors; for Canary, the volume control, like the Sprague and MultiCap caps, is also fair game. What the lucid, self-effacing TKD stepped attenuator fitted to the 601 Mk2 allows it to do is produce a sound akin to the best of both thermionic and silicon worlds.

The Canary teamed up with sources from Pioneer (a modified DV-505 DVD player) and Trio (L-07D direct-drive turntable, SME V tone-arm and DNM Lexe MC). Ahead of the Magneplanar SMGa panel loudspeakers were Musical Fidelity's X-A200 monoblocs working through 6in. runs of QED Profile Silver 12 loudspeaker cable.

One sure musical grilling most valve pres fail is Dance music followed by Dub Reggae. The treble may shimmer and the midrange may be pure, but the bass which underpins both normally lacks punch, drive and extension. The result is tunes which sound as though they're trying to run through treacle. Not so with the Canary, which can hammer out basslines with speed and power. Axiom Dub's *Mysteries Of Creation* album along with Asian Dub Foundation's *Rafi's Revenge* and System 7's *Golden Section* all made it through the 601 sounding taut, crisp but very smooth. Even Soundgarden's

thrasher Metal moments were controlled and taut, the Canary demonstrating a knack for peering deep into the individual strands of a recording yet still presenting this wealth of detail as a cohesive whole.

A very prime example of this was Sheryl Crow's *Tuesday Night Music Club* album. Most pre-amps at this price homogenise the tracks on this CD. The 601 made it very obvious who had been doing what at the controls and how the band had been mic'd up - some numbers were flat as beer mats in soundstaging and imaging where others had a much more life-like ambience.

The Canary's musicality was just as convincing with the Palladian Ensemble's *Trios For Four* on Linn Records, as it captured the harmonic signatures and tonal characters of the recorder, violin, viola da Gamba and archlute with ease. Its dynamic speed matched with a freedom from hardness or spit were the main qualities contributing to an enjoyable and highly expressive performance.

It was orchestral recordings such as Elgar's violin concerto (L.P.O. under Vernon Handley with Nigel Kennedy) where the scale this pre-amp is capable of portraying came to light. The whole orchestra lay spread out between and behind the SMGas, the 601 Mk2 giving competitors a run for their money in the way it relayed the feeling of open space in the venue. Elgar said of this work, "It's good! Awfully emotional, too emotional, but I love it." These words are put into context by the Canary's natural, fluid presentation.

The 601 Mk2 owes a great deal of its transparency and control to the TKD stepped attenuator and its valve complement (two Sovtek 6922s and an RCA 6CG7). Unfortunately, therein lay a problem with our sample.



Canary 601 Mk2 £1600

Audio Connoisseurs  
Unit 7, Claremont  
Buildings,  
Old Clatterbridge Road,  
Bebington,  
Wirral,  
Merseyside L63 4JB  
Tel: 0151 343 0007

The designers of the amp have chosen a high-gain line stage for its sonic prowess. With high output sources like CD players, and power amps of average sensitivities (0.7V-1V), there's little room for manoeuvre on the volume front. With the DV-505, I rarely went past step three on Rock and step 5 on Classical. The situation wasn't quite so bad with phono stages and tuners, whose outputs are often in the 0.3V to 0.5V area. However, if you were driving Lowther 'speakers with Leak monoblocs, you could forget about the Canary - the first position on the TKD would see the cones forcibly ejected from their baskets. After a couple of phone calls to Audio Connoisseurs, it now transpires that the manufacturers will be adding input attenuation to all of the 601s destined for the UK's shores.

At £1600 the Canary is a serious contender for adding to your shopping list. Cheap it isn't, but the internal construction is the best I've seen at the price and the TKD is a storming device. If you're searching for a pre-amp which mixes valve sweetness with grip and control, put the 601 on your list ●

## WORLD VERDICT



Very musical and very revealing, the 601 Mk2 makes a strong case for itself.

Measured Performance  
see p111

# Letter of the Month

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

## MILLENNIUM MAN

I read with interest NK's article on the MPMAN portable MP3 device. Along with the new APS camera system, my 20th-century time capsule will include this device. My two great passions are hi-fi and computers, in that order. I can therefore view the MPMAN debate from both sides of the fence.

The main claim of the record companies is that the MPMAN is a recording device and thus will affect corporate profitability. However, cassettes, DAT, DCC and MiniDisc have furnished us with this ability for years. They also say the Internet supplies

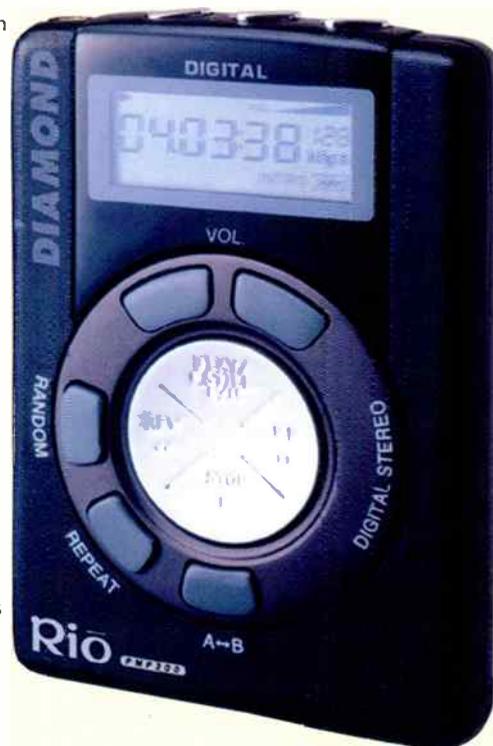
material for download over which no control exists in distribution.

To counter this, three points come to mind; (a) The Internet is slow, thus downloads can be costly, even with compression. It would be more cost-effective to buy the required disc.

(b) I have viewed the MP3 sites and sampled the music available. In short, they are unlikely to tempt the readership of hi-fi magazines.

(c) The Win/Win/Win situation. New recording artists need exposure; without distribution this cannot happen. Groups see the Internet as a low-cost distribution network for material. With much-needed exposure, this encourages an interest first from the buying public and subsequently from the record companies. These then arrange recording contracts, sign the bands up and promote their music to the general public. The groups get a wider audience, the public receives more music and the record companies make more money. They discover groups with little effort.

The upshot of MP3 technology is this; people surf the Net, people record music, but people also covet. As a result, LPs and CDs will continue to be bought. The benefits are that MP3 technology is portable, solid-state, non-skip and easy on the batteries. Yes, the situation in the



It remains to be seen exactly what effect on the music business portable MP3 devices will have.

music industry will change, but not on the time-scales that are mentioned in some quarters. I want to listen to music on the move, not destroy the livelihoods of Sony et al. Suffice to say I shall purchase an MPMAN before they are banned.

Terry Vassell  
London.

## WRITE & WIN WITH HI-FI WORLD!

Every letter we print wins a superb prize! On offer are the Chord Co. interconnects, Audio Electronics books, Ringmat Statmats, DNM Licon contact enhancer, DNM Reson 'speaker cable, Vivante LPs, Nimbus Records CD box-sets and a FREE subscription to Hi-Fi World for the best letter of the month! Every other month we are also giving away a DNM Mica cartridge worth £185 or a Musical Fidelity X-ACT DAC worth £130. Please write, fax or E-mail to Hi-Fi World Mail, Suite F29, Imex House, Kilburn Park Road, London NW6 5LF, Fax: 0171 328 1844 E-mail: edit@hi-fiworld.co.uk

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**STATMAT**

**BETHOVEN**

## FINALLY BATTERED

I enjoyed your review of the Final Music-5 and Music-6 in the February issue very much, but you didn't mention how long the dry cells last. This I think is important. However it is very clear that a simple amplifier can work very well indeed and I was wondering what could be achieved with your chip amp in Supplement 27 with high-quality components and battery power.

With the proposal to connect homes to the Internet via the already noisy mains, it may well be worth investigating battery power for sources and becoming totally independent.

Perhaps with turntables we could go back to clockwork and save the expense of batteries, but a quiet drive unit may well be too difficult and expensive to produce economically. Nevertheless such a unit could be mounted outboard and belt driven in the usual way. A special version could even be made for Garrards and Thorens with their idler drives.

**Aaron Proctor**  
Scunthorpe.

*Apologies for the omission as to battery life, but then any figures will vary widely depending on loudspeaker impedance, efficiency and volume levels. If the Finals are driving loudspeakers like Thomas Transducers' Virtuoso Gold horns, because these are so sensitive battery life could well hit 60 hours. Into a 4ohm load of only 85dB-87dB you're more likely to get around 20 hours.*

## SHORT-SITED

This query doesn't concern an upgrade as such but relates to equipment siting.

I have just moved house and the room in which the hi-fi is to be located has a sprung timber floor, under which there are no timber joists, only 2in. block polystyrene. The floor actually floats on the polystyrene and isn't fixed at any point. The result is that the floor is 'live' and footfalls are magnified many times - quite alarming amounts of movement can be detected.

Obviously this situation will have to be improved before I install my equipment. Unfortunately the building regulations won't allow a traditional floor



Guinea power is one possible answer to the problem of keeping that platter turning. . .

*The Finals prove that non-rechargeable batteries can sound extremely good, but they're not a practical proposition for higher-power amplifiers. The chip amp we built in Supplement 27 can be made to sound superb seeing as the parts count is very low, which means it can be Vishay'd and Black Gated without taking out a mortgage. Connect two pairs of car batteries to form +/-24V rails as the PSU and the results are sure to surprise. Just beware of completely discharging the car batteries as they're not intended to be deep-cycled. Instead, they should be topped up after use each day.*

*Batteries are equally effective with sources, as I've found out with DC-motor turntables and CD players.*

*Clockwork, hmmm; best*

*reserved for children's toys, methinks. Mechanical speed control would be a headache, and there would be plenty of noise too. By far the best way to optimise the performance of a deck with an AC motor is to plug it into either a huge mains transformer or an AC synthesiser. Slate in their Powerhouse offer one of these. Slightly more comprehensive designs with distortion meters and an output guaranteed to +/-1V are produced by Accuphase, but the 500VA version costs a not inconsiderable £3500. Still, when you consider you could probably run all your sources and a pre-amp or small integrated from it, it doesn't look so expensive. JM*

**Keep the grunge from your connections with a free bottle of DNM's Licon contact enhancer.**

to be installed, so the situation may have to remain.

The walls are constructed in a similar way with brickwork on the outer skin, then a cavity, then plasterboard. How will these methods of construction influence the overall sound in my listening room?

My first thought is to use a wall shelf for my turntable to lift it clear of the floor. As I work in the building trade I won't have any difficulty fixing into the brickwork behind the plasterboard, but I am concerned that the plasterboard may well resonate and influence the turntable.

I had in mind to try to de-couple the

shelf from the wall by using perhaps a squash-ball cut in half, and locate this around the point of fixing. If a squash ball is not ideal, perhaps you could suggest an alternative.

Would it be necessary to locate all my equipment in this way, bearing in mind that the CD player, amps, etc aren't as susceptible to this problem as the turntable?

To be honest the movement around the periphery of the room isn't as bad as it is at the centre. Perhaps locating the equipment tables on paving slabs or the like with cones or spikes might do this trick (except of course for the turntable).

# PURITY of form

# PURITY of function



## ARIA S2

by Unison Research

Combining styling of classic elegance with a sound both pure and natural, ARIA S2 has an unbeatable pedigree. Electronic design to reference standard is by Giovanni Sacchetti, and includes pure silver circuitry throughout. Appearance design is by Italy's top audio stylist Claudio Chiarello. Made for the serious music-lover, the S2 gives you the enchanting sound of a fine single-ended valve amplifier in a sensibly-powered and sensibly-priced package. Check it out soon at your nearest UKD stockist. You'll be enthralled.

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or visit our website: [www.ukd.co.uk](http://www.ukd.co.uk)

All my gear usually rests on specialist tables - Target and Mana. At my previous address I was fortunate enough to have a concrete floor so none of these problems has arisen before.

J. Watson  
Address Not Provided.

*Given the nature of the problems, I tend to agree that wall fixing is your best route for components. Brick is a superb material for non-resonance but has a much lower absorption co-efficient than plasterboard so, to get the best of both worlds, I should anchor the structure to the brick but spread the load onto the plasterboard.*

*Anyone for squash? Not particularly! Let's examine the required function of any game-type ball. The necessary feature, whether it's for soccer, squash or, for that matter billiards, is to store energy and release it quickly. This is the last thing you want for a*

*decoupling medium. To be of any use, an absorbent needs to waste as much energy as possible. This is why a plastic bag filled with dry sand is such an excellent economy measure: each grain has to be set in motion individually and, since each will impinge upon other grains, the damping works as a chain reaction in reverse. Lightweight it isn't, but if you're keener on results than on weight saving, give it a go!*

*If you don't fancy such Scroogesque measures, there's quite a lot of wonder plastics which are specifically designed to absorb kinetic energy. Sorbothane is perhaps the best known, but Astrosorb is another. The uncanny thing about these materials is that a ball made from them, dropped onto a concrete floor, hardly bounces at all.*

*The paving-slab idea is probably your best bet for loudspeakers. Some of the colours*



If all else fails, it might be worth taking a leaf out of the Building Research Station's book!

*available are quite decor-friendly and unobjectionable if discreetly placed. It is necessary to use enough weight compared with the 'speaker to avoid setting up what could be a second resonant system between your floor and the loudspeaker. RMW*

One more step in the right direction - a pair of Siren interconnects from The Chord Company.

## BOTTLE BANKING

I have an Oracle Alexandria MkIII turntable, Rega RB300 arm and Shure V-ST V which feed an Audio Innovations 500 integrated valve amplifier and Diamond Acoustics loudspeakers. Could you please help me with the following questions:

- 1) The cartridge and replacement stylus are no longer available. Should I replace them with a DNM Mica?
- 2) Would it be worthwhile having the arm modified by Origin Live?
- 3) The valves in the amplifier will need replacing soon. Can I obtain better sound by paying a little more for valves?
- 4) You will note that although my system was only purchased seven years ago, most of it is no longer available. What kind of time span do I have before replacement parts are unobtainable?

Allan Keates  
East Sussex.

*If you're happy with the Shure, you might like to try one of the stylus specialists who advertise in our pages before you give up on it. They may very well have some new/old*

*stock. Failing that, the Mica should quite happily partner your Rega.*

*The Origin Live modifications can offer considerable sonic benefits. An upgrade arrangement I have taken a shine to is the Black Plastic (tel: 01902 751861) replacement counterweight which is*



Fresh valves in place of faded can often add much needed sparkle to the sound of an amp.

*designed to bring down the centre of gravity of the arm. This involves no structural modifications other than unscrewing the old stub and screwing in the new one. The Black Plastic arrangement sells for £40.*

*Valves and their contribution to*

*the sound are a subject of some controversy. In the old days it was recommended you change valves about once a year. In my experience there is still something to be said for this approach: the freshness a new set can impart to an amplifier still surprises me.*

*Premium valves have a good many sonic merits but they do make you hesitate before discarding them. Horrible to relate, but I use valves as they come to hand. If a cheap-and-cheerful example sounds rough, especially in the input stages, I change it for a better one.*

*I do not think we need worry about vinyl for the foreseeable future - 78rpm records mainly ceased production over 30 years ago but, to date, I can't think of many serious difficulties you would encounter if you wanted to listen to them. Granted it's a specialist market, but there are people falling over themselves to sell replacement motor springs, needles, etc. RMW*

For more on thermionic amplification, have a browse through John Linsley Hood's Audio Electronics.

# e-mail

Visit our website at  
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[edit@hi-fiworld.co.uk](mailto:edit@hi-fiworld.co.uk)

## ALL CHANGE, PLEASE

I was fortunate to inherit an audiophile's legacy and thus build up a system. All the equipment was bought in the mid-Seventies and spent around 15 years idle while the previous owner lived abroad. The equipment consists of the following: Quad 33 pre and tuner; Quad 405 power amp; Linn LP12 with Grace arm and Stanton cartridge; IMF transmission line Reference monitors (MkIII).

I have had several years' use out of the equipment as it stands but am considering updating it. In particular I am interested in replacing the IMFs, which really cannot be accommodated in my small London flat (given their fabulous bass extension). I'm not necessarily looking for small 'speakers - floor or stand mounted would be fine - it's just that the IMFs are extremely large. I also want to replace the pre-amp with something that is more appropriate for digital sources (I have DAT and CD) bearing in mind that I have no intention of parting from the Sondek.

What could I expect to raise by



Castle's Edens sound every bit as good as they look.

selling the IMFs second-hand (they are in near-mint condition) and could this amount fund a switch to another pair of 'speakers and a decent pre-amp.

Jim Copperthwaite  
[jim@adsoft.com](mailto:jim@adsoft.com)

*I believe there's actually a number*

*of changes which would boost your system's sound. It's hard to put a price on the IMFs as a second-hand buy, but let's assume you can rustle up roughly £500 for them.*

*On the loudspeaker front there are Castle's Eden stand mounts (£450). This doesn't give you much leeway on the pre-amp front. To be perfectly frank, I'd stick with the 33 and go for a Rotel RQ-970BX phono stage. If you're short of inputs, an external switchbox would be the answer.*

*When further funds permit, have the 405 serviced by Quad and swap the Grace for either an Origin Live-modified Rega RB250 or a second-hand Ittok. Replacing your cartridge's stylus would probably be a wise move too. JM*

Partner a new phono stage with these free Siren interconnects from The Chord Company.

## WHITHER WALLET?

Please could you give some of your valuable advice. My current set-up comprises a Pioneer PD-S703 CD player, Quad 34 and 306 amps and Music Technology Harrier 'speakers. My 'speaker cable is QED Qudos and interconnects are Ixos 104. I also have a Rega Planar 3 and a Nakamichi BX-300E, which I am more than happy with.

I am thinking of upgrading my CD player or loudspeakers but I'm not really sure where the weak spot in the system is. I find that the 'speakers don't really like being played at moderate volumes. The music I favour is mainly Rock and Indie but everything else does get played.

Is it worth changing the 306 to a pair of Quad IIs? My gut feeling is that the Harriers may need some extra grunt behind them. I would also consider



A pair of 306 power amps (one seen here below the 34 pre and FM4 tuner) would be fine for bi-amping.

bi-wiring. I have a budget of £500-£1000 and am quite happy to buy second-hand.

David Walford  
[DJWalford@aol.com](mailto:DJWalford@aol.com)

*To be honest, the last thing you*

*should do is go for a pair of Quad II valve amps if you're after more grunt - these venerable monoblocs only put out about 15watts (the 306 manages 50watts into 8ohms).*

*You could buy another 306 for bi-amping new loudspeakers such as KEF's Q35 floorstanders. In this arrangement, you can maximise sound quality by having one 306 for each channel rather than splitting them across the mid/bass and tweeter units. This will also allow you to keep loudspeaker cabling very short.*

*As for the CD player, Marantz's £400 CD-63 KI-S is still the one to beat. JM*

Amplify your knowledge of hi-fi with a free copy of John Linsley Hood's Audio Electronics.

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

**MORE FROM MARANTZ**

I currently have a Marantz CD-94 CD player and a Pioneer A-400 amplifier driving Spondor Prelude 2/2 'speakers on Atacama SE24 stands. The interconnect and 'speaker cables are from The Chord Company and the 'speakers are bi-wired.

The system is quite musical and sounds fine on simple pieces but lacks detail and cohesion when more complicated music is played. The treble also lacks control. I want to make changes that will bring the music into sharper focus and produce more life-like performances.

I suspect that the weaknesses in the system are the amplifier and the internal DAC in the CD-94, so I was considering different amplification and an external DAC (you've previously suggested that the CD-94 works well as a transport). I'd also like to be able to purchase a vinyl source later and have a simple upgrade path.

I mainly listen to Rock and female vocals but also play Jazz and Classical

music. My budget is £1000 which I hope will be sufficient to make a significant improvement, especially if I consider second-hand equipment.

**Geoff Pownall**  
pownalls@mcmail.com



It may be an oldie but it's still a goldie - Marantz's heavyweight CD-94 CD player.

*As you say, if you're prepared to go second-hand, you could radically improve your set-up. A pair of Musical Fidelity P170 power amps (around £250 each) bi-amping the Spondors would produce a much tighter grip on music than a single A-400.*

*Seeing as you only have one CD source, Danish Audio Connect's CT1 stepped attenuator (£106 from AudioCom, tel: ) would make a superbly transparent passive pre-amp. Should you prefer active instead, a second-hand DPA 50S (approx £350) would mark another massive upgrade over the Pioneer.*

*With the money you have left over, get your Marantz 'clocked'. We hope to be doing a group test of after-market CD player master clocks in a forthcoming Supplement, but if you can't wait, Trichord (tel: 01684 573524), AudioCom and Acoustic Precision (tel: 01443 833570) are the ones to speak to. It may be a crude tweak, but bolting a lead sheet to the CD-94's base-plate is apparently highly effective. JM*

Discover more of your Marantz's hidden promise with a Ringmat Statmat.

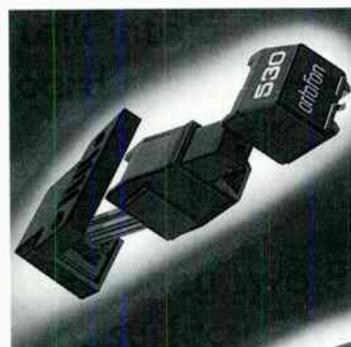
**GETTING THE NEEDLE**

I own a turntable which is based around a Thorens motor unit of unknown origin built into a home-made plinth cut out of solid 60mm plywood. The arm is a Linn Basik LVX and the cartridge A&R Cambridge's P77.

I was, until recently, looking for a replacement stylus but I now suspect that I could do better than retain this cartridge. Do you have any advice on what replacement I might try? I listen mainly to Fusion, Funk, Jazz and occasionally Rock.

**Shaun Onverwacht**  
sonverwacht@ziton.com

*One way of starting cheap without cutting off your cartridge upgrade path is Goldring's 10 series. The most basic model, the 1012, costs £85 but can be boosted to the level of the assured*



Ortofon's 500 range of MMs contains some competent budget performers.

*1042 with a better stylus.*

*If your budget can't quite stretch to the 1012, then Ortofon's 500 series begins with the 510 at £40 and ends on the 540 at £140. JM*

Keep your contacts in shape with a dose of DNM's Licon enhancer.

**BASS ON A DIET**

My current system is a Linn LP12/Valhalla with Cirkus bearing, Ittok LVII arm and Klyde MC. My Linn Majik amplifier and Tukan 'speakers are wall-mounted with Linn Brakits. Other sources are an Arcam Alpha Plus CD player and Creek CAS3040 tuner.

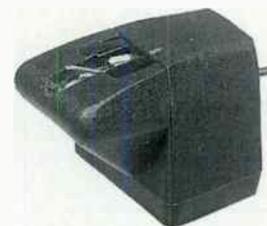
The Klyde was a recent purchase and replaced an Ortofon MC 25FL. However, I am unhappy with the sound of the Klyde which, whilst more full-bodied than the Ortofon, sounds a lot slower and tonally dull. My local dealer has recommended changing to a van den Hul MC10. I can't afford to make any more expensive

mistakes but desperately need to make the system more listenable.

Is it really necessary to spend over £800 simply to get a tonally-balanced sound? Would I be better off trying something like a DNM Mica?

**Steve White**  
steve.white7@virgin.net

*Cartridges which have an even*



One MM which can show cheap MCs a thing or two is DNM's Mica.

*tonal balance can indeed be had for as little as the DNM Mica's £135. Their £180 Rica is better still. It might also be worth investigating some of Dynavector's mid-price MCs with their solid-diamond cantilevers before you think about splashing out £800. JM*

One area where this free bottle of DNM Licon contact enhancer will work particularly well is cartridge pins and tags.



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## DELIVERING DYNAMICS

I have had my current system for over 10 years with the exception of the CD player. The line-up consists of an A&R A60, Heybrook HB1 Mk1, Roksan Xerxes and a Micromega Stage 1.

I have resisted upgrading until my finances changed and significantly better but affordable products appeared. I want to start by upgrading my amplifier and 'speakers. I am, however, constrained by my living room which is not large. I have a budget of £1500 to £2000.

I listen to a broad range of music, but I want a system which is dynamic and detailed. I was thinking of amplifiers such as the Anthem 1, John Shearpe Phase 2 Reference, Exposure XV Super or the Sonneteer Alabaster. As for 'speakers I am interested in the Kelly KT3, Castle Harlech, Triangle Zephyr and the Audiovector M1. Should I go for a pre/power or a good integrated? I also need a phono stage for my Xerxes.

**Jonathan Smith**

[Johnathan\\_Smith@novell.com](mailto:Johnathan_Smith@novell.com)

*Of the amps you mention, the Anthem 1 and Alabaster would both be reliable choices. I'd forget about the Kellys as their bass can be overpowering in small rooms. Instead, consider Epos' ES22s at £1200 and Roksan's Ojans at*

## SPEAKING THE LINGO

I am considering a new set of 'speakers for my system (Linn LP12, Ekos, Arkiv, Lingo, Linto, Naim 82, 250, a pair of Hi-caps and a CDi). My current 'speakers are Epos ES14s which I adore for their speed and attack. Although I would like to gain greater bass depth, I don't want to lose this dynamism.

I have considered bigger Epos, Naim and even Linn 'speakers but need a guide as to what else is out there. I am also concerned with the present situation with Epos closing.

**Pete Brackley**

[brackley@cwcom.net](mailto:brackley@cwcom.net)

*Epos' closure is a shame as they made some fine loudspeakers, including the ES22s which would probably suit your system down to*



Musical Fidelity's twin-can Nu-Vista pre-amp is one of the best of the breed.

*£1000. These two have deep but controlled bass. I suspect the Alabaster and ES22s would be the better combination.*

*An excellent alternative would be Harbeth's active DPM-1 Xpression! 'speakers fronted by a Musical Fidelity Nu-Vista pre-amp with its on-board phono*

*stage. This would offer the most transparent, dynamic sound.*

*King of HFW's current sub-£500 phono-stage list is the £400 Lehmann Audio Black Cube. JM*

You can stop worrying about interconnects with these Sirens from The Chord Company.

*the ground. You could try to buy a pair from a dealer who still has some for sale, but then servicing might be problematic. Having said that, 'speakers rarely need fixing and Epos is a respected company likely to find another owner soon.*

*Naim's Credos and Intros (from what we've measured and heard) will please some within the context of a Naim system but they're not the best transducers around.*

*Since you love the ES14s, why not consider a subwoofer. When set-up properly, a good one sounds surprisingly fast. REL (tel: 01656 768777) offer a range which runs from around £300 up to £4000. JM*

Squeeze the most from the digits read by your CDi with a Statmat from Ringmat.

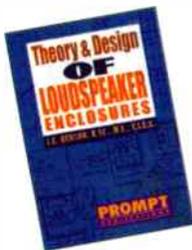


Whatever the future of Epos, the ES22s remain enjoyable and accomplished floorstanders.

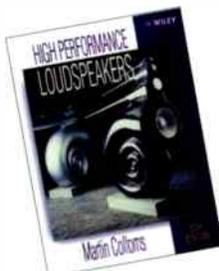
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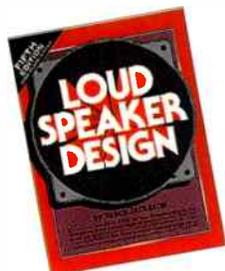
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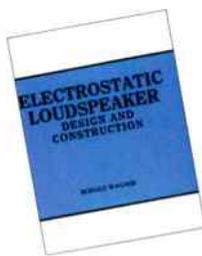
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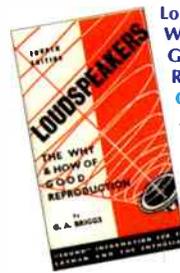
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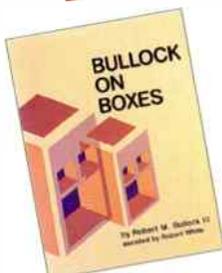
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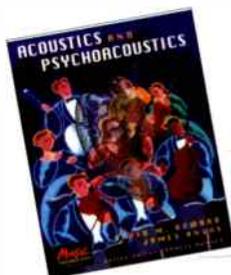
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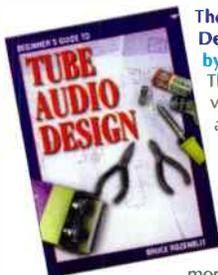
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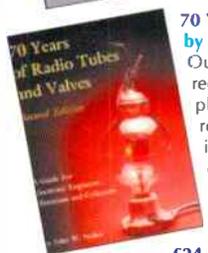
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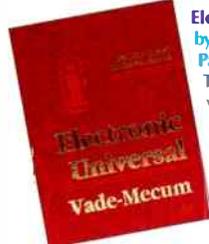
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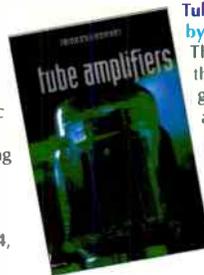
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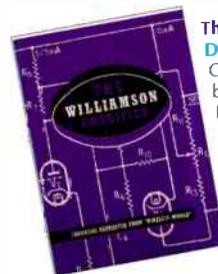


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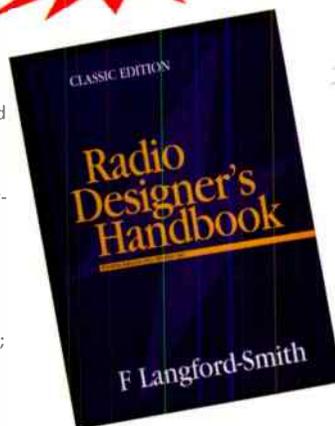
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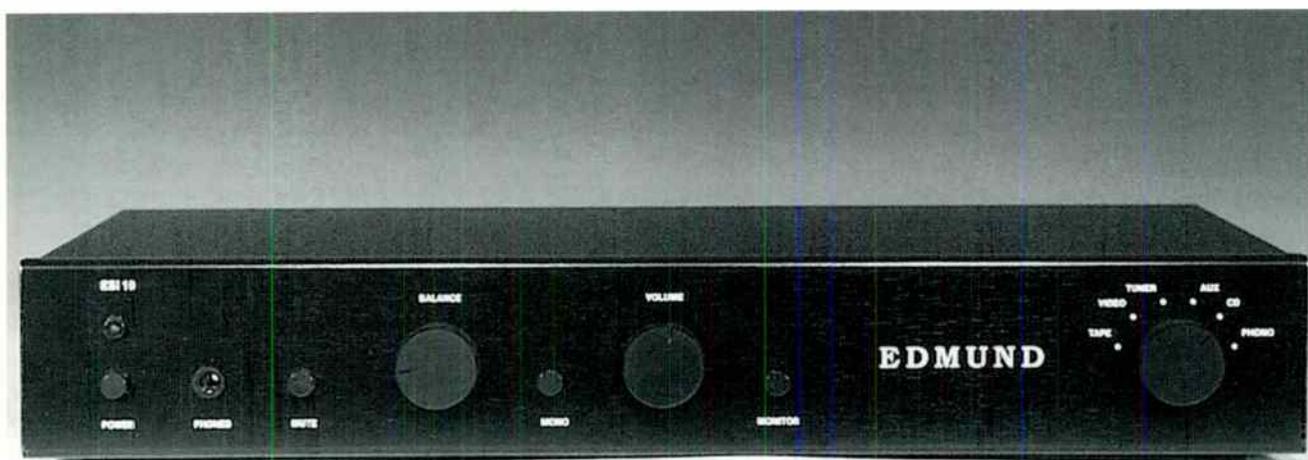
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# GLORIA EDMUNDI

Simon Pope samples the ESI 10 integrated amp from Edmund Audio, a new company under the REL umbrella.

**E**dmond is an unusual choice of name for an amplifier.

Aside from the villain in King Lear and a certain Mr. Blackadder on television, I can't call to mind that many examples. I don't even think that Edmund is a particularly Welsh name, though the amplifier hails from the headquarters of REL, famous for their subwoofers, down in Bridgend.

Unpacking the ESI 10 brings you face to face with a plain blue-black box (it's also available in chrome) of reasonably hefty build. There aren't that many £400 amplifiers that require genuine effort to lift them up, but this is one of them.

"Edmund" is emblazoned on the front in large capitals (lest you forget) where you'll find the three solid knobs for input selection, balance and volume. Along with these main controls come a mono button, tape monitor, mute switch and headphone socket. A little touch which separates the ESI 10 from the crowd is the inclusion of one of the ever-growing population of blue LEDs.

Another bonus which accrues for vinylphiles is the fact that, although normally a line-level device, the Edmund can be ordered with an MM/MC input at no extra cost, this replacing an auxiliary input.

Under the bonnet of this class

AB design nestle a pair of Darlington transistors in each channel's output stage. Star earthing is employed throughout and two of the controls, the volume and input selector, are from Alps. This hardware was put through its paces in a system where the loudspeakers were Heybrook Optimas and the sources a Roksan Caspian CD player and Linn LP12 with SME 3009 and DNM Mica.

Soundgarden's Superunknown album can be a tough cookie for some equipment, but the Edmund responded well to its tight, compressed production. The opening onslaught of 'Drown Me' had the taut cohesion necessary to keep it pounding along undiminished. All this blood and guts didn't obscure detail in quiet passages, however - I could make out the buzz from one of the cranked-up guitar amps easily.

The ESI 10 was at its most impressive handling the drum kit, where every complex pattern was crisp and unconfused. The amp never deteriorated into an unrecognisable mess; listening fatigue was noticeable by its absence.

Tchaikovsky's Fourth Symphony (played by the Oslo Philharmonic on Chandos Records) sounded rich in texture and emotion, especially

as the amplifier gradually burned in. The intricate and precise playing could possibly have been better highlighted, but the first movement retained just the right amount of melodrama. Bass was especially deep and well-pronounced despite the slightly coloured, heavy sound the Edmund can produce in the nether regions.

When it came to trying out the phono stage, an Audioweb LP demonstrated good stereo separation and imaging. The deep, Dub-style bass guitar was well-rounded and clear, but when joined by the rest of the instruments some of the detail was lost. This also applied to the vocals, which shrank back into the mix. In complete contrast, a 1964 recording of Schubert's String Trio played by the Vienna Philharmonic String Trio on the black disc was beautifully delicate, the violin tone untainted by any papery break-up.

The Edmund's bias towards bass and the meaty sound this leads to are better suited to Rock; Classical music can lose some of its spaciousness when travelling the same route. Then there's a small loss of detail on heavily-layered, complex music to consider as well. Nonetheless, all in all the Edmund is a welcome addition to the mid-price amp ranks.

Edmund Audio ESI 10  
£399.95

Edmund Audio  
North Road,  
Bridgend Industrial  
Estate,  
Bridgend,  
Mid-Glamorgan  
CF31 3TP  
Tel: 01656 768777

## WORLD VERDICT



Solid build and a big sound make the ESI 10 worthy of audition. Not the most transparent at the price.

Measured Performance  
see p111

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What subliminal advertising messages are contained in this apparently innocent sporting picture? T+A reveals all. Firstly the Audio Triax double-shielded coaxial cable has 330 silver OFC wire strands, unique to T+A. Secondly the CD 1220 is the first CD player in the world with a two-way converter. Thirdly 'Audio' magazine puts it in the five-figure price bracket, although it barely costs a third as much. Fourthly listen to both, that's the hammer!

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Noel Keywood

I was intrigued by literature for Lavardin's IT Reference integrated transistor amplifier reviewed this month. Their engineers claim to have discovered the reason why valve amplifiers sound "musical" and are commonly rated above solid-state amplifiers in high-quality audio systems. I have my own theories on all of this and at heart they differ little from Lavardin's.

If we can hear the sound of the material used in resistors, capacitors and cables, then there is no reason we should not be able to hear the difference between a valve and a transistor, especially since they differ so much. As designer Andy Grove points out, current density through a valve is but a fraction of that through a transistor since high powers can be supported without high currents.

A valve has no dielectric, nor any real insulation. It passes a current through a deep vacuum by the strangest method imaginable - charged particles are kept in order primarily by electric potentials. The glass of a valve is there to support the vacuum and the electrodes. That's vastly different from the high currents that flow through the minute junctions of a transistor. If a material is excited by the amount of current flowing through it - and current is electricity - then we should expect a valve to have less coloration than a transistor.

We know from loudspeaker research that colorations are to be found as minute signals in the time domain. When a loudspeaker cabinet panel resonates, it stores energy that is returned

later and heard as a 'wooden' signature. Such signals are very hard to measure, even though the ear hears them quite easily. They exist whilst the music is playing, where they are all but impossible to detect, but also reveal themselves for a short period just after the music stops as a small 'tail'. Capturing these tails by measurement reveals a complex pattern of resonant frequencies that go to make up that woody coloration.

I believe conductors behave in a similar manner, albeit on a much smaller scale. This applies to both valves and transistors. I am even haunted by a most peculiar effect that I cannot pin down conclusively. After using a valve amplifier I am sure I hear, for a brief moment, a sort of noisy, grainy swishing sound from a transistor amplifier when music plays through it. This noise can be heard for the briefest moment when music stops. Trouble is, it is so elusive that I hear it

other. I am reminded of cabinet coloration: although very obvious, it is difficult to measure. So what is it that Lavardin say?

"Memory distortion is the property that is the dominant factor in causing solid-state amplifiers to sound shrill and mechanical. Tube technology allows electrons to travel through a vacuum which causes no storage or memory effect, but solid-state amplifiers use silicon components which keep the trace of electrons flux that have gone through. Memory distortion occurs each time that the dynamic behaviour of a system is different to its static behaviour."

What Lavardin are saying is that an amplifier behaves differently when handling time-varying signals like music instead of non-varying test signals. This is not new nor widely disputed. I am glad to see someone trying to nail this phenomenon, though, using such a

*"If we can hear the sound of the material used in resistors, capacitors and cables, then there is no reason we should not be able to hear the difference between a valve and a transistor."*

only once. Then my hearing seems to adjust so I'm unable to hear it again. Until I change back to the valve amplifier that is, whereupon I notice deep, dark silences and a complete absence of grain to the music. If I listen to a valve amplifier against a transistor amplifier in a structured fashion then they do not seem to sound very different; it is at a subliminal level that their sound quality diverges.

A great problem in all this is that nothing can be measured. Harmonic distortions are not the cause - they do not enhance sound in the way some people think, and low-distortion valve amps do not sound more like transistor amps. But as Lavardin say, we only measure using steady tones, not music-like signals that vary all the time - and one is not the

theory, because my experience and love of valve amplifiers suggests other explanations are wide of the mark.

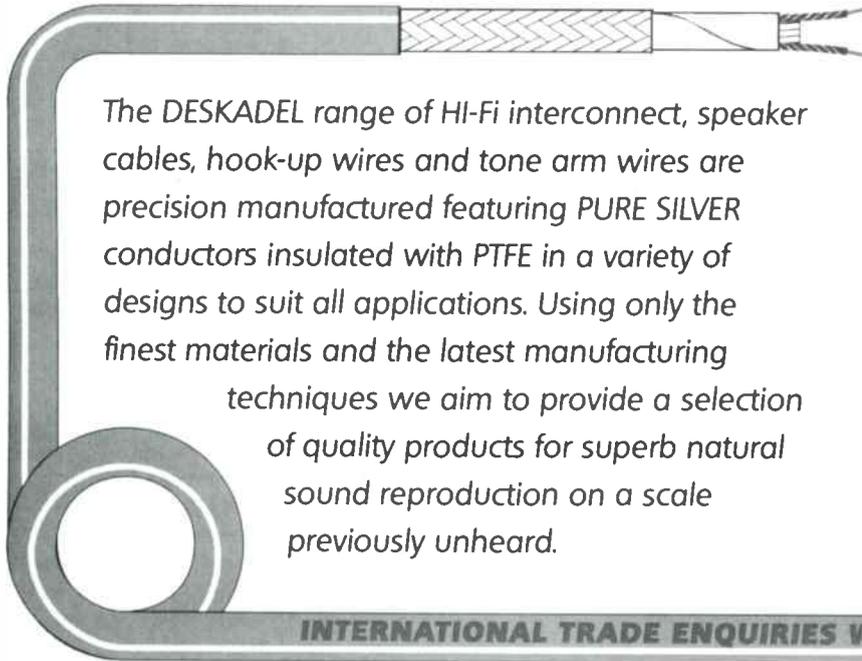
I am disappointed that Lavardin, after a lot of grand claims such as "we are glad at Lavardin Technologies to have full control on that which remains the mystery of tube musicality for previous audio designers" say nothing specific about how they tackle the time-domain problems they claim to identify, nor how they may be either measured or somehow gauged. But the IT Reference does offer something different and better in sound quality, and it measures unusually too. I hope in time we can get more substantial information from Lavardin on all this. The mystery of the valve sound is a mystery I would love to see solved ●



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# THULE THE FLAMES

Is Danish digitalia on a par with their tasty bacon? Simon Pope tucks in to Thule's CD100 CD player.

**T**hule was founded in 1989 by Danish electronic engineer Anders Thule. In the decade since its inception, the company's output has grown to the 12 components that now form the Spirit series. These include two CD players which fit snugly into the all-important (and very crowded) £600-£800 market, the CD100 at £600 and the CD150 with its balanced outputs and twin DACs at a £100 premium.

Internally there may be differences but both machines share the same sleek, black lines as the rest of the Spirits. Disconcertingly, all that adorns the metal fascia is a drawer, a red LED display and a lone button. Naturally a remote is included, but lose it and you could be limited in your control options. The single button opens and closes the drawer, sets the disc playing and jumps forward to the next track and, er, that's about it. All of the other commands are located on the remote.

With no power switch on its case, the CD100 automatically switches into standby mode after five minutes of inactivity. A touch of either the fascia or remote buttons will swing it back into action.

Turning digits into analogue with-in is a Philips CDM12.4 transport and CD7 digital servo; the circuit and software are Thule's own. A Burr-Brown PCM 1710 converter with multi-level Delta/Sigma completes the package.

Opening the Thule's trial by disc was the 'Hardbag' House of Sasha and John Digweed. The Dane furnished a smooth and sophisticated overall sound, maintaining a certain foot-tappability in place of the all-out, rave-in-your-front-room presentation this album normally evinces from more adrenal players. This wasn't altogether to the bad as the CD100 allowed me to actually lis-



ten to the music rather than being bludgeoned by it, and what it lacked in out-and-out impact it made up for in refinement. My only gripe was that after 30 minutes or so my attention was drifting as the Thule's unfussed calm failed to gel with club-style compositions.

More guitar-based material in the shape of New Order's Movement album found the Spirit responding with abundant detail and a commendably uncoloured interpretation. This better suited NO's rather clinical production as the CD100 brought warmth to what is deliberately cold and calculated music.

Starting a Classical session with the first act of Wagner's Die Walkure played by the Vienna Philharmonic, the Spirit leapt straight into the exciting opening string writing with gusto. The reproduction of the aggressive, accentuated double-basses at the start didn't make it to the top rank rhythmically, but the string tone was superb, with not a hint of hardness. Vocals were clear and well-focused but not too forward of the 'speakers, as often happens with this CD.

Seeking a recording with more treble energy, I tried the Overture to Verdi's Nabucco. As well as ironing out the harshness of the orchestration, the player picked out details I had not noticed previously, such as the podium straining under Maestro Giuseppe Sinopoli's efforts in the quieter passages. With its manically fast rhythms and cymbal crashes, this overture can all too frequently sound like a hand grenade going off in a percussion shop, but the Spirit kept a commendably sustained and sensible grip on things.

Thule's CD100 has a lot going for it: it never gives the impression it's merely going through the motions as some mechanical-sounding players do. It displays plenty of insight too, even heavily-compressed music revealing detailing that's usually hidden away. The treble won't offend either, the strings of Classical works relayed with a pleasing weight and body. At the price, the Thule has a sound that you parents would definitely approve of, although headbangers and ravers may find themselves looking elsewhere.

**Thule Spirit CD100**  
£599.95

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

## WORLD VERDICT



A very smooth and refined player with the added bonus of good detailing. Can lack rhythmic bite with loosely-recorded material.

Measured Performance  
see page 111

**VIVANTE LONDON**

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## OL' BLUE EYES IS BACK!

In what must be one of the musical coups of the decade, LA-based audiophile specialists DCC have just announced an historic agreement with Artanis (the company started by the Sinatra family to handle the late crooner's musical catalogue) to issue previously unreleased archive material. The world-wide deal has given DCC access to over 60 hours of tapes which will result in a series of 180g vinyl and 24 carat gold CD releases, all to be remastered by engineering maestro Steve Hoffman using DCC's renowned vintage vacuum

playback system, resulting in what we all hope will be the best-sounding Sinatra releases ever. The first title is *The Summit*, a 1962 "Rat Pack" recording featuring Ol' Blue

Eyes and accomplices Sammy Davis Jr and Dean Martin (see page 7 for details), and this will be followed by a solo Sinatra live recording, '57 Concert, and many more releases will follow. Given not just the musical but also historical importance of the project, we all fervently hope that at last the audiophobes in the non-hifi media will give the project the exposure it deserves.

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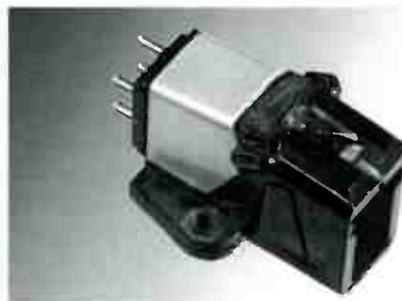
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# MISSING LYNX

Richard White points his ears in the direction of Chario's latest Lynx loudspeakers.

**C**hario loudspeakers come in a variety of guises but there is a family resemblance shared by them all. In the first place, the cabinet is as well built as it finished - solid hardwood cheeks form a substantial part of the construction and add a distinctive touch of class to what can be a rather drab 'black box' world.

Another common theme is the fondness of Chario's designers for downward-firing reflex ports. This arrangement has been moving in and out of favour for almost as long as the bass-reflex itself. Granted there is a triumphant neatness to the arrangement which also distributes the port's radiation evenly, but it means the loudspeaker becomes reliant for bass augmentation on the stands chosen. In this case, flat-topped versions are mandatory, so our usual Elemental Audio open-frame types were out.

Set in a compact cabinet around 14in. by 8in. by 10in. (hwd), the Lynx's main driver is a 5in. mid/bass with a paper cone and concave dustcap. A generous rubber-roll surround gives long-throw capability, a handy consideration when you require a small unit to move a good deal of air. The tweeter is of the fabric-dome type an inch and a half across, its front-plate profiled to prevent 'corners' interfering with the sound. As mentioned before, the port is cut into the bottom of the cabinet and kept clear of the 'speaker stands by four pointed rubber feet.

Having plugged the Lynxes into a Meridian pre/power system fronted by the Teac transport and an Alchemist TS-D-1 DAC, I commenced my Pop picking with Linn's sampler of their various Jazz/Easy Listenin' albums.

Claire Martin's voice was given a healthy push by the Charios, with



her slightly sibilant delivery and huskiness-to-order well in evidence. Imaging was well defined too, and the soundstage quite broad for such small cabinets.

For the genuine audiophile article, I invited Joe Beard to call with Ronnie Earl's Broadcasters. One thing which became clear with this disc was that, for loudspeakers of their diminutive size, the Lynxes have a phenomenal output in the upper bass.

Unfortunately, on the wrong disc this could easily overstep the bounds of decency and tramp into the realms of one-note bass. In addition, as a result of what seemed to be forward reproduction in the extreme treble, Mr Beard's voice sounded rather recessed in the soundstage. Piano tone in the upper midrange had genuine appeal, however, and showed that outside their suspected 'boom and tizz zone' there was quite an engaging performance to be had from the Charios.

Feeling that I might perhaps be feeding these standmounters the wrong musical diet (much like

British Railways and snow), I brought to bear Rimsky-Korsachov's Scherezade. This piece gave the Lynxes a fairer crack of the whip, the opening flute notes reproduced with a natural delicacy. And thanks again to their bass-spreading port, the illusion of a broad orchestral sweep was well sustained.

All classical music is not delicacy and subtlety: when the going got tough about five minutes in, the recessed midrange was back at its old tricks again. Although the climaxes had considerable floor-shaking power, the overall effect had a touch of the Underground about it, with low-frequency rumblings and rather echoey tutti.

Given the excellence of Chario's cheaper Hiper 1000 (reviewed February 1999), the Lynxes are rather disappointing. Their over-enthusiastic bass and treble make their presences felt on most recordings and distract attention from the music. Given the drab styling of your average box, it's a shame these 'speakers don't sound as good as they look●

Chario Lynx £549

Musical Design  
Company  
PO Box 4146,  
Epping,  
Essex CM16 6HJ  
Tel: 01992 573030

## WORLD VERDICT



The Lynxes are superbly built but their rising bass and treble suit home cinema more than hi-fi.

Measured Performance  
see page 111

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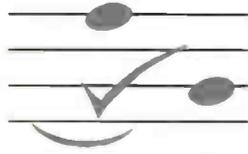
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## David Price

One of the best songs ever written about my greatest passion is by a certain Mr Elvis Costello and is called, predictably, 'High Fidelity'. That aside, I can count the number of Pop's odes to audiophilia on the fingers of one small hand.

There were, of course, a couple from the late, great Steely Dan, who in Walter Becker and Donald Fagen had two big-time hi-fi freaks. 'FM' was a classic, while the cover to *The Nightfly* still seems about as cool as you can get for an album released in the Eighties.

At this time it's probably best to end this train of thought before someone goes and spoils it by recalling probably the best-selling hi-fi singalong ever, Cliff Richard's hymn to the Walkman, 'Wired For Sound'. Still, you've got to hand it to the man, "Walking along with a head full of music/Cassette in my pocket and I'm going to use it," is as unforgettable as any Beatles lyric I've heard, albeit for slightly different reasons!

No, strange as it may seem, hi-fi has played a tragically small part in Pop cul-



ture through the years. Unsurprising, perhaps, given the recording and mastering quality of most of its releases, but that's another story. For today I want to talk about a band called Stereolab, who to me are the absolute gvnors.

It all started several summers ago, when walking past a certain Soho record shop I noticed a copy of the old Hi-Fi Sound HFS75 test record. Unfortunately this is further proof, as if anyone needed it, that I am in fact the sort of sad addict who'd twig such an obscure thing in the first place. But what the hell! As any analogue addict will tell you, the HFS75 was once a vital tool for setting up turntables properly, so of course you'd recognise it, wouldn't you?

As the temporary elation finally subsided, I suddenly realised that it wasn't in fact the aforementioned mid-Seventies hi-fi set-up sensation, but a new LP from Stereolab called *Transient Random Noise Bursts With Announcements*. "Oh dear," I said to myself (or words to that effect). Still, I bought it anyway, and gave it a right old blast on the GyroDec for good measure.

I was hooked, and suffice to say, I now own all their vinyl output. The music is oddball, eclectic in its influences and quite unlike anything else I've heard. If pressed, I'd have to say it resembles Astrud Gilberto meets the Beach Boys ('Pet Sounds'/'Surf's Up' era), meets Sonic Youth meets My Bloody Valentine meets Neu!, Can and Faust. Phew!

If you've heard any Stereolab it won't come as a total surprise to learn that they're an international combo staffed by musicians with impressive pasts before joining the band. English guitarist Tim Gane and French vocalist Laetitia Sadier are both ex-McCarthy, a respected Eighties Indie band, while early singles included Martin Kean, previously of *The Chills* (once one of New Zealand's most

promising bands) and Joe Dilworth, of *Th' Faith Healers* and a *Melody Maker* photographer!

NME scribe Gina Morris was also there singing in the early days, while the second singer, Mary Hansen, is an Aussie, Morgane Lhote is French and drummer Andy Ramsay is English. But perhaps the brightest star is Sean O'Hagan of *Microdisney* and *High Llamas* fame, whose superb brass, string and keyboard arrangements are having ever more affect on the band's musical direction.

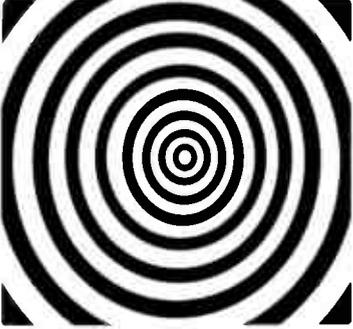
*Low-Fi*, the band's first release in September 1992, came only on 10in. vinyl. Cleverly, its name reflected its production values, so Stereolab starters might do well to look to later stuff like the



aftermentioned *Transient Random Noise Bursts* from 1993, 1996's *Emperor Tomato Ketchup*, or better still 1997's *Dots And Loops*. Undoubtedly their most accessible LP to date, it's a beautiful confection of Sixties French Pop, James Bond soundscapes and warm, mellow, orchestral Jazz. Beautifully sung, played and recorded, it's a must for those seeking Pop with a difference.

And there's more. Buy the vinyl and you're into instant collector's territory. Stereolab treat their analogue releases as treasurable artifacts, meaning limited pressing runs and coloured vinyl à go-go. *Dots* is an exquisite slice of white plastic, while *Emperor* comes in a corblimey shade of sparkling gold glitter. By far the best band ever to love hi-fi, and only disciples of the great Sir Cliff could argue otherwise●

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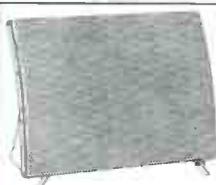
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Turntable mats have always offered the experimenter a free field; until you've tried it, it can't be wrong! In view of the interesting concepts I have foisted on my turntable over the years, before I began this test I re-instated the turntable's original mat and had a re-acclimatizing earful of rubber-supported software.

Remembering that the job in hand was to test the new Ringmat package, not ruin records, I reached for the Ringmat instruction booklet and was soon comforted by the directions in Step One: "Remove any felt, rubber or other mat" - good, done that! - "and place the non-slip spacer mat on the platter."

This base mat is a thin 'rubber' disc with a couple of circles stamped out of it and a foam triangle stuck on the edge. The purpose of this last is to engage with the spacer mats placed over it, to prevent slippage.

Now to the spacer mats themselves. These are colour-coded by thickness: depending on which set you have bought, you get a greater or lesser assortment of discs distinctly reminiscent of stage-lighting 'gels'. Each of these, and the base mat as well for that matter, has five wedges cut out of the centre, making a sort of spoke pattern on a two-inch radius. In addition the two circular holes are again stamped out opposite the notch where the base mat 'stud' engages.

Following the directions once more, when I had placed the correct sequence of spacers on the turntable, it was time to adjust the arm height. This procedure is second only to the humble sweater sleeve as an executioner of pick-ups, so due care and attention is recommended.

The trick with the Ringmat outfit is to level the tone-arm with x number of spacers plus a 'dead'

record. Then, when y number of spacers are used for the proper record playing, the optimum vertical tracking angle should automatically have been set, all this without resort to protractors, try-squares and the like.

Having removed the setting-up spacers, placed the Statmat and the main Ringmat on the spindle and checked the tracking weight, it was high time to listen to the gramophone.

With Haydn's F major concerto for violin and harpsichord ready for action, and with all the proper scepticism of a seasoned reviewer, I lowered the needle.

Surprise number one was the immediate beneficial effect on the bass. With the best will in the world, a chamber orchestra seldom exhibits much punch in the lower octaves. I had really chosen this record to show more the mid and upper ranges - a harpsichord pushes out harmonics in excess of 20kc/s, which gives a useful index for top-end response. Bass improvements were thus a very welcome bonus; both the sound level and the accuracy were considerably improved. Bowed double-basses sound like the worst loudspeaker in the world - honks, booms and rattles all being par for the course. It's when a bass sounds smooth and 'cello-like that you're not getting the full story!

Moving onwards and upwards, solo fiddle floated through the 'speakers with enchanting sweetness. On some of the climactic moments, where I knew the record to be worn, the Ringmat managed to keep audible distortion well under control; the static-y clicks had disappeared. As I ploughed on through my collection it was plain that, although my cartridge had been carefully set up prior to trying the mats, it was by no means



unhappy in its new horizontal alignment. Records which generally track indifferently can be fine-tuned by use of additional spacers; this can make quite a difference, since cutting angles have resisted standardisation despite all endeavours.

To avoid trusting my ears alone I tried out a couple of test records. Tracking and biasing arrangements were proved to be very well optimized and the general behaviour of the needle was as good as it's ever been. Where the inherently low-mass Ringmat cannot help much is with mechanical rumble, but this is rather like expecting a petrol additive to inflate the tyres as well!

As is usual with modular products, not everybody will need all the bits. The full system may look a little expensive but it is easily possible to trim costs by selective exclusion, although the sheer convenience of the precision spacers for setting up stylus rake should not be overlooked. Certainly if you've never been able to face the rigours of vertical alignment or your turntable is still struggling with the mat 'as supplied', the Ringmat Support System could be money well spent ●

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# VINTAGE VIRTUES

By Haden Boardman

**T**he Quad Electrostatic - it's either the most fantastic loudspeaker ever produced or the most over-rated piece of Fifties kitsch, a 'speaker so odd it makes you wonder just what on earth all the fuss is about.

Peter Walker's original ELS 57 electrostatic was not based on anything radically new, and in some ways can be directly linked to the work of an American, F.J. Hunt. What it was, and what it remains, is one of the world's audiophile bargains, a commercial product that broke moulds, set standards and will still be impressing people well into the 21st century.

So, now you know my view, but what about the detractors? Well, the Quad ELS does have its flaws. I have never met the perfect 'speaker, and I know I never will, but ultimately you have to decide if this loudspeaker's shortcomings are something you can live with or not.

Its main drawback to me is its acoustic power output - the '57 is just not capable of playing at ear-splitting levels.

Electrostatic technology is a nightmare to work with; the bigger the panel, the louder it will play, but the higher the polarising voltages (danger!) and input it will require (causing lower sensitivity). This also makes the design harder to manufacture (larger panel gaps, greater electrical insulation), never mind 'putting up' with the things in your home.

Mr Walker realised this problem, and I think the resultant size is more than acceptable for the results the '57 gives. If you're still not happy with volume levels below 11 out of 10 on the dial, then the ELS is not for you. In an average room, just over 100dB is about the maximum SPL a single pair can realistically generate.

Another foible is the fact that electrostatics are also pretty directional - you have to sit on-axis to enjoy the very best



sound. With a stereo pair, this can get quite selfish in your average British semi! Some people don't like this and do not even try to hunt out the 'sweet spot' - they have their head too high and the 'speakers too low.

As I have said before in these pages, good stereo transducers should be directional - all dome tweeters should be binned and decent cones developed instead! The (original) electrostatics behave as a true line source. As such, the acoustic output does not drop off with distance as much as you might expect compared to a normal two-way box 'speaker. The ELS 57s do benefit from a room of reasonable size, as Quad used to recommend. However, one of the best sets I ever heard was in the tiniest room, no more than six foot by eight foot, and with a low ceiling!

In the average room, positioning can be tricky; in an ideal world, there would

be just as much space behind the 'speaker as in front of it. Never put a '57 flat against a wall - it will sound appalling. Position them at least one metre from a side wall as well. Bear this in mind if you are considering buying a pair - these 'speakers are far from 'plug 'n' play'.

## BASICALLY SPEAKING

The worst accusation levelled against the '57s is that they lack bass. Frankly, this is balderdash. The ELS design has the cleanest, crispest bass I have heard, even if its extension won't do justice to Bob Marley or any Drum 'n' Bass.

The real obstacle here is people's idea of what bass should sound like. The majority of commercial loudspeakers these days are brewed from Theile and Small parameters. I am not knocking the research of either Theile or Small, just the products which result from mediocre designers taking the easy route of blindly

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plugging numbers into equations without bothering to do any homework. This has led to an almost total stagnation of ideas in the 'speaker market.

The sad fact is that most of us have grown up with ported boxes that suffer exaggerated bottom-ends and badly-coloured bass. This artificial box-speaker 'slam' can make the Quad sound as if it lacks weight - it doesn't, it happens to be very accurate down to 45Hz. Still, some people may miss the bass bloom they've become accustomed to. Subwoofers are not my cup of tea but it is true that one of decent quality can 'lighten the load' on the '57s and allow them to play a little louder. By introducing a box in the bass, you also gain a little coloration where most people want it!

The Quads' midrange is the best bit. Voices are amazing - no alternative can get close to the level of transparency offered by these units. The seamless integration across the whole midrange means Aled Jones or Louis Armstrong communicate clearly. The treble is similarly open, with no 'spit', 'sizzle' or metallic 'ting'. Some have complained in the past that the high frequencies are not especially extended, but to be honest, like the coloration in the bass, it's mainly the artificial additives they are missing. Mind you, there is some merit to adding a high-quality ribbon tweeter like a Decca-Kelly to the set-up as it adds a little more 'air' to the soundstage.

**LOADING UP**

One thing you have to be very careful of is matching the '57s to an amplifier. A medium-power, push-pull valve amp is about right - valves don't mind the nasty



"Well I must say, darling, that new radiator sounds absolutely wonderful!"

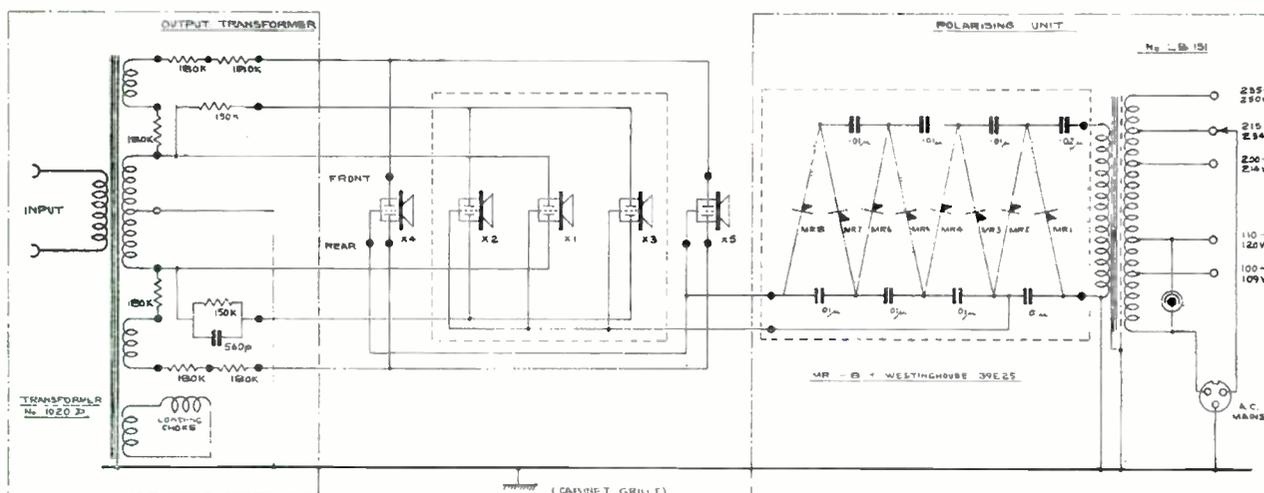
capacitive load and don't tend to get too upset by the downright vicious impedance curve (would you believe it swings from as low as 1.8ohms to over 60ohms?) Calling the Quads nominal 16ohm loads is a bit of a joke! Most well-engineered solid-state amps are equally suitable. For safety's sake, though, check with the manufacturer before you risk melting your poor amp.

Power-wise, you only really need 25watts to drive these electrostats. With that 16ohm load, no harm will occur if there's a little more power on tap. If your '57s have been serviced by Quad, they will have fitted a 'clamp' circuit, which helps prevent over-driving and the terminal damage which results. These devices are a necessary evil when using big transistor amps, but personally I believe they spoil the sound, and if I know the 'speak-

ers are going to be used with a moderately-powered valve amplifier, I usually remove them.

Now the worst part: servicing. Until recently, all parts were available direct from Quad. Sadly, some chemical or other going out of production meant that Quad could no longer offer spare panels for the older ELS. I'm still puzzled by how they managed to find something to build the ESL 63s and the new electrostats with, though. It would be easy to get the impression that they didn't want to keep all their old 'speakers up and running. Anyway, the good news is that the panels are now available from several sources, with Quad GmbH in Germany having acquired the original jig.

One more word of warning; everything can and will go wrong with an ELS. With age all of the panels fade and die. EHT



The circuit diagram for the ELS 57.

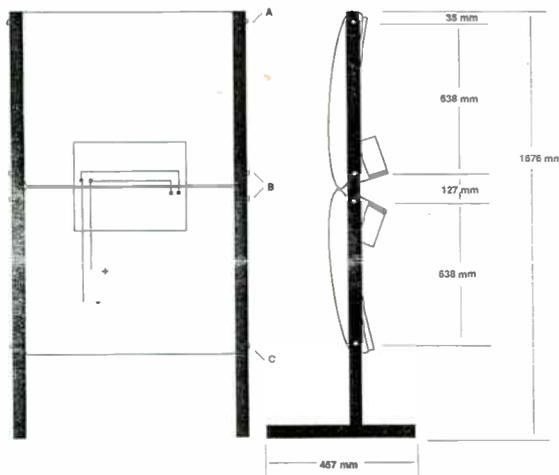
(Extra-High Tension) units, which generate the panels' polarising voltage, fail. Even the capacitors and resistors on the base of the audio transformer eventually give up the ghost.

Unless you can prove potential purchases have been fully serviced, you can budget on at least £500 to sort them out. Make sure you consider this if buying a set blind or with no documentation since even a '57 on its way out can sound impressive.

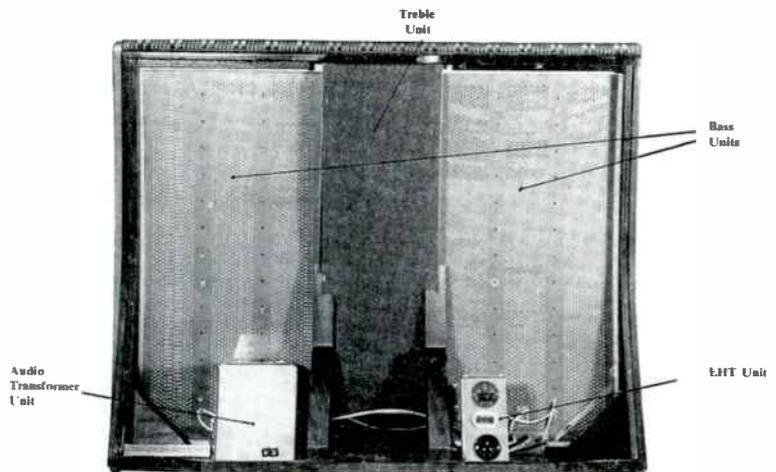
As a matter of course you should replace all passive components with the best your budget can afford. Original EHT units should be swapped for some of the newer types too - this alone can transform a tired-sounding pair. In addition, Russ Andrews recommends fitting separate EHT units to all of the panels for a worthwhile improvement.

The panels themselves can be somewhat trickier. The most delicate is the treble panel, which is swiftly barbecued by solid-state amps run too loud. A dull overall sound and crackles indicate duff treble panels. The bass units can suffer as well, losing efficiency and going pop! It is a good idea to remove the grilles and check the 'clingfilm' dust covers for tiny rips and tears. **WARNING: BEFORE YOU REMOVE A SINGLE SCREW, UNPLUG THE SPEAKER FROM BOTH THE MAINS AND YOUR AMPLIFIER AND LEAVE WELL ALONE FOR AT LEAST ONE HOUR.** The voltages within the Quad '57 can kill.

Dust and moisture are the enemies of all high-voltage devices, especially ones that rely on this kind of technology to move air. Without doubt, the expanded metal grilles make a real mess of the



If you want to stack two pairs of '57s, this is the sort of frame you'll need. Adding a Decca-Kelly or



Seen from behind, the ELS 57's most important parts - the panels, EHT unit and input transformer.

sound, and total recluses who live on their own with no cats, dogs or rug rats would be advised to remove them completely (see warning text above). For those of us without such an option, just give the entire 'speaker a good clean out with one of those canisters of compressed air.

### ONE STEP BEYOND

There are so many modifications which can be applied to the Quads. However, in addition to what has been suggested already, here are a few more tweaks to consider:

- 1) Use a decent, rigid 18in.-24in. stand. You can perhaps use even two under each 'speaker.
- 2) Located inside the back of the ELS panels is a covering of what looks like sack-cloth. This does nought for the sound, and the tweeter panel has an even thicker chunk of felt; remove them!
- 3) Stacking. If you are going to have a pair of crazy old 'speakers, why not be really perverse and have two pairs in a stack! Extra efficiency, higher SPLs and better bass are the rewards. This requires a properly rigid frame. Most people build one which screws into the sides of the '57s in place of the wooden end cheeks.
- 4) New frame. The original wooden carcass is not of the most solid build. Major gains can be had by building a stiffer frame.
- 5) Ribbon tweeter.

an ATD ribbon can bring with it slightly more spaciousness. Wire in a single 6dB/octave filter - most people prefer a 2uF cap, although there's invariably room for experiment.

In terms of value, it's quite difficult to put a figure on the '57s. It can and will cost hundreds of pounds to get a pair back into pristine condition. At junk shops and car boots Quads have been known to go for pin money. Privately, people tend to want a bit much for tired examples, so be careful.

Later black-grille versions with IEC mains sockets command the highest prices, and it's not unrealistic to expect to pay around £1000 for a well-serviced pair. If buying 'as is' with no demo, pay as little as possible, say £50 single or £120 a pair.

The ELS 57 is still an awesome 'speaker. It may be nearly 45 years since 'Walker's Wonder' was first demonstrated but it remains a show-stopper to this day. If, for a fantasy moment, the ELS was still being made, you would be looking at about £2500 in new money, and I feel it would be worth every penny.

I am not alone in preferring the older ELS to the newer ESL 63, in spite of the fact that it is much better built. I'm not taken by the audio delay circuit on the latter. Sonically, there are areas where the older model beats the newer hands down, especially in the upper-mid and treble. Maybe it's that wonderfully Fifties style that draws me to the older 'speaker. Maybe it's because it's such a bargain, and very underrated in this country. The Quad ELS 57 is tweakable, fun and offers high-end sound at a low-end price. Call me the number-one fan!

# HEAD OF THE CLASS?

**Pink Triangle have revitalised their long-lived Da Capo DAC with the new 24-20 filter. Jon Marks plugs in to more bits.**

Compared to analogue components, the lifespan of many digital products is similar to what's meted out to some members of the insect world - they emerge from their eggs to enjoy a season or so of life before becoming worm fodder. One exception is Pink Triangle's Da Capo convertor.

Originally launched in 1990, its various digital filter upgrades maintained it as a viable piece of equipment for almost a decade. Now it looks set to break into the third millennium with its next filter, the £400 24-20. This small metal box (which plugs into Da Capos of any vintage) processes data with 25-bit precision. In addition, the latest triangular dithering apparently improves low-level resolution, as does strictly-controlled jitter.

I gauged the 24-20 against its predecessor, the HDCD filter, in a system of Teac's P-30 transport, Meridian's 501 pre-amp, Musical Fidelity's X-A200 monoblocs and Jamo's Concert 8 loudspeakers.

Having allowed the Da Capo and 24-bit filter an hour or so to warm up and hit their stride I reached for an old reviewing favourite, Dave Brubeck's Time Out. This SBM gold disc from Mastersound purred away within Teac's P-30 as I headed for the sofa.

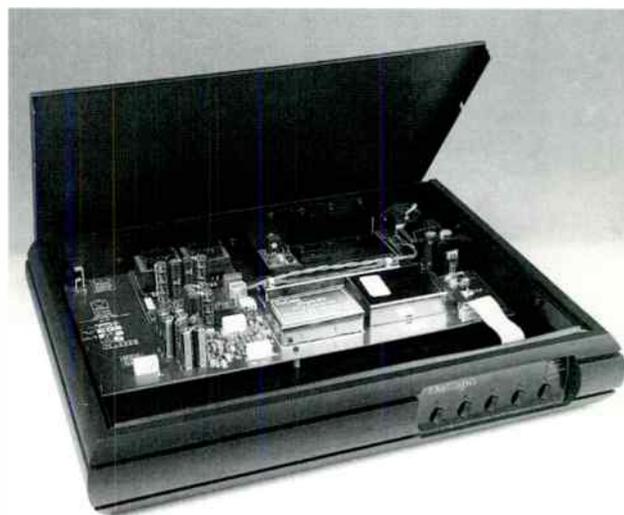
After the warm but rather woolly presentation of the filters which had

preceded it, the 24-bit had a speed and crispness which startled my ears. Where the penultimate Da Capo incarnation had a relaxed, mellifluous view of music which clicked with Jazz and Classical but didn't get on so well with Rock and Dance, its heir demonstrated it was a more neutral performer. The drums of 'Take Five' had a far more realistic leathery thwack, their decay sustained for longer within the acoustic. The 24-bit filter didn't view cymbals through such rose-tinted specs either; it wasn't that they had lost any smoothness or shimmer, rather that they had greater power and sparkle without becoming bright or fizzy.

Transparency is the hallmark of this filter. 'Strange Meadow Lark' and 'Kathy's Waltz' were again portrayed in larger and more convincing soundstages than had been the case with earlier DACs, which had a habit of veiling low-level subtleties. Both tracks also gained in impact, for where a lot of digital gives the superficial impression of slam and smack, very few components actually deliver the real thing.

Images of instruments like double-basses which put out predominantly lower frequencies tend to be spread far and wide by most gear, analogue or digital. The PT was closer to actually producing a recognisable outline here, with commendable focus.

A second reviewing favourite, Eric Bibb and Good Stuff, demonstrated that the Pink Triangle didn't seek to please by dropping off at the top-end faster than a brick thrown off a cliff. It didn't shy away from reproducing the brightly-lit cymbals of this track, keeping its composure. Spicing up the mix with 'Nothing Like You Used To Do', I was happy to hear the Da Capo and



24-bit filter didn't wilt in the face of brisker bpm's, although they didn't fully cash in on this song's bump-and-grind drive.

Dancier material like The Chemical Brothers' Dig Your Own Hole, or Heaven 17's Penthouse And Pavement, might not be the Da Capo's strongest suit but Classical works such as Sibelius' symphony No2 in D major were a better bet. Rich but not syrupy woodwind tone partnered strings which were incisive but not metallic or caustic. With its ability to dig out detail, the 24-bit PT did a fine job of scale too, climaxes building and then exploding to powerful effect. And whenever the going got tough, the Da Capo kept its grip on soundstaging and imaging, refusing to blend orchestral sections together into an amorphous blob of sound.

If you're a long-time Da Capo owner who's feeling the first niggings of upgraditis, the best cure would be the 24-20. This digital filter provides a significant lift in performance for its £400, elevating the PT to the ranks of contemporary convertors around the £1500-£2000 mark.

**Pink Triangle 24/20  
£400**

**The Pink Triangle  
Partnership  
The Basement,  
Camberwell Bus. Centre,  
Lomond Grove,  
Camberwell,  
London SE5 7HN  
Tel: 0171 703 5498**



This is the box of tricks which turns the Da Capo into a leading DAC once more.

# 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 entropy 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 LP's) 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 it's 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, reclocking, 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, reclocking, 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.



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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).

**£850**



## 300B VALVE AMPLIFIER KIT

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 MkII Upgrade kit

Upgrade your pre November 1996 K5881 amplifier to MkII status. The kit converts your amplifier to the new 7025 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 & KLP1 use the same chassis

**£345**



## KLP1 VALVE LINE PREAMP

The KLP1 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 off 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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**£650**

An audiophile parallel-single-ended valve amplifier at an affordable price. K5881PSE uses the reliable Russian 5881 output valve. Its 17watts is enough to drive most loudspeakers, making high-end sound quality and design available to everyone. Can be easily monoblocked to give 32watts. Weight 17kg external dimensions with valves 40cm(w) x 32.5cm(d) x 17cm(h).



# BEEN SO GOOD!

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**DRIVE UNIT PACK £450.00**

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**DRIVE UNIT PACK £230.00**

**£350**



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**DRIVE UNIT & CROSSOVER KIT £260.00**  
**DRIVE UNIT PACK £175.00**

## KLS4 TWO WAY CARBON-FIBRE DRIVER LOUDSPEAKER

A two way standmounter using stagger-tuned reflex loading for good bass, plus light and fast carbon-fibre drivers. Sensitivity 86dB at 1W/1m, 18mm MDF, internal volume 15.3 Ltrs, external dimensions 21.6cm(w) x 42cm(h) x 25.8cm(d).

**DRIVE UNIT & CROSSOVER KIT £230.00** **DRIVE UNIT PACK £120.00**

**Audax HD-3P Gold dome piezo-electric tweeter**

**£130**

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Compact and affordable two way reflex loudspeaker. KLS7's slim dimensions make it easy to accommodate, but it uses top quality carbon-fibre drivers, so performance isn't compromised. An audiophile bargain. Sensitivity 86dB at 1W/1m 12mm MDF, internal volume 18Ltrs, external dimensions 15cm(w) x 80cm(h) x 22cm(d).

**DRIVE UNIT & CROSSOVER KIT £195.00**  
**DRIVE UNIT PACK £110.00**

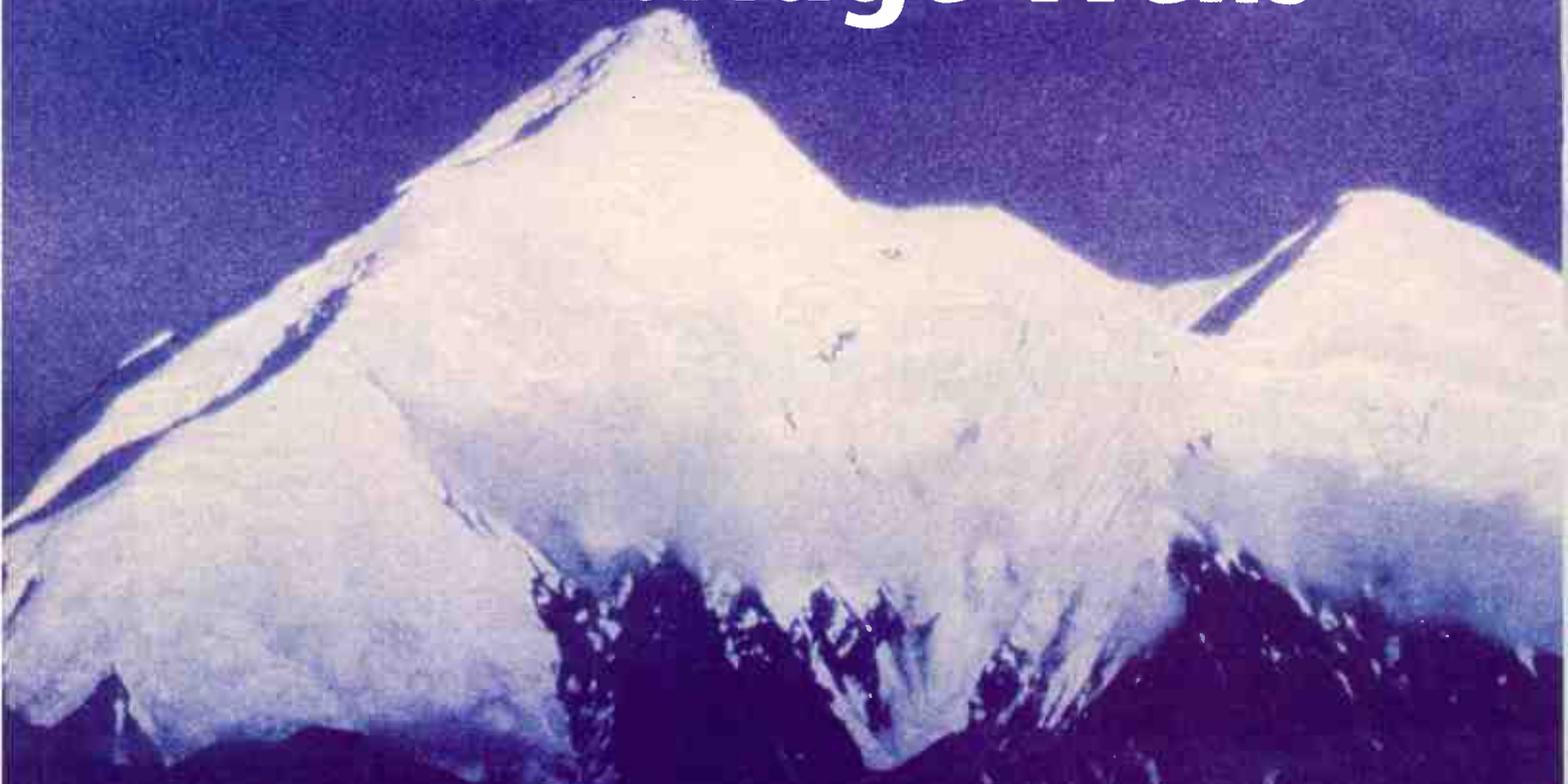
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# A RETURN TO FORM

**Do you lust after Quad's ESL 57 electrostatics but worry about the lack of servicing? Jon Marks seeks restorative help from Classique Sounds and One Thing.**

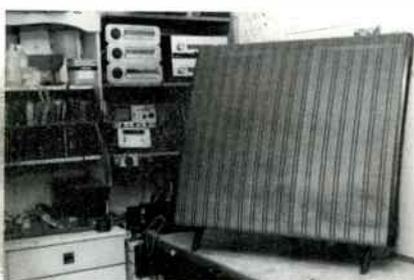
**A**h, serial numbers 12599 and 12273, you have indeed seen better days. The miserly sum of £100 made you both mine, but I have to say you possess all the sparkle, life and speed of a wet blanket. Connected to my favourite CD player, turntable and amplification, you had me wondering at the fuss surrounding ESL 57s.

If this rings bells with you, you've obviously been through the same anti-climax of purchasing a pair of Quad's vintage super-speakers in less than mint condition. As Haden Boardman comments in *Vintage Virtues* this month, even when they're only pale shadows of their former selves, ESL 57s can still sound better than a lot of other loudspeakers. The problem is, with Quad no longer servicing these electrostatics, where can you have a poorly pair spruced up?

We decided to get a test set of ESL 57s fully refurbished by Classique Sounds (tel: 0116 283 5821). 12599 and 12273 were duly handed over for diagnosis.

As the list of woes said, the 'speakers were "working but sounding tired". This was a bit of an understatement as there seemed to be precious little treble above 4kHz or 5kHz, all the crispness and pizzazz of a month-old lettuce and bass that was murky and indistinct.

On the bench some typical ailments showed up. The blocks which supply the panels with their Extra-High Tension voltages (6kV for the bass and 1.5kV for the treble) were down on one 'speaker and up on the other. This meant new blocks with modern rectifiers (£80 per pair).



A new patient prepares to undergo examination.



The three short legs fitted by Quad to the ESL 57 do a fair job but the loudspeakers sound a lot happier when they're higher off the floor on solid stands.

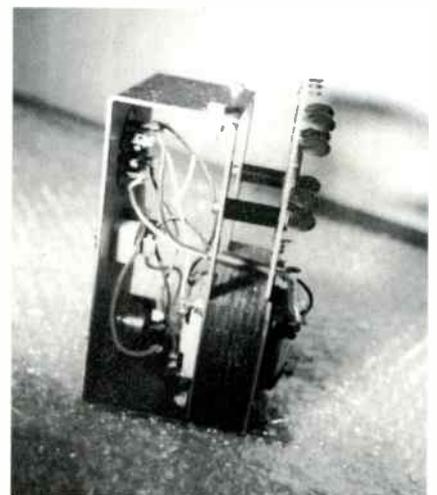
None of the panels were torn or burned, but the bass stators were well past their prime. Their three separate sections are connected by conductive bridges which often go open-circuit. While the loss of a section won't stop a panel functioning, it means it will take longer to charge and will produce muddier bass. The cure is to clean away the detritus and replace the bridges. Rebuilding and soak-testing bass and treble panels costs £120 each for the former and £100 each for the latter, although not all of them invariably require treatment - nine times out of 10, it's the tweeters that have given up the ghost.

As far as the 'speaker diaphragms themselves go, their conductive coatings need to be checked to make sure they're not too high in resistance (which will cause arcing) or too low (which reduces efficiency).

## HAPPY TO BE CLAMPED

One sure-fire way of sending '57s to their

graves is by over-driving them. Later samples were protected by factory-fitted 'clamp' boards, which prevent input voltages exceeding the 33volts which Quad quote as a maximum. Our examples lacked clamp boards but had escaped damage. Seeing as they were going to be



Classique Sounds offer rebuilt EHT blocks as well as brand new replacements.



Soak testing of rebuilt panels is carried out on the test jig pictured above.

used on the end of a pair of Musical Fidelity X-A200 monoblocs (over 300watts into 8ohms), ours were duly fitted with CLP1 clamps (£45 per pair).

### WIRED FOR ACTION

Once the major surgery on the moving parts was complete, the wiring loom came in for some attention. Most of the old wire was removed and fresh EHT cable soldered in place. The final stage of servicing involved fitting new 'speaker sockets and testing the input transformers along with their associated crossover resistors and caps. After a thorough valet (£20 per ESL, including relacquering the feet and the side strips, touching up the grille and frame), the Quads were ready for a last listening session before they returned to World Towers.

### ELECTRO-ECSTATIC?

After the disappointment of their initial sound, I was hoping for something more promising this time, especially considering



Some panels, like the bass one to the right, have had a very hard life. On the left is a rebuilt treble panel.

our ESL 57s had been given the full treatment, bringing their total cost including purchase up to around £1000.

Having hooked up the Quads to the X-A200s, a battery-powered DPA 50S pre and a Trio L-07D turntable, I gingerly fired them up and allowed them an hour to settle down. The first LP under the DNM Lexe/SME V was Joan Armatrading's Back To The Night.

### FILM STARS

What emerged from those featherweight diaphragms was superbly crisp and clean across the whole of the frequency range. Cymbals had a speed, clarity and freedom from distortion which only the rarest of esoteric dome tweeters can get close to. Vocals were also untainted by the normal cone and box colorations, the result a nat-



Checking the three bass stator sections to ensure continuity across them.

ural transparency which really opened up recordings.

Swapping to a modified Pioneer DV-505 DVD player and Talvin Singh's Anokha compilation of Dance music, I homed in on the bass. Positional foibles aside (hunting out the right spot in a room for '57s can be a very time-consuming business), the bottom-end was taut and very nimble. The long-lived myth of the Quads being bassless was also banished, this album's heavier tracks benefitting from a satisfying (if not furniture re-arranging) extension.

As Haden notes in *Vintage Virtues*, it's the low-frequency 'sludge' which most box loudspeakers pump out that plays a large role in lending their presentation extra weight. Even compared to relatively inexpensive panels like the Magneplanar SMGas (which aren't electrostatics and have higher diaphragm masses) most boxes sound slow, blurred and boomy.



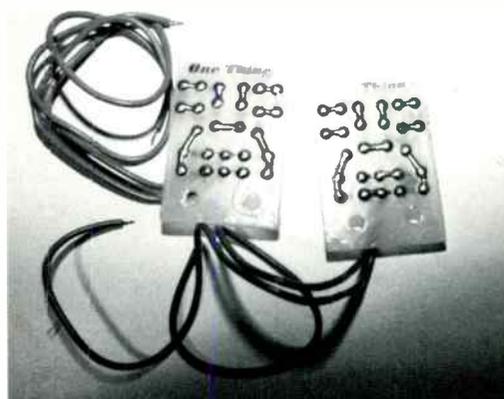
A rejuvenated '57, unclothed to show the central treble and two bass panels. The input transformer is sitting on the bench.

Tori Amos' Boys For Pele with its spiky harpsichord and vocals (which are more shrieked than sung) failed to provoke any nasties in the Quads. In fact, whatever was played through them had a dynamic freedom which made even the sprightly SMGas sound dull and sluggish.

### BUY, BUY BABY?

If you're thinking of buying a pair of '57s and having them overhauled, it would probably be more sensible to opt for a cheap, tired set and have the necessary work done (usually just EHT units and treble panels) rather than spending £400 on a good but not perfect pair.

Considering our totally revamped ESL 57s cost around £1000, the results more than justify their price tag. Contemporary electrostatics aren't particularly cheap but *Classique Sounds'* servicing restores the Quads to a position where they can hold their head high in some exalted (for which read expensive) company●



If you're going to be driving your '57s with a large solid-state amp, clamp boards are a wise precaution.

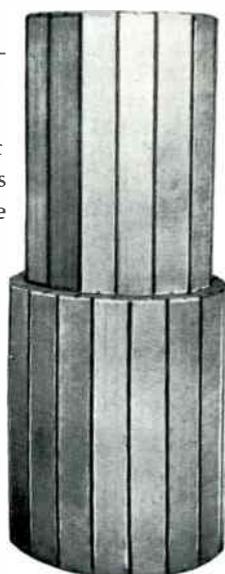
# ELECTRO-STATISTICS

As this is electrostatic loudspeaker month at Hi-Fi World, we thought we'd catalogue some of the alternatives to the Quad ELS 57 which have surfaced over the years.

Half lost in the mists of antiquity are the pioneering efforts of Voigt in the late-Twenties and McLachlan's 'Stretched-Membrane Electrostatic Loudspeaker' of 1933. As happens so often in audio, it seems that the theory has to tread water for donkey's years waiting for technology to catch it up. Considering the primitive state of plastics chemistry in those days, these fellows did well to get anything going for long enough to write up their notes! Indeed, one experimental model, the Oscilloplane, used a stretched metal diaphragm instead. In audio, which is Applied Physics when all's said and done, you don't get anything for nothing; the Oscilloplane boasted an improved bass response but suffered poor treble, a classic indication that the diaphragm had too much mass.

Before he perfected the familiar Quad panel version, Peter Walker himself toyed with a variety of designs for electrostatics. Earlier versions included a five-foot-tall, full-range panel and a rather fetching omni-directional column with two bands of narrow panels. Both of these emerged from the Walker workshop around 1955.

In the end, the pressures of domiciliary considerations gave rise to the more compact dimensions we now know so well. On the opposition benches, throughout 1956 H.J. Leak and Co. advertisements were full of their forthcoming electrostatic unit, and members of the public were freely invited to send for Messrs Leak and Sarkar's paper on their research findings



Peter Walker's elegant multi-cell column of c.1955

reprinted from The Gramophone.

Where the Leak scheme differed from the 'usual' push-pull electrostatics was in the arrangement whereby the polarizing charge was applied to a fixed perforated electrode placed between twin external diaphragms.

Among the advantages stated for this arrangement were the accessibility of the diaphragms and the lower resistances required in the circuit. The experimentors claimed that, since the coated film had considerable resistance in itself, the need to even out the polarizing voltage by a vast number of

megohms was avoided. In addition, it was hoped that the layer of air trapped between the diaphragms would have applications in controlling resonance and bass extension.

The device even had a name - FREL for Full Range Electrostatic Loudspeaker - and was confidently advertised to be 'available to the public in 1957'. As far as I am aware, only the treble unit was ever shown in public and, over 40 years later, the world is still waiting for the rest to follow! Naturally Leak themselves gave no reason for FREL's non-appearance but the introduction of the famous (and eminently reliable) Sandwich loudspeaker in 1962 must have counted as the final nail in its coffin.

Although few firms were prepared to endure the blood, sweat and tears of a full-range electrostat, by the late Fifties there were a number of treble units on the market.

Decca Special Products manufactured an interesting curved treble panel under

the name Audistic. Very much a period piece, it dates from a time when 'adding a tweeter' implied that you already owned a loudspeaker which catered for up to, say, 8kc/s and wanted to take advantage of the new, extended-frequency records. With this in mind, the Decca job has a built-in crossover and a variable level setting for the bass output. Having tried out one of these units, I guess this last feature was to bring the midrange level down to the rather feeble level of the tweeter - full-range reproduction at last, but at a whisper!

Janszen, the famous American firm, marketed a tweeter comprising four small cells arranged in a 'W' formation. It seems likely that this arrangement was intended to give some directional reinforcement of the sound and additionally some welcome reduction of the doublet cancellation effect around the edges of the baffle.

Of course, if you had the money, you could have things built to order. Mr Ewing Nunn, supremo of the legendary

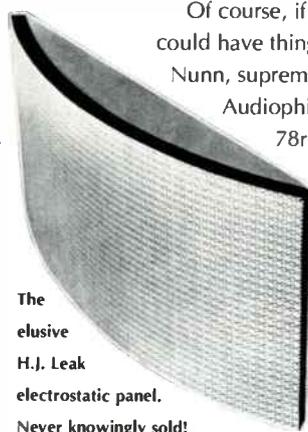
Audiophile records (microgroove at 78rpm!) was able to persuade

Janszen to make some full-range panels for his listening room.

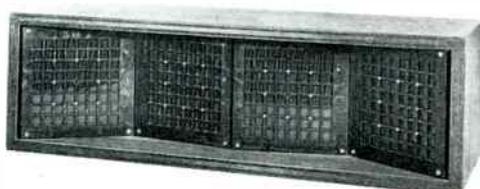
Photographs show six panels, each roughly five feet high by 18in. broad, grouped in two sets of three (for stereo) either side of his fireplace. What

Mr Nunn shelled out for these is not recorded but perhaps I ought to start doing the lottery!

Despite their manifest virtues, electrostatics have been around for a long time without significantly altering the market and, perhaps more tellingly, without becoming comparatively less expensive. To quote Peter Walker: "... (electrostatic 'speakers are) capable of a theoretically predictable solution. However, available materials and practicable limitations make its realization extremely difficult. The work is both fascinating, absorbing and rewarding."●



The elusive H.J. Leak electrostatic panel. Never knowingly sold!



The Janszen company's four-cell tweeter.

# WHY OH WIRE?

Richard White turns the spotlight on a radical advance in cable technology from Vector Developments.

The World offices are dead centre in the sights of interconnect companies - scarcely a day passes when we don't have to fight our way through yet another pile of specimen cables. As regular readers will know, we frequently do group tests on the latest offerings, so when an extraordinarily hi-tech interconnect was described to us by Vector Developments, we decided to investigate further.

Most interconnects we review have something special in the conductor and dielectric departments; Vector have taken these materials to logical conclusions and developed an interconnect in which the dielectric is provided by as near perfect a vacuum as possible.

At first sight, this is an idea which is so obvious, it is staggering that no-one has thought of it before. On the other hand, like so many simple ideas, this could be one that has just been waiting for technology to catch it up.

At first, the development team at Vector tried out pure elemental metals for the outer casing: copper, silver, even tin was tried in the search. Since the technology for drawing tubes in all grades of wall thickness is readily available, all seemed set for success until it occurred to one of the designers that it might be possible to attain a degree of super-conductivity by progressive cooling of the casing to draw heat away from the inner conductor. This would, however, rule out the use of the metals already tried, since none could be made strong enough and thin enough to support the outside atmospheric pressure when the vacuum was applied.

Since combatting the mechanical stresses caused by acute pressure differences is all part and parcel of the technology for space exploration, the team tried the European Space Research Bureau but found themselves unexpectedly stymied:

"We found that all of the 'outer space' designs were naturally enough concerned with the containment of inner pressure - the completely opposite problem to the one we faced. . . We obviously had to think again."

The reconsideration process occupied the team for the next 18 months. In the end, a double-walled, honey-comb pattern was found to offer the greatest strength per unit of material. Taking no chances with all the vagaries of domestic atmospherics, the unusual but ultimately logical teardrop pattern was developed.

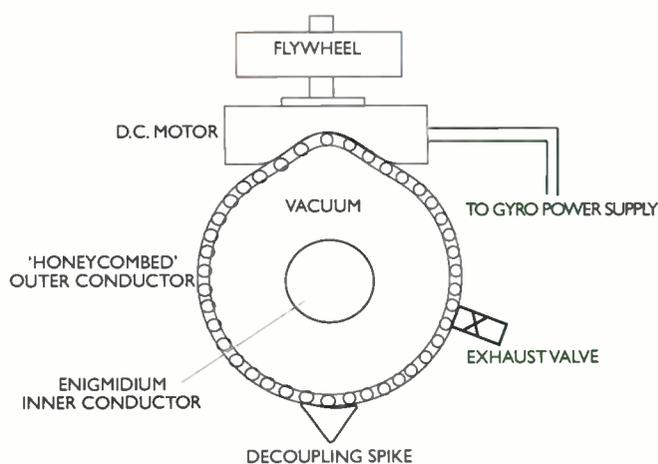
"With the degree of vacuum we were hoping to achieve being so high, it made sense to compensate for the altitude difference between the upper and lower surfaces of the tube; maybe it's a perfectionist sort of madness but it didn't seem worth leaving it to chance."

The altitude pressure compensation naturally means that the interconnect is orientation sensitive, a potential problem which the team faced from the outset. Various options were mooted to ensure that, in use, the finished product would remain 'upright', including stands, feet and a novel system of slings. In the end, the best solution was also the most obvious:

"With the great improvements made in recent years with miniature, battery-driven gyroscopes, it became a simple matter to arrange that the 'cable' (as we had long ceased to think of it as) would stay in the same position, even if the building fell down about its ears. With power already on hand for operating the vacuum maintenance system, there didn't seem any point in persevering with other potentially more complex solutions."

With the design of the outer conductor more or less fixed, the team turned to the important inner conductor. Since Vector had decided to take nothing for granted, the same extensive research was put in motion in the search for the perfect cable. Nothing quite met the desiderata:

"With all the metals we tried, the residual gases (air or oxides of the metal)



trapped between the molecules ruined our attempt to achieve adequate vacuum. We tried heating in liquid nitrogen but soon discover that metal assimilates gas as quickly as you try to burn it out!

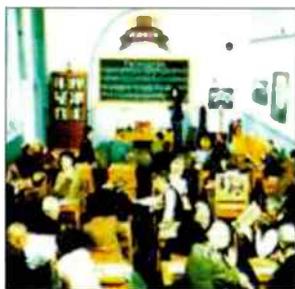
"In the end, we developed a patented alloy which we have dubbed 'Enigmidium' after the famous code-crackers at Bletchley during the war. Enigmidium has the peculiarity that the atomic activity of its constituents generates tiny ionizing currents which get rid of gas - rather like the 'getter' in a thermionic valve."

With the basic prototypes all set up, Vector were ready to try the ultimate test; trying for full vacuum and full self-acting super-cooling under simulated 'domestic conditions'. As most people know, when a current is passed along a wire, the electron flow causes the wire to heat. Since this would ruin the super-conductivity conditions, the designers opted for a clever delay-and-anti-phase circuit in the pre-amplifier which senses the signal current, holds it in memory while the anti-phase signal is synthesized and then joins the two by a matrix arrangement. By this means, a complete cessation of noise is achieved, regardless of the quality of source components - a welcome bonus.

The Vector Enigmidium cable should be available about the beginning of April and Vector are confident that initial demand will be high●

## ROCK & POP

by Jon Clarke & Stuart Lenz



### OASIS THE MASTERPLAN

OK, so it's been in the shops for a few months, but we couldn't possibly let an Oasis album slip by unnoticed.

The Masterplan was indeed a clever ruse: bring out an album of B-sides and various out-takes, live and otherwise, make a bit of money in the process and let everyone know that you haven't gone away. Already a big seller, released as it was just prior to Christmas, this album still smells like a con-job, except (and this is a big exception) that its 14 tracks actually knock the socks off their previous studio effort, *Be Here Now*.

Of course, if you're a big fan and you've been there from the beginning, you'll know that on each of the group's brilliant singles, 'Supersonic', 'Live Forever', 'Cigarettes And Alcohol', 'Some Might Say', etc, there was a trio of extra tracks. This is rare in this day of high consumer living, when a B-side most often means the Dance mix, extended mix, radio edit mix and the cat, dog and ferret mix. But the Gallagher boys, creativity gushing from their every pore,

were producing so much material that the singles were a useful secondary outlet to the public.

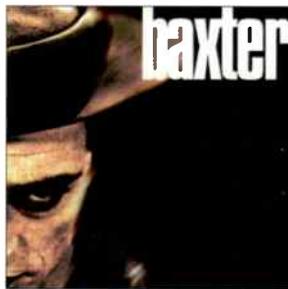
Gelling remarkably well considering they span four years, at least a couple of these tracks are as good as the singles that they were released on. Take 'Listen Up', a wonderfully angry ballad. It was easily as good as 'Cigarettes And Alcohol'. Then there's 'Acquiesce', on 'Some Might Say', which has even been included in Top 100 polls. Anthemic, punchy and downright dirty, there can be no better way to start an album than this number; featuring the lyrics "We need each other, we believe in one another", it was perhaps the first sign of the secret brotherly bond between Noel and Liam. Great live, it is the classic Oasis track, sadly missing in spades on *Be Here Now*.

Skipping the decidedly dodgy 'Underneath The Sky' - one of only two stinkers on *The Masterplan*, the other being the irritating 'I Am The Walrus', the Beatles track that they seem so obsessed with playing live at the drop of a hat - we chug on to the moving 'Talk Tonight' and the again Beatlesque 'Going Nowhere', which, while slightly off-key, is nonetheless catchy. Then it's on to the Punky two-chord, Buzzcocks-style 'Fade Away' from 1994's 'Cigarettes And Alcohol', power Pop at its very best.

The second side keeps up the pressure with the excellent Grunge number 'Listen Up' and 'Rockin' Chair', a

melodic, Paul Wellersque chant from 'Roll With It'. Continuing in the same gentle vein is the brilliantly moody 'Half The World Away. . .' This is Noel at his reflective best, singing as well. Ending with the superb 'Masterplan', the album leaves a very up-beat aftertaste, one that will hopefully carry Oasis in good spirits towards the Millennium and beyond.

With Noel declaring recently that he has packed in the drugs (charlie to be exact) we can only hope that he will channel his creativity into producing some more of this stuff.



### BAXTER INSIDE

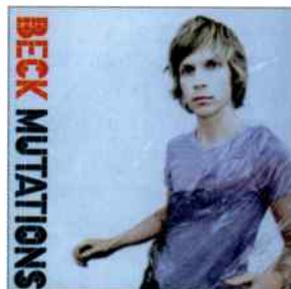
Forget Gay Dad and all the other hyped bands for 1999, one group to keep a real look out for is Baxter. Consisting of the musical talents of the Baxter brothers and friends Tim and Henry, this band is the best thing to come out of East Anglia since Alan Partridge and Lenny Beige.

Southwold, or Islington-on-sea as it is often known in the media, has spawned little more than a cracking cream tea over the years. Now it has produced something a little

different. On *Inside*, a five-track mini album, Tom and Charlie Baxter, a musical student of some stature, show just the sort of instrumental nous needed to make an impact in the cut-throat world of Pop. With a wonderful assortment of sounds and instruments (violins and horns included), Baxter conjure up a part-mystical, Oriental earthy feel, driven along by a series of brisk Ska/Reggae basslines.

From the up-beat White Reggae sound of 'Only Joking' (a floating, moving composition which builds slowly up to a catchy, spiralling Dance number) to the assured, moody and sad cries of 'Inside', this is a debut of some promise.

As was the case with Gomez last year, it's hard to pigeon-hole this lot. A dose of Reggae, a pinch of Ska, a sprinkling of Punk, a trip to the theatre and a visit to the Orient. Whatever, Baxter might spring a few surprises this year.

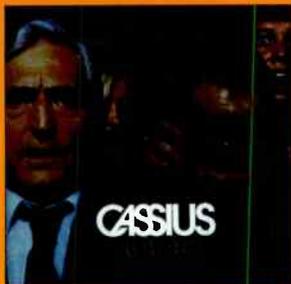


### BECK MUTATIONS

This is supposedly the record Beck has been wanting to make for the last five years, and for an audience weaned

ROCK & POP

RECORD OF THE MONTH



CASSIUS  
1999

Oh la la - the French making hip music? Unheard of. Well, in the wake of Air's brilliant debut last year, amazingly they seem to be doing just

that. In the shape and form of Phillipe and Hubert, two 31-year-old Parisian Disco nuts, Cassius have produced a belter of an album.

It's not as if the two gentlemen concerned lack the musical pedigree, having spent the last 10 years working behind the scenes for French luminaries such as MC Solaar as well as remixing for the likes of Neneh Cherry, Björk and Air themselves. They have even been known to cross the pond to DJ in a series of trendy London clubs, including Basement Jaxx and

Scaramangas.

With 1999 they have drawn on their 12 years of experience to create the classic new-Disco sound. Big on bass, the 16 tracks are hewn from a steamy mix of Funk, Disco, House and Garage.

The downright sleazy 'Foxy', the impossibly funky 'Hey Babe' and the title track, already a big hit on the dancefloors, might be the pick of the bunch on first listen, but there's a lot more besides.

Second track 'Feeling For

You' slides in aggressively on a Tuff-Jam-style tape loop, to metamorphose into a banging House masterpiece. 'Mister Eveready' is Cassius' nod to Rap with its street-style Break Beat; the James Brown-like 'Nulife is a riot'; 'Interlude' is a slow moody affair and 'Somebody'... Well, it gives the Chemical Brothers a ride for their money.

It may be more suited to the dancefloor than your flat, but 1999 is bound to get you in the right mood for a big night out. For the French, ce n'est pas mal!

on Mellow Gold and Odelay, Mutations is anything but a sprawling, cut-and-paste follow-up.

Intended originally as a low-key personal affair, experimental in content and never considered as a full release, Mutations was set for a quiet life on a minor label. His record label Geffen, however, had entirely different plans. Realising there was a rich vein to be mined here, and having heard the early demos which were surprisingly good, the chiefs at Geffen fought to reclaim Mutations as one of theirs.

Labelling it as a series of 'transitional' pieces for the big Beck fan, they knew this album would sell like hotcakes. Hence, while Mutations still contains Beck's special blend of Folk, Rock and Pop, the style has evolved in a subtle new direction. In short, the block-rockin' beats have been replaced by a quiet magic.

Comprising 11 beautifully-crafted tracks, Mutations could easily be (and could be yet) a soundtrack to a low-budget Western with its loose, melancholy, late-night feel. The songwriting may be tainted by Folk, Cabaret and Space Pop, but its heart lies unashamedly in Ragtime and Sixties Country Rock.

A collection of ramblin' tumbleweeds, Rawhide it ain't. And with no complex Japanese hardware to taint the proceedings, Beck simply let his strummed guitar take charge of the two weeks during which the album was recorded.

'Cold Brains', a surreal piece influenced as much by vintage Psychedelia as up-to-date Country, sets the pattern magnificently. And the harmonica solo is simply sublime.

Sixties Folk Pop is never far away, though, as you'll discover from the spellbinding

selection which follows. From 'Nobody's Fault But My Own' - beginning with a Doorsish 'The End' and framed by a droning sitar and Indian violin - to 'We Live Again', a Donovan-type 'Mellow Yellow' number swimming in dreamy, rolling harpsichord figures, we are in for a series of treats.

'Cancelled Check', which sounds like the Rolling Stones at the peak of their love affair with honky-tonk Americana, takes up the reins thereafter and is swiftly followed by Beck's cheeky 'Sing It Again', which by any other name is 'Norwegian Wood'.

For every Sixties rake-over there is a Country standard built along the lines of 'O Maria' or 'Sing It Again', which serves as a reminder to all that Beck, with his fluffy sideburns, really would not be out of place at the Grand Ole Opry.

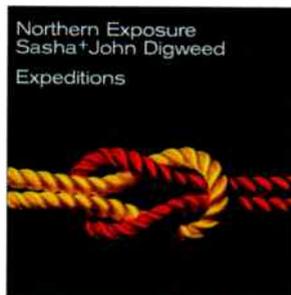
Only once does Beck live

up to his perverse image when, out of the blue, he does a breezy Bossa Nova song, 'Tropicalia', modelled on the Brazilian protest music of the same name which was popular in the Sixties and Seventies. Alongside the movement's figurehead, Caetano Veloso, to whom the song is a tribute, Beck shares an unusually sophisticated sense of rhythm. The result is a sort of quirky 'Girl From Ipanema', if you like.

In Mutations Beck doesn't really go anywhere he hasn't been before - it could easily be a companion to 1994's One Foot In The Grave, though it's not perhaps as raw. Thanks to his wry invention and humour Mutations is always a refreshing stroll down memory lane and holds the fort safely until the arrival of the 'official' follow-up to Odelay which should hit the planet some time next year.

DANCE & AMBIENT

by Sara Davis



SASHA AND DIGWEED  
**NORTHERN EXPOSURE**  
SONY EXPOCD1-1

The observant will notice that this third instalment of the Northern Exposure collection comes via Sony rather than Ministry Recordings; clearly the Sasha/Digweed phenomenon has changed hands (probably for lots of money). The new label InCredible appears to have been set up in order to continue the Northern Exposure tradition which was built on the touring club night of the same name some years ago.

The new label signifies a change of affairs that comes at a strange point for the halves of the Sasha/Digweed partnership. Both are going through unsettled times, be it with fresh residency contracts or musical diversifications. Sasha especially has evolved his sound quite radically since the early Northern Exposure days, so it's hard to imagine how this album will sit next to earlier releases. His recent Global Underground CD, classy and sophisticated, consolidated his Ambient and experimental House tastes. This was hardly the Sasha House vibe that, in the old

days, would have had you reaching for your handbag.

As for Digweed, so far he's stuck with churning out the characteristic dreamy House that he has always played, and getting abuse for it in some quarters. Despite the fact that his formula pleases crowds, he's falling victim to the stagnant syndrome and probably needs to take his sets one notch lower on the underground scale. Which is a strange co-incidence, because that's exactly what Sasha's done to great effect.

Hence the appeal of this double-CD, Sasha's new, dark House vibe tempered by Digweed's love of quality hard House. Expect sleek, groovy House, a whole array of layers held together by a tight, slowly accelerating beat. The mix is extremely consistent, Sasha's underground vibe dominating Digweed's tendency towards peaks and troughs. The partnership has probably never been greater, and certainly never as complementary.



PAUL OAKENFOLD  
**BEST OF CREAM  
COURTYARD, CD2**  
CREAM/VIRGIN VTDCD237

The first DJ to have his name

shortened, is it because Oaky's success is so great everybody wants to be on casual terms with him? Or perhaps it's because people feel they know Mr Oakenfold? Any witness will vouch for the fact that his sets are extremely infectious - it's as if he can sense the collective feeling and play to it. Such is the sign of the world's biggest DJ, the first to be credited in the Guinness Book Of Records and one of the most respected men in the business.

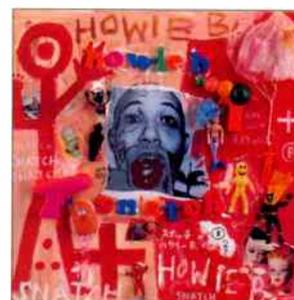
So just what is the secret of his success? It has to be down to Oaky's selfless approach to music, the way he concentrates on the tracks the crowd want to hear rather than the one's he's pushed to promote. Then there's his seamless mixing plus a broad-minded approach to his sets which he builds track by track to create waves of sonic atmosphere rather than a line-up which hops blandly from tune to tune.

Thankfully, all these elements are recreated on this double-album, right down to the cheering Cream crowd egging Oaky on as he works in those haunting break-downs. And the tracks? An excellent choice of tunes that can be slotted into that category of songs you know and love but don't yet own. In other words, they belong to that respectable class common to the dancefloor but not yet being power-played to the masses; melodic and catchy enough to make the Top 40 but still to be plucked from the realms of the

underground.

It's sophisticated House music like the intro, Taste Experience's 'Summersault', and Mansun's 'Wide Open Space', that gets under your skin in an un-cheesy way. Cream regulars, especially those with the first episode of Courtyard, will find that this album adds more of the same epic, dreamy House to their collection and serves as a good souvenir of the legendary Cream nights. The Tilt version of 'Children' is particularly reminiscent of the Cream years, representing for some the highlight of the emotive House-club days.

Those who have yet to visit Oaky's Courtyard Of Dreams will never get the chance to hear Paul's resident set at Liverpool's finest club night and will have to comfort themselves with this CD series, coupled with the new Radio 1 residency that he's just accepted.



HOWIE B  
**SNATCH**  
PUSSYFOOT CDLP011

After two critically-acclaimed solo albums, Music For Babies and Turn The Dark Off, one of the most innovative producers around creates an album on

DANCE & AMBIENT

RECORD OF THE MONTH

VARIOUS

KOSMONAUTS

KOSMO RECORDS LC 3252

Kosmo Records is always quick off the German mark to react to market changes. This time it's up there amongst several other German record labels who have found it necessary to diversify away from the traditional hard-edged Techno and Euro-Trance of yesteryear and concentrate on the awkward Big Beat and glammy Disco-House elements that continue to prevail in the UK scene at present.

More than a fast-buck mix CD that strikes the right chord, Kosmonauts signifies a sea change within the structure of Kosmo Records as they prepare to launch a UK wing under Logic. Just how successful this mission will be remains to be seen.

Some might see traditional German Techno producers adopting the very British breakbeat and funky handclaps as a disaster waiting to happen since the two strands of Dance music are light



years apart in terms of musicality and culture. But anyone familiar with Kosmo will know that it has regularly been the feeding ground for highly reputable labels such as FFRR and Hooj Choons, who have returned time and again to license artists like Da Hool and Eniac, both of whom are featured here.

Despite what the politics and theory behind this album might imply, there is still a strong, melodic Techno vibe to this release. The double-edged Funk does exist but mainly in the form of a

typical Big-Beat intro featuring yet another Fifties-style recording on the subject of the definition of music (you know, choc-full of dialogue samples, this time a square music teacher who's trying to cut it with the kids).

The rolling, funky tip also manifests itself subtly within the tracks, artists such as Mo Funk providing a particularly jammin' remix of 'Whoosh' building into Dani Konig's 'Disco 3000', a fine example of hip-grinding House riding a mean, Trancy riff.

On the whole, Kosmonauts orbits lighter musical influences in a sturdy Techno rocket, even Novy vs Eniac's groovy House tune 'Someday, Somehow' losing its defined vocals to a pounding bassline and psychedelic break-downs. The rule of thumb is that the rhythmic Funk fades out whilst the chirpy House co-exists nicely with gorgeous, melodic Techno. It's great to hear Kosmo's new UK breed of Euro-Trance utilising the label's traditional Techno talents in a refreshing and exciting format.

Pussyfoot. It's been a long time coming, but considering that he's been DJing for U2 on their Popmart tour, remixing Steve Reich and producing Sly and Robbie's latest LP, it is fair to say that he's been a busy man. He even had a transportable studio custom-built so he could continue making his own music as he circumnavigated the world.

Leap-frogging from tea-boy to tape operator to fledgling engineer, Mr B. cut his teeth as an assistant to soundtrack composer Stanley Myers. He has since worked with Björk, Tricky, Skylab and Bryan Eno amongst many others, a reflection of his diverse tastes

and open-minded outlook.

Howie is famed for his ability to explore the furthest realms of the sonic spectrum through ethereal soundscapes, quirky sounds and addictive loops from bizarre sources. So is this digital Jazz or bodge-it-all pizazz? Could any insane person with a mobile studio and the power of a gut-busting effects desk at their finger tips do better?

Snatch is one of those experimental beat-fests that requires multiple listening before it can even begin to hook itself into the subconscious. As there aren't any volunteers around willing to store it in their CD players

for the foreseeable future, it's true calibre may remain ungauged.

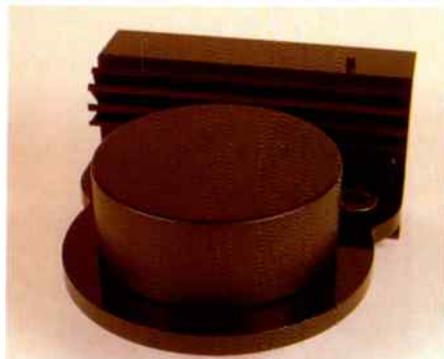
After average amounts of play there are definitely some tunes which feel good - track three, 'Cook For You', maintains more order than most, mixing a big Bristol bassline with a jazzy flute sample and a spiritual melody. 'To Kiss You' also appeals instantly, its head-nodding groove built around an oddball piano and guitar loop that perfectly illustrates Howie's penchant for combining the surreal with the sublime.

'I Can Sing But I Don't Want To' has an equal capacity to infect, although it's

on a melancholic and laid-back tip. You can imagine this tune as the closing music to a British realist film from the Sixties - it evokes images of a lonely heroine who has just experienced not very much, walking slowly into a factory-lined metropolis as the credits roll.

You're left with a similar kind of sensation after trying Snatch. In its raw, down-to-earth feel it's entertaining enough. There's some true creativity to be found within the fabric of the medium too. Interesting and fun to listen to, Snatch the album ultimately leaves you somewhat empty afterwards.

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JAZZ

by Ian Nicolson



ART BLAKEY AND THE JAZZ MESSENGERS  
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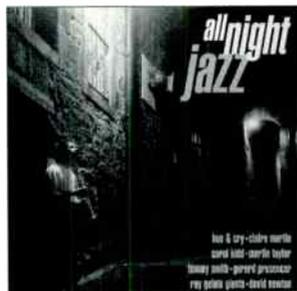
Many fans with tuned-in ears rate Blakey and Blue Note as the ultimate in Jazz talent-spotting, and his Jazz Messengers were their Academy of Excellence. Lee Morgan, Cedar Walton, Wayne Shorter, Freddie Hubbard, Hank Mobley, Curtis Fuller, Horace Silver and Bobby Timmons all became Messengers, in front of one of the presiding geniuses of Hard Bop.

Blakey ruled the drum stool from the inception of the band in the mid-Fifties to the end of the line in the late Eighties.

The sessions for *Africaine* (recorded in 1959 but not released until 1979) saw innovative young tenorist Shorter linked with the equally forward-looking trumpet of Lee Morgan for the first time on record. These two were set against the efforts of producer Alfred Lion to shape another commercial hit to match Blakey's breakthrough with 'Moanin''. What he got instead was a showcase for two hot young horn players and composers burning ideas and talent over the uniquely wide-screen Blakey percussion style, all

anchored by Walter Davis's low-key, self-effacing and supportive Blues piano.

This first CD release for *Africaine* as part of Blue Note's 60th anniversary programme does what Blakey always wanted for his music and his Messengers - it captures a transitory creative coalition at a peak moment and keeps the fruit of their imaginations and skill as something timeless, elegant and brave. Essential.



VARIOUS ARTISTS  
**ALL NIGHT JAZZ**  
LINN AKD 087

You can buy Linn Products' hi-fi from Glasgow to Bombay to Tokyo, and a lot of people do. I wonder how many realise that the same company has a kid-sister operation called Linn Records that believes in the same grails: quality, precision and musicality.

Periodically, the label issues samplers from their roster of predominantly Folk and Jazz acts. Hi-fi shops are often the easiest place to find them because the recording, mastering and musical quality makes them ideal audiophile testers.

Don't expect a mid-Atlantic nerd intoning: "15000Hertz, left channel", or the sound of a cabbage

being sawn in half while performing backflips off the wall behind the sofa. Do expect immaculate, hallmark performances from vocalists Carol Kidd, Ray Gelato and Claire Martin; lyrical, sophisticated, smooth Jazz keyboards from Tommy Smith and the under-rated Gerard Presencer; delicately inflammatory acoustic guitar inspired by Martin Taylor's passion for Django; and a glimpse of the Kane brothers (aka Hue And Cry) in plangent ballad mode.

Not all the tracks are the latest recordings by the acts, and only a few of them have ruffled the airwaves or battled for racking in HMV, but there's a coherent A&R, production and recording philosophy at work here that deserves more favour. Try one and see.



THE NEW TESTAMENT OF FUNK  
**VOLUME 1**  
ACID JAZZ LP106

After too long - around two years - since the last album to be released by the indispensable London-based Acid Jazz label, 1999 is off to a flying start with this hour's worth of classics that have wired up UK dancefloors to the latest mash-up of breaks, beats and improvisation.

Volume 1 (what a promising title. . .) kicks off with Xavier Fisher's latest enclave, the seriously souled-out Sookie All Stars funkng up Richie Haven's monster 'Freedom', all dripping Curtis M. guitar and fruity clavinet. Then it slips seamlessly into stripped-down Gallic Disco with NLE, pumps up the bass bumps and triangle accents for German new signing Erobique (aka Casten Meyer), and comes over all hard-boiled Breakbeats with The New Testament slamming the theme to The Professionals up against the Granada just one more time.

Next is a slyly addictive taste of Bhangra Jazz from new signing Pathaan, then a lyrical, spaced-monkey, James Lavelle stretch mix as the Man From Unkle tries on the 'Emperor's New Clothes', which dissolves into Aussie Martin Sheen getting anthemic over a psychoactive sitar and handclaps backbeat.

If you're not tired of jiggng about yet, Chekhov's mesmeric 'Aha' and T-Boy's traffic-jammed baritone saxes in 'Jetsonville' or Melbourne-based remixer OSS's latest incarnation (where the Models meet Devo in Daft Punk's backyard) should all trigger your slow-twitch fibres nicely. Which only leaves Paul Murphy collaborating with Canadian producers High Fidelity and German DJs Unique on a madhouse Breakbeat pastiche of Sixties ads, Seventies Soul and several sampled kitchen sinks. Face it, if you can't find your cup of tea in here then you're either not thirsty or in the wrong town altogether...

## JAZZ



VARIOUS ARTISTS  
**BRASIL 2MIL**  
ZIRIGUIBOOM ZIR 02



BELEZA  
**TROPICAL 2**  
LUAKA BOP 46275

After one too many Sunday mornings lugging half the contents of Tesco around bits of south London dampened by profoundly unconvincing snowflakes, I reach for something tropical. So perhaps it's no coincidence that both Luaka Bop and the Austrian Jazz-to-Pop Ziriguiboom labels fancy their chances with compilations of new Brazilian Jazz at this time of year.

Jazz musicians have eagerly embraced Latin influences - and vice versa - since at least the end of WW2. There was even a period in the mid-Sixties when trying to get a gig without a couple of Bossa Nova tunes in the book was like spitting into the wind. If it was good enough for Stan

Getz or Dizzy Gillespie, and if Herbie Mann and Sergio Mendes could get rich quick off Samba and Bossa, why not?

Now Astor Piazzolla's tangos and octogenarian Cuban lounge acts fill the Albert Hall, while Jobim or Gal Costa truly sit comfortably next to Marley and The Chieftains in thousands of European living rooms. Latin music informs everything from The Mavericks to Baaba Maal. But the Sixties Bossa boom eventually transformed a vigorous, fertile fusion of African, native and European musics into something a lot closer to tinned soup: ingredients the same as the real thing, but what happened to the taste? It's just too easy to bolt some Samba or Lambada onto traditional Pop changes and, hey, look, the Spice Girls singing 'All Around The World'.

But Brazil is every bit as influential and volatile a music-making culture as the US, and these outstanding new collections illustrate that breadth. Ex-Talking Head David Byrne A&Rs Luaka Bop, and Tropical 2 is a follow-up to his first Brazilian compilation (released in 1989) which keeps the faith that breakthrough set inspired: giants like Gilberto Gil, Tom Zé and Caetano Veloso updating Tropicalia, Marisa Monte and Carlos Careca's seductive Nineties Bossa sounds, the strident African drums of the Bloco Afro underpinning new star Daniela Mercury's patois-Pop and original internationalist Sergio Mendes mixing it over

and under Jazz-Rap lyrics that wouldn't be out of place on a Bootsy Collins set. . .

Brasil 2mil compiles many of the best of Brasil's young Bossa and Axé dance-based acts who have absorbed House and Trance - and, through Brazilian producer Béco Dranoff, breathe new life into Bossa. If you've already heard Smoke City and Arto Lindsay (both represented here), you'll know how the melancholy of memory - the quintessentially Brazilian synthesis known as "saudades" that is traditionally alleviated by music - can be wrapped in a parcel of Jazz-Funk that defies categorisation. They call it Bass-o-Nova on the sleeve - an appalling pun but a lovely record.



CLAIRE MARTIN  
**TAKE MY HEART**  
LINN AKD 093

Sensational young London-born Jazz/Folk singer Martin has built an enviable international reputation with her five Linn albums to date. Every date or session has revealed her catholic taste in songwriters, her unwillingness to be categorised, and an exceptional ability to breathe personality into both

unexpected and familiar tunes, all underpinned by the wit and technique to keep lyric, melody and swing in easy harness.

Whether her growing following will take easily to her latest depends on one simple test: are we far enough down Rock's river to let Jazz embrace these songs by writers like Nick Drake, David Sylvian, Elvis Costello and Lennon/McCartney?

Then again, every one of the originals was full of doors being opened by mould-breaking singers itself. And why shouldn't a 30-something singer steeped in British Pop and Rock history pick the eye-teeth out of that canon, rather than that of the Thirties or Fifties legends? Which is probably part of why ace magpie Noel Gallagher worked on Martin's version of 'Help', while her producer and guitarist, Paul Stacey, is helping to incubate the next batch of Oasis' tunes.

There are real reminders of the K.D. Lang approach to making records on Take My Heart, a kind of absolute focus on the performances and a burnished, succinct, economically-arranged classicism that never shouts "look at me!" - especially in the tricky bits - or parades in front of the mirror. Meanwhile, Martin's leisurely, smoky voice never dodges a syllable or blurs a meaning as it sends slow, lingering chills up the back of the neck.

I've never really been confident that I knew what "plangent" means, but I'm pretty sure that this is it.

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## Dominic Todd

The question of hi-fi design has been chewed over many times before within this publication. Yet with the onset of the millennium (sorry to mention the "M" word again) the world of good hi-fi has been, or at least is about to be, brought to a wider audience. As part of the bedomed millennial experience, visitors are to see products that reflect the best of British hi-fi design which, in this case, relates as much to aesthetics as function and sound quality. Any opportunity to present decent gear to the great British public sounds like a fine idea to me, especially when it's shown that it doesn't have to come encased in boring black boxes.

So the question is, what are the fabled products selected to represent the UK's esteemed audio manufacturers? Well, it came as little surprise to find B&W's Nautilus loudspeakers are one of the chosen. After all, they already have a spot within the Science Museum, and prove that even when form follows function a product can still be visually arresting. On the other hand, priced at about the same level as a Midlands terraced house, they perhaps don't offer the best example of affordable hi-fi.

More realistic yet also somewhat baffling is the inclusion of the Arcam Alpha 10 amplifier. Don't get me wrong, this is a well-implemented, competitive amplifier. It's hardly what could be called a 'looker' though. Nor does it redefine sound quality at the £800 price level. It's included because of its modular construction which renders it

future-proof, and forward-looking is just the sort of thing I could see the millennium judges going for in a big way. Fair enough, but I still can't help thinking something from Cyrus would have been of more aesthetic interest.

That's the pinnacle of hi-fi design then, so where does it leave the rest of the industry as we race towards Y2K? The really exciting news is that Pioneer have produced a new badge. It's the same colour as the old one (gold) and it sits on the same sort of equipment (shiny, black boxes) but it's a little more 'organic' than before.

Call me cynical but it's hard to find anything affordable that challenges the status quo these days. Of course there are a few exceptions - Musical Fidelity's X range seems to be growing by the day and has had favourable reactions from press and public alike. Tracking down components from the larger Japanese multi-nationals which get the juices

the Altos failed because, despite standing out visually, they fell down in terms of function. For the price they didn't sound good enough (see Hi-Fi World April '94 for our review on the amp). Later price reductions weren't enough to save them, even though at the end the Alto range had something of a cult following.

More recently I've been reacquainting myself with the Rogers DB101 loudspeakers. Rather like the Alto, this was a futuristic product from a traditional company. Also like the Alto, it was over-pricing that led to its downfall; that a company could even dream of charging £400 for a 'speaker with spring-clip terminals, a basic hard-dome tweeter and a plastic cabinet is hard to believe. The only sign of the sort of quality I'd expect for the money was in the bass driver whose cast chassis and fixed phase plug offered some hope for decent sound quality.

*"In the recent past there have been products that have dared to be different and only succeeded in bankrupting the whole company."*

flowing can be a fruitless task. Many have an esoteric range, usually not available in this country, that looks as if it has been hewn from a solid billet of titanium, but exciting, attainable stuff is hard to come by. Sony's cute CDP-X3000ES is one product that begs to differ from the norm, but it's the only one that springs to mind.

It's not hard to imagine why many companies choose to tread such a conservative path. When Audio Innovations launched the Alto amplifier and CD player, it was fair to say that both raised eyebrows amongst the industry and public.

Producing hi-fi that resembled miniature flying saucers was one thing, but coming from a company that had specialised in solid, workman-like valve amps was quite another. Seen by some as gimmicky but others as stimulating,

This hope proved to be misguided as listening to them reminded me of why most 'speakers use wood and not plastic for their cabinets. Despite a taught bass response, the overall presentation was so coloured as to make me reach for the nearest budget mini monitor as a source of refuge.

In the Rogers' defence I think the retro toaster styling looks great, but I guess that form has to support function, not the other way around. And therein lies the rub. There is a demand for hi-fi that looks as good as it sounds - Michell, Cyrus and Musical Fidelity can all testify to that - but when form becomes the overriding concern, manufacturers are beginning to lose the plot. As fascinated by design as I am, I would rather have my hi-fi ugly than make sacrifices in terms of sound quality. If that means more black boxes, then so be it!●

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CLASSICAL

by Peter Herring

We're in unknown territory this month, though it's surprising to discover works by Brahms that qualify as 'neglected'. More esoteric still is the enigmatic 17th-century Italian Michele Mascitti and Dmitri Shostakovich with his 15th symphony.

RECORD OF THE MONTH

JOHANNES BRAHMS

**Choral music: Two Motets, Op29/Two Motets, Op74/Three Motets, Op110/ Fest- und Gedenksprüche, Op109 et al Alain Planès, piano; Stefan Jezierski, Manfred Klier, horns; Marie-Pierre Langlanet, harp RIAS-Kammerchor; director, Marcus Creed**

**HARMONIA MUNDI FRANCE 2901 591.93 (3-CD SET) (DDD/186.56)**

The music of Brahms is so familiar that it is hard to believe that a large measure of his output - and in an area in which he excelled - could justifiably be described as neglected. Yet, in comparison with the symphonies, concertos, chamber and piano music, Brahms' choral compositions are lamentably underexplored. There is one monumental exception to this observation, the German Requiem. If you followed up the recommendation in the February issue and - like me - revelled in the reissue of Otto Klemperer's classic account, this handsome boxed set of Brahms' lesser-known choral music, sacred

and secular, will reward investigation.

Brahms wrote choral music throughout his creative life. One motivation for this was that his principal conducting appointments were with choirs. He was only 14 when he directed a choral society for the first time and, in 1857, aged 24, he secured the post of chorus master at the court of Detmold. Two years later Brahms formed a choral group of his own, the all-female Hamburg Frauenchor, in his home city. His work with this ensemble was one of the happiest periods of his life, a contrast to the discord that clouded his time as chorus master of the Wiener Singakademie in Vienna.

It was for the Hamburg Frauenchor that Brahms wrote his Vier Gesänge, Op17, with the unusual but effective accompaniment of two horns and harp. As elsewhere in this Harmonia Mundi collection, the recording of these songs is a model of clarity and definition, with

the choir perfectly 'placed' within an ideally resonant acoustic (disappointingly, the

venue is not disclosed).

The sound of the 35-strong RIAS Chamber Choir under its British-born director, Marcus Creed, is characterised by a wide range of tone colour, finely-judged vibrato, commendable accuracy of pitch and stylish phrasing. They project the music to thrilling effect.

The choir was founded in 1948 and this set supplies a splendid celebration of its 50th anniversary last year. RIAS, incidentally, stands for Radio In The American Sector, the radio station set up during the Allied occupation of West Berlin. Its 'Cold War' choir made contributions to many classic recordings, principally for Deutsche Grammophon.

Tradition mattered to Brahms too, and - like Mendelssohn and Bruckner - he found inspiration in the polyphonic choral music of the past. But everything sung here has its own distinctive

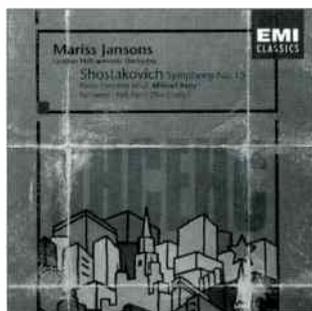
stamp, with harmonies that could only belong to Brahms. The motet settings are richly varied, ranging from a simple chorale style to substantial double-choir compositions with multi-layered contrapuntal textures. The Vocal Quartets with piano accompaniment - here an 1870 Riedel instrument played by Alain Planès - are similarly inventive, although the invention is often cleverly masked by an engaging lightness and charm.

The composition of the quartets spanned 27 years (1864-1891), and Brahms set texts - mostly on romantic themes - by Goethe, Schiller and several lesser literary lights. They refute the old chestnut about Brahms' supposed heavy-handed technique and drab colouring.

The two sets of gypsy songs (Zigeunerlieder) supply a sparkling coda to this immaculately-produced set (texts and translations are included, along with some lucid insights into the music). Throughout, this is Brahms at his most fluent and idiomatic, unfettered and unburdened by the weight of expectation and self-imposed sense of destiny which haunted his career as a symphonist.



## CLASSICAL



**DMITRI SHOSTAKOVICH**  
**Symphony No15 in A major, Op141/Piano Concerto No2 in F major, Op102\*/Suite: The Gadfly, Op97a**  
**Mikhail Rudy, piano\***  
**London Philharmonic Orchestra; conductor, Mariss Jansons**  
**EMI CLASSICS 5 56591 2**  
**(DDD/74.56)**

After the 'programmatic' 11th and 12th symphonies and the 'song cycle' symphonies, Nos 13 and 14, Shostakovich returned to the orthodox four-movement, purely instrumental format for his 15th and - as it was to prove - last symphony. But if the structure was unremarkable, the content was far from straightforward.

Quotations from his own works perhaps suggest a summation on the part of the composer, whose health was failing. But why include three motifs from Wagner, including the first three notes of *Tristan und Isolde*? And why the undisguised references to the main theme from Rossini's *William Tell* overture? The composer's son, Maxim, who conducted the first performance of the symphony in 1972, relates that his father described the burlesque-like first movement as a 'toyshop'.

If Shostakovich was preoccupied with his own mortality,

then he expressed it with chilling, heart-rending eloquence in the symphony's mighty slow movement, with its sepulchral brass intonations. And if the clues to understanding this puzzling, elusive yet hypnotic music are buried within the score, then Mariss Jansons' broad and considered reading ought to reveal them. Attentive to both detail and line, and with marvellous phrasing, Jansons simply allows the symphony to unfold and the result commands attention.

That he is able to sustain this hold owes much to some outstanding playing from the London Philharmonic; the brass and woodwind sections are in top form, and the percussion make the most of the many opportunities to shine which Shostakovich presents them with.

There are no riddles surrounding the Second Piano Concerto which Shostakovich wrote as a 19th birthday gift for his son and which Maxim, then studying piano at the Moscow Conservatoire, gave its premiere there in May 1957. Two scintillating outer movements enclose an andante of melting beauty. It contains one of Shostakovich's most lyrical themes, one which the soloist here - Mikhail Rudy - mercifully refuses to sentimentalise. The approach adopted by both Rudy and Jansons reveals a depth to this concerto which many other versions completely overlook. The virtuosity here serves a purpose.

Jansons concludes with the engaging suite assembled from the music Shostakovich wrote for a 1955 film, *The Gadfly*. It

supplies a rousing encore to the programme, and the LPO sound as if they thoroughly enjoyed recording it. Mike Hatch's finely-judged sound balance, one of the best I've encountered recently from Abbey Road's Studio No1, does full justice to the performers' achievement.



**MICHELE MASCITTI**  
**Sonate Da Camera, Op1**  
**Fabrizio Cipriani, violin; Antonio Fantinuoli, cello**  
**CANTUS C9610 (DDD/60.55)**

No, I hadn't heard of Michele Mascitti either, but then the list of itinerant Italian virtuosos of the 17th and 18th centuries is well-nigh endless. Does Mascitti warrant more than a one-line entry in the musical dictionaries? On the evidence of these exquisitely-played and beautifully-recorded violin and cello duos, he is clearly a more substantial figure than the many other followers of the great Arcangelo Corelli.

Mascitti, who was born in 1664, almost certainly studied with Corelli in Rome before migrating to Germany, the Netherlands and finally France. He settled in Paris in 1704 and it was there, in 1738, that he published all his collections of instrumental music.

It cannot have been easy for Mascitti to succeed in France, a country whose musical and aesthetic tastes were the antithesis of those of his homeland. In France, instrumental music was regarded as the poor relation of vocal compositions; in Italy, composers such as Corelli had constructed an instrumental language which reflected the expressive structures of vocal music and become immensely successful on the strength of it.

Mascitti took this with him and, judging by these refined and captivating chamber sonatas of 1706, was able to resist any Gallic dilution of his rich and colourful Italian musical 'recipes'. The final movements, usually jigs, have a bright, Mediterranean feel and the discourses between the two instruments are full of expressive freedom. The effect is of an intimate conversation between two members of a family; sometimes they're in sunny harmony, on other occasions in fiery conflict. It makes for enticing listening.

The two soloists on this recording from the Spanish Cantus label make a persuasive case for Mascitti's music. Violinist Fabrizio Cipriani plays a Venetian instrument from 1788 while cellist Antonio Fantinuoli uses a copy of an 18th-century Stradivarius-Piatti. They combine to make a lovely sound, one whose vibrant colours are well caught by the lively, airy acoustic of the Church of San Bartolomeo in Cravasco, Genoa. Michele Mascitti may only be a detail in the tapestry of music history, but it is one sewn with the brightest of threads.

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BANG & OLUFSEN	BEOCENTRE 9300	CD/RADIO AND CASSETTE	X	1	£1650.00	£1200.00
BANG & OLUFSEN	BEOCLAB 2000	ACTIVE LOUDSPEAKER	X	1	£550.00	£400.00
BANG & OLUFSEN	BEOCLAB 3500	HORIZONTAL ACTIVE LOUDSPEAKER	X	1	£900.00	£650.00
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CELESTION	CSW	SUBWOOFER	N	3	£300.00	£150.00
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MERIDIAN	502	PRE AMPLIFIER	X	1	£1,385.00	£1,000.00
MERIDIAN	565 7.1 AC-3	AC-3 DOLBY DIGITAL PROCESSOR	S	1	£2,850.00	£1,900.00
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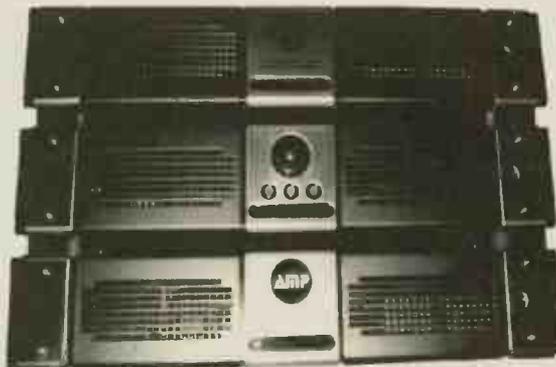
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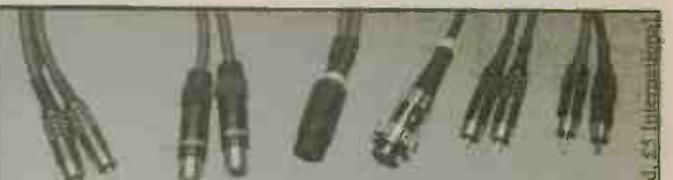


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Musical Fidelity X - ray CD player ex display, full warranty (£799) ... £640

Naim Headline headphone amplifier with Flatcap PSU s/h perfect boxed (£555) ... £325

Nordost superflat gold (bi-wire) loudspeaker cable 5m pair s/h (customer needed a longer set) current cost £217 ... £120

Pink Triangle DeCapo DAC, 1307 chip S/H boxed, perfect ... £650

Pink Triangle Cardinal CD transport, S/H perfect. No handset ... £350

Quad II Power amplifiers. Excellent, original condition (but IEC mains and phono sockets) s/h ... £450

Quad 77-10L loudspeakers. Yew wood, boxed, excellent s/h ... £340

Quantum Minstrel hybrid amplifier, S/H Boxed, (£999) ... £349

Royd Minstrel SE loudspeakers. Cherry veneer with optional steel bases. x/d (£454) ... £250

Sony CDP XE 320 CD player x/d (£140) ... £70

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8000DAC	£900	£650
8000MX pair	£1800	£1495
B&W CDM2 r/wood	£400	£320
Copland CDA288	£1999	£1599
Cyrus 111i	£598	£475
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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
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PDS505 Precision	£460	£350
Quad 77 Power amp	£600	£450
77 Pre-Amp	£700	£525
77 Remote	£300	£150
77 CD bus (all carbon)	£700	£595
REL Q100E bk.	£495	£395
Yamaha DSP-A3090	£1500	£1125

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Audiolab 8000C pre-amp	£375
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Audio Innovations Series 1000	
monobox (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,	
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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
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FM4 tuner (din)	£150
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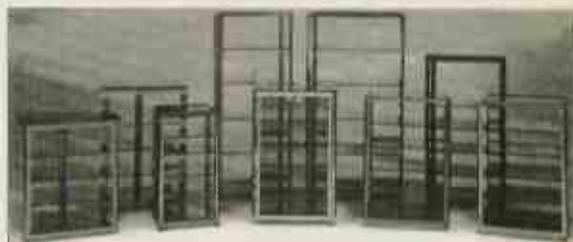
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Magnaplanner SMGA panel speakers	£195.00
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ARCAM Alpha 5	450	200	EXPOSURE XV111 Super Poweramp 850 500
MARANTZ CD80 enormously heavy	300	400	10N OBELISK 3X & XPAK-I Amp 300
MERIDIAN 207	1000	400	LFD PA1 power amp 900 450
MICROMEGA T-DRIVE transport & T-DAC with AES-EBU lead	2150	900	LFD MISTRAL integrated 500 300
MICROMEGA DUO 3.1 transport & DUO B5 DAC	2100	900	LUXMAN Avance Z501 power amp 150
PINK TRIANGLE ORDINAL DAC	500	500	McINTOSH C28 PRE / MC250 power amp
PS AUDIO LAMBDA CD Transport	2700	1000	Enormous beauties with wooden sleeves and they light up in blue! 900
ROKSAN CASPIAN 3 months old	900	670	McINTOSH MC250 classic early transistor power amp with output transformers 400

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AUDION 2 Box Pre with Phono	1500	800	NAIM NAIT 3 400
AUDION SILVER NIGHTS 300B 17 watts monoblocks	2250	1250	NAIM 62 pre old style with mm or mc boards 200
BEARD BBA100 line integrated	1500	600	NAIM hicap old style 350
BEARD P500A valve pre with phono	400		NVA 50 watt stereo power amp old style 200
CONCORDANT EXCELCIOR Phono Pre amp with offboard PSU	650		NVA A80 monoblocks 3 years old boxed 1600 800
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REL Q-100E Subwoofer 3 months old	500	350	
ROGERS STUDIO 1	275		
ROYD MINSTREL pair	120		
RUARK EQUINOX	2500	1200	
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SONUS FABER MINIMA boxed	700		
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McIntosh MAC1700 Hybrid valve/solid state receiver	500		
MERIDIAN 104 FM tuner	120		
NAKAMICHI 480Z cassette deck	200		
QUAD FM 2 stereo valve tuner	100		
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ARCAM Delta 60 amp	300	160	
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MARANTZ PM66KI INTEGRATED AMPLIFIER	£400	£350
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PROJECT 6 TURNTABLE (INC. ORTOFON MC 10 CARTRIDGE)	£600	£395
REGA KYTE BLAC K FINISH	£198	£125
ROTEL RCD-950 COMPACT DISC PLAYER	£250	£180
REL STORM 100W ACTIVE SUBWOOFER	£695	£550
YAMAHA DSP-E1000 7 CHANNEL PRO LOGIC PROCESSOR	£700	£350

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# MEASURED PERFORMANCE

## AMPLIFIERS

### EDMUND ESI 10

The Edmund produces 78watts into 8ohms, rising to 110watts into 4ohms. It has reasonably good power supply regulation and should have some bass slam as a result.

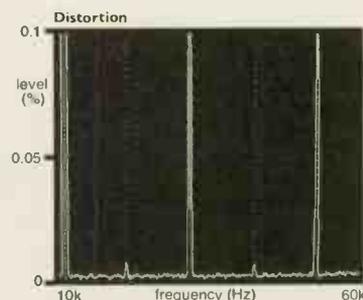
Although the amplifier is powerful it exhibits a Class B distortion characteristic where, as signal level decreases, distortion increases. Our standard figures showed a maximum of 0.2% distortion at 1watt, 10kHz. However, further measurement showed that at very low levels as much as 2% distortion existed (100mW output at 10kHz), with odd-order harmonics extending up to ninth order and beyond. This sort of distortion is invariably heard as coarseness in the sound and

is not commonly met in amplifiers nowadays.

Frequency response measured flat from 10Hz up to 30kHz through the CD input. Via the phono stage there was +1dB treble lift at 20kHz and some shelving off of bass output. This would produce a bright or slightly light sound from LP. Input noise was very low and gain quite high, giving a sensitivity of 2.5mV on both channels.

The Edmund has some weaknesses that need attention before it is a match for good, modern designs. **NK**

Power 78watts



CD/tuner/aux.	
Frequency response	10Hz-30kHz
Separation	65dB
Noise	-95dB
Distortion	0.037%
Sensitivity	220mV
DC off-set	-21mV/-6mV

### LAVARDIN IT

The Lavardin produces 50watts into 8ohms, rising to 72watts into 4ohms. It's not enormous, but it is enough power with reasonably sensitive loudspeakers to get very high volumes. Power supply regulation was fair so there will be reasonable bass control too.

The interesting and unusual feature of this amplifier is its distortion characteristic. It is common for distortion to be low up to a few kHz with a rise thereafter. With this amplifier high-frequency distortion was lower than that in the midband. So I moved down to 40Hz and found distortion there very high, measuring no less than 1.7% third harmonic.

Luckily, the sole distortion harmonic was well correlated with the signal, much like that of a valve amplifier, so although there might be a little 'sharpening' of the bass, possibly adding emphasis to leading edges, I would not expect this distortion to be perceived as the coarseness or roughness of classic 'distortion'.

With good overall distortion figures

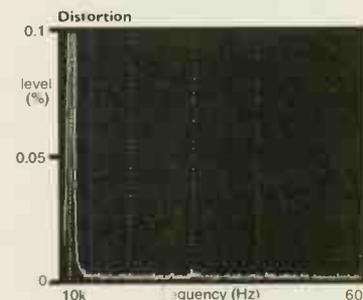
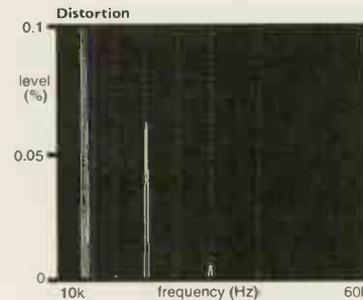
from 0.02% at 1kHz (all powers) to 0.005% at 10kHz (all powers), I have no problem with the Lavardin's distortion performance. Our 300B valve amplifier produces more, but it is not audible.

In all other ways the Lavardin measured well, although it is not very sensitive. Old tuners and cassette decks, producing around 300mV output will not drive it sufficiently to produce full power.

The Lavardin has an interesting measured performance. It works well. Feedback seems to increase with frequency, decreasing distortion progressively. **NK**

Power 50watts

CD/tuner/aux.	
Frequency response	28Hz-18kHz
Separation	85dB
Noise	-96dB
Distortion	0.037%
Sensitivity	400mV
DC off-set	-3mV/-14mV





## NAD C320

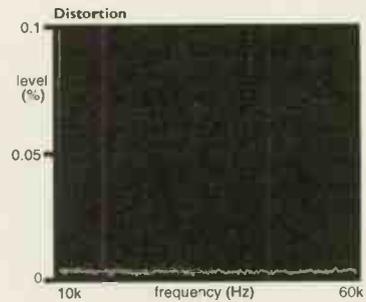
The C320 produces a lot of power into a standard 8ohm load - no less than 90watts. This is plenty enough to get very high volumes in the home. The only unusual feature of this NAD compared to previous models is relatively poor power supply regulation, due to the use of a small-ish mains transformer. Output into 4ohms hardly rose at all, unusual for a solid-state "constant-voltage source" amplifier. This commonly softens out bass in terms of attack and slam.

Frequency response proved wide and again the C320 was different from earlier models in this respect. NAD have tended to limit high-frequency extension in the past to get a soft, warm, yet clean sound.

The C320 may well sound brighter and clearer than NADs of yore as a result. NAD have not compromised on low distortion, however, with figures of 0.003% at low power in the midband, up to a reasonable 0.037% at full output at 10kHz - a very arduous test. I would expect the C320 to sound smooth and free from the coarseness caused by distortion.

The NAD measured well in most areas but its power supply is not especially sturdy, which may well soften bass impact. NK

Power	90watts
CD/tuner/aux.	
Frequency response	8Hz-106kHz



Separation	77dB
Noise	-95dB
Distortion	0.003%
Sensitivity	320mV
DC off-set	-2mV/-6mV

# CARTRIDGE

## CLEARAUDIO ALPHA MM

The Alpha has a very long cantilever that projects forward from the cartridge body, making cueing easy and accurate.

However, this is also a method of getting correct vertical tracking angle, so it was no surprise that VTA measured a theoretically correct 22degrees. This in turn minimises vertical distortion which, on the Alpha, measured an unusually low 1.3%, comprising mainly second harmonic.

Trouble is, few designers in the world choose such a design route, viewing a short, stiff, low tip-mass cantilever as preferable to the long, flexy, higher tip-mass that correct VTA demands. Low measured distortion is not overly important when the distortion concerned is correlated second harmonic.

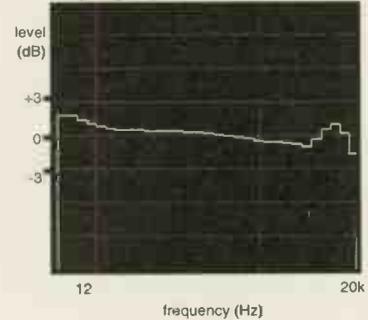
One channel was 2dB down on the other. Frequency response was reasonably flat; the Alpha displays less midrange generator droop than old designs, although it is no better than modern Goldring's, for example. Tip mass resonance puts a peak into the response at a low 12kHz, which

will add a little brightness. This low-ish frequency comes about as a direct result of the long cantilever. All the same, tracking performance was respectable, if not exceptional, at all frequencies.

The Alpha has been engineered to give a good measured performance. The decisions made have compromised it in other areas though. NK

Tracking force	1.6gms
Weight	10gms
Vertical tracking angle	22degrees
Frequency response	20Hz-20kHz
Channel separation	30dB
Tracking ability (300Hz)	
lateral	63um
vertical	45um
lateral (1kHz)	20cms/sec.
Distortion	(45um)
lateral	1.5%
vertical	1.3%
Output (5cms/sec rms)	4.2mV

Frequency response

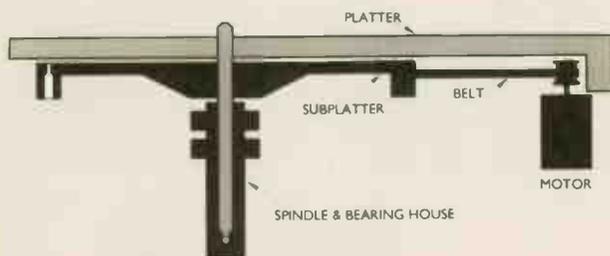


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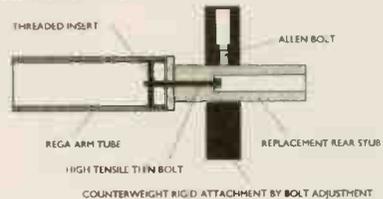
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# CD PLAYERS

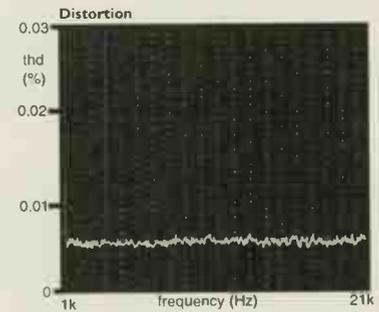
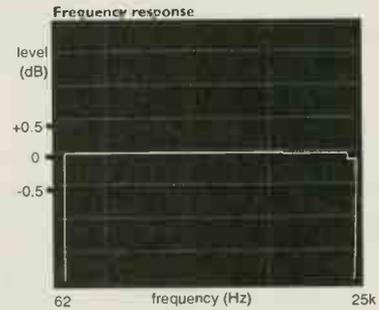
## AUDIO ANALOGUE PAGANINI

The Paganini would not replay a pulse test used for frequency response measurement, which is unusual. The only other players to behave unusually with a pulse are those with special processing from Pioneer and Denon, but both display curtailed frequency response rather than no response. However, the Paganini replayed white and pink noise correctly, as well as fixed tones, displaying flat frequency response to 21kHz. Our third-octave analysis, with fine 0.5dB/division scaling, shows the Paganini was very flat. In use, inability to reproduce a short pulse may well make the player sound a little warm and easy-going.

Distortion levels were much the same as most good players. Our analysis clearly shows absence of quantisation products at -30dB and there was little distortion at lower levels too, so this player will sound clean and free from coarseness.

With a normal output of 2V and wide channel separation, the Paganini measured well. NK

Frequency response	4Hz-21kHz	
	left	right
Distortion (%)		
-6dB	0.005	0.004
-30dB	0.01	0.009
-60dB	0.56	0.57
-90dB	30	31
Separation (dB)	left	right
1kHz	120	117
20kHz	103	107
Noise		-109dB
with emphasis		-109dB
Dynamic range		107dB
Output		2V



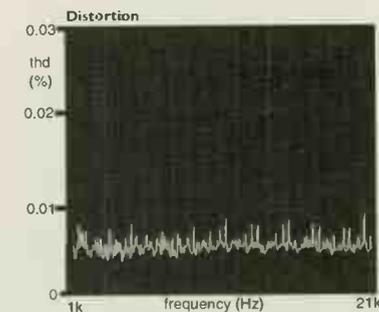
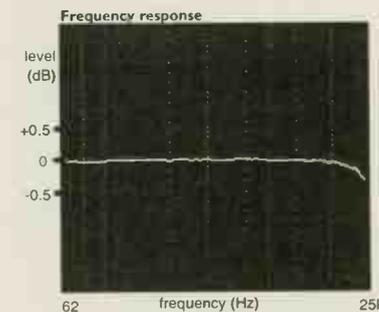
## THULE CD100

The Thule gave a conventional CD measured performance. It has a flat frequency response with slight top-end loss, just enough to avoid a bright, spitty sound, as our frequency response analysis shows.

Distortion was low at all signal levels, comprising mostly quantisation noise at -30dB, the level shown in our distortion analysis. At lower levels distortion from the Thule rose a little higher than usual, a figure of 0.8% being double that of a good, modern design. This compromised the EIA dynamic-range figure, putting it at 107dB.

Channel separation was satisfactory, noise low and output normal. The Thule uses a pretty standard chip set which offers conventional results. NK

Frequency response	4Hz-21kHz	
	left	right
Distortion (%)		
-6dB	0.005	0.004
-30dB	0.02B	0.028
-60dB	0.7	0.8
-90dB	37	36
Separation (dB)	left	right
1kHz	80	80
20kHz	68	68
Noise		-105dB
with emphasis		-105dB
Dynamic range		107dB
Output		1.975V



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MC 15 Super II	£120 £102 EX	Concorde Pro SSS Pack	£67 Stylus £15
MC 25 FL	£210 £178 EX	Concorde Nightclub SSS Pack	£106 Stylus £27
MC 10 Supreme	£263 £224 EX	Concorde Nightclub EEE Pack	£82 Stylus £33
MC 20 Supreme	£330 £280 EX	Concorde DJ SSS Pack	£82 Stylus £21
MC 30 Supreme	£392 £333 EX		
Rohmann	£725 £645 EX		
Jubilee	POA POA EX		
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# LOUDSPEAKERS

## CHARIO CONSTELLATION LYNX

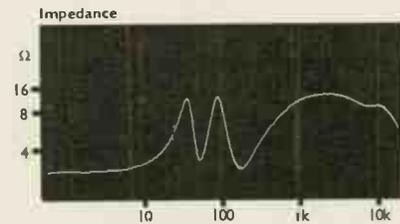
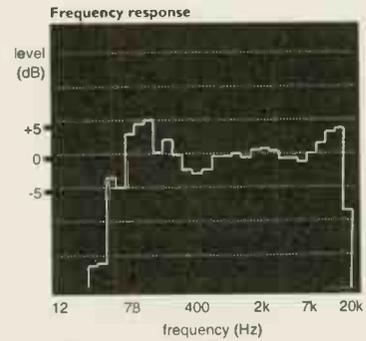
The Lynx has been engineered to have pronounced bass and treble lifts, like many European loudspeakers. It may sound lively in a showroom but it makes no attempt at accuracy and may well prove tiring in the home after a while. Output from the tweeter peaks up +4dB at 16kHz, enough to sound sharp on CDs with a lot of treble. Bass rises by +5dB at 160Hz, which will add speed but possibly boom at this level.

The impedance curve is more bizarre than the frequency response. From 20kHz down to 1kHz it is a high 12ohms, doubtless attributable to the dome tweeter.

Below this, impedance plunges to a very low 3ohms at 200Hz, broken only by the twin peaks of reflex loading.

There is a lot of reactance in the load, plus heavy current draw at bass frequencies, not a good mix at all. This is one of the most awkward looking loads I have ever seen and could well upset some amplifiers. Sensitivity was a normal 86dB sound pressure level from 2.83V input, a nominal watt.

The Lynxes need to be auditioned carefully, with the amplifier they are to be paired with. I was unimpressed with every aspect of their engineering. **NK**



## MISSION 772

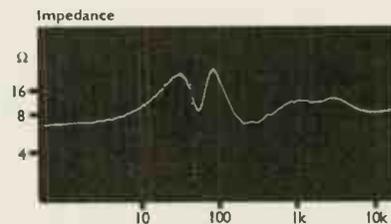
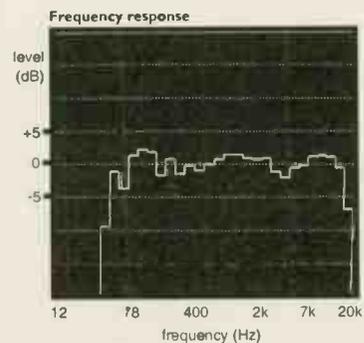
The Mission 772s have a smooth forward frequency response, as our analysis shows. There is a small dip between the mid/bass unit and the tweeter but it is an amplitude dip that holds constant over a wide forward angle, so the loudspeakers' sound will remain stable with listening position. Phase integration between drivers was very tight, a good sign. This gives solid, clear treble, especially with transients like struck cymbals.

There is a small but steady rise in bass to a peak at around 150Hz, which will add bass speed and slap to hand drums. Below this bass continues down to 60Hz, after which the port takes over, delivering its contribution at 50Hz, as the impedance curve shows. Mission place port resonance right on bass unit resonance for the tightest bass damping. The 772s should be used within a few feet of a rear

wall to lift low bass a little.

The impedance curve is unusually flat, meaning the 772s are essentially a resistive load that will not return energy to the amplifier, thereby affecting the feedback signal, except at low frequencies. This minimises differences between amplifiers and makes the most of them. Also, as the Missions measured out at a high overall impedance of 12ohms, amplifiers will not have to deliver much current to them, again making them a light load as far as an amplifier is concerned. With reasonable sensitivity (as small loudspeakers go) of 86dB, they deliver good volume from low powers and should need no more than 60watts to go loud.

The 772s are very well engineered in every area, better so than all rivals. Impressive. **NK**



# Previously Cherished Items, Or something new from Choice

## Clearance Items

	Choice Price	Original Retail Price
Audio Research D240 mk II	£ 1395.00	£ 3500.00
Chameleon Ruby Power amp (200W)	£ 395.00	£ 1200.00
Alchemist Kraken x 2 Stereo & Pre-amp	£ 595.00	£ 1400.00
Exposure V Active x over	£ 295.00	£ 995.00
EAD 7000 Transport	£ 395.00	£ 2495.00
Tesseract Tala pre-amp	£ 695.00	£ 1495.00
Magnum P200 pre-amp	£ 895.00	£ 1895.00
Alon IV mk II	£ 1500.00	£ 3500.00
Royd Priors	£ 395.00	£ 950.00
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	-
Linn Kan	£ 250.00	£ 500.00

## New in This Month

POWER AMPLIFIERS		
2 x Copland CSA 14 Integrated (black/Silver)	£ 795.00	£ 1195.00
Restek Extract Monoblocks (180 watt)	£ 2495.00	£ 3500.00
Mark Levinson 331	£ 2750.00	£ 5000.00
Krell KSA 100 mk 2	£ 1495.00	-
Audiolab 8000P	£ 575.00	£ 800.00
PRE AMPLIFIERS		
Marantz Model 7 (Limited Edition)	£ 2995.00	£ 4000.00
Jeff Rowland Consumate + Phono	£ 3995.00	£ 8000.00
Audiolab 8000S	£ 450.00	£ 700.00
SPEAKERS		
Aliate Spazio	£ 350.00	£ 550.00
Rogers LS3/5A Black	£ 550.00	£ 699.00
Kef Reference Model 4 (Rosetta Burr)	£ 3300.00	£ 4000.00
Impulse Taus	£ 1800.00	£ 3100.00
TURNTABLES/ANALOGUE/VARIOUS		
Voyd Reference/Reference Power supply/ Helios Cyalene/Audio Note 10 limited + P/S	£ 11500.00	£ 22000.00
Roksan Xerxes/Linn Akito/PSII/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
SME V (Gold Print)	£ 850.00	£ 1600.00
C.D 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

## Power Amplifiers

Krell KAS 2 Monoblock	£ 9195.00	£ 18390.00
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
Audio Research VT150 SE	£ 11995.00	£ 17000.00
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
Copland CTA 505	£ 1295.00	£ 1899.00
Micromega Tempo P	£ 750.00	£ 1250.00

Audiolab 8000A	£ 250.00	£ 600.00
Air Tight AT1	£ 2600.00	£ 4200.00

## Pre Amplifiers

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 LS5 mk II	£ 2695.00	£ 5700.00
Meridian 541 Dolby Surround	£ 695.00	£ 1095.00
Burmester 785	£ 395.00	£ 900.00
Angstrom 200 (Home cinema controller)	£ 1800.00	£ 3495.00
Audio Research LS7	£ 1095.00	£ 1620.00
Audio Research LS15	£ 2400.00	£ 3200.00
Copland CTA 301 Mk II (mm)	£ 795.00	£ 1249.00
Electrocompaniet EC4.5	£ 695.00	£ 1195.00
Audio Note M2	£ 650.00	£ 950.00

## Quality Speakers

Audio Note AN-E/B	£ 795.00	£ 1520.00
Acoustic Energy AE1	£ 550.00	£ 795.00
Ensemble PA1	£ 995.00	£ 2000.00
Alon V mk II Bk	£ 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
Acoustic Energy AEGIS 1/ Stands	£ 295.00	£ 590.00
Martin Logan SL3	£ 2795.00	£ 3499.00
B & W 801 Series 2 (Black Ash)	£ 2200.00	£ 4000.00
Apogee Stage	£ 995.00	£ 3000.00
Sonus Faber Electa Amator	£ 1495.00	£ 2992.00
Kef Reference 4	£ 2200.00	£ 3600.00
Martin Logan Aeries I	£ 1650.00	£ 2200.00

## CD Players & DACS

Mark Levinson No 39	£ 4250.00	£ 5000.00
Micromega T-Drive/T-DAC	£ 895.00	£ 2100.00
Wadia 6	£ 1995.00	£ 4300.00
EAD DSP 1000	£ 695.00	£ 1495.00
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
Meracus 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
Micromega Duo CD 2 Transport	£ 895.00	£ 2000.00
Audio Alchemy DDS II Transport	£ 395.00	£ 900.00

## Turntables & Analogue

Well Tempered Turntable and arm	£ 895.00	£ 1500.00
Linn LP12, Lingo Cirkus, Ittok III, Troika Trampolin	£ 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	-
Stax Lambda Nova Signature/ SRM-TIS	£ 995.00	£ 1195.00
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, Lavardin, DVD Players now available from Sony, Panasonic and Pioneer, Michell, Musical Fidelity, Oracle analogue and digital, and many more.

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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)

## TONE-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  
Bettors 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 Campion 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 PP1** £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 Atessa 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.

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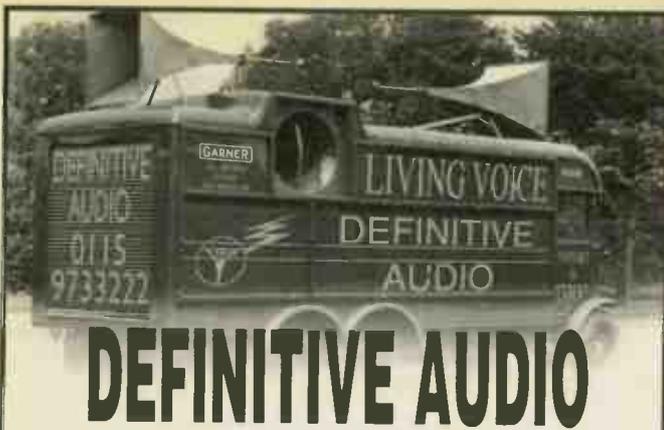
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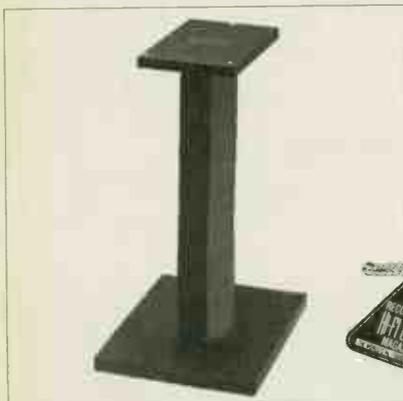
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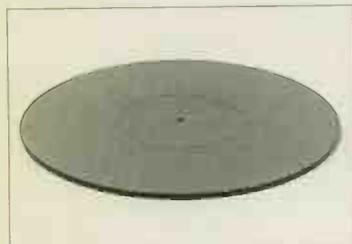


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# CLICKETY CLICK 88

**Goldring-Lenco's answer to the Garrard 301 was the G88 motor unit.  
Gold-digger Richard White travels down memory lane.**

To tell the truth, the names Goldring and Lenco are not at the top of everyone's vintage hi-fi wants list. These days Goldring make excellent cartridges to suit all pockets and Lenco is just a badge found on television sets and the like in continental hotel rooms.

Of the vast number of GL75 turntables still floating about, most are suffering the well-known droop in the rubber tone-arm bearing and, if you're really unlucky, the unit will have been left with its idler drive in the On position for a few of its years in the attic and the idler wheel will consequently have a well-developed flat on one side. Possibly because of these common problems, the general opinion of Goldring-Lenco decks is very low and, as audio jumbler will tell you, even inducements like "Lenco deck free with every purchase over £5. . ." fail to shift 'em.

To me this is roughly equivalent to pronouncing, say, the Quad II amplifier to be 'rubbish' because the valves and smoothing caps are worn out. No piece of kit is at its best after years of neglect and turntables are commonly in very poor fettle indeed by the time they get on to the second-hand market.

Since we have often dealt with the Garrard transcription units in these pages, we decided to have a look at Goldring-Lenco's equivalent offerings, the G88 and the updated model, G99. Since these decks are the same in all essential details, unless otherwise noted, for G88 read also G99.

The G88 was conceived to fill a gap in the market. Although there were some excellent transcription decks about at the time for the enthusiast, public perception was more or less Garrard 301 or nothing; after all, that was what the BBC used. Audiophiles might compare the merits of Collaro and Connoisseur but it needed another volume manufacturer to break the 301 monopoly.

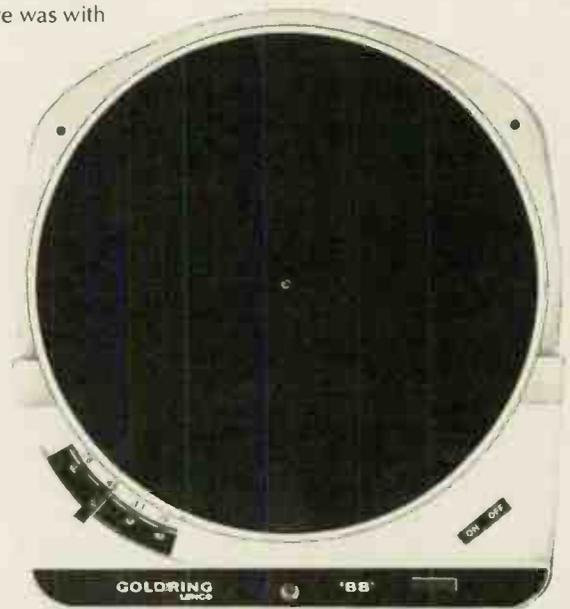
At first glance the G88 is not dissimilar to the Garrard, with its un-square shape, controls at the front, the cream and black paint and the 12in. platter. Where the

G88 had the potential to score was with its rather more up-to-date appearance and, even more important, its very competitive price: £17.14s compared with over £22 for the 301, £21.16s for the three-speed Connoisseur and a whacking £38.8s for the (admittedly 'armed') Thorens TD124.

One of the reasons why Goldring could undercut so convincingly in this way was due to the cunning use of readily-available bits from other decks in the GL range. Thus the well-designed motor, idler wheel, idler arm, the excellent main bearing and platter had all been developed and road-tested 'in-house'. The geometry for the famous infinitely-variable transmission had withstood many years of practical use. What remained was to design a stylish chassis to incorporate all these known factors in the most compact way possible.

On its appearance around the beginning of 1963, the G88 won mostly plaudits from the reviewers. The then lack of choice in transcription turntables was commented upon, and most welcomed a new face on the scene. Caveats were voiced on the subject of wear - when the idler and motor bearing are worn, would vertical-component rumble wash out the unit for stereo? On the other hand, it was reasoned that the 8lb platter of itself ought to stand guarantor for damping moderate motor noise.

When compared with, say, the Garrard, the G88 protrudes little either below (less than 3in.) or above plinth level. With the platter surface less than an inch above the plinth there could be difficulty in getting a tall arm pillar to telescope sufficiently, but since transcription arms in those days were somewhat simpler than today's, this difficulty did not arise.



Wow and flutter were quoted as 0.2%; this seems high to me but as the reviewers seemed to think it 'inaudible' perhaps measuring techniques have changed. For instance, the 1968 GL75 deck quoted .06%, although mechanically it is substantially the same as the G88.

The Goldring 88 and 99 series still offer serious sonic possibilities today. For a start, they are unloved and consequently cheap. Most essential replacement parts are available from Technical And General (tel: 01892 654534); a chic plinth is also made for them by Aphelion (tel: 01237 422772). What's more, the decks can be stripped down to the last nut and bolt on the kitchen table. The G99 offers an integral stroboscope à la Thorens TD124 but this feature seems to me to be 'something and nothing'. Although the speed control knob on the G99 is more elegant than the lever on the G88, in use there is precious little to choose between them.

When next you spot a G88 or G99 at an audio jumble or whatever, don't dismiss it out of hand. Although they never quite overcame their 'poor man's Garrard' reputation, there is unquestionably gold in these old Goldrings - you just have to dig it out!

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Goldbug Brier Cartridge Boxed 400 Hrs	N/A	250
Koetsu Black Re-tip (low hours)	N/A	350
Linn LP12 Valhalla Black/Basik Plus/Linn k9	N/A	450
Rega Planar 3 Turntable	274	175
Roksan Shiraz 350hrs use	1000	375
Roksan Xerxes/Tabrizi/MC25FL	1295	695

## Preamplifiers & Poweramplifiers & Integrated Amplifiers

	Was	Now
Audio Innovations 1000 Passive Controller	199	100
Audio Innovations 800 Series III Valve	1000	499
Audio Research LS 7 Line Preamp	1599	950
Audio Research LS1 line Preamplifier	1295	650
Audion Golden Knights 300B Mono Blocks	3995	1799
Conrad Johnson PV10 AL SE	1299	825
Electrocompaniet ECI-2 Class A Amplifier	995	599
Krell KRC HR Remote Preamp	6950	4750
Michaelson Audio Chronos 2 Box Valve Preamplifier	4700	1250
Naim Audio NAC 32mm/MC Preamplifier	N/A	149
Orelle SA 100 Amplifier	449	359
PS Audio 4.5 Preamplifier	499	225
Rega HAL Pre Amp MM/MC Remote	998	649
Roksan L1.5 Preamplifier	2250	1495
Rotel RA 931 Integrated	149	99
Rotel RC 970 BX Pre Amp (new)	175	99
Unison Research Smart 845 Mono's	3250	2199

## Loudspeakers

	Was	Now
Celestion SL600 Loudspeakers	679	279
Epos ES 11 Loudspeakers Black	479	249
Harbeth HL-K6 Cherry	1049	599
Impulse Lali Cherry Loudspeaker	1750	1295
Impulse Maya Loudspeaker	695	459
Mission 754 Freedoms Primavera	1499	799
Mordaunt Short MS25 I Black	349	119
Rega ELA Cherry Latest Spec	535	425
Rogers Studio 5 Rosewood	799	399
Roksan ROK-1	650	279
Ruark Epilogue Walnut	269	85
Ruark Talisman II Dark Oak	750	599
Tannoy Series 10 DTMI studio monitors	1200	575

## Cables & Miscellaneous

	Was	Now
Cogan Hall Intermezzo REF 0.5M	375	95
Musical Fidelity T1 Tuner	N/A	145
Transparent Music Link Plus 1.5m	219	129
Transparent Reference Balanced Music Link 1.5m	2895	1495
VDH CD 102 Mk2 3.0M WBT	N/A	115

Midland Audio X-change is looking for good used British & American Hi-fi, cash paid call John Roberts on 01562 822236

New products now on demonstration

**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 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 princely sum of - £1050.00

**Densen** - Beat 200 remote controlled preamplifier is now here at last. Priced at £1,000 this beautifully styled Dane incorporates full remote control switching and volume has a rear port for audio access in a multi-room situation. In conjunction with an AV processor you have a nerve centre for a home movie theatre system with all the convenience of an all in one amplifier. Then at a flick of a switch it can now be your high end pre-amplifier for the purest of audiophiles. The Densen CD player will also emerge as a formidable £1,000 machine within the next few weeks. Ring for more details concerning any part of the Densen range

**Rega** - RB600 Tonearm is now available by itself and is a worthy upgrade upon the trusty RB300. At £350, you will find it very difficult to find a better sounding Tonearm at this price. Worthy of many fine cartridges, the RB600 incorporates RB900 bearings, has a metallic paint finish and is wired with Klotz high definition audio cable. So rather than upgrade your RB300. Why not invest in a new RB600, the difference is well worth every penny

**Totem Acoustics** - We are pleased to announce that we are now the Midlands authorised dealer for these amazing speakers from Canada. The Arrow is a very small and slim floorstander with incredible staging and depth of image. They work extremely well with valve amplifiers and class A solid state. The price £950. The Totem Model one is no newcomer to MAX. Hailed as one of the worlds best small monitors in Stereophile magazine it has the ability to give a very three-dimensional sound and amazing bass extension for its size. The price £1249. The Totem Tabu is a two way medium sized monitor loudspeaker and is capable of earth shattering levels of audio pleasure. Priced at £2,299 it is a must for any discerning listener. The Mani 2 is an Isobarik loaded two way monitor which when first heard made us stand to attention. It's capabilities far outreach any other speaker of its size. My word of warning is listen at your own peril. Priced at £3,100 the Mani 2 is not for the faint hearted

**Michell Engineering** - Well looky here... the guys in Borehamwood have done it again. The Gyro SE takes the bull by the horns at the sub £800 turntable market. Basically 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

## Rega

Alya Loudspeaker has a 3/4" soft dome tweeter and a 5" Rega bass driver available in Cherry, Light Oak, Black Ash - £350.00

The Planar 25 exceeds all expectations with truly exceptional performance and build quality akin to the Planar 9. Also, a new Tonearm RB600 will be available with it. Early indication of price, around £600. Available end of November

New CD Transport 'Jupiter' will be available in conjunction with a new DAC the 'Io'. The price is around £950 'the pair'

## Mark Levinson

A new leading edge digital to Analogue Converter incorporating full 96 kHz/24 capability and 44.1 sampling rates. It made big waves at this year's Renaissance Show in conjunction with Pioneer DVD players which have a 96 kHz output on the rear. Price - £3999.00

## Opera Loudspeakers

A new mini monitor on the books. The Prima is a 2 way; solid wood loudspeaker which sounds very well balanced like the others in the range. Price - £495

## Graff

The new GM20 OTL valve amplifier. Yes the one Ken Kessler raves about and guess what, he's right, a truly magnificent piece of Italian Design and Build Quality. Rated at 2 x 60 watts and at a very attractive price - £2750.00

## Audiogram

Audiogram Elle 1 Full range Electrostatics. Italian Design at its most elegant. These really sound as good as they look, and with a reasonable price to match - £2500.00

## Wadia

830/850/860 Compact Disc players of the finest quality. The 830 being the new arrival, full 24 bit D/A system, DVD/96K Chip fitable, fully balanced outputs with digital volume control, a truly ground breaking price - £2999.99

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# HI-FI WORLD CLASSIFIED PRIVATE 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  
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PAGE 138 FOR  
DETAILS

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/1)

**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/1)**

NAIM NAC72 inc MC board (£450), NAPI40 (£425), HiCap (£450) - All new style, Epos ES11 biwire walnut with stands and 10m NAC5 cable (£275), Meridian 566 (20 bit) DAC (£495) Arcam Delta 270 CD player (£275), Soundstyle 4 glass shelved black triangular table (£120). All boxed and in excellent condition. also Heybrook HBS1 speaker stands (£20). Tel: 0411 407 135 or 01844 353 741 (S.Oxen - 2 miles JN6 M40) (Apr)

AUDIO SYNTHESIS DAX. Ultra analog converters. Balanced outputs, Coax, Toslink, AT&T AES inputs £650. Orelle Orator speakers, rosewood, including Partington A7-50 stands, sand and lead filled £500. Tel: 01372 450 620 evenings (Apr/1)

MONITOR AUDIO MA703 PMC loudspeakers (light oak finish, plinths and spikes) £400 ono. Rotel RCD-965BX CD player £60 ono. Audiolab 8000A 50w amplifier £250. Tel: Richard 01582 414 915 (Apr/1)

AUDIO RESEARCH D 240 mint, boxed, as new, balanced op/RCA £1100. Audio Research SP9 MkII, boxed, mint £900. Audio Research SP11 inc p/s, mint £1400. Electrocompaniet EC4R £900 ono, under 2 yrs as new, boxed manual etc. Electrocompaniet 100 AW-DMB power amp (£2095) £1350 ono. Epos ES14 walnut as new, boxed, superb condition inc. stands £350. Marston Silhouette CD. 6 months old £500. Denon TU 425 RD tuner £120. Naim NAP 250 new style £1150. Tel: Jules 01792 280 061 (Apr/1)

TRICHORD PULSAR DAC rrp £1500+, vgc £650. Leak Troughline 3 tuner incl. Teak sleeve superb cond. £100. Tel: 0181 539 8262 (Apr/1)

LINN SONDEK LP12, Ittock LV2 arm, Audio Technica OC9 Moving Coil cartridge, Cirkus Kit and recently fully serviced, Ringmat. Mint condition. £650 ono. Tel: Mr. Brown 0181 461 3798 (Apr/1)

SIRIUS D 200 power amp. 6 months old (£2995) £2000. Sirius passive controller silver wired with Elna pot, balanced output (£995) £600. Acoustic Eergy AE2 Signature Piano black wth AE stands, 2 years old, mint (£3400) £2000. Various hi-end leads - Transparent, Tice etc. Tel: 01202 303 693 (Bournemouth) (Apr/1)

QUAD ELECTROSTATIC loudspeakers (ESL 57) bronze. Genuine reason for sale. £350 the pair. Tel: 0116 289 2420 (Leicester) (Apr/1)

NAIM 90/92 pre/power amps, moving coil board, mint £650. Linn LP12, Valhalla, Ittock, Denon DL304 (new) Studio 99 service history £595. Castle Edens Yew, mint £325 (new) Target R2 stands £195. Unique sound tower, natural ash, 6 glass shelves, new £125. Sonic Link AST 200, 10 metres £60. Tel: Brian 0181 952 2044 (Apr/1)

KEF 105/11 rosewood, excellent condition £595. Bang & Olufsen Beocord 9000 - offers. Tel: 0385 237 583 or 01438 833 691 (Herts) (Apr/1)

DRIVE UNITS. Morel MDT 33 tweeters. Kef B110 & B139 & Wilmslow crossover units. One pair of each £150. Tel: 01225 757 646 (Apr/1)

ENTHUSIASTS EQUIPMENT. Musical Fidelity A370.2. professionally, expensively modified £1350. F19/25. New boxed unused £2200/£850. Celestion Studio 66 monitors £650 ono Horn speakers, singular design, superb £1500. Tel: 01226 764 272 (Apr/1)

QUAD POWER amplifiers. 707 £520, 77 £390. AVI NuNeutron speakers £490. Ruark Templars £275. Harbeth HL Extenders (bass speakers for LS3/5a and similar) £195. Technics SL120 D/D turntable unit £100. Tel: 01892 536 919 (W. Kent) (Apr/1)

REVOX F36 reel to reel £70 or exchange for Troughline Naim 602 speakers circa 1978 - unmarked £90. Buyer collects. Tel: 013873 75852 (Scottish Borders) (Apr/1)

MARANTZ D63 KI Signature, excellent condition, boxed and instructions £220. Alchemist Kraken pre and power 70wpc Class A amplifier, instruction books, (£1100) £475. Tel: 01508 499 586 (Apr/1)

AUDIO RESEARCH LS7 valve line preamplifier. Superb clear sound. Excellent condition. Boxed with manual £825 for quick sale. Tel: 0961 316 947 (anytime) or 01622 736 283 (eves) (Apr/1)

AUDIOLAB 8000CDM transport and 8000DAC hardly used, boxed with instructions, excellent condition. Reluctant seller moving abroad. Cost £2000 new will accept £1300. Tel: Brian 0181 210 5050 (01372 844 595 eves) (Surrey) (Apr/1)

MICROMEGA STAGE I with Trichord output board, Clock II, twin PSU's. Duo BS2 DAC balanced interconnect, boxed, good cond. £400 ono. System 935 speakers, black, £135. Tel: 0181 508 8100 (Apr/1)

CYRUS DAD7 CD player Creek OBH-12 pre, NAD 218THX power, Mission 734i speakers, £1300. Free black Slink cables etc. Pioneer A-400X amp, CT-S640S tape, £300. Offers considered. Tel: Rob 0114 266 5400 (Apr/1)

TEAC T1 transport £250 and D-T1 DAC £250 (£450 pair) mint. Audio Research SP-6 preamp £400 and Yves Cochet AL2 valve power amp £400 (£700 pair). Tel: Dominic 0161 773 0113 (Apr/1)

A selection of our ever changing offers for sale (all fully guaranteed)

**AMPLIFIERS**

	Equivalent New Price	Sale Price
Audiolab 8000S 2 x 60 Watts Remote int (NGC) s/h	750.00	429.95
Audion Silver Nights (200B) Class A monobloc power amps (mint/as new) s/h	2250.00	1395.00
Chameleon Ruby power amp (2x200 watts) (vgc) s/h	1200.00	449.95
Creek DBH11 Headphone Amplifier (Mint) s/h	1200.00	89.95
Exposure XP int. c/w MC/PM	750.00	399.95
Kinshaw Overture int. (mint/as new) s/h	435.00	199.95
Leak Stereo 30 int. (vgc) s/h	1000.00	399.95
Lumley YTP 1000 valve line pre-amp (vgc) s/h	250.00	139.95
Marantz PM40 S.E. (int.) (vgc) s/h	199.95	199.95
Meridian MCA int. amp (mint/robb) (vgc) s/h	730.00	349.00
Michel Rego Pre/ Hera PSU (NGC) s/h	550.00	299.95
Mission Cyrus Two / PSX (grey steel version) (vgc) s/h	200.00	200.00
Musical Fidelity X-Pre valve pre-amp (new)	500.00	249.99
Musical Fidelity A100 2 x 50 Watts Class A Integrated (NGC) s/h	1000.00+	(cash sale)
Naim NAC 62 (Lboards) / NAP90 pre/power late style (mint) s/h	3800.00	2000.00
Papworth M100 100 watt valve monobloc power amps (mint/as new) s/h	700.00	299.95
QED C300/P300 pre/power amps (f.c.) s/h	388.00	199.95
Quad 34 pre-amp (borom) (vgc) s/h	450.00	299.99
Quad 33 pre-controller (vgc) s/h	450.00	299.99
Rega Mira 2 x 60 Watts / Remote integrated (Mint) s/h	450.00	139.95
Rega Mira 2x60 watts / Remote int. (mint) s/h	450.00	149.95
Rega Brio 2 x 30 watts int. (vgc) s/h	loads	169.95
Roeliff RB 960BX (2x60watts) power-amp (vgc)	loads	89.95
SAE Mark IV CH 2x100watts American power amp (g.c.) s/h	450.00	249.95
Sugden CSI pre-amp (vgc) s/h	1150.00	795.00
Technics SUA90 Mk II 2 x 70 Watts integrated (NGC) s/h		
Union Research Simply Two Valve Integrated (Mint) s/h		

**TUNABLES/ARMS/CARTRIDGES PHONO-STAGE ETC**

Anson RD80/Linn Bask LVM/Oroton VMS30 (VGC) s/h	500.00	189.95
Decca International uniprot tonearm (g.c) s/h	150.00	79.95
Dual 503 1 (vgc) s/h	500.00+	329.95
Linn Asa/Alcora (Mint) s/h	1700.00	545.00
Linn LP12 (altro) / Alphonson delta/ K18 II (vgc) s/h	1500.00	445.00
Linn LP12 (mainly) Black arm/ K9 (vgc) s/h	loads	399.95
Mission 775 SH774 arm/VMS 20E (vgc) s/h	226.95	
Monacor SPL6 MM Phono Stage/PSU (Brilliant Value) New	130.00	
Musical Fidelity X LP (The One At This Price) MM/MC NEW	40.00	30.00
NAD PPI MM Phono Stage/PSU (Mint) s/h	200.00+	109.95
Q.E.D. R232 arm/NADA RP20 (g.c)	149.95	
Revoher Nebel c/w arm/AT cart (mint) s/h	729.95	
Sarou SR222 IV/Magicka MP 11 (GC) s/h	loads	199.95
STD 305M c/w Mayware Uniprot/Golding Ebn cart (vgc) s/h	120.00	80.00
Surmo Blue Point High Output MC Cartridge (Mint Based 30 hours) s/h	loads	229.95
Syrinx P/3 Ippasna Silver Wired Tone Arm (mint/boxed etc) s/h		

**LOUDSPEAKERS**

Apogee Caliper (piano black) with bases	3500.00	500.00
(Restoration project/need finishing) (g.c) s/h	300.00	169.95
Canon 5.35 inc. stands (vgc) s/h		

Equivalent New Price

Sale Price

A selection of our ever changing offers for sale (all fully guaranteed)

Canon SU15 mini monitors (mint) s/h	110.00	74.95
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
Chario Syntar 100 (Light Oak) (Lovely) (Mint) s/h	550.00	399.95

**PRODUCT OF THE MONTH**

**AUDIOLAB 8000CD**

**FULL REMOTE CONTROL COMPACT DISC PLAYER**

in mint (as new condition with box) manuals

**RRP-1000.00 AA PRICE 629.95**

Cyrus 782 (black) (vgc) s/h	350.00	149.95
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 Uuo-0 Floorstanders (Black) (vgc) s/h	1300.00	599.95
Kef Coda 7 (mint) s/h	130.00	89.95
Kef Coda 7 (unused) (mint) s/h	130.00	89.95
Linn Helix LS 150 (vgc) inc. stands (black) s/h	280.00	179.95
Linn Helix II/Ku-Stone stands (black) (vgc) s/h	350.00	199.95
Lumley LM 3 (Natural Pine) (Mint) s/h	1000.00	499.95
Monitor Audio R300 MD (black) (vgc) s/h	300.00	159.95
Monitor Audio R852 MD (gold) (vgc) s/h	450.00	189.95
Rega EL-8 Floorstanders (Black) (Mint) s/h	300.00	199.95
Revoher Purdy Floorstanders (VGC) s/h	200.00	119.95
Ruark Paladin (Dark Walnut)/Soundbytes (VGC)	1100.00	599.95
Spendor SP2 (walnut) (vgc) s/h	450.00	229.95
Tannoy 603 inc. stands (mint) s/h	200.00	139.95
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 605 Bi-wire (VGC) s/h	170.00	109.95
Tannoy DC-200 Dual Concentric (Black Vinyl) (VGC) s/h	loads	199.95
Lots of LS. stands in stock including Target/Alphonson etc.		

**TAPE DECKS/TUNERS ETC.**

Arcam Delta 100 Dolby S Cassette Deck (VGC) s/h	loads	499.95
Denon DNH-S10 HL Pro etc. (GC) s/h	150.00	89.95
Denon DRH 6505 Dolby S etc. (Mint) s/h	230.00	149.95
Denon DRH10.HX cassette deck / 3 motor / HK Pro etc (vgc) s/h	119.95	
Rega Radio FM Tuner (Mint/As New) s/h	250.00	189.95
Teac A.3340S high speed 2.4 track / 4. channel reel to reel with simul-sync (vgc)	loads	399.95
Technics ST.GT350 FM Digital Tuner (New)	150.00	119.95

**COMPACT DISC PLAYERS/TRANSPORTS/D.A.C.S.**

Arcam Alpha One CD Player (GC) s/h	350.00	249.95
Arcam Delta 250 transport/Black Box 50 DAC (mint) s/h	1250.00	795.00

Equivalent New Price

Sale Price

A selection of our ever changing offers for sale (all fully guaranteed)

Audiolab 8000 CD Full Remote (mint/As New) s/h	1000.00	629.95
Cambridge Discmagic 1/ Dacmagic 1 (vgc) s/h	500.00	269.95
Denon DVD-2000 (region 1 conversion)		
Full remote DVD player (mint)	600.00	429.95
DPA little bit 3 D.A.C. (vgc) s/h	350.00	199.95
Marantz CD-42 (f.c.) s/h	1500.00	795.00
Micro Mega CD3 top loader transport (Acrylic) (vgc) s/h	350.00	119.95
Musical Fidelity X-Ray 24/96 player (superb player) (new)	799.00	
Musical Fidelity X-24k DAC (new)		300.00
Musical Fidelity X-Act Dac (new)		130.00
Musical Fidelity X-100 missing Link Line Buffer (Mint) s/h	120.00	90.00
Philips CD1 240 (interactive) (mint) s/h	400.00	109.95
Pioneer PD-102 Basic CD Player (GC) s/h	150.00	89.95
Pioneer PDS 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
Technics SL PS 770D remote (mint/as new) s/h	250.00	189.95
Technics SL P550 remote (vgc) s/h		129.95
Teac VRDS.7 (mint) s/h	600.00	379.95

**OTHER ITEMS OF INTEREST**

Alphonson Glass 4 shelf mini stand (ideal for X Series) (mint) s/h	1000.00	69.95
Horizont Short Decoder One (Dolby Pro Logic Processor) (inexpensive route to home cinema) (mint) s/h	400.00	149.95
Shun Acoustic Jpsun/Phymer LS stands (20") (g.c) s/h	150.00	79.95
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
Atacama SE24 (Filled) Stands (VGC)	£75.00	£49.95
Sennheiser HD 455 Cars (Mint) s/h	£60.00	£35.00
Audiquest Crystal Hyperlatz Bi-wire 2 x 3m (Mint) s/h	£100.00+	£59.00
Target B.3W Equipment Stand (Blue) (Mint) s/h	£178.00	£149.00
Puresonic 9010A Psoc Interconnects (New)	£100	£79.95
Rega IS Cable s/h	loads	phone
Naim NAC AA Cable s/h	loads	loads

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**R.R.P WAS £2499**

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Hucknall  
Nottingham NG15 8BT  
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	LIST PRICE	SALE PRICE
Alchemist Forsetti pre + power	£2398	P.O.A.
Alchemist Kraken Anniversary MK.II	£579	P.O.A.
Alchemist - The Stereo Poweramp 200 watt (ex/d)	£3995	£2195
Anthem CD player (5 star What Hi-Fi) (ex/d)	£1699	£1250
Apogee ribbon monitors (new & ex/d)	£999	£699
Audiomeca Mephisto CD transport	£2400	£1250
Audion Black Shadows 845 valve monoblocks	£4000	P.O.A.
Audion Silvernight 300B monoblocks	£2250	P.O.A.
Chario Academy 1 solid walnut (ex/d)	£1299	£800
Chario Academy 2 solid walnut (ex/d)	£1649	£1100
Chario Academy 3J (ex/d) floor standing, solid walnut speakers	£5999	£2699
Genesis Gen 500 spks In Built Active Bass(ex/d)	£11000	£6499
<b>SUPERB</b>		
Krell Kav 3001	£2495	P.O.A.
Meridian 208 CD & pre & remote	£1650	£500
Micromega T Drive & T Dac & XLO cable	£2150	£999
Musical Fidelity P140 pwr. Amp x		£300
Nakamichi 1.5 cass.		£200
Nakamichi LX5 cass.		£350
Restek 6ch. pwr. Amp	£900	£595
Revox H1 cass.	£1150	£650
Revox H6 RDS Tuner	£1000	£495
Triangle Antials spkrs (ex/d)	£739	£499
Genesis APM1 SPK (ex/d)	£9000	£4999
Genesis Sub Woofer R/C (ex/d)	£1900	£999
Proceed AVF AC3 DTS		
AMP 5 SCH Pwr Amp }	£10000	£6500

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# CLASSIFIED ADS

## 6 PAGES OF BARGAIN HI-FI

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DETAILS

QUAD 33/303 plus FM3 tuner, pair Spondor BC3 speakers. best offer secures the lot. Tel: 0181 788 7073 (Putney) after 7pm or weekends (Apr/I)

SINGLE LEAK TL12 Point One with matching preamp and rare Lowther tuner, slightly tatty condition but all in working order with original valves and components, offers. Tel: 0131 556 6707 (Apr/I)

LINN KARMA cartridge virtually unused £180. Linn Troika cartridge used £120. Sony 700-ES tape deck £180. Philips 104 CD player classic £100 also other hi-fi, video for sale. Tel: 01273 306 519 (Apr/I)

SONY CDP-101 CD boxed as new and stored, reviewed February £110. Decca Deram speakers £18. Sony TV tuner TT3000UB £25. Wanted - Technics SA-210L circuit diagram. Tel: 01323 500174 (Eastbourne) (Apr/I)

CELESTION DITTON 44 loudspeakers good condition £130. Various mono Leak preamps Varislope III x2, Point One plus Varislope II Point One £20 each. Tel: 01277 364 833 (Ongar, Essex) (Apr/I)

ATC 10's black boxed vgc £600. Meridian 506 CD player £450. Lumley PU1 valve preamp with Tom Evans designed solid state MC phono section. Line stage upgraded with Howland Musical Caps by the Audio Consultants, boxed, vgc £650 Tel: 01844 347 729 (Apr/I)

LINN LINTO phono stage less than one year old. Mint condition. Happy to demonstrate. £600. Tel: John 01222 453 230 (Apr/I)

GARRARD 401, SME 3009/II original veneered plinth and cover £130 ono. Osram KT66 valve, offers. 4 Michell screw thread/banana plugs £10. Bulgin plug for Quad II £5. Audioquest video-Z interconnect £40. Tel: 01793 526 796 (Apr/I)

KEF 103/4 Ref (boxed) £350. Tel: 0113 294 4937 daytime 01274 411 013 eves. (W. Yorkshire) (Apr/I)

B&W P5 loudspeakers excellent condition rosenut finish £500. Exposure XV integrated amplifier. Mint condition £300. 2x4.5 metre length Chord Legend bi-wire speaker cable £75. Tel: 01902 835 459 (Wolverhampton) (Apr)

NAIM NAC102 remote control preamp plus NAPSC power supply mint condition £775. Tel: 01273 556 458 or 07971 131 324 (Sussex)(Apr/I)

TUBE TECHNOLOGY Unisis integrated valve amplifier Audiophile valves cost £2300 accept £1150 or exchange for Naim pre/power. Rega Planar 9, 6 months old cost £1600 accept £1000. No offers Tel: 01803 297 691 (Apr/I)

TECHNICS SL150 turntable with SME 3009 tone arm. EE1-500 cartridge. Very little used from new. £190. Tel 01484 606 241 (Huddersfield) (Apr/I)

GARRARD 401 with SME 3009II arm, in SME 2000 plinth, immaculate, £300 ono. Musical Fidelity 3A pre amp with Acurus A150 power amp (powerful) £500 together or £170 & £385. Tel: 0181 574 5510 (Apr)

LINN KEILIDH speakers and bases plus 4x4 metres Naim NAC 5 cable £425. Tel: 01444 248 424 (Apr/I)

TRICHORD REVELATION CD player, boxed and remote, excellent condition £385. Wanted: Meridian 502 preamp. Tel: 01634 668 822 (Apr/I)

RUARK EQUINOX speakers. Rosewood finish. Boxed. £2000 new, now £900. Tel: 01772 315 723 (Apr/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)

MERIDIAN 500 transport £675. Celestion SL600s £300. Arcam Delta 290 (MM/MC) £250. Rega RB300 £70. Meridian component moving coil preamp £50. Skyline turntable platform £20. Single Celestion Ditton 10 speaker £15. Tel: 01621 772 884 (Apr/I)

FOR SALE: Source record deck (£1500 new) with Zeta balancing arm, Audio Technica AT-F3 cartridge. Also The Preamp (Musical Fidelity). Tel: Evans 01269 832 204 (Apr/I)

REVOX B77 10" reel to reel 4 track, 3-7.5 ips. perspex cover. hardly used last 8 years. £500. Tel: 01422 843 866 eves 01422 845 143 work (Halifax) (Apr/I)

SONY MD MZ R50 plus 20 mini discs £190. 0.5 metre stereo balanced Cardas Hexilink £80. 0.8 metre stereo balanced van den Hul Second £85. Tel: 0181 670 6411 (Apr/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)

MANA SUPPORTS: Sound stage x 4, £150 each. Sound Table x 2, £165 each, Power Supply Table x 2, £95 each, Mini Table £95. QED Profile Silver 12 Bi-Wire, 2m x 2 £30 pair. Tel: 01952 660 207 (Telford) (Apr/I)

FOR SALE: English and American valve amps 1 valve power amp, many valves. Tel: 0113 240 3496 (Apr/I)

MERIDIAN 500 transport and 566 24-bit DAC, absolutely mint and boxed, all accessories £1600. VDH D102/III XLR interconnect £60. Chord Cobra 2 XLR-to-DIN £50. Tel: 01793 526 796 (Apr/I)

WILSON WATT 5/Puppy 2, gloss 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)

QUAD II x 2, QCII mono x 2, AM valve, FM valve, FM2, 33 x 2 (one intermittent fault), 303 x 2 £400 ono. Thorens I66/P77 £70. Tel: 01942 826 250 (Apr/I)

SNELL TYPE E II speakers + Pirate stands £575. Helios Orion Silver wired tone arm £290. Marantz CD17 CD player £450. Tel: Derek 01297 489 877 (Apr/I)

TEAC VRDS105E CD player, excellent condition, boxed £475, Quad FM3 tuner £30 ono. Tel: 01582 758 049 (Luton) (Apr/I)

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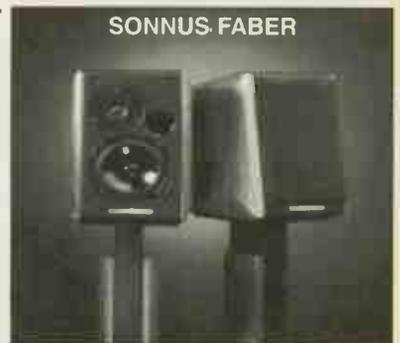
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Roksan Roki Transport	£325
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DETAILS

ROKSAN XERXES RB300 1990 boxed, vgc £300 ono. Choice of cartridges. Micromega Duo BSII DAC 1992 boxed, vgc £200 ono. Tel: Nik 01905 280 33 weekends, 01628 667 765 eves. E-mail: nik@liverfluke.demon.co.uk (Apr/I)

MUSICAL FIDELITY P170 power amp £250 ono blk. Good condition. Tel: 01256 844 218 (Apr)

UNISON RESEARCH Simply Two, new, boxed: 700. Concordant Excelsior (Good condition) £500. Tel: 0043 664 431 56 25 daytime (Apr/I)

AUDIO RESEARCH LS8 all valve lineage. Latest model. New January '99. lovely unit but not needed. As new £950 (£1500). Clearaudio Gamma cartridge, latest version. Barely used. £400 (£750). Tel: 0181 325 2585 (Apr/I)

THORENS TD150, Mayware Mk4, custom plinth £90. AR legend, Basik. totally as new £225. Walker CJ55, RB300 £170. Goldring Lenco £30. Tel: 0113 216 9896 (Leeds/Notts) (Apr/I)

DECCA INTERNATIONAL arm and London Gold cartridge. Both boxed and in excellent condition £150. Tel: Lee 01824 705 629 (N.Wales) (Apr/I)

AUDIO RESEARCH LS2 preamp £950. Teac A-BX10 amplifier 9 months old £700. Both mint boxed with manuals. Offers. Tel: 01639 886 297 (Apr/I)

CABLETALK INTERCONNECTS: Just run in. One careful owner. Only used for Chopin. 1 metre Broadcast 2; 1 metre Rference 2. Cost £99 & £149. Accept £50 & £75. Tel: 01483 281 234 (Surrey) (Apr)

WANTED: AUDIO Innovations pre-amp L2. EAR 834L, Rogers Studio 5, VDH Teatrack. For sale: Musical Fidelity X-Pre £120, Rogers Studio 3 £285, Kudos S100 speaker stands £170. Tel: 01865 553 428 or 278 200 (day) (Oxford)(Apr/I)

NAIM INTRO black ash speakers £440. Naim Naixo active crossover £460. M&K V75MkII black ash subwoofer £430. All with boxes and manuals, little used. Cash only, must collect. Tel: 01233 626 163 eves (Apr/I)

RADFORD ZD22/ZD100 (solid) amps, IMF Mk4 Ref Pro Monitor Transmission Line speakers, Naim CD3, Logic DM101/Helios/Decca London, Denon DR-M30HX cassette, best offer(s) secure. Tel: 0117 985 6480 (Bristol) (Apr/I)

COUNTERPOINT SA7 valve preamplifier GT Audio PSU upgrade £300. Gamma Space 300B amplifier, upgraded Space Reference III PSU (£3500) £700. Tannoy Mayfair floorstanding speakers 10" Dual Concentric & 10" ABR units £175. Tel: 0181 672 4319 (Apr/I)

CABASSE (FARELLA 400 97) 93dB floorstander £450. Danish AC (CTI 100K) £60. Audio Innovations (Second Audios) modified PWO £925 ono. Scanspeak Natural Tower mahogany floorstander 28 inch carbon & revelator. Similar Proac Response 3.4 £1500 ono. Tel: 01662 548 623 (Apr/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)

PROAC TABLETTE 50. Black ash. Dedicated Target R4 stands. One month old. Cost £900. Any reasonable offer considered. Tel: Richard 01455 631 396 (Apr)

LINN LP12 Afro, Ittock LVII, Asak, £140 spent, new motor, reset, serviced, mint (£1700) £480. Musical Fidelity T1 digital tuner, rave reviews (£300) £140. Pink Triangle LPT RB300 (£600) £250. Tel: 0161 762 9884 (Apr)

ARCAM ALPHA 10 amp, 10P power amp, 8SE CD player. Van den Hul interconnects. Soundstyle stand. Tannoy D700 Definition speakers. Everything boxed, only 6 months old. Sale due to emigration. Cost new £5200 +. Offers around £4000. Tel: 0973 199 523 24 hrs 01703 582 160. (Apr/I)

EPOS ES22 speakers (unused) £950. Naim Credo speakers £750. Audio Research LS3 pre-amp £750. Audiolab 8000Q pre-amp. Unused from new £850. Audio Note CD2 £750. Quad 77 pre/power & remote £850. Tel: 01952 502 097 (Telford)(Apr/I)

WANTED: PAIR of Epos ES11 loudspeakers. Any condition or single's considered, Wanted: Pioneer A400 amp. Non-working considered. Tel: Dan 01484 516 494 (Huddersfield)(Apr/I)

MAHOGANY VENEERED KLS10 speaker cabinets (Hi-Fi World) £100 per pair. Also another pair with Audax HMI70C0 drive units, terminal boxes & ports - just need tweeters and crossovers - £195. Wanted: SME plinth for Garrad 301 (SME 3012 arm). Genuine enquiries only please ring 0115 975 4070 (after 5pm) (Apr/I)

HARBETH COMPACT 7s. Walnut boxed excon £450. Acowstat Spectra IIs Electrostatic hybrids, boxed £450. Rega ELAs boxed, excon £250. Musical Fidelity A1 original £100. Meridian 203 DAC £100. Edison 12 stereo valve preamplifier £150. Stax Gamma headphones with energiser £100. Leak Troughline (stereo) £100. Tel: 01423 565 661 (Apr/I)

LINN AXIS, Akito, K18, mint £255. NAD 533/Rega 2 turntable as new £125. Meridian 206 ΔΣ 1993 last of the 206 models, mint £325. Pioneer A300R Precision as new £225. Nakamichi BX 100E £125. Tel: Glasgow 01505 359 572 or 07801 587 407 (Apr/I)

KELLY KT34 speakers vgc RRP £1200. now £450. Ferrograph S1 twin transmission line monitors very open sound £250. Technics SP-10 MkII motor unit, £225. Technics ST-3500 tuner £20. Tel: Jon 0181 904 8023 (Apr/I)

RUARK EQUINOX loudspeakers, light oak finish, bi-wired, crossovers mounted in stands, beautiful condition £995 (£1850). Hi-Fi World favourite Sugden AU41 amplifier pre/power 100w £650. Micromega bitstream DAC £175. Tel: 01869 322 007 (Apr/I)

KEF CODA 9 Speakers £90. Sennheiser IS550 cordless headphones £65. QED headphone amplifier £25. Cabletalk Monitor 2 interconnect 0.5m £20. Cabletalk 4.1 Biwire 2x5.5m £40. Cabletalk 3 2x4m £10. QED Qudos 2x6m £16, 2x3m £8. Pioneer PD-M700 CD £55. Tel: 01489 570 990 (Apr/I)

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Audio innovations Allo integrated amplifier. Mint.	£180	Beard BB100 integrated valve amp. Mint	£600
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Thorens TD160 and Thorens arm. No lid.	£65	Thorens TD160 and Thorens arm. Good condition.	£145

### SPEAKERS

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Snell J3 with custom built heavy stands. Mint. Boxed.	£500	Cyrus 781 speakers & stands. Mint.	£150
Pair Lowther A80s speakers. Good condition.	£250	Kel 1022 speakers. Ex condition. Cost £780. Boxed	£295
Gradient subwoofer for EL563 BXD. Cost £1700	£750	Richard Allan Monitor 80 speakers. Ex condition.	£175
Magneplexer SMGB loudspeakers. Mint. Boxed.	£550	SD Acoustics S02 speakers and stands. Good cond.	£199
Single Lowther acousta using PMA. Early style cab	£191	Mordant Short MS940 with Decca Kelly Ribbons	£195
Celestion SL600 & Celestion stands. Ex cond. Boxed	£350	Quad Electrostatic speakers. From £400 pair	£400+

### OTHER ITEMS

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Denon HA 900 MC step up. Mains. As new. Boxed.	£95	Quad LWMV. SW. tuner	£40
VDH The First Digital Interconnect. Cost £125	£65	Acis 1.5 ure tone arm. Ex Condition	£40
Narantz C678E cd player. Mint. Boxed	£150	Quad FM3 tuner. Good condition.	£75
Arcam Alpha CD player. Boxed with remote.	£150	Phillips CD960 CD player. Cost £700. Make oil trans.	£199
Quad FM1 Mono tuner	£20	Audio Alchemy Dac in the box. Cost £230	£75
Leak Triangler 2 & 3 Mono Stereo. From	£75	Narantz CD52 MK2. No remote	£69
SME 3009 tone arms. Various. From	£60	Sony CDP 5011 CD player	£99
Yamaha KX580 SE Cassette deck. Mint. Boxed	£150	QUAD Digital (satiny) power supply	£75
Audio Technica AT1000 mono. (Boxed) (no 3X1)	£35	A.P. 100 HR 100S MCS. (4 arm) Silver shell	£275

### QUAD ESL57 PANELS/SERVICING ETC

Rebuilt & soak tested treble panels. Fitted new dustcovers. Exchange	£100
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New high spec rectifier boards. Excellent quality and long lasting	£40
High spec rectifier block (rebuild wax unit). Exchange. Price each	£30
Clamp boards. (price per pair).	£45
New dust covers bass or treble panels. Fitted	£25
Treble protection boards (before S/N 16800) price each	£15
Refurbish Grille with fabric overcover. Black or brown. Each	£30

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(somewhat of a bargain Hifi World, Jan 1999)

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Ear 834P MM phono stage. No volume control	Brand new. Boxed at only £350
Ear 834L. Line only valve pre-amplifier. Amazing	Brand new. Boxed at only £450

### 301/401/124 PLINTHS AND POWER SUPPLIES

Power supplies for above as well as any i/table/CD etc. Eg TD125/150/160 etc. Amazing value at only £125.00 each.  
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# CLASSIFIED ADS

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REVOX G36 quarter track stereo 7.5 & 3.75 recorder £200, Tandberg 62 valve half track £75. Quad 33/303/FM3 £150. Yamaha Wedge TC 800GL cassette £150. Crimson 510/520 pre/power £150. Tel: 01704 530 928 eves/ weekends (Apr/I)

AUDIO INNOVATIONS 200 valve pre/power amplifier £350. Quad II pre/power amplifier, original KT66 valves £400. Rappaport I preamp, suits Quad IIs £200. Tannoy 3LZ 10" dual concentric loudspeakers £200. Tel: 01704 530 928 eves/weekends (Apr/I)

GALE 401 chrome loudspeakers with stands £300. Musical Fidelity A1 (late model) amplifier £90. Nytech 302 35 watt integrated amplifier £90. Lux PD300 vacuum turntable £200. Tel: 01704 530 928 eves/weekends (Apr/I)

KRELL KAV500 5 channel power amplifier £2990. Lexicon DC1 with DTS/DTS/AC3 upgrades fitted. Both mint condition. Both 8 months old. Tel: 0113 236 111 or 0113 240 2043. E-mail: tompledge@msn.com (Apr/I)

EARLY ACOUSTAS (birch-ply) professionally renovated in matt walnut and fitted with Lowther's latest neodymium cored DX3s. Redesigned front panels. Style-2000 compliant. £1450. Tel: 01483 268 804 or E-mail: ano@zsizsi.demon.co.uk (Jun/I)

AUDIONOTE AN-J speakers (rosewood) with MAF stands, superb £835. Naim NAT 0.1 tuner £650. Tel: 01903 756 582 (Apr/I)

REVOX B77 MkII R/C centre channel, dust covers, loads of new 10.5" tape, virtually unused £950. Private sale but credit card accepted. Tel: 01908 543 210 (Apr/I)

QUAD 33/303/F3 preamp & power & tuner £350. Garrard 401 £125, SME 3009 MkI with Shure V15E cartridge £75. Mordant Short Pageants MkII £150. Private sale but credit card accepted. Tel: 01908 543 210 (Apr/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)

CONRAD JOHNSON MV55 power amp £1995 new, £1200 ono. Copland CTA401 integrated £1695 new £1300 ono. One must go. Both excellent condition. Pioneer A400 good condition £80 ono. Tel: 0171 257 1134 daytime 01932 841 361 eves (Apr/I)

QUAD 33/303 Classic pre + power amp combination. Boxed, immaculate with manuals £175. DPA Little Bit DAC, boxed, good condition £110. Will demonstrate. Tel: 01746 710 356 (Shropshire) (Apr/I)

LINN SARA loudspeakers, original type with stands. Very good condition £200. Tel: 0181 994 2030 after 6 p.m. (Apr)

PIONEER A400X amplifier, mint, boxed £130. STD 3055 T/T with SME armboard £60. Sony TCD-D100 DATman, mint, 10 hours only £395. Sony SS86e bookshelf speakers, boxed £35. Wanted: Mission 752, Michell Gyropower PSU, old hi-fi mags. Tel: 07899 816 120 (Apr/I)

DENON DMD1000, Minidisc recorder, new, boxed, guarantee, impeccable recordings, can demonstrate £259. Tel: 01306 883 557 (Dorking) (Apr/I)

MUSICAL FIDELITY NuVista Class A tube preamplifier, remote controlled, highly acclaimed, 6 months, mint, boxed/manuals, spare nuvistors. 18 months warranty + purchase option for upcoming limited edition nu-vistor poweramp transferable. £900 or highest bid!. Tel: 01865 842 055, office hours: 01865 852 803 (Apr/I)

MUSICAL FIDELITY X-A200 Monoblocks 200Watt, MF's large 'aluminium tube' design, 6 months, mint, boxed/manuals. Very good match to the NuVista! £700 for the pair. Offers welcome. Tel: 01865 842 055, office hours 01865 852 803 (Apr/I)

AUDIO INNOVATIONS Series 200 (Mk II) pre/power, new Sowter transformers and valves - work carried out by Haden Boardman. Boxed, mint, free XLO i/c £580 ovno. Michell Gyrodeck (MkI), Helius Orion, MC3 Turbo £380. SME 3009 Mk II S2, boxed, mint £50. Tel: Matt 0161 225 7496 Manchester (Apr/I)

AUDIOLAB 8000 DAC £400. Micromega CD 3.1 transport (£1500) £500. QLN Ref HD2 floorstanding speakers in cherry veneer (£2500) £1200. All in excellent condition. Little use. Sale due to divorce. Tel: 0161 724 9109 (Apr/I)

MODIFIED RB300. 1998 arm structurally modified and rewired with silver Litz by Origin Live. (See Hi-Fi World article Feb 99) Palpable improvements. Mods alone cost £145. Sell complete £175. Tel: 01483 281 234 (Surrey) (Apr)

TEAC TI TRANSPORT (£550) £330, DPA Little Bit III, DAC (£325) £160, Teac V5000 cassette deck (£320) £160. All mint and boxed. Sound Systems Tower (mahogany) (£270) £160. Tel: 0114 288 7326 (Sheffield) (Apr/I)

GARRARD 301, SME 3009II, Linn K18. Linn interconnect, strobe platter, heavy and large MDF plinth, original mat (£500) £225. Ixos 604 bi-wire 2x7m (£75) £35. Tel: 0114 288 7326 (Sheffield) (Apr/I)

YAMAHA KX380 cassette (5 star) £100. Hitachi FTMD5500 tuner (5 star) £70. 2x1.5m lengths Exposure speaker cable, terminated 4mm banana plugs £20. Pair of Castle Avon speakers, as new, mint £550. All new, never used. Tel: Tony 01424 431 536 (Sussex) (Apr/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)

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AC-2 Power cable - Silver clad, Teflon insulated at 10awg; this is the largest gauge of power cord we know of. The design of our shielding system effectively eliminates interferences from RF and EMI sources. 2ft £49, 3ft £59, 4ft £69, 6ft £89, 4, 6 and 8 way all steel distribution boxes also available. Analogue Interconnects, IC-50, IC-80, IC 100, IC, 200. Speaker cables - SS800, BIWIRE, SS1000



## Gershman Acoustics

Avante Garde RX20 - a mere 36" tall and 12" x 12" at the base - Absolute Sound review - " a true torture test with a bass line that's big, super fast and continuous - the Gershman's handled it beautifully, servo driven Infinity RS1 towers have more power but are way too slow. The Magnepan MG3.5/R's, can't match the low bass impact of the Avant Gardes, only the Thiel 3.6 can handle this track with aplomb and even they don't sound quite as fast. Unquestionably, the Avant Gardes are a tremendously musical loudspeakers".

X-1, Specter, Enigma 500-X, GAP-520X



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## CLASSIC RECORDS RELEASE BOB DYLAN'S "ROYAL ALBERT HALL"

After all the hassle that we had with Sony over the LP of this release, those fine people at Classic Records are to do us proud by releasing an audiophile double LP of this defining moment in rock history. The release date is for early march (watch this space) Expected price of Bootleg Series 4/5 is £32.90

## EMI Millennium Vinyl (Follow up to Centenary Vinyl) - 22 March

David Bowie	Aladdin Sane	£13.90
Deep Purple	Book Of Taliesyn	£13.90
Frank Sinatra	In The Wee Small Hours	£13.90
Jethro Tull	This Was	£13.90
John Lennon	Walls And Bridges	£13.90
Queen	Day At The Races	£13.90
REM	Document	£13.90
Specials	Specials	£13.90
Talking Heads	Stop Making Sense	£13.90
The Band	Music From Big Pink	£13.90

## New And Forthcoming Releases

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Stereolab	Switched On	£9.90
Jimi Tenor	Organism	£11.90
Ananda Shankar	Ananda Shankar	£6.90
XTC	Apple Venus Volume One	£11.90
Jimi Hendrix	Live At The Fillmore East 3LP	£22.90
Kula Shaker	Peasants Pigs & Astronauts	£TBC
Stereophonics	Performance And Cocktails	£TBC
Blur	13 - 2LP 15/3	£TBC
Tom Waits	Mule Variations 19/4	£TBC
Curtis Mayfield	Curtis - 180gm	£16.50
Curtis Mayfield	Roots - 180gm	£16.50
Curtis Mayfield	Superfly - 180gm	£16.50
Wings/Paul McCartney	Band on the Run - 25th Anniv	£TBC
Metallica	Garage Inc - 3LP	£21.50
Beck	Mutations (LP + 7")	£12.90

## Nagaoka Anti Static Sleeves (Pack Of 50) - £12.50

## New Audiophile Titles

Bruce Springsteen	Born to Run(Classic Records)	£21.90
Michael Hedges	Aerial Boundaries (Alto)	£19.90
James McMurtry	It Had To Happen (Alto)	£19.90
Lorna Hunt	All In One Day (Alto) - Double	£32.90

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Exposure 7 Pre s/h	450	95
Linn Kan MK1 & MKII Stands s/h	n/a	150
Linn Karik Transport s/h	1850	595
Linn LP12 Cirkus Trampolin Lingo Aro Arkiv s/h	4020	1795
Linn LP12 Ittok Valhala s/h	2000	495
Linn LP12 Lingo Ittok K18 s/h	2500	895
Linn LP12 Valhala Basic Plus s/h	1400	395
Linn Numerik s/h	1500	595
Linn Sara & Stands s/h	900	250
Lumley ST70 Triode switchable x/d	2300	895
Martin Logan Sequel 2 s/h	3500	1795
Meridian 566 20 bit s/h	1095	595
Meridian 601 s/h	2750	1295
Meridian 602 s/h	1750	695
Mission DAC5 DAC s/h	300	50
Naim 101 Tuner + Snaps s/h	n/a	450
Naim 102 Phono + PSC s/h	1337	895
Naim 110 s/h	n/a	250
Naim 140 s/h	770	450
Naim 160 s/h	n/a	450
Naim 180 s/h	1090	695
Naim 250 s/h	1705	1195
Naim 32.5 s/h	450	250
Naim 42.5 s/h	n/a	175
Naim 62 New Style MM/MC s/h	450	250
Naim 82 s/h	222.5	149.5
Naim 90 s/h	460	295
Naim 92 Phono s/h	567	350
Naim Hi-Cap s/h	720	495
Naim MM/MC Boards s/h	82	30
Naim Nail 3 Phono s/h	657	450
Naim Naxo 3/6 New Style s/h	650	295
Pink Triangle Export Rega RB300 s/h	1070	450
Pioneer PD95 s/h	2000	795
Proac Response 2 & Stands s/h	2000	750
Quad 44 s/h	n/a	250
Roksan Xerves Artemiz Piano Black s/h	2500	895
Roksan Xerves Table s/h	n/a	25
Siltoch HF6 1/2 metre s/h	100	50
Sound Organisation LP12 Table s/h	n/a	10
Stax Lambda Nova Basic s/h	450	295
Syrinx PU3 s/h	n/a	195

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# CLASSIFIED ADS

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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 (Apr/I)

ROKSAN XERXES (Walnut) turntable. Rega RB300 arm, Audio Technics OC5 cartridge, plus XPS3 & DSU power supply. Excellent condition with box £375. Tel: 01299 271266 (eves) W. Midlands (Apr/I)

TANNOY 609 Mk II plus dedicated Tannoy stands, good condition £180 ono. Target 3 tier equipment stand £50 ono. Tel: 01332 835 823 after 6 p.m. (Derby) (Apr/I)

WANTED SONY tuner ST SA3ES. Goodmans receiver 110/120. Rotel receiver RX 850 AL. Tel: David 01524 823 904 (Apr/I)

EAR 519 amplifiers £1600. Sony CD player and DAC (CDP552ES + DAS702ES) £650. All kit in excellent condition. Tel: 01959 524 258 eves/weekends (Apr/I)

MICROMEGA SOLO CD player boxed with receipt as new £595. Goodman Magnum loudspeakers £80. QED Connect 2 interconnect new £20. Sony Elcaset Mediatech transport working but no sound. Offers. Tel: 01705 376 247 (Hants)(Apr/I)

VOYD VALDI turntable, white ash plinth, Helius Aureus tone arm, Goldring Electro II cartridge £835. Audio Innovations 1000 pre-amp and First Audio power amp £1235. Snell Type 'J' speakers, white ash, with stands £795. Tel: Richard 0181 255 9194 (Twickenham)(Apr/I)

ATC SCM 50ASL LOUDSPEAKERS rosewood £3800. Chord CPA 3200. enhanced pre-amplifier, silver £2300. Both items 4 months old, boxed as new. Tel: 01355 264 586 (Apr/I)

PROAC RESPONSE 3s £1500. Orelle CD10 Transport £350. Sugden SDA-1 DAC £350. Denson amp DM-10 £800. Aiwa ADF850 £80. Interconnects, van den Hul £180, Red Dawn £180, Kimber £60. Tel: 01634 826 324 (Apr)

**THETA CHROMA 396 DAC.**  
Beautifully detailed smooth sound £430 for quick sale.  
Tel: 0171 435 4365 or 0973 278216 (Apr/I)

QUAD ELS57 speakers, excellent (black) £400. Quad II valve power amps, phono inputs £250. Audionote OTO amp (phono) unique version, revalved £750. Tel: 0141 571 2045 (Apr/I)

CYRUS dAD 3 CD (£600 new) £350, Cyrus III amp (£550) £300, Mission 751 rosewood speakers (£330) £150, van den Hul cables & interconnects (£130) £55 or offers for whole system boxed and complete. Tel: 0181 440 9524

PINK TRIANGLE Cardinal & DaCapo 1307 filter & relocking card £350 & £600 respectively or £900 pair with 22 bit filter & pair i/cs also. Tel: 0181 879 0364 (SW London) (Apr/I)

MERIDIAN 200/203 DAC7 Transport and DAC Trichord Clock 2 and power supply fitted. Superb condition, all leads, manuals, boxes £495 ono. Sony STS370LBRDS tuner, excellent. boxed £50 ono. Tel: 01803 315 391 (Apr/I)

RADFORD STA-15 amp. SC 22 control unit. FMT 1 tuner. Original technical instructions £850. Also Leak 2200 amp, 2300 tuner, 2060 speakers. Original owners handbooks and sales brochure £450. Tel: 01592 758 753 (Fife) (Apr/I)

LINN KABERS, excellent condition, black ash, boxed as new, only £500. Tel: 01865 246 405 (home) or 077 88888 059 (mobile) or Email: charlie.osmond@worc.ox.ac.uk (Apr/I)

FALCON C800 Three way loudspeaker kit. Amazing performance. Electrics alone cost £700. Cabinets included. Needs completing. £300 ono. Tel: 01202 690 339 (Apr/I)

PRIMARE D30.2 CD player £1000 (£1500) brand new in factory sealed container. Current What Hi-Fi 5 star winners. Tel: 0171 724 9945 (Apr/I)

**CELESTION 7000 speakers (£395), QEDA240PA integrated (£150), QEDP300 power (£125) amps (both £250), Linn LK1 preamp w/o remote (£135), Sony DTCP7 DAT recorder and tapes (£250). Tel: David 0113 266 2723 anytime (Leeds) (Apr/I)**

QUALITY SWEDISH Sonab hi-fi, little used and carefully stored for years; comprises tuner, turntable, cassette deck and specially made attractive Kef speakers, manuals and connecting cables. £250. No offers. Tel: 0181 467 1441 (Apr/I)

PIONEER D-05 DAT recorder £550. Sony 555ES CD player £300. Sony MDS JE510 MD £110. Akai 4000DS open reel deck £80. Tel: 01707 267 379 (Apr)

EXPOSURE XX integrated amplifier. Recent purchase, boxed, unmarked and as new. Cost £800, will accept £500. Delivery considered. Tel: 01423 780 687 (especially evenings) (Apr/I)

**NAIM HEADLINE**  
Headphone amp & NAPSC PSU £225, boxed. Sennheiser HD565 Ovation headphones £100 boxed, mint. 4x7m terminated runs of NAC A5 cable £50/pair ono. Tel: Chris 0121 453 9950 (Apr/I)

FERROGRAPH S1 monitors with stands. Twin transmission line design, very transparent £300 ono. Technics SP10 Mk2 BBC version, upgraded with copper screening, superb sound, slightly scruffy £225. Technics ST-3500 tuner £40. B&W Active I loudspeakers, very clean open sound with fast deep bass, mint condition £400. Tel: Jon 0181 904 8023 evenings (Apr/I)

ROTEL RCD-965BX CD player, mint, boxed, complete with interconnects, manual, remote etc. £130. Tel: 01689 820 112 (Chislehurst, Kent)(Apr/I)

VAN DEN HUL Cables. D10211 interconnect 0.8m boxed £40. 2m bi-wire pair Teatrack silver hardwired insert audio phonos £50. Tel: 01293 786 453 (Apr/I)

**LINN KLOUT power amps, two, £1195 each. LK100 power amp £325. Linn Isobarik Aktive electronic crossover (bingoed) with Dirak power supply £595. Tel: Kevin 01932 761 000 (day) 01932 781 614 (eves), Email: kevin@macrotech.co.uk (Apr/I)**

SD OBS SPEAKERS & 3 metre pair of Chord Flatline Tri-wire cable £350. Pair of 3 metre Audionote ANB speaker cable £25. Tel: 01636 683 830 after 5pm (Apr/I)

# MUSICAL IMAGES

PRODUCT		LIST	NOW
AVI S2000 MC/20 REF CD PLAYER	EX/DEMO	£1400	£1000
ANTHEM INTEGRATED AMP 1	EX/DEMO	£1300	£1100
ANTHEM CD 1	EX/DEMO	£1700	£1355
B & W-MATRIX 801 walnut speakers	EX/DEMO	£4000	£2800
APOGEE-Centaurus Ribbon Monitor black spkrs	S/H	£1000	£400
CABASSE FARELLA 400 beech speakers	EX/DEMO	£1000	£700
DENON-PMA Q5 1011 amp	EX/DEMO	£1800	£1200
DPA - ENLIGHTENMENT pre amp	EX/DEMO	£695	£350
DPA - ENLIGHTENMENT power amp	EX/DEMO	£995	£495
EXPOSURE-17 pre amp	S/H	£850	£450
KELLY KT2 speakers	S/H	£700	£500
LINN-KARIK III cd player	S/H	£1850	£1100
LINN-KEILIH walnut speakers	EX/DEMO	£850	£650
LUMLEY-VTP1000 pre amp	S/H	£1000	£500
MARANTZ MM 500 amp	S/H	£500	£250
MERIDIAN-DSPA 5000 black digital speakers	NEW	£3495	£2500
MERIDIAN-501V AV pre amp	S/H	£875	£400
MICHELL GYRODEC bronze turntable+RB300ar	EX/DEMO	£1106	£880
MISSION 753 - black speakers	S/H	£700	£300
MISSION 754 -r/wood speakers	EX/DEMO	£1500	£900
MONITOR AUDIO STUDIO20SE r/wood speaker	EX/DEMO	£2400	£1900
MONITOR AUDIO STUDIO50 r/wood speakers	EX/DEMO	£3300	£2600
MUSICAL FIDELITY-P270 power amp	S/H	£1250	£500
MUSICAL FIDELITY -3B pre amp	S/H	£380	£150
OPERA TERZA - mahogany speakers	S/H	£1000	£600
PINK TRIANGLE-NUMERAL cd player	EX/DEMO	£1050	£850
PINK TRIANGLE-LITAUURAL cd player	EX/DEMO	£2100	£1575
PROAC-RESPONSE 2.5 yew speakers	EX/DEMO	£3000	£2400
PROAC-STUDIO150 cherry/walnut speakers	EX/DEMO	£1400	£950
ROGERS-AB33 black speakers	EX/DEMO	£400	£200
ROGERS-LS33 black speakers	EX/DEMO	£280	£140
ROGERS-GS5 black speakers	EX/DEMO	£380	£190
ROGERS-GS6 black speakers	EX/DEMO	£430	£215
ROGERS-E20A valve amp	EX/DEMO	£1230	£700
ROKSAN-RADIUS turntable (MINT)	S/H	£620	£500
ROKSAN-S1.5 silver power amp	EX/DEMO	£1495	£1150
ROKSAN-XPS V CONTROL UNIT	EX/DEMO	£320	£240
ROKSAN-DS 1.5 POWER SUPPLY	EX/DEMO	£695	£525
SONY - MDSJA30ES mini disc player	EX/DEMO	£700	£550
SOUNDLAB-PRISTINE electrostatics speakers	S/H	£8000	£2000
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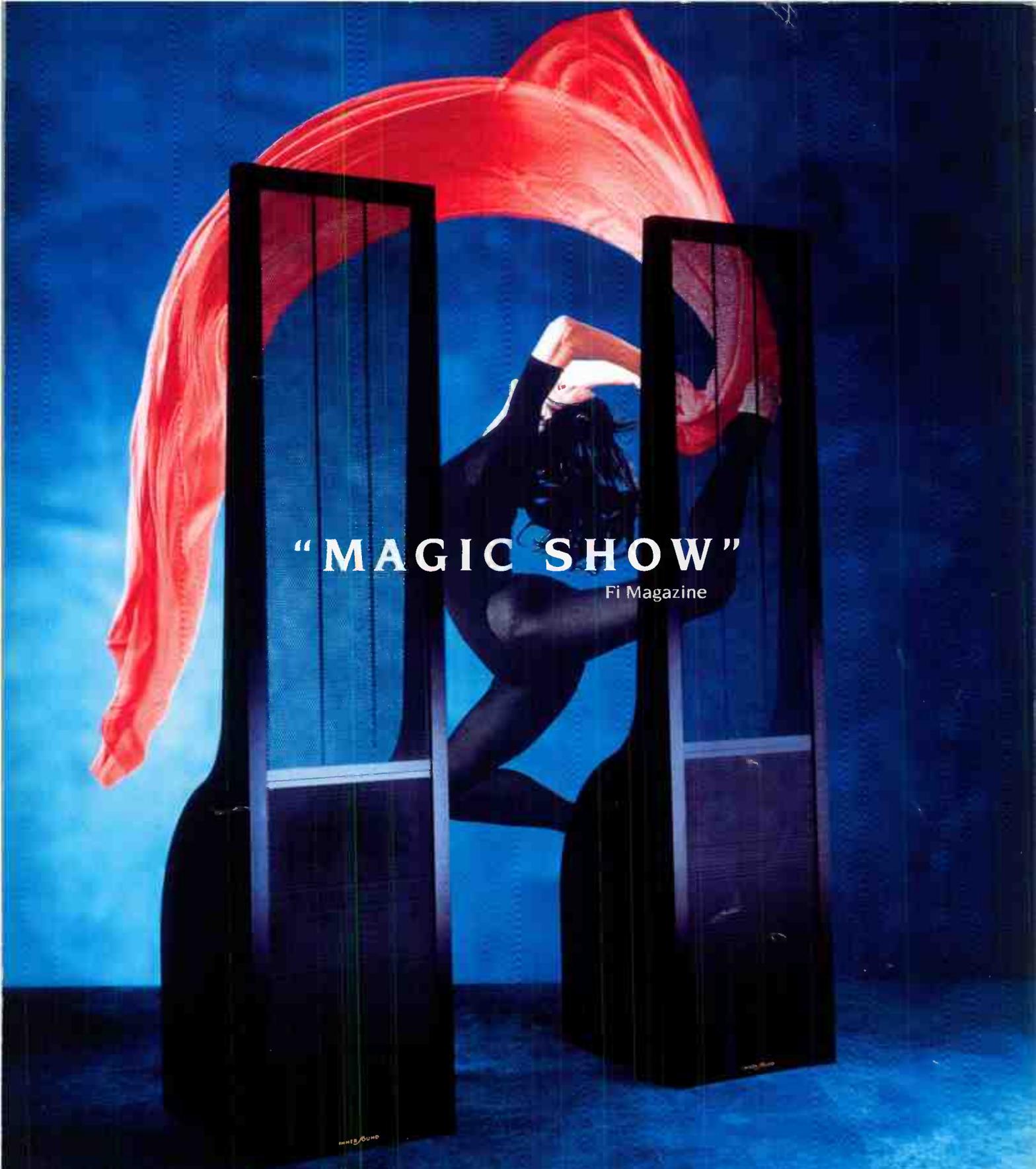
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