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FOR NATURAL LISTENERS

TUNERS TONEARMS LOUDSPEAKERS

## This Month's World

There's great variety in the hi-fi marketplace. Some products are refined over the years, others break new ground. We've got both in this issue, from Tannoy and DPA respectively. Cambridge point to a new trend where retailing and manufacturing are combined, giving the promise of lower prices. There's a lot happening out there, as you'll discover if you read on!

• The famous Tannoy dual-concentric drive unit, launched in the fifties, now finds itself in an affordable £500 floorstander. Here's a taste of what recording studios use - see p34.

• DPA are one of Britain's most innovative hi-fi companies. In the guise of the Renaissance, they've packaged their ground-breaking one-bit convertor technology into a compact CD player. Dynamite! We scoop the first review, on p13.

• The new Cambridge Dacmagic CD convertor is designed in Britain, built in Taiwan and offered only through Richer Sounds shops at a knock-down price. Is it a knockout? See p23.

• Audiolab have significantly upgraded the sound quality of their standard, well equipped 8000C preamplifier, and at the same time introduced a top end design, the 8000Q, that really cuts it. Good preamps are difficult to come by, so this is a surprise. See p42.

The signs are confusing. Midi, mini and micro systems dominate the hi-fi market, but Rumbelows, which sold them by the lorry load, has closed down. Yet Richer Sounds are busy opening more stores! Is it their refusal to sell midis, or their approach, with eye-catching shop fronts, open doors and "Browsers Welcome" signs that makes all the difference?

Richer's success comes from their effort to reach people and offer a good deal, but hi-fi is more than a saleable commodity, it's also a creative, entertaining and educational hobby. The incredible popularity of our DIY Supplement around the world has proven this.

Change is coming fast. Fading yesteryear operations in retailing, manufacturing and publishing are suffering and doubtless many more will die. Better service and more exciting products are needed as is enthusiasm, vision and vitality. The process of renewal should bring them.

## Noel Keywood, Editor

TEST EQUIPMENT



 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 quickfire group listening tests.

Hi-Fi World's engineering team designs a wide range of products in-house. We export kits, parts and built-up products around the world, delighting buyers in far flung corners of the globe. No other hi-fi magazine is so expert and dedicated. LISTENING ROOM (TREATED BY RPG ACOUSTIC TOOLS)



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Andy Grave

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SUBSCRIPTIONS see page 68 for details

AUDIO PUILLISHING LTD 64 CASTELLAIN ROAD, MAIDA VALE, LONDON W9 IEX.

## THIS MONTH'S REVIEWS

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## AMPLIFIERS

### **DENSEN DM-10**

Danish Densen make distinctively styled high-end amplifiers. Dominic Baker auditions their £1200 entry-level integrated.

### HARMAN KARDON HK610

Harman always build solid, competent electronics but seem to make a limited impression. Eric Braithwaite finds whether this  $\pounds$ 180 amplifier will change things.

### AUDIOLAB 8000Q

Is Audiolab's new £1000 remote controlled preamplifier what the world has been waiting for? David Price finds out.

### VRR ADUR

A modern valve amplifier in vintage style.

## COMPACT DISC

### DPA DIGITAL RENAISSANCE

A new one box CD player equipped with DPA's own discrete design 1-bit convertor. Noel Keywood finds the Renaissance has something different to offer.



#### **CAMBRIDGE DACMAGIC**

On the face of it, this is the best value CD convertor on the market. Noel Keywood finds appearances can be deceptive.

#### ORELLE DA-188

Orelle's improved aesthetics bode well for the sound quality of their new mid-price CD convertor, finds Dominic Baker.

### TURNTABLES

## **TOP MOVING COILS**

David Price listens to a group of moving coil cartridges exquisite enough to make you bin your entire CD collection!



## LOUDSPEAKERS

## AUDIOVECTOR 6

These enormous £4600 floorstanders have high quality Focal drive units which promise great things. Dominic Baker squeezes them into his listening room.

## **UKD DIVINA**

David Price auditions these exquisitely finished, luxurious sounding £1500 standmounters from UKD.



## TANNOY PROFILE 637

## 34

65

18

29

Can this imaginatively designed £500 floorstander put Tannoy back on the map? David Price finds out.

## CASSETTE

#### **YAMAHA KX-580**

Noel Keywood auditions this popular Dolby S cassette deck from Yamaha.



## TUNER

## TECHNICS ST-GT 350L

27

Eric Braithwaite takes a break from the heady climes of upmarket radios to try Technics' most humble of budget models.

## REGULARS

## NEWS

## The latest industry developments and new products rounded up.

#### LETTERS

A deluge of letters sees the vinyl brigade back with a vengeance, with the message "don't mess with us"!

### QUERIES

Once again we heroically answer all the searching, exhaustive questions you can muster!

## COLUMNS 61, 63, 69, 71 Comment, criticism and overviews on the ever-

changing hi-fi scene.

NEXT ISSUE Find out what July's edition has in store.

COMPETITION

Win a superb complete Linn system!

## SUBSCRIPTIONS

A month without Hi-Fi World is a crime to yourself! To save the ensuing anguish and heartbreak, why not subscribe?

## SPECIALIST HI-FI DEALERS

Want a Micro? Go to a computer store. Need a Mini? See your Rover dealer. Buying real hi-fi? These dealers offer expert advice and service.

## MEET YOUR MAKER

How to get in touch with the manufacturers of some of the best hi-fi around.

MUSIC

Some excellent new reases for your perusal.

ROCK RECORD OF THE MONTH: Tindersticks: This Way Up

CLASSICAL RECORD OF THE

Major Op62: Kashiye Scots, plano

Gabriel Faure: Value Ceptice No.4 in A flat

## WORLD AUDIO DESIGN

High performance kits for the enthusiast.

**DIAL-A-DEALER** Who sells what, and how to get in touch.

ACCESSORIES

All you need to keep that system in the best of health.

HI-FI WORLD LIBRARY A collection of special hi-fi titles.

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## MEASURED PERFORMANCE

Noel and Dominic switch on the HP3561A and opine on matters technical.

## READERS' CLASSIFIEDS

After that elusive Nak Tri-Tracer? Hi-Fi World classifieds are the best place in the UK to find it.

## ADVERTISER'S INDEX

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## RETAILING TODAY

We investigate.

Amidst a sea of post-recession gloom lie plenty of retailing opportunities, claims Julian Richer.

FEATURES

## SETTING UP YOUR CARTRIDGE

Find out how to set up your turntable's arm and cartridge properly. You'll be amazed by what it will do!

## DIY SUPPLEMENT

In this month's supplement we design a preamplifier complete with low noise MM and MC phono stage, build a stereo decoder, bring you all the kit news, answer DIY queries and more.

## COMPETITION

Win a superb Linn system comprising Mimik CD player Basik/Akito/K5 turntable, Majik L scuplifier and Keilidh loudspeakers. 66





HI-FI WORLD

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## News June 1995 trade winds

## **TEAC SCORE A CONVERSION**

TEAC have just announced their D-TI CD convertor, designed to partner the popular VRDS T-1 transport.

Retailing at £499.95, the D-TI continues TEAC's high-end look with a 5mm thick aluminium front panel, finished in black for the UK market. Two sets of TOS-link optical and coaxial inputs are provided, with standard line outputs.

Inbetween lurk two bitstream SAA7350s each with a TDA1547, making it a DAC7 design. A copper plated main chassis gives flesh to the bone.

TEAC UK Limited 5 Marlin House, The Croxley Centre, Watford. Herts WDI 8YA Tel: 01923 819630

## **AUDIO INNOVATIONS**

Not ones to follow Japanese black box design tedium, Audio Innovations have just launched a CD player in the style of their Alto amplifier, which looks so similar to a flying saucer that government ministers are doubtless already busy denying its existence.

Said to be a "no compromise" design, Audio Innovations say it uses the "highest quality components" such as premium grade selected Op amps, and a Bitstream DAC with a stabilised low jitter clock circuit. The Alto CD features a backlit LCD display, gold plated phonos, coaxial digital output and Sony control circuitry. The new Alto CD player costs £299 in standard black, or £329 in chrome.

Audio Components Ltd. Albany Court, Granby Industrial Estate, Weymouth, Dorset DT4 9TH Tel: 01305 761017

## KINSHAW GAIN CONTROL

Subsequent to the launch of their stereo and mono block power amplifiers at the Ramada show last September, Kinshaw have announced a matching preamplifier, the Perception Control Amplifier.

Featuring six line level inputs and twin balanced outputs as well as optional remote control (£200) for £1195, the Control is said to be an upmarket product designed to compete with exotic imports from across the Atlantic.

Kinshaw Electronics Ltd., 84 Pendarves Street, Tuckingmill, Camborne, Cornwall TR14 8RE Tel: 01209 715878



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## The **TEAC** VRDS Range The One System You Can't Beat!

Everybody is aware of the huge success of the VRDS range of integrated CD Players and Transports. Now the VRDS players are complemented by a range of components which share the same outstanding build, engineering and sonic qualities

Everyone knows that the VRDS mechanism is the best CD transport in the world -Now there's no need to compromise with the rest of your system!



## June 1995 trade winds

### AMBER ALERT

Keswick Audio Research, have moved upmarket with the introduction of a new loudspeaker.

The £1399 Amber features anodised magnesium cones,



said to take the metal cone argument a step further by reducing overall mass and increasing stiffness in controlled areas. KAR have avoided the temptation of using metal dome tweeters however, resorting to 26mm silk soft dome designs. In conjunction with their dual cavity reflex-based cabinets, this is said to give a "very musical nature that remains coherent and balanced at all listening levels". The

1020x220x300mm 'speaker is available in a variety of real wood finishes including Walnut and light and dark Cherrywood. Like many new 'speakers these days, the Amber is magnetically shielded, conferring upon it a high degree of A/V readiness.

Keswick Audio Research Ferrybridge Workspace, Pontefract Road, Ferrybridge, West Yorks WFII 8PL. Tel: 01977 671823

## **CABLE TALK**

Cable Talk have announced improved versions of three of their most popular interconnects. All feature strands of 6N



(99.9999%) purity copper which increase in thickness the higher up the range you go. Each core is sleeved in a special insulation material for complete rejection of RF.

The Monitor 2 costs £49.95 for a 1 metre stereo pair, the Studio 2 £64.95 and the Professional 2 £84.95.

Cable Talk Unit 12, Farnborough Business Centre, Eelmore Road, Farnborough, Hants. Tel: 01483 750667

### **MONRIO MOBILISE THE MOSFETS**

More and more tasty looking Italian hi-fi products are winging

their way to the shores of Blighty. Monrio's impressive looking range of transistor amplifiers and CD convertors includes the ADN phono amplifier at £595, the 18B DAC at £925 and the £1695 CENTO HP power amplifier.

Featuring a separate power supply, two gain and three switchable cartridge impedance settings, the



ADN caters for both MM and MC cartridges. This "low noise, high resolution phono preamplifier" is said to have "a crystalline quality of musical presentation", whilst the 18B DAC is said to be getting excellent reviews in the continental hi-fi press.

The 14kg CENTO HP is a dual mono MOSFET amplifier claimed to have enough current to drive any load. It features a high quality extruded aluminium case, with selected components including 1% metal film type resistors with a sprinkling of Vishays and Holcos at critical points in the signal path, plus audio grade capacitors and Carda-made Litz internal wiring.

UK Distribution 23 Richings Way, Iver, Bucks SL0 9DA Tel: 01753 652669

#### SUMMER SONYS

Sony have just announced their latest range. New cassette decks include the flagship £279.99 TCK-661S with three heads, carefully selected components, a three-motor drive mechanism and power loading. The £229.99 three head TCK-561S is also comprehensively equipped with bias and record level calibration, while the TCK-461S is the cheapest implementation of Dolby S to date. £179.99 buys you a two-



## CHORD SOLID

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> "Tumed unwanted sibilance making the sound more natural" Audiophile

"Amazing upgrade that was worth every penny" Mr. R. Ness, Zeals

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## June 1995 trade winds

head, two-motor machine with a ceramic cassette stabiliser with sorborthane damping.

The CDP-761E heads the CD player range, featuring Sony's new "Full Feed-Forward Digital Filter system" and improved power supply capacitors and op-amps. In an interesting move, it loses the previous model's variable line output and headphone socket, so it looks like Sony are really serious about sound! The tuner range is topped by the STS-361 at £179.99 which features a full RDS implementation with two antennae inputs.



Sony United Kingdom Ltd., The Heights, Brooklands, Weybridge, Surrey KT13 OXW Tel: 01932 816000

## **ACTIVE MUSICAL EVENING**

Aston Audio is holding a Meridian Active system demonstration on the 27th of June at Korks Wine Bar, Otley at 8.30pm. Contact Roger on 01943 467689.

#### **RAYMOND COOKE, founder of KEF.**

Raymond Cooke, founder of KEF died on March 19th 1995. Largely responsible for the enviable world-wide reputation of KEF as a company dedicated to advanced loudspeaker engineering, he exerted great influence on the audio industry. Many UK companies subsequently installed the sort of test equipment pioneered by KEF, some going even further perhaps. What they all lacked was the charisma of Raymond Cooke and the effort he put into communicating KEF's work to the world at large. In this respect, KEF, in my experience as a journalist in contact with Britain's speaker companies, was unmatched.

For many of KEF's most buoyant years, for example, annual lectures were held at the Park Lane Hotel, London, in which Raymond Cooke and Laurie Fincham, KEF's chief engineer at the time, took it in turn to lecture on loudspeaker engineering and development. Of all the myriads of lectures I have attended, working in hi-fi since 1970, these were the most impressive and valuable. Whilst many - usually overseas - large companies can't help but promote trite and dubious corporate views, KEF stuck to advanced 'speaker engineering. The lectures were packed; everyone invited turned up, a rare occurrence! Discussions and arguments were handled with humour and forbearing, even though Raymond was sometimes exasperated with the apparent lack of technical knowledge shown by journalists and at what he thought was their questionable subjective views (mine included!).

His jibe that the best test equipment most journalists could muster was "an Avo with a bent needle", spurred me to buying expensive and accurate acoustic test equipment, now used on this magazine for loudspeaker test and development work. And KEF Audio Engineering Society research papers were a fertile source of up-to-date information on measurement techniques and problems. So, ironically, the result of Raymond's criticisms was more searching tests on KEF loudspeakers. It was his example that contributed strongly to the standard from which we work on this magazine; I always admired his knowledge, dedication and achievements:

Raymond Cooke founded KEF (Kent Engineering and Foundry) in 1961, after working for Philips, the BBC and finally Wharfedale. The company remains at its Tovil, Maidstone, Kent site today, albeit in greatly expanded premises.

Raymond's work and achievements were acknowledged in his lifetime. The company's export achievements won them a BNEC award in 1970 and they were first to win the Queen's Award to Industry in 1970 and 1975. Four years later, Raymond was awarded an O.B.E. and in 1983/4 was the first Englishman to be elected President of America's Audio Engineering Society.

Unfortunately, research wasn't enough. KEF lost its momentum during the late eighties, going into administrative receivership in 1992. It was bought by Gold Peak Industries of Hong Kong, who are investing heavily to ensure the company continues to research and manufacture loudspeakers that reach a standard for which Raymond Cooke became famous. *Moet Keywood*, Editor





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DPA's aptly named Renaissance CD player is a clever piece of electronic artistry, says Noel Keywood.



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## AUDIO ILLUSION

23 Langley Broom Langley Berkshire SL3 8NB (2 mins Junc. 5 off the M4) TEL: (01753) 542761: (0860) 665662 10am-10pm Mon-Sat: Sundays by arrangement

## ALL MAJOR CREDIT CARDS ACCEPTED

Audio Research M300 Mk II Servo 300w Monaural Amplifiers. These superb amplifiers are listed at £12,000. This is a rare opportunity to own an ex-demonstration pair in black with very low hours, fully checked and serviced by Absolute Sounds and fitted with the extra cost tube saver option. Sold with full manufacturers warranty £6,495.

EARLY SUMMER BARGAINS

Pierre Lurne J1 with SL5 Arm (4,250)	S/H (Mint)	£1,595
Musical Fidelity FCD Player (£1,500)	Ex. Demo	£1,150
Audio Research SP8 Preamp, Sllver		
(fully overhauled by Absolute Sounds)	S/H (Mint)	£895
Classe 30 Remote Preamp Balanced (£1,370)	Ex. Demo	£1,095
Classe 70 Power amp 70w Balanced (£1,400)	Ex. Demo	£1.095
(Classe 30 and Classe 70 sold as a pair)	Spec. Price	£1,995
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Counterpoint SA 100 Hybrid Power	. ,	
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Musical Fidelity F18 Hybrid Power	,	
Amp 200w Bal. (£4,000)	Ex. Demo	£2,995
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Acoustic Energy AE2, Black Plus Stands (£1,500)	S/H (Mint)	£595
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## **Reclock your Transport or THETA TLC ???**

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World Radio History

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Renaissance. It's one unusual player.

Much like its two-box brother, the Elightenment convertor and transport, the Renaissance player is dimensionally compact and sturdily built. It has remote control and an attractive if small green backlit LCD display to show track and time. I had no trouble using the player nor any quibbles about it.

When warmed up. instruments producing the complex Latin American percussion on both Songhai 2 and John Lee Hooker's Chill Out were so strongly etched across the sound stage I could barely believe how vividly this player imaged. Being a great fan of proper stereo staging I go to lengths to ensure my system is capable in this respect. But images like this, so hard and breathlessly real, seemed just a bit more than credible to me. No wonder this CD player managed to grab our ears in the tumult of a show!

If this is how it really is, then all other players must get ready to meet their maker, I thought. But having lived 'the Decca London experience' many moons ago (a pickup cartridge blessed with not dissimilar magical properties), I sensed there might be some enhancement at play.

Playing the Beatles' 'Here Comes The Sun', always a good thing to do at the end of March, I was taken by how obviously the guitar was placed far left in the mix (you know how weird Beatles stereo was), how drums came over really solid centre-stage and the way Harrison and McCartney were harmonising to the right in an unusually forward and apparently realistic manner.

I found this very odd because Abbey Road was recorded in 1969 and is of mediocre sound quality with plenty of subtle background nasties probably a result of all that editing and mixing on ferric tapes. Through the DPA it seemed magically elevated in intensity, as well as cleaner sounding. The nasties appeared to have dropped beneath audibility, leaving everything else in stark relief, 1990s style. It sounded great, fantastic even, but an air of disbelief set in, so I wheeled in the rather good budget Marantz CD63SE for comparison.

The DPA had the Marantz nailed on speed, imaging and dynamics, but Abbey Road sounded richer and more realistic through the Marantz. All the complexity plus all the messiness

 There's no competitor to this product. It brings to percussion a dynamism and a richness of filigree detailing that's outstanding.

> returned. Once again here was an album made in 1969, not 1989. In other words, the Marantz told me the truth about the recording, however superficially less attractive than DPA's version it may have been.

Another property of the Renaissance is a restricted range of tonal colour which compromised the warmth and character of instruments. I believe this is attributable to the significant levels of distortion generated within its one-bit convertor. In this respect the DPA was little different to the Linn Mimik, which also struck me as a little monochromatic when I reviewed it recently. But the DPA is faster, more forceful and images more sharply than the Mimik, supporting an almost unreal sense of timing and pace to music.

The Decca London cartridge was crude, even if the final effect was apparently convincing. In contrast, the DPA CD player is highly sophisticated, as is its interpretation of music from the silver disc. Yet at the same time, it offers a unique version of events.

Is enhancement acceptable, or does it compromise the drive for purity and accuracy that is, supposedly, at the heart of hi-fi? I tend to be pragmatic about this nowadays. Pioneer surprised us all with Legato Link CD players that reached just I 6kHz before bombing out. This digital processing system, simple and misdirected as it is in my view, has gathered a sizeable following. Denon have now come up with Alpha-Processing, which hits 8kHz before fading out. Neither player advances any notion of accuracy, but both have an entertaining enough presentation. Conversely, I've heard too many 'technically correct' products that suck life from music, so I'm not quick to condemn characterful sounding players, which includes the DPA in my view.

Unlike Pioneer and Denon, DPA don't use digital signal processing in their player, so my analogy isn't perfect. It's the properties of their inhouse designed one-bit convertor that gives the Renaissance player its unique sound.

At the price, there's no competitor to this product. It brings to percussion a richness of filigree detailing that's outstanding. It also gives bass lines and drums a peculiarly supple flow, yet firm power that will delight most listeners. Although its power seems to favour rock, I found it brought equal drama to classical works.

The new DPA Renaissance CD player offers breathtaking imagery, stunning dynamics and the magic ability to elevate all recordings to an equally high level of excitement; it puts music onto Prozac. Whether its rendition is strictly accurate I would question, but in this it's hardly alone. What's for sure is that it brings a sense of life to Compact Disc that is outstanding. This is a player I would recommend anyone to audition •

## See Dominic Baker's column, p. 69

DPA Renaissance CD Player £895 DPA Digital Ltd., Unit 7, Willowbrook Technical Units, Crickhowell Road, St. Mellons, Cardiff CF3 0EI. Tel: 01222 795621

Measured Performance see p105-111

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"The DAC-1 really is a fine sounding converter and a cost effective way to step up from a CD player that has a digital output.'

#### Tom Miiller, The Audio Adventure, Vol. 2, #1

"The DAC-1 has a balanced presentation that I find myself enjoying increasingly as I listen to this product.

"The refined airiness was there, as was the feeling that the DAC-1 sounded more effortless when reproducing high level complex passages than the DITB."

#### Bill Weigel, Positive Feedback, Vol. 5, #3

about one hour) and requires only a soldering iron and a few

ted toroidal power transformer, low ESR power supply capaci

"The DAC-1 preserved the transparent nature of the recording nicely; I was especially impressed with the sheer depth of the sound stage. The midbass was rich and lustrous - oh those cellos!

"... the pace, the progression of note to note in the music, was magnificent.

"What was far more important was the DAC-1's ability to portray all of the truly subtle signifiers...

... I think it's a killer unit - one that performs far, far better than its \$449.00 price tag would indicate."

#### Wes Phillips, Stereophile, Vol. 18 No. 4, April 1995

At \$449 US, the Assemblage DAC-1 offers an outstanding value in digital conversion and comes with a Satisfaction Guarantee (return it within 30 days of purchase for a full refund), an Assembly Guarantee (if you can't get it running, we will!), a Two-Year Limited Warranty and Phone Support (Toll Free in the U.S. & Canada).

It comes in a small packages (the DAC-1 is only 9.5" x 2" x 7") but packs quite a punch. With its fully assembled and tested board and comprehensive, fully illustrated assembly manual - the DAC-1 Digital Processor goes together in a snap (typically

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### hand tools. We've even included the solder! The DAC-1's component list is exemplary. It employs a pot-

tors, Crystal CS8412 input receiver, NPC 5813 digital filter, and two Burr Brown PCM1702 20 bit DACs. The output stage is a direct coupled, Class A design, utilizing high speed Analog Devices AD844 and AD847 op amps, film and foil polypropy lene capacitors, and 1% metal film resistors. It accepts both Co-ax RCA and Toslink digital inputs.

"... it came as no surprise to me to find a high level of component quality within the Assemblage."

"The instructions were superb in every way."

"Treble is neither too soft or too dull, with just the right amount of crispness and sparkle to bring lack-luster recordings to life.'

"With more complex passages, the Assemblage manages to bring a sense of order to the music, clearly differentiating between instruments and their respective melodies. A good perspective of depth and width certainly helped here, giving a large sound stage for the performers to work in."

"I suspect [The Parts Connection] will have a lot of success with the Assemblage DAC-1. It is easy and fun to build, competitively priced, and delivers fine sonic results too."

#### Dominic Baker, Hi-Fi World, DIY Supplement, Jan 1995

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## FEELING GRAVITY'S DULL

h no, not again, we all muttered as the heavyweight Audiovector 6s, were lifted from the office to the car for transportation to my listening room. The memories of the TDL References and Thomas Transducers Brios came flooding back.

The £4600 6s are top of Audiovector's range, being a 115x38x42cm 4-way design. The drivers all come from specialist manufacturer Focal, with 4" midrange, 8" bass/mid and 10" bass unit all using Polykevlar cones. The inverted dome Kevlar tweeter is one of my favourites, again from Focal.

With their bright yellow Kevlar Focal drivers and gloss piano black finish, the Audiovectors certainly fit the criteria for high-end audiophile floorstanders. Personally, I would prefer a nice light natural Oak or Ash, which would give them a less coffin-like appearance. The cabinet is beautifully finished though, having an eight-sided construction to help reduce internal standing waves.

Presumably to take the weight, they are fitted with six spikes too, which makes levelling a whole new experience! I started with four, and then tightened the centre two down until they were firmly connecting with the floor, as advised by The Chord Co. Any other method will normally result in injury; sharp spikes at the bottom of a 60kg loudspeaker usually do.

The Audiovectors are sensitive, so need little power to drive. But when I measured them they had a strong dip in their impedance curve, so an amplifier capable of delivering high current into low loads in needed for accurate results. I used a 60watt DPA 50S power amplifier to drive the 6s, which was more than up to the task, giving a clean, detailed and balanced sound.

Audiovector's 6s greeted me with an enthusiasm for music that was a joy to behold. From the word go they leapt into life, conjuring a terrific soundstage in all dimensions that lifted every type of music played to a greater plane. Even mediocre pop recordings such as the Lightning Seeds and The Lemonheads took on a whole new breadth, height and depth, expanding outwards to create a scale of performance other floorstanders would struggle to compete with. Here they mimic some of the magical properties of Quad's 63s, which have a slightly more refined ability to create a sense of acoustic.

Used in plenty of free space, I left a good 3-4ft between rear and side walls, and in a room of generous proportion, the Audiovectors are dynamite. The separate 10" bass units effectively act as stereo subwoofers to give a deep and powerful grumble to drum rolls. The 6s go very low, easily capturing the full impact of the subsonic kick on Tricky's 'You Don't'. It sounds like a bass guitar as it two-steps downward to around 25Hz, but the power behind each note suggests it has either been enhanced or is a keyboard effect.

But this alone doesn't describe the 6's ability in the lower registers. The 8" unit above fills in the area between these earth shaking subsonics and the effortless three dimensional projection of the dedicated midrange driver. This upper bass unit is responsible for much of the speed and punch in rock and the natural woody bloom of cellos in orchestral pieces. Its smaller, lighter cone gives the 6s lightning dynamics and the agility to track basslines through the thickest tangle of instruments.

I'm a great fan of 'speakers where a dedicated midrange unit covers the majority of the vocal and instrumental Dominic Baker risks life and limb to audition Audiovector's heavy weight model 6 loudspeakers.



18



range. The 6s use a 4" Polykevlar driver for this, which gives an openness and clarity rivalled only by the better ribbon and electrostatic designs. Kristin Hersh's vocals on Throwing Muses' 'University' had a tangible solidity and breadth of expression that brought feel and emotion to music. Strings too had tonal breadth with sharp leading edges, giving a crisp and fresh spring to the melody.

The delicate harmonic structure of violins was accurately preserved by the Focal inverted Kevlar dome tweeter. I have heard this unit in several designs now and must say I'm impressed. It's sweet with a lovely tone, and it's powerful, giving solidity to cymbals. I have heard it imaging far better though, but in smaller cabinets where diffraction is far less of a problem.

Audiovector have done impressively well to engineer a loudspeaker of such complexity. They integrate well to produce a coherent soundstage of generous proportions. The performers are a little too far dispersed across the stage, image focus not being one of the 6's fortés, but this can be forgiven against the scale the performance as a whole. They have a neutral balance with an ease of dynamic expression that speaks volumes for the light, stiff, efficient Focal drivers.

If you have a spacious room and a well balanced system to drive them with, the Audiovector 6s are capable of a highly musical, involving performance. They achieve a good balance between transparency, power, dynamics and subtlety that makes the best out of any music presented to them. All you need to do now is get saving

Audiovector 6 £4600 The Chord Co. 30a Sarum Business Park, Portway, Salisbury, Wiltshire SP4 6EA Tel: 01722 331674

Measured Performance see p105-111

# EUROPEAN INTEGRATIO

Danish company Densen have an interesting product in the DMI0 integrated amplifier, finds Dominic Baker.

ensen have recently been introduced to the UK by Morel, manufacturers of high quality drive units and loudspeakers, to complement their own products. This Danish company has a small range of specialist amplifiers, comprising the DM-10 on test here, and a pre/power, the DM-20/DM-30.

Tested here in line-level only guise, the DM-10 retails for £1300. The optional MM phono stage costs an additional £149, and the MC stage £295. The MC stage takes its power from a solar panel, illuminated by LEDs, which Densen claim reduces noise and hum thanks to better power supply decoupling - an interesting way of tackling the problem!

Styling, and whether you like the appearance of a particular product or not, is always a personal matter, and Densen haven't made life easy for themselves here. The DM-10 has a very distinct image, with a sparse gloss black front panel interrupted by two oversize gold control knobs and a red power indicator. I must say that it's beautifully put together, and I quite like the styling, but I suspect opinions will be divided. The control knobs are a joy to use, well weighted and silky smooth, although I'd personally prefer them in chrome rather than gold.

The DM-10 is a line level only integrated, having 4 line inputs and two tape inputs. The optional MM or MC phono stages use the first line input, labelled simply 1. Inside, build quality is superb with large separate toroidal transformers for each channel, a line of beefy smoothing capacitors, an Alps volume control and selector, Wima polypropylene signal capacitors and so on. Not only are the components of a high standard, but the whole layout and construction is very neat and professional.

So, we have a distinctly styled £1300 line level integrated amplifier from Denmark that's well finished and constructed - what then does it sound like? Well, Densen's DM-10 is very hi-fi in its sound, with hard etched detail and fast, striking transients, which doesn't make it one of the most forgiving amplifiers around. Like a big Naim amplifier it drives rhythms along with



attitude, giving them real kick. This is helped by deep, powerful bass, with good attack on dynamics. Elastica's 'Never Here' really slammed out from the Epos ES25s I was using, totally under the control of the DM-10. Basslines are bestowed with solidity, and a taut, lean punch that makes the Densen sound more powerful than it really is.

Tonally, the DM-10 has a glassy hardness to its character right across the audio band. This isn't so noticeable on rock such as Elastica or PJ Harvey's new album where writhing guitars and crashing cymbals suit this presentation,



but on lighter, more delicate acoustic music this trait gives the DM-10 a necessarily hard, sharp sound. Grant Lee Buffalo's steel guitar and hi-hats had a little sting in their tail, with more sharpness than normal.

Vocals also suffered a slight coarsening when compared to the smoother Class A Sugden A21a I use as a benchmark. The Densen had the same brutal resolution of detail, and greater attack, but wasn't quite as clean. Suzanne Vega's dryly etched vocals were a treat on the DM-10 though, coming across as simple, pure and airy, although lacking in texture and emotion. She had a haunting coldness to her voice, dispersed across the wide stage created by the Densen.

The dual mono construction gives strong stereo separation, in turn increasing the boundaries of the stage within which the performance resides. With CD this can sometimes take things too far, pulling central images wider than they really should be. Sherryi Crow's fulsome voice lost depth and body on 'All I Want to Do', which took some of the strength away from the intended 'club-like' atmosphere.

Densen's DM-10 is typical of the more analytical solid state breed. It

couldn't be described as the last word in detail resolution, because a lot of the ambience and acoustic in a performance are glazed over, but what is there is accentuated and thrown forwards. This gives the DM-10 an impressive, powerful presentation that really lets the beat of the music through •

## Densen DM-10 £1299 Morel UK 11 Foxtail Road, Nacton Road Industrial Estate, Ipswich IP3 9RT Tel: 01473 719212

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### For more information and demonstration, contact:.

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or anyone with an old or just plain mediocre CD player, separate CD convertors can be an excellent upgrade. And the Cambridge Audio Dacmagic I looks a million, but costs just £150. It comes packed with every conceivable hi-fi plus point, like fully balanced outputs, top quality audio grade components, BNC inputs, XLR outputs and what have you, and has created a real buzz for itself. Considering the cheapest quality standalone convertors like DPA's Little Bit II cost around £450, the Dacmagic looks appropriately named.

Potential buyers are likely to get excited by the Dacmagic's pedigree: it has been designed by Pink Triangle. Regular readers know we rate PT products so much that their Da Capo convertor is our in-house reference.

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## review

Designing their own dedicated one-bit convertor is no mean feat and a tribute to their expertise. I greatly enjoyed reviewing Pink Triangle's cheapest convertor, the £790 Ordinal. So how come the Dacmagic costs just a fraction of this amount? Two reasons: it's made in Taiwan and it is sold direct by Richer Sounds, who now own the Cambridge brand name. So there's a margin missing and, with Richer Sounds being what they are, you can bet the their margin is fairly small too.

You certainly get a lot of metalwork for the money. The case is 430mm wide, 315mm deep and 82mm high, allowing it to just fit onto a standard width equipment rack. To connect up, you need a BNC-phono lead, which will have many users scratching their heads, but these days most dealers should have such a thing. The BNC connector is a military twist-lock device with a sand/dirt seal and a specified characteristic impedance (50 or 75 $\Omega$ ). It's strong but in my experience the mechanical braid connection becomes a

problem after a while as oxidation sets in, meaning the braid has to be soldered to prevent this. Curiously, whilst the Dacmagic has no fewer than three switched BNC inputs, it doesn't have an optical input, so anyone with a Japanese player with no coaxial connections will be disappointed.

There's a feedthrough digital output, ordinary phono-socket audio outputs and balanced XLR professional audio outputs. These reject hum and interference but can only be used with a balanced input, still rare, especially at this price level.

The front panel is studded with green LEDs, showing digital lock, SCMS anti-copy code recognition, and sampling rate. The latter can be 32kHz, 44. I kHz or 48kHz, to accept digital radio broadcasts from satellite, CD replay or DAT replay, respectively.

#### **NOEL SAYS**

The Dacmagic has fine sound quality, offering a great sense of balance together with good basic dynamics. Up against Audio Alchemy's Digital Decoding Engine it came over as more lively and dynamic in every area. Where the Dacmagic excels is bringing life to the flat, boring sound of the average Far East CD player. It has fulsome bass, just a little on the generous side. I noticed a little more resonant thunder than usual in the drum rolls at the start of Steve Earle's 'Copperhead Road', and this carried on through to the great kettle drum strikes at the start of Carmina Burana.

Strong mid-band clarity had singers well defined on the sound stage. I was aware though, that the Dacmagic had a little muddle around images and that transients weren't as clean and hard hitting as more expensive designs. There was some energy smear, typified by treble splash to cymbals that gave them a subtle "schhh" effect, rather than a vibrant sonorous ring. These

"Where the DACMagic excels is bringing life to the flat, boring sound of the average Far East CD player. " were generalised effects, heard from slight coarseness in the violins of Rimsky-Korsakov's Tsar Sultan through to some lack of hard-edged penetrative clarity behind percussion on John Lee Hooker's Chill Out.

but these minor blemishes detract from the fact that the Dacmagic convertor offers a good standard of

performance at the price. At the end of the day Dacmagic will fulfil its function as a good upgrade for mediocre budget CD players, even if it doesn't quite get into the serious convertor league.

#### **DOMINIC SAYS**

Pressing play on the Arcam transport used with the Dacmagic for my listening, I found a big, sweet, warm sound from Primal Scream's 'Rocks'. It's a very easy convertor to listen to, having a well balanced, even sound. There's no treble harshness to speak of and the midrange is not as forward as some, partially warmed by the generous bass.

This was a good start indeed for a £150 convertor. The similarly priced QED Digit has the opposite balance, with midrange projected well forward and drier bass, giving a more analytical balance than the mellifluous Dacmagic.

I suspect this will give the Dacmagic an edge ahead of the competition in many budget systems where it's likely to end up, lending them an air of refinement. But before you rush out and snap one up, it's no Pioneer A400. Yes, it's super value, and yes it will sound excellent in budget systems where its warm bass will even things out. But these qualities aren't enough to worry more expensive convertors.

Against any of the better CD players over £350 such as Marantz's CD63SE and Arcam's Alpha 5 Plus, you start to notice a greyness to its tonal colour and a lack of any real detail or atmosphere. In the foreground the Dacmagic produces a convincing enough performance, but subtle nuances behind are subdued. This gives it a solid sound that concentrates on the fundamentals of a recording, but makes things sterile and two dimensional.

For those looking to tame a budget system by adding smoothness, the Dacmagic is an instant upgrade at a bargain price. But don't believe the hype, it's no wonderdac, and isn't a useful upgrade for any half-decent machine over £300 •



Measured Performance see p105-111

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## Technics budget ST-GT350 tuner looks good to Eric Braithwaite.

strephics' little tuner bargain, the ST-GT350, is a mere £140, for which it has FM, MW and, miracle of mirac es, LW, a 30-station memory (20 FM. #0 AM), all in a slim line case. Only RDS is missing.

Technics

That's the obvious bit. Three neat little tricks are hidden away, however. pressing the FM button momentarily will switch the tuner to mono; holding it down will give a fairly sane signal strength reading in dB, and on top of this, if you have a remote-controlled Technics amplifier, you can run it from the amplifier remote.

By and large, the Technics acquitted itself well use. Listening to a Radio 3 play, The Duchess of Malfi, there was plenty of atmosphere and a ful rendition of the bare-board studio. If the mobility of the actors, constantly shifting back and forth three paces to the left or right was distracting, it proved that the Technics was surprisingly good at keeping control of images without b urring them or lapsing into approximation.

Neither a live relay of Tosca from the Met nor a Schubert quartet came a cropper in sounding very realistic and spacious, even if there isn't the bow-tostern depth of top tuners.

There was not much wrong either with the tonal euality and timbre of instruments. Quartets, acoustic bands and such like came over very pleasurably. Where this tuner just failed on scoring a whole row of nines was its shortfall in zip. Neither the top end of a synthesizer nor of orchestral instruments really flew out of the speakers; even rhythm guitars sounded as though their strings had a thin layer of cloth over the firets. Not that the Technics could be said to be dull; it just needs more freedom in the upper reaches.

A little more of a disadvantage was an element of cuppiness on voices, with males sounding brittle and women slightly pinched.

As usual, the AM section is good for reminding a listener what Mr Bell sounded like reciting 'Mary had a little lamb', meaning it will do for ta'k radio.

I found Technic's budget baby was thoroughly capable when wired up to a Harman-Kardon 6 0 amplifer, whose bright, perky presentation sharpened up its act neatly. All ir all, the ST-GT350 is not a bad little buy and a very good fit for budget and mid-price systems



Measured Performance see p105-111

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# INTERACT

UKD's new Divina loud publicers in we quality drivers that promise a fight, musical sound in a variety of systems. David drice tolenthem out. KD's new £1400 Divinas are the next model up from the Callas Walnut. Both share a modern Focal polypropylene bass unit, but the Divinas feature the larger 8 inch version. Unlike the Callas though, they don't use Focal's Kevlar inverted dome tweeter, and instead come fitted with a silk dome Scanspeak unit.

A bass reflex design with a rear firing port, these 260x390x400mm (WxHxD) loudspeakers are somewhat unusual looking. They are beautifully finished and when sat atop their matching walnut stands, definitively could not be confused for your average black box.

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Unlike many loudspeakers, even at this advanced price point, the UKDs have no glaring weaknesses, and much to endear them. On the end of a decent system (and it has to be good or the Divinas will shout its failures to the world), you'll be greeted with an unusual combination of warmth and speed. With many speakers, it's dry and fast or warm and flaccid, but the UKDs let you have your cake and eat it.

Like a kind of grown-up Chario Hiper I, the Divinas have a warm, fulsome upper bass allied to a clean midrange and a sharp but sophisticated treble. This makes for an exciting presentation, achieved through the intrinsic quality of the drivers rather than a cynically engineered boom-tizz. Rush's 'Red Barchetta' is a super-clean but rather anaemic digital recording with which the UKDs instantly showed

The UKDs jumped into the piece with aplomb, giving a thoroughly musical performance with a satisfying richness of tone and delicacy of touch.

their mettle; cymbals conveyed in a finely etched, sensitive manner without a hint of splash, guitars suitably dry and well located, and bass guitar super-tight and rhythmic.

Leading edges were a particular forté of the Divinas, which caught the way the bass guitar, cranked high up on the fretboard, was working with the snare drum and hi-hat as the major percussive force of the song. This speed, achieved through their innate control rather than any harshness or brightness, worked in conjunction with another strong point, their dynamic abilities. Many 'speakers have a tendency to sit on dynamic inflections, completely missing how drummers hit their kit with particular force at certain times, or how guitarists pluck or hit strings with varying degrees of subtlety or violence. One of the marks of a good speaker is their ability to convey

HI-FI WORLD

this together with the music's rhythm, and the UKDs excelled on this point.

Moving into the digital-free province of Herbie Hancock's 1969 Maiden Voyage album, and 'I Have a Dream' confirmed the speed, dynamics and clarity of these loudspeakers. The opening double bass was full, almost overly so, while the following flugelhorn, tenor sax and alto flute were brightly lit but thoroughly smooth. However, as things progressed I began to notice a few, admittedly minor gripes.

I'll admit I've been thoroughly spoiled by the exquisite point-source imaging of the Tannoy Profiles also tested in this issue. For all their faults, the prospect of having an enormous soundstage with voices hanging eerily in mid-air was one I rather enjoyed. This has duly made me accutely aware of

> what stereophonic sound can do without the need for fripperies like Dolby Surround and what have you. Sadly, the UKDs are rather mediocre in this respect - not bad, but not awe-

inspiring either. Indeed they needed a wallop of power from my Meridian 551 to get them to image out the box. Treble doesn't have the best projection going, and bass veers towards boxiness.

The Divinas are also guilty of a slight lack of space in the upper midband. They failed to quite capture the airy feel of the studio. Although not bad, they're not up to KEF Reference Series Ones in this respect. Indeed, although a highly detailed loudspeaker, they seem to lose the last ounce of decay. An open hi-hat struck hard has a beautiful sonorous ring, but then seems to fall off a touch quickly.

Teenage Fanclub's 'Star Sign' underlined their character, with a bright, crisp, smooth treble and a satisfyingly warm, full bass. Rhythms were superbly carried, with kick drums coming through with great clarity, and those neat Byrds-style 12-string guitars had real body and colour, Norman Blake's vocals likewise. Yet there was still a conspicuous bloom in the upper bass and for all their clarity and precision, ultimately a lack of atmosphere. Soundstaging was good, if not perfect, and imaging solid if not grin-inducing.

On all types of music tried, the pattern was the same. The UKDs jumped into the piece with aplomb, giving a thoroughly musical performance with a satisfying richness of tone and delicacy of touch. Although there are a few gripes, the Divinas are sufficiently well deported not to draw attention to them, which makes for a 'speaker of excellent overall ability. If you enjoy their 'characterful' aesthetics, you may well find yourself a fan of these loudspeakers.

## DOMINIC SAYS

I used the Divinas over a couple of days and always found their big, warm sound enjoyable. They have deeper and more powerful bass than the smaller Callas Walnut 'speakers, and are well suited to large listening rooms of around 24x18ft. They don't have quite the same pinpoint imagery as the Callas, but they give a performance greater scale with a deep and wide sound stage.

Tonally the Divinas are not the most neutral of 'speakers, the thick polypropylene bass unit gives them a richness and warmth that isn't strictly accurate. Yet they were extremely smooth, with an overall coherence to the sound. The Divinas are definitely an enjoyable 'speaker to sit in front of, and those looking for an easy and musical balance rather than the slightly colder and harder truth, would do well to audition them



Measured Performance see p105-111

## MICHE QC POW



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**"THE MOST DESIRABLE DECK BELOW £1500"** Ken Kessler - Hi-Fi News & Record Review August '94

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The H-K 610 has a decided affinity for any music that has an infectious beat or rhythm. There is a crisp, sharp sound that sends a raucous bluesy guitar like Gary Moore's straight to the toe-nails, with a beat that is spot-on the ball. To adapt the old KFC slogan, it's finger pickin' good. No muddle, a rich, full, detailed panoply of a rock band.

If there is a bit of a shortfall, it is perhaps the bass is clear but not as weighty as that of Arcam's amps, but it is more cleanly defined than some of the Japanese competition. I had to remind myself that this amplifier - line-level only, by the way, but with an optional £30 phono stage - costs just £190.

The 610 scores high on acoustic recordings, with its tight, clean sound. On Bernie Grundman-re-mastered Rob Wasserman duets on GRP, Wasserman's bass, doubled with vocals from Rickie Lee Jones, Jennifer Warnes and Aaron Neville, among others, was crystal clear and pure, with the various vocalists brought a touch forward but caught nicely.

In the Vivaldi, massed violins could sound on the strident side, tamed by a small twist to the left of the treble control (yes - it has tone controls). Also, Alan Loveday's solo violin in the Vivaldi stubbornly refused to separate itself in space from the other fiddlers

Conversely, cellos and basses had a splendidly rich, warm tone, although bottom-end bass was not terribly powerful.

It's the 610's bright but clean approach which gives it enormously appealing vivacity. Just enough warmth in the mid-range also touched up the harpsichord continuo in the Vivaldi, giving it a little more prominence and weight when otherwise it would have drowned in the mass of strings in front of it.

In common with most budget amplifiers, the H-K makes up in speed

and attack what it glosses over in dynamics. Nor is it any great shakes in the fancier ways of reproducing recorded ambience and threedimensional space on classical recordings.

What you get for the money - and there's nothing wrong in this - is a thorough-going, down-to-earth liveliness. Like Spring sunshine, the 610 is guaranteed to wake up anybody like me who hibernates through winter •

Harman Kardon H-K 610 £180 Harman Kardon UK Ltd., Unit 2, Borehamwood Ind. Park, Rowley Lane, Borehamwood, Herts. WD6 5PZ Tel: 0181 207 5050

Measured Performance see p105-111

Have Tannoy finally got the balance right with their mid-market floorstander, the Profile 637? David Price finds out.

> fter considerable success with their budget Planet Series 'speakers a decade or so ago, Tannoy have recently spent less time in the limelight. Although competent, their subsequent budget designs failed to capture the imagination of the loudspeaker buying public.

THE

RIGHT

OFILE

The latest Profile range continues their traditional approach to loudspeaker design, using a dualconcentric drive unit to give an effective 'point source', so sound doesn't appear to come from many different points (i.e. drive units) on the front baffle. The tweeter sits at the centre of the bass/midrange unit, the benefit of this arrangement being a cohesive sound with consistent imaging. The Profile 637 allies their well known 8" dual-concentric driver, to an additional 8" bass driver, to give stronger bass.

The unusually shaped cabinets are designed to side-step the perils of internal reflections that conventional box 'speakers are prone to. The 82x29x26cm 637s feature a spiked base with the option of mass loading, which Tannoy recommend. In my listening room, with a Sony X77ES CD player driving Meridian's 551 integrated amplifier, the Profiles seemed happiest about 50cm from the rear wall, slightly toed in.

First impressions were wholly positive. They have their own way of doing things, far superior to the

average £500 floorstander and, in many respects, up with the best of them at this price, such as Mission's 752. They're extremely musical, rhythmic sounding 'speakers with superb imaging and a real sweet spot for female vocals. But in other

respects they could be improved. I've some reservations about their treble performance, and some will find their overall tonality a little arid.

On program material that suits them, such as rock or classical, the Profile 637s are a joy to listen to. They certainly made a great job of Kate Bush's 'Moving', setting up an enormous acoustic in the listening room from which Kate's voice projected with great clarity. The scale of the soundstage did not diminish the Profiles' ability to capture every nuance and inflection of her singing. Bass and percussion were located with pin-point accuracy, not just from left to right but front to back. Rhythmically very capable, they caught the looseness of the playing well, imparting a sense of the musicians enjoying working together. Dynamically the Tannoys worked well too, communicating the way Kate's phrasing pushed the song along, as expressive as it was melodic.

The Profiles' downside was just as easy to gauge. Although smooth and well integrated, treble wasn't exactly the most sensual of experiences. Lacking air and space, cymbals sounded rather perfunctory and unengaging. Smoothing the song's delicately recorded hi-hats into reticence the, Tannoys couldn't be accused of coarseness in the vein of the B&W P4s tested recently. Quite the reverse in fact. This meant much of the recording's ambience was lost, compromising the feel of one of the most sumptuous analogue recordings of the seventies.

This dryness was pervasive, I'm sorry to say. In the midband, the polypropylene driver made its

They have their own way of doing things, far superior to the average £500 floorstander and, in many respects, up with the best of them at this price.

> presence felt, imposing a little plastic colouration that brought some uniformity to the character of instruments. Even the bass wasn't safe, Bruce Lynch's deliciously rich, fruity bass guitar sound being rendered rather barren. This heady combination of strengths and weaknesses certainly makes for an unusual 'speaker that you'll either love or hate.

Moving on to Blondie's 'Atomic', the Profiles set up another drop-dead soundstage with Debbie Harry's voice lilting over the rest of the mix, hanging somewhere in the middle of the room. Indeed they really seem to have a sweet spot in the upper midrange which gives a superb rendition of female vocals. Guitar and bass parts were ultra-tight, starting and stopping with a deftness that made for plenty of foot-tapping. The Tannoys threw out masses of detail as well, but because the dual-concentric drivers integrate the frequency extremes so well, it's so cohesive you wouldn't notice unless you listened for it.

However, for all their abilities with imaging and rhythm, the Profiles robbed the performance of a good deal of atmosphere and colour. This was particularly evident with jazz, which needs all the 'feel' going. As Lonnie Smith's classic 'Twenty Five Miles' so ably demonstrated, it's all very well having masses of detail and a soundstage the size of the Carnegie Hall, but if the 'speakers lose the event's vibe, these strengths are wasted.

The Tannoys did better on chamber music, their detail and cohesion capturing the delicacy of Naim's recording of Dvorak's Quartet No.9 in D minor Op.34 which, allied to their supreme imaging, made for a thoroughly engaging performance.

Likewise on electronic music, where the sparsity and rhythmic subtlety of Kraftwerk's 'Musique Non Stop' was well conveyed, devoid of boxy colourations that haunt many a conventionally cabineted loudspeaker.

With the right music, the Tannoy Profile 637s endeared themselves. In some respects such as imaging and cohesiveness they're good enough to teach the best of the rest at this competitive price point a thing or two. Partnered with a rich sounding source such as a Quad 67 CD player or Linn LP12 turntable, you could well discover they're what you've been waiting for. But I'd say a home demonstration is mandatory. As always, try before you buy!



Measured Performance see p105-111





For further information on the range of loudspeaker systems Ruark will send you the latest brochure, a copy of Press Cuttings and authorised dealer list. RUARK ACOUSTICS, Dept. HFW, 59 Tailor's Court, Temple Farm Industrial Estate, Southend on Sea, Essex SS2 5TH. Telephone: (01702) 601410. Fax: (01702) 601414
# HI-FI RETAILING TODAY

Hi-Fi World investigates Britain's changing retail market place for hi-fi.



ike English cricket or Scottish Conservatives, hi-fi separates sales are in decline. Sales patterns show there's more money to be made selling integrated systems like midis and micros, while the buying public shows pitifully little awareness of how real hi-fi separates can sound.

Even at the bottom end of the market, competition is cut-throat. In an announcement which took many by surprise, Thorn EMI plc has closed the entire Rumbelows electrical retail chain, with all 285 stores and 2900 jobs

lost. Said to have been brought about by continuing losses, reported to be £12 million for 1994, this leaves Dixons (and Curry's) and Comet to battle it out for the scraps. So what's going on in the Great British High Street? Where have all the hi-fi buyers gone?

The advent of Compact Disc in 1982 gave many people the best excuse in ages to get to their local hi-fi dealer and part with large sums of cash. It helped the industry saunter along as it had the previous decade, showing steady growth of around 10% a year. Not so anymore. Slow sales of recent new formats such as DCC and Minidisc has shown that in Britain at least, high technology for its own sake is no longer a guarantee of sales. It's a testament to changing times and markets - as manufacturers are all too aware, demographics are shifting as surely as coastlines.

#### CHANGING MARKETS

Product sales usually follow a bell curve over time. They rise slowly at the start of a product's lifetime, then climb steeply, level out and then launch into terminal decline, a process that often takes decades. This state of decline is where we now find hi-fi separates, taken as a group.

Particularly telling in this group are the figures for hi-fi CD players, which declined by 13.4% in 1993, and 14% in 1994. When launched in 1983 the only way to play CDs was by the addition of a separate CD player to an existing system. As hardware prices came down, CD players enjoyed an early sales peak. But by the beginning of the 1990s the

> dreaded midi system was upon us, and because CD players came with the package, many no longer saw the need to buy separates. Sales migrated to midi and mini systems, aided by the public's continued belief that anything with a CD player has to be 'hi-fi'.

Confirming this trend downmarket, figures last year showed separates' sales down 10%, with audio systems (including midis, minis and micros) up by the same amount. Now, figures from the British Radio





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"It's a gentle elegant effect - and a very even one...One simply becomes more aware of the music." — Eric Braithwaite - Hi-Fi World

"CDs sounded better defined, the soundstage having a more definite shape. It was as if there was more air around each strand in the mix, allowing you to hear it more distinctly, more separately...I didn't immediately want to switch the CD player off and relax with some LPs, instead I went on to make further explorations of my CD collection" — Andrew Cartmel - Hi-Fi Choice

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Equipment Manufacturers Association (BREMA) put integrated system (e.g. mini, etc.) sales up a further 17% for 1994. However, there's a sting in these figures. The overall sales increase

comes from minis and micros; midi system sales are in decline. Yes, midisystems are on the wrong side of the bell curve, with trade deliveries down 11% and sales down 7%. When trade deliveries are less than consumer demand, it suggests goods are

oversupplied. If this happens to products on the downside of bell curves, they're probably nearing the end of their market lives. Indeed a BREMA spokesman confirmed that although holding out "better than people expected", midi sales are expected to decline substantially in the coming year.

So if midis are on the way out, how low can you go? If you believed the figures, the place for retailers is micro systems, whose sales are growing strongly, and mini systems which are recording a 43% rise in trade and 55% rise in consumer sales.

But if the trend is towards lowbrow audio systems, why then are midis due for the chop? Marketing lore holds that products follow a cycle: introduced upmarket, competition leads to price cutting, which moves the product downmarket, bringing more competition, leading to over-supplied markets. This in turn means there's less money to be made, causing major manufacturers to eventually move out due to poor profitability. As this relies on technological development and fashions changing, it happens over many years, some products maintaining high residual demand for long periods.

In the light of this, aren't things looking decidedly difficult for anyone in the business of selling audio equipment? Yes thinks Julian Richer, founder of Richer Sounds, "It's a bloodbath out there. Clydesdale, a Scottish chain of electrical stores closed down earlier in

the year, Comet recently announced a 10% drop in sales and Dixons and Currys have turned in disappointing figures."

Whilst Britain's hardpressed

• There are too many stores at present, as there were once too many shoe shops. A painful slimming down process is going on. 🤊

electrical stores are hardly big on the hi-fi horizon, their performance may be portentious for the way serious kit is sold in the future. Instead of expensive locations with high overheads attempting to trawl in as much of the general public as possible, Julian

believes the trend will be towards leaner, meaner specialists, pointing out that High Street retailers suffer huge rents. "My rent and rates are 2% of turnover, which is within the grasp of specialists, whilst the multiples typically pay 20% or so. The trick is to advertise and give great customer service so you don't need to pay such high overheads. Then stores in less prestigious locations can get customers and do well."

This reflects current wisdom on future trends towards niche marketing and flexible production. "I think the market is moving to specialisation", Julian told us. "Customers are confused by multiples, specialist shops will come back."

Indeed markets are specialising in many areas, but with out-of-town superstores currently doing all the running, this still doesn't appear the case with retailing. Does Julian think it's likely to change?

"There are too many stores at present, as there were once too many shoe shops. A painful slimming down process is going on. And with specialist goods, notably hi-fi, customers like experts. The last thing they want is to walk into the shop, climb over the washing machines to find the hi-fi, meet acres of midi-systems and have to walk past them just to find the little room that says 'Separates'. Finding a member of staff that knows anything about hi-fi will be difficult in this environment."

"We think the specialist store has

also got advantages with staff. People who go to big multiples complain the staff don't known what they're talking about. That's another reason we're doing well. By concentrating on a narrow range of products we can train staff more effectively. Customers are more confident when they understand what they're buying".

So how does Julian see the future, both for Richer Sounds, and the industry en masse?

"As a retailer we need to educate customers about the benefits of real hifi separates. We have just had a big meeting between retailers and manufacturers, and think a national advertising campaign would help reinforce the image of real hi-fi. Our ads will make people ask themselves whether they should be buying a midi or whether they should be looking for something better, because real hi-fi costs little more. That's the message we need to get across".

Anyone in the industry will tell you how specialist hi-fi retailers are suffering, reporting little light in the post-recession gloom. Will this situation continue for the foreseeable future? Julian Richer thinks not, seeming unusually optimistic. But it's based on 16 years experience and the retail sector's wide acknowledgement that Richer Sounds knows its business.

Many believe the hi-fi separates market has peaked, and is now in slow decline in the face of the dual assaults mounted by home cinema and 'audio systems', notably minis and micros. But there are opportunities in the future for those with a tight grip on the problems of the past. People like Julian have shown that there is a market for real hi-fi separates, but it takes effort to reach it ●







#### THE WHEEL IS

Having not read a hi-fi mag for more than two years it must have been fate to buy April's World and read about, you've guessed it vinyl! It's great to hear it can be bought again fairly easily and that someone in the industry realises its unique qualities. Hopefully it will never die, remaining available to the select few who appreciate it.

I used to be an avid Flat **Response and Hi-fi Review** reader - I know they were rather biased but they certainly had a point. After this I became disillusioned with hi-fi. As the owner of a middling Linn/Naim system, I just couldn't understand why my friends had to buy these really awful sounding CD players - and boy didn't they first sound truly terrible! The attitude was: "well it's digital and it's got a laser so it's got to be better!"

It's great to hear the wheel is turning full circle and that the two media can exist commercially together. Still, when I purchased a CD player last year I realised how far Compact Disc has come. Having had a Naim CDS for a year and never really loving the sound, I listened to an Orelle CD10T with Kinshaw DAC, and although not the most analytical transport, boy did it sound like music - it's certainly the most 'vinyl sounding' CD I have heard. My system is now LPI2, Lingo, Ittok, Asaka, Naim 32.5/Hi-Cap/140 with Ruark Equinox speakers, and I am really delighted with it. Dr D.R.E. Jones Wallington, Surrey.

# World

Vinyl has always had a strong following, and many music lovers have found its natural presentation more musical than CD. It is a bit like the valve amplifier. where some of our readers are still using Leaks, Quads etc from the 60s, but are ignored and even ridiculed by those in the industry. Many are still using vinyl as their main source. enjoying the sound, but again are sneered at for sticking with old technology.

At Hi-Fi World we are all music lovers and enjoy listening to vinul. We know that our readers do too, having huge record collections. And as you say, it is perfectly possible to run CD and vinyl alongside each other, which is exactly what we do at Hi-Fi World, respecting and enjoying the different presentations. CD has progressed a long way, but still hasn't surpassed vinyl in every aspect, and I don't think it ever will. Both mediums are now extremely good when performing to their full potential, but neither are perfect. DB

#### RECORD RETAILER

As a classical record collector for twenty five years and a dealer for four years, lan Johnson (World Writes, March 1995) is not alone in his support for the vinyl disc, as many of my customers and friends will confirm.

The only point I would disagree with is the difficulty in locating vinyl. There are many dealers who sell second-hand LPs in addition to or, as in my case, instead of CDs, and will have facilities to play records if requested.

As an aside, I use a Transcriptors Reference turntable with a Decca International arm, feeding a Radford HD250 amplifier which powers a pair of Spendor BC3s - 20 years old but still impressive! **Stephen Cooke 'Book-A-Brac', Sutton-In-Ashfield, Notts.** 

#### BE FAIR ON RECORDS!

I have a large collection of LPs, but a few years ago I purchased a well thought of but 'warm' sounding CD player, mainly to hear classical recordings only available on this medium. After the initial excitement I began to find the sound rather flat.

One evening in desperation I put a vinyl pressing of Brahms fourth symphony on the turntable.

# Letter of

#### LESS OF THE "JUNKIE", PLEASE

I stopped reading hi-fi magazines sometime ago after the demise of Hi-fi Review, a publication never shy to extol the virtues of analogue. That was until one day I came across a magazine I had never heard of before, Hi-Fi World. Needless to say, I have been an avid reader ever since.

As a keen vinyl listener, a first port of call is always 'The Record Shop' advertisement. I increasingly find myself relying on mail order to supply music on my preferred, superior format, the LP. Contrary to popular belief, there is still plenty of the black stuff available, it just needs rooting out. The shortage of vinyl on the High Street is in my opinion deliberately orchestrated by the major retail players, motivated by fat profit margins from CD.

The supposed lack of demand is also a gross fabrication, if vinyl is stocked at all, it's relegated to an obscure area of the store. Potential vinyl purchasers are often greeted with the sort of reaction that might be reserved for some strange alien being from the planet Sondek!

These types of stores are unlikely to see the error of their ways, and frankly it's their loss. I feel it is questionable whether any serious vinyl preservationist (I dislike the term "vinyl junkie") should patronise this type of establishment anyway.

Send your letters to Hi-Fi World Letter Page,

writes

Once again there was the transparency and depth I had come to take for granted from analogue reproduction, but found missing from CD!

I have no wish to re-open any debate regarding the superiority or otherwise of LP versus CD. I maintain that there are pros and cons for both, but for me the sonic qualities of analogue LP win every time, even with the odd click and pop.

I'm sure there must be

many young music lovers weaned only on CD who have never had the opportunity to hear good quality sound from vinyl, but would be encouraged to investigate from reading your excellent turntable reviews. Any hi-fi magazine that claims to be interested in good reproduction that ignores vinyl is doing a disservice to these people.

Although new vinyl is often hard to obtain, the second-hand market is flourishing! This is especially

# the Month

As consumers have a choice, vote with your wallet and support the specialist shops that continue to support the format.

For the record, my system includes Naim Armageddon, LP12, Cirkus, Akito, K9, Ion Obelisk 2 amplifier and Linn Index Plus loudspeakers, connected to a dedicated mains supply. To my ears this outperforms any CDbased system I have heard, including many costing much more than mine - so there!

Anyway, thanks for listening to my ranting and allowing me to use you as a soapbox. Please keep the vinyl flag flying and I'll keep reading! **R.A. Jones Brighton, East Sussex.**  I'm not sure if we should not ask for LPs at the major retail stores, as it will only lead them to believe vinyl is even 'deader'! In my experience, vinyl stocks vary a lot from store to store and area to area. While HMV Brighton has a solid stock of LPs and 12"s, as has HMV Edinburgh, many London HMVs have next to nothing! Tower Records in Central London have almost no vinyl, while Tower Kingston is full of the stuff! However, buying vinyl by post is a great idea if it's properly packed, and The Record Shop certainly excel in this area. DP

true with classical music where well cared for LP collections are coming onto the market, often with titles that may never appear on CD. The regular record fairs held at Wimbledon are also a good hunting ground for that elusive bargain. Frederick Eady Romford, Essex.

The CD versus LP debate is a can of worms that could fill a dozen magazines. Suffice to say, the tendency for people to sell their irreplaceable record collections for a fraction of their original cost, only to invest [sic] in sonically dubious, poorly packaged CD versions seems curious from where I'm sitting. What this means, however, is there are some great bargains around.

Now many major retailers have lost interest in vinyl, second-hand record shops have assumed a new importance, and record fairs are a godsend look in your local paper for details. Usually held once a month, they cost next to nothing to get into and are often packed with bargains. I regularly attend the one down at the Brighton Centre on Sundays, often walking out with ten or so mint LPs for the cost of one fullprice CD. DP

#### CD - BETTER ON A BUDGET?

As an audio/visual technician and hi-fi enthusiast, I have a few comments on the LP/CD debate.

My system has cost me around £1200 to build in the past ten years. I find its quality of CD reproduction is of a standard reached only by turntables costing around £600. Although analogue has a warmer, more rounded

continued on page 44...

#### WIN HI-FI WORLD INTERCONNECT CABLES

**OR PERFECT PITCH'S FRANCINSTIEN CD** 

#### ENHANCER

The writer of the most interesting or funniest letter will receive a choice of either: a free set of Hi-Fi World's silver plated copper interconnect cables, worth £69.95, or a Francinstien CD convertor enhancer worth £150.



64, Castellain Road, Maida Vale, London W9 1EX.

#### review

ecently Audiolab's range has been augmented by a new flagship preamplifier, the 8000Q, price £1000. This comes in above their 8000C, price £520, yet the latter is better equipped, having an MM/MC phono stage. So what's the difference?

We've used an 8000C for some time now, so long in fact that Philip Swift, founder of Audiolab, insisted we have a later and much improved (he said) model. We had become aware that the early 8000C was characterised by a fairly taut, dry sound, some bass bloom, a little grain and some lack of ultimate lucidity, but it has always been a very well equipped preamp that we have been happy to use as a benchmark and as a good audio footsoldier, driving all sorts of power amps, alongside various other preamps, passive, valve and our own! - see this month's Supplement.

Here are our views on the upgraded 8000C, as well as the improvements brought about by the new 8000Q.

#### **THE 8000Q**

Despite different control knobs and a sparser front panel, the first thing that struck me about the 8000Q is its remote control facility. This integrates with the on-board microprocessorbased system controller, which automatically mutes the system when input selection is changed, eliminating speaker-damaging switching clunks. But it hasn't been allowed to interfere with sound quality, because when the controls aren't touched for a few seconds, the microprocessor reverts to a dormant state, removing the risk of sound degradation.

So smooth and slick is the system in use that you'd be forgiven for thinking this was Audiolab's sole design aim. But beneath the slick fascia is a direct coupled audiophile preamplifier, devoid of sound-degrading coupling capacitors in the signal or feedback path. High quality small signal relays



David Price thinks Audiolab's new 8000Q preamplifier could be one of their best products to date. handle all signal switching, and the Q boasts a simple, minimalist circuit topology. Gone are tone controls and making its debut is a gain selector adjustable in 3dB steps from 0-15dB, allowing you to match different inputs to the same volume levels.

Sadly missing is Audiolab's high quality phono stage, meaning vinyl lovers will now have to spend an additional £850 on the 8000PPA, should they want an all-Audiolab set up using this preamp.

#### LISTENING

Driving a pair of 8000M monoblocks, the 8000C preamplifier instantly shone, delivering a crisp, detailed performance. Indeed, the 8000C and our Linn LP12/Akito/Klyde worked very well together, with the latter's slightly fulsome

tendencies assuaged by the former's dryness.

The 8000C caught the leading edges of the steel strung guitars in Neil Young's laconic 'Country Girl' with great alacrity. It certainly managed to pass the Neil Young solo vocal test,

singularly failing to sound anaemic and whiny, unlike some other transistor preamps. With unusual precision, Young's multi-tracked chorus vocals came through clearly, keeping a grip on things as the mix became more complex. It seemed fairly dynamic, happily imparting the scale of the finishing crescendo, complete with Young's impassioned harmonica solo. Rhythms were fairly tight, although not quite in Naim preamp territory.

Unlike our previous 8000C of a few years vintage, its limitations were relatively subtle. Reminiscent of what Digital Audio Tape does to analogue sources, it removed a little atmosphere and emotion, making the musicians seem on edge and somewhat selfconscious, failing to capture the looseness of the playing. Moving over to the 8000Q I wasn't prepared for the improvement. From the first note of the first bar, a far more rhythmic, dynamic sound greeted me. Tonally less bright, but with more contrast, the lights seemed lighter and the darks darker. So much smoother was it that I soon realised the 8000C got much of its bite from transistory grain, commendably absent from the Q. Bass was deeper and more forceful while treble was smoother. Young's voice was far fuller, tightly located behind the right 'speaker, and the recorded acoustic assumed a new scale, stretching far back behind the 'speakers.

All the detail of the 8000C was there, but it wasn't delivered so pedantically, allowing more space for the music to emote. Rhythmically, the O was also streets ahead, far more

fluid and expressive. The Q's ability to **Gregory Reeves'** bass guitar wasn't retrieve vast amounts just deeper, but also more supple. The 8000Q let the players play their own tune way is its greatest with their own individual strength. \* rhythmic inflections,

presenting it all as

a cohesive, musical event.

Moving to what Smokey Robinson once called "the single greatest record ever made by anyone", Marvin Gaye's "What's Goin' On', and the 8000C again performed well with a clear, incisive performance. Finger clicks and tom-toms cut sharply through the mix, while bass was tight, if a little dry. Strings had a smooth, slightly thin tone, while Marvin's voice was delivered in a tidy, somewhat matter-of-fact way.

Marvin said about this album, "I felt like I'd finally learned how to sing", and switching to the 8000Q I could see what he meant. His voice was at once more powerful and delicate, his breathtaking phrasing conveying the way his lead vocal diced with Lem Barney's backing vocals. Frequency extremes were smoother and more natural, with bass guitar rich and powerful. Eli Fountain's kicked-back alto sax soared out from the mix, while those famous voices chattering away at the back of the mix became audible. What sounded like background mush with the cheaper preamp became clear phrases like "hey man, what's your name" and "the word is groovy"!

Even valve lovers will find much to like about the 8000Q. Unlike many competing transistor preamplifiers it doesn't get its speed by adding an artificial edge to the sound, although it remains tonally less chromatic than the best valve designs. Its ability to retrieve vast amounts of detail and put it together in a natural, cohesive way is its greatest strength. From the organ grooves of John Patton's 'Understanding' to the breakbeats of Galliano's 'Little Ghetto Boy', it came across as an extremely musical design.

#### THE VERDICE

Audiolab's 8000C is better than ever, and can be recommended as an excellent value entry-level preamplifier, especially for those with a quality turntable.

The 8000Q is recommended with no strings attached. Although costing twice as much as the 8000C, it's more than twice as good. Indeed it's so capable it would be churlish to criticise at £1000. With its blend of operational sophistication, build and sound quality, the 8000Q will win many friends

Audiolab 8000C	£519.90
Audiolab 8000Q	£999.90
Cambridge Systems T	echnology,
Spitfire Close,	
Ermine Business Park,	
Huntingdon,	
Cambs PE18 6XY	
Tel: 01480 52521	

Measured Performance see p105-111

HI-FI WORLD

#### .... continued from page 41

letters

sound, the amount of detail CD resolves makes it a much more listenable format in the

lower to middle price range.

I would love a £2000 turntable and system to match, but much as I lust after a Pink Triangle or Michell, we have to bear in mind CD has given a huge boost in expectations to the general public. We have to face the fact that a cheap midi system CD player has a far superior sound to the turntable thrown in to complete the package.

I think we need to take a balanced view of the whole affair. LP has a more inviting, rounder sound, but it costs a hell of a lot of money, which most people cannot afford. **Alastair Crooks South Norwood, London.** 

I'd agree that midi system CD players are better than those atrocious bundled turntables! But don't confuse midis with hi-fi. If you've got a couple of hundred pounds to spend on a source, in my opinion you'll struggle to find a CD player that beats a Rega Planar 2, for example. And further up the scale, middle decks from Pro-Ject and Michell coupled with a decent budget moving coil will leave many a 'best buy' CD player for dead.

CD's categorical superiority lies not in its sound, but its convenience and ease of use. Buyers don't have to align the laser azimuth in a CD63SE, or replace the belt for that matter! That's where the silver disc wins hands down. Still, some of the less well-socialised among us would say vinyl's tweakability is part of its allure. DP

#### VINYL LOSS TO CD PROFIT

I read with interest your

Kaleidoscope article on the rise and fall of the vinyl LP. Whilst I agree that neither Compact Cassette nor CD was directly responsible for the demise of the black disc, I think it's important to look at its decline relative to its success in the '50s and '60s.

What people fail to acknowledge is that high fidelity playback equipment has always been superior to the vinyl software. In other words, enthusiasts have always attempted to extract from the disc much more information than engineers allow for in the recording and manufacturing processes. While hardware manufacturers were making great progress during the 1960s and early 1970s, recording standards showed no significant improvement.

By the time of the oil crisis, record companies already concerned about long term profitability were given the heaven-sent opportunity to charge more for less. Pressings got worse and discs got thinner. I well remember arguments with record shop staff as I returned faulty pressings for the fourth time. Thus was the way paved for the Compact Disc.

With two HDCD formats coming on to the market, and the possibility of companies tearing up compatibility standards and releasing red laser players and then commercially viable blue laser players, perhaps it's time for hi-fi enthusiasts to realise that ultimately all equipment we buy, whether budget stereo or top-end audiophile, is in order to play music. LP collections represent a whole lifetime's commitment. Can we as collectors rely on the same commitment from CD manufacturers? Some ten years after its introduction, CD's superior sound is still a matter of fierce debate. It was introduced for profit, and if the format changes substantially it will again be

motivated by the same quest for profit. Vernon Liddell, Bootham, York.

It is difficult to know where the future of music software is heading these days. As you have pointed out, there are already suggestions that CD as we know it will be replaced by an upgraded CD system. I'm going to stick my neck out though and make a prediction. I think CD will give us the lifetime's commitment that vinyl did, maybe more, and for several practical reasons.

Many consumers now have CD players and CD collections and are reluctant to change to a new format that only offers a slight improvement, whether it be in sound quality or convienience. If a new format is to succeed, it has to be significantly better. It needs to be smaller, easier to use, give exceptional sound quality, and possibly double up as a carrier for a second medium such as film.

But the most important factor is the record companies. They don't see the need for a new format. As far as they are concerned CD offers a very high level of sound quality and convenience. Why, after spending vast sums on the equipment needed to produce CDs, should they change? As far as they are concerned, the general public is perfectly happy with CD. DB

#### LINN EXCHANGE

I was pleased to see from your March issue that you intend to set up a Linn LP12 as a reference. This will be a real service in helping many Linn owners and vinyl unregenerates assess its strengths and weaknesses in relation to other high grade options.

In parallel with this, what about acting as a forum for the tweak and DIY brigade related to the LP12? With so many in use, ranging from original unreconstructed items with mains motors to the latest Cirkus acts, the potential audience for tweaks and tune-ups must be enormous.

I recall that at the time the Rega RB300 was launched, a reviewer got a better performance from a Linn/Rega combination by stiffening the bearing/subframe joint. And what about Russ Andrews' tweaks substituting 'Torlyte components for the armboard and sub-frame. There must be many other enthusiasts who have made worthwhile improvements without following the official upgrade route. How about sharing them through the pages of Hi-Fi World? **David Lee** Essex.

We will happily act as an information exchange for the LP12, or any other product for that matter. If you own a Sondek, why not write in and share your experiences?

Fans of the LP12 have much to look forward to in the coming months. Very soon, we're running an extended in-depth LP12 feature with history, tweaks, and recommended partnering equipment, as well as Linn's closely guarded list of upgrades to the Sondek referenced to serial numbers! Also look out for a comparative review of the Sondek with different power supply and arm options, as well as a supertest against the best of the super-deck rest!

So, we've got masses lined up for you, and if you'd like to share your thoughts and experiences, we'd be only too happy to print them. DP

#### VIRTUAL HI-FI WORLD

My reason for writing is the "cold turkey effect" I suffer every time I finish reading your magazine. A vintage hifi thirst appears, leading me to read the magazine again and again, from cover to cover. This sorry state of affairs has led me to surf the Internet searching databases high and low, hierarchies worldwide for that morsel of hi-fi information.

Finally, I found some. Usenet is a conference/ forum/message area where you can post a message about a defined subject and éxpect other members in that area to join you in conversation over a period of time. The news group in question is:

Usenet/Mainstream/rec.audi o.hi-end

The group can be accessed through service providers such as Delphi, Cix or Demon. It can also be accessed through academic institutions or even company e-mail services. The problem with this news group is that it is predominantly run and accessed by American hifi'ers. Everything is in dollars and Dynaco are the most sacred invention since the square wheel, although I did manage to get in touch with another Hi-Fi World reader based in the UK. If anyone is interested in providing some kind of input, please contact me.

#### Donato Marrese Donato@mdx.ac.uk.

You may like to know that hi-fi enthusiasts in the UK can be contacted on Audio@cix.compulink.co.u k, including ourselves hopefully in the near future. DB

#### ENORMOUS QUAD

Your article in May's Kaleidoscope has prompted me to write. I too use Quad 63s, but perhaps with a difference. I have a large room, 11 feet high, 18 feet wide and 36 feet long. The Quads are about 12 feet into the room, and behind are two large horn loudspeakers.

These 'speakers are 20 foot folded horns with about a ton or so of sand around each of them to stop booming. The open ends of the bottom horns are about 100 square feet, with each opening about 7 feet by 7 feet, built into the room each with 18 inch Fane drivers.

Fortunately, the room is not worried by neighbours, and I have a most understanding wife! The constructor who did the job about 15 or 20 years ago was a craftsman who originally built very large horns for the old acoustic EMC gramophones, which must have sounded pretty good.

Of course, my trouble is the active crossover. The Quads are driven by AVI amps and the horns by a Russ Andrews modified Musical Fidelity P270. It all sounds pretty good, but would you believe, I want more power in the bass for it to be truly realistic! **Major J.E.M. Ruffer, Stokesley, Middlesborough.** 

It sounds like a pretty impressive set up indeed. I



have never come across a hubrid Ouad '63 sustem using bass horns. We have experimented with dipoles, motional feedback and conventional REL designs, all of which gave very satisfying results. I am surprised that you need more power for the bass. horns normally being unusually sensitive and the Quads the complete opposite. It may be worth checking the input sensitivities of your AVI and P270. If the P270 is less sensitive it will need more signal from your preamp for the same volume level as the AVI. which is nothing to do with ultimate power. Russ Andrews should be able to advise on this though. DB

#### NO PLACE FOR THINKING IN AUDIO!

Your correspondents King and Penrose in April letters were out of line. What they both have in common is an inability to get to the point quickly. Audio has no place for such goings on. I see not one thing to be gained as far as these characters go. I have been involved in Audio for some forty years and have never read such rubbish.

I sincerely hope they do better in their respective fields. Hell would freeze over before I would become a client of either. But then

#### ◀◀

Quad's ESL63s can sound fantastic with a good subwoofer. Major J. E. M. Ruffer uses 20ft folded horns for powerful bass. again, I would hate to wire them up for sound as all it takes is a B.Sc. to dispense a hearing aid. Then I would be a little over-qualified in the UK. One never knows, does one?

All audiophiles are concerned about is getting the utmost from our equipment. Their dialogue is best ignored. I am very much surprised that Hi-Fi World would even enter into the matter. Maybe you can explain the rationale behind it. I do hope you will or you can.

#### Harry Wood, Wisconsin, USA.

The discussion by Dr Penrose and Dr King was initiated by my review of Penrose's book, Shadows of the Mind. I felt it gave us some idea of the complexities of the human mind, which has a bearing on the way we react to what we hear.

All is not as it seems in this incredibly complex area, yet hi-fi engineers in particular give the subject little thought. And it does very much help toward "getting the upmost from our equipment".

For example, you don't need four loudspeakers for surround-sound. It's possible to fool the brain into thinking a sound lies behind with just two. That's a lot of money and unnecessary boxes saved. Researchers like Michael Gerzon, also from the Oxford Institute of Mathematics like Penrose, are working in this area.

There will be direct benefits from such work, not only in audio but in artificial intelligence and medicine, so the more exposure it gets the better. Whilst I accept that Hi-Fi World cannot turn into research forum, I feel we ought to devote some space to such discussions. NK

# readers'

queries

#### STAGED IMPROVEMENT

My system consists of Micromega Stage One CD player, Audiolab 8000C/P (1st generation) and a pair of TDL Studio 0.5s with DNM Solid Interconnects and Cable Talk 3 biwire cables.

Though I'm generally happy with the sound, I think an upgrade in all departments would improve it further. The obvious upgrade would be a move to a Stage Two or even Three. I'm quite satisfied with the Audiolab 8000 C/P but was wondering whether an upgrade to current specifications would give a significant improvement? I was also considering an-AVI Integrated or a second-hand pair of 8000Ms.

I am also considering improving the interconnects and supports. It's my aim to achieve a balanced sound with a clearly defined soundstage. Samuel Lum, Nottingham.

You're right in giving priority to the source, but I think there are plenty of things to be improved further down the chain as well. Firstly, you should consider the new Audiolab 8000Q preamp at £995. So much better is it than the latest 8000C (which is in turn far superior to early

Write in with your
problems to Hi-Fi
World, 64 Castellain
Road, Maida Vale,
London W9 IEX.
Our panel of experts
will endeavour to
solve them, or at
least offer some
practical advice.

8000Cs), that I suspect a new Q with your old P would be considerably better than your old C with Ms! If you can further afford a new P, all the better. The Q will bring far more fluidity and naturalness with lots of extra detail, so much so that you'll suddenly be impressed with your existing source.

HI-FI MORE HI-FI Yourmare hi-Fi LUADS'A HI-FI

As far as interconnects go, Philip Swift from Audiolab told me they have no specific recommendations other than that they are of good quality. With this in mind, Van den Hul's The First is excellent, but also hear Chord Company's superb Blue Heaven, an extremely smooth silver cable, while their Flatline Twin is a good choice for speakers. I've found Audiophile Furniture's Base platform works particularly well



#### WOOLLY AND WAFFLY

This is one of those boring equipment/matching questions!

My present equipment comprises Rogers LS7s on open section stands, QED 79 strand, Cyrus I amplifier, Marantz CD50, Denon DRM-710, Cyrus tuner, and Linn Axis/Akito/Goldring 1042.

I like listening to a wide range of music, classical through to rock. I particularly enjoy small ensembles/ trios/quartets and choral music (Tavemer Consort, Tallis Scholars etc.). In the pop world - Cranberries, Eric Clapton, Eddie Reader, Simple Minds - that sort of thing.

The sound I get at the moment is very nice I suppose, but I would characterise it by saying that it was tiring to listen to. The treble seems very forward, sometimes even piercing or shrill, especially from turntable/CD. The midrange is quite nice, especially from female vocals. The bottom end though is "woolly" and a bit slow and mis-timed. What do you suggest as a possible upgrade path for this?



The new Audiolab 8000Q offers a smooth and detailed sound making it a worthy upgrade from the popular 8000C.

I had thought of changing the amplifier to something like a Cyrus II/PSX or an Audiolab 8000A. I even borrowed the latter from a friend but didn't quite get the results I wanted. I expected the bass to firm up and grow - it did firm up but it didn't get bigger. I expected the treble to sound even more piercing as the Audiolab is often described as clinical and dry. But instead the midrange and high range got sweeter. The only way I can describe it is "silkier". It was a definite improvement, but left me wondering if there was another way. I do like the Rogers sound in general. I was surprised however that for a 60 watt amp the Audiolab doesn't really make them go very loud. I have got quite long speaker wire lengths (7m) could that be the reason?

Any ideas? I would be very grateful.

#### David Benedict Osborne Havant.

The Mission Cyrus 1 does have quite a light sound to it, which in your system may be manifesting itself as light bass. I can't see why the sound would be so forward or shrill though, since both the turntable and the CD player should have a smooth sound. And even though the Mission has a light balance, it certainly isn't shrill. Talking to Rogers' Chief Designer, Andy Whittle, didn't shed too much light on your troubles either. Unless you have the later LS7ts, which had a titanium dome tweeter, we couldn't see why the sound would be shrill or piercing.

However, here are a few things we came up with that we thought would be worth a try. The LS7s have quite a loose bass, which benefits greatly from heavy, solid stands spiked firmly into the floor, Target's HJ17/3 being ideal. The LS7s should be Blue-Tak'd to the top plate of the stand, and firmly seated. This will clean up the bass, giving you more power and bass articulation, as well as improving midrange and treble accuracy.

Replace the QED79 strand, which like all copper cables oxidises and deteriorates with time, with a fresh set of cables. Try Ortofon's high purity SPK500, which is annealed to prevent oxidisation. Get your local hi-fi dealer to silver solder this into gold plated 4mm plugs, which will ensure a long life. This should give a sweeter treble and improved bass definition.

Whilst we're on the subject of cables, replace any supplied 'patch chords' you may be using with a modern good quality interconnect. Campaign Audio Design do a very affordable silver plated copper cable which will add smoothness to the sound, especially from CD.

After you've done all this, go back and try the Audiolab again. The differences should be far greater and will help you to decide which areas, if any, need further improvement. DB

#### **EXTRA INPUT**

My system comprises Meridian 101B/105 amps, Linn LP12/Syrinx/Supex turntable, Philips CD 850II CD player, Pioneer CT-S320 cassette deck, Yamaha CT710 tuner, and Monitor Audio 'speakers.

I've got too many units for my preamp to connect to, as I'd also like to bring in an open reel tape recorder. As I'm a pensioner I can't afford a great deal, but I thought a different amp such as a Technics SU900II might be useful, or another preamp to replace the I01B. What do you recommend? **H. Cleverly** 

Epping.

When the Meridian 101

the mid 1970s, it was a bit stretched for inputs even then! Nowadays, you've got the chance to upgrade your system and expand your inputs by looking at a decent integrated amp. If you're on a tight budget, consider the Pro-ject 7 which is a bargain at £260 complete with a decent MC phono stage. Spending more will bring greater detail and power. The £500 Audiolab 8000A is a good choice if flexibility is your priority, while the more expensive (with phono module) Naim Nait 3 also offers excellent sound, with a leaner, tighter, more dynamic presentation. DP

preamp was designed in

#### **KIT OR BUILT!**

I am considering changing my speakers and have in mind the System 935s, although tracking down a pair in this part of the



world is proving difficult. For a similar price or less I could obtain a kit from Wilmslow Audio and have in mind the Digital 90 costing £293 or the Kevlar One, costing £377.

I would look forward to building the loudspeakers, but at the end of the day would I end up with a superior product to a £400 ready-built commercial product? **D. L. Leece** 

Ulverston, Cumbria. Your nearest Systemdek dealer is Doug Brady in Warrington (tel: 0925 828009) or Bill Hutchinson in Leeds (tel: 0532 427777), or 'phone Systemdek themselves at 0294 721251. Wilmslow Audio tell us that both kit loudspeakers you are interested in are on demonstration at their showrooms in Knutsford, Cheshire and that, in their view, the Kevlar cone speaker warrants its extra cost. If you fancy the trip, 'phone 0565 650605 first to make sure a demo is possible on the day of your visit.

It isn't possible to generalise about the abilities of kit speakers versus built-up product. We've found from our reviews that kit designs reach a consistently high standard of performance and can be quite impressive. Commercial product - at least, from the

◀

If you're on a budget the Pro-Ject7 is a bargain at £260 complete with a decent phono stage.

big boys - benefits from research and buying power, but suffers from budget restraints and multiple margins that load the price; kit manufacturers invariably sell direct to the public.

My only general advice is this: try and gauge drive unit quality, because it's crucial. You can't make a silk purse out of a pigs ear.

Continued on page 54...

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Let's go back a few years to 1978. Sumo has just introduced its first Class-A amplifier, a 100 watt-per-channel, 120-lb behemoth known as The Gold. Arguably one of the most advanced audio amplifiers of its time, it set the standard for Class-A sonic performance for years to come.

Fast-forward a few years. The critically acclaimed Sumo Nine and Nine Plus power amplifiers prove for the first time that you don't need a second mortgage to enjoy state-of-the-art Class-A power.

A few more years bring us to the present, where the flagship Sumo Ten and the new Sumo Five are once again breaking new ground in Class-A amplifier design.

We guess you can say that Class-A amplifiers are something of a tradition at Sumo.



The Five

60 watt Class-A 240 wpc into 2 ohms 200 wpc mono block. 150 amperes of current True balance XLR and single ended inputs. TTL circuitry allows the Five to run without overall feed back.

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JUNE 1995

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David Price auditions high-end moving coil cartridges from Goldring, Linn, Lyra, Ortofon and van den Hul.

owadays there are some great 'mid-price' (around £100) cartridges to be had such as the Goldring 1042, not forgetting Ortofon's excellent MC15 Super II budget moving coil. However, when you spend several times that, LP reproduction starts to become startlingly good. We thought it time to listen and compare some of the best moving coils currently available, ranging in price from £450 to £840. Yep, they're expensive, but these cartridges will put you into the hallways of audio heaven for much less financial damage than a £3500 van den Hul Grasshopper.

#### LYRA LYDIAN

The £649 Lyra Lydian is an extremely smooth, civilised sounding moving coil with no obvious weaknesses and more than its fair share of strengths. Whatever music you ask it to play, the Lydian rewards with a balanced, polished performance. Its strong suit is impressive sound staging and imaging, effects it creates with great alacrity. But this is not to underestimate its impressive rhythmic ability.

James Taylor Quartet's 'Keep on Moving' is a slick piece of funk tinged with their hallmark acid jazz Hammond B3 organ. The B3 is so far back in the mix that many cartridges fail to retrieve it, but the Lydian was not one of them, capturing the instrument's timbre in its entirety.

The Lydian was equally capable with dynamics too, catching the power of Marlena Shaw's voice on 'Woman of



the Ghetto'. I found this live performance captivating, with an enormous sound stage and a great sense of atmosphere, from the midst of which her vocals projected beautifully. ABC's 'North' revealed the Lyra's skill with percussion instruments. Hand claps and hi-hats alike were finely etched and had a gentle richness of tone. Plenty of bass poured forth, the Lydian going down deep with satisfying power. It was only on Sueno Latino's club classic, with kick drums sounding a touch loose, that I could discern any failings of the Lydian at all.

This aside, it was difficult to fault such a transparent, balanced and detailed sound. It draws me into the music gently and kept me there precisely what a top class moving coil should do.

#### ORTOFON MC30 SUPREME

The £450 Ortofon MC30 Supreme has a quite different presentation to the Lyra. It is best characterised as 'valvelike', bringing a slight extra richness and warmth to instruments, although this is not to be confused with blandness. Quite the reverse in fact, because despite its velvet patina, the MC30 Supreme is still a super-fast

and highly dynamic sounding device. Where the Lyra's slight extra

brightness and dryness gives added attack to transients, etching out steel string guitars super-sharply, the Ortofon is a touch smoother on leading

#### review



edges, but with better grip and detail. The Ortofon actually sounds faster and tighter, while also sounding duller. This was particularly evident on Primal Scream's 'Gentle Tuesday', which came across with a better sense of air and space, as well as more fine detailing in the upper treble, bringing tambourines and ride cymbals into greater focus.

In the meantime, the Ortofon separated Bobby Gillespie's voice out from the mix better, putting more distance between him and the band. Although instruments moved back on the soundstage, they were still more tangible than with the Lyra, better conveying the guitars' melody and rhythm. It was as if the band had been more closely miked, with the listener but a few metres away amidst the fray.

Although the Ortofon had an immediate, musical sound, its failing against the Lyra was reduced left to right sound stage width; where the Lydian would image far to the left and right, the Ortofon failed to pull this off. Within its smaller sound stage, however, the MC30 Supreme had stronger, more tightly defined images stretching further back behind the plane of the 'speakers than the other MCs of our group.

The Ortofon's involving yet refined presentation had a richer tonality that's great for thinner sounding turntable systems, but I suspect some classical music lovers with a taste for analytical cartridges would hear its warmth as colouration.

#### GOLDRING EXCEL

The £549 Goldring Excel reminded me of a Naim amplifier. The brightest, driest, tightest cartridge of the group, its strengths in the rhythm department put it up with the best. Tonally, it started off sounding conspicuously bright, almost sibilant on ABC's 'North'. The reedy quality of the opening saxophone almost screeched, while percussive hi-hats sounded scratchy.

However, as the Excel warmed up it smoothed out to become acceptable, while still retaining a brightly lit top end.

This cartridge's greatest strength was its capacity to involve me in the



rhythm of the music, achieved by a vicelike grip on transients, capturing the tiniest of rhythmic and dynamic nuances. While the Ortofon was excellent in this respect, the leaner Goldring has that extra couple of percent grip that pulls you into the music more.

While the Goldring's bass was a little light, it was also one of the best controlled, catching the slowly arpeggiating sub-bass on The Aloof's 'On a Mission' with the greatest precision. Counterpoint between the bass line and drum patterns was also superb, the Goldring displaying the tightest inner rhythm. Dynamics were also pretty special, as Marlena Shaw demonstrated. The Excel caught the power of her voice and its inflections superbly, making the music communicate in a highly emotive way.

Such talent in this department

shifted my gaze away from the atmosphere the Goldring lost from recorded acoustics. Imaging was good, if not as tight as the Ortofon, while soundstaging was competent but nothing to write home about. Here, I found the Excel poorer front-to-back than the MC30 Supreme and lacking the left-to-right space of the Lyra. Tonally, the Excel was also a tad monochromatic, lacking the Ortofon's warmth and opulence.

I liked the Goldring. It's competent in many respects and literally excels in some. A very musical, dynamic device.

#### LINN KLYDE

The £489 Linn Klyde is a 'character cartridge'. Certain aspects of its performance are deficient compared to others tested here, but what it does do, it does superbly. Treble detailing is modest, to be polite, exemplified by 'Gentle Tuesday', with cymbals losing their finely etched quality and timbre, not to mention the space around them. Although a

little ill-defined and rough around the edges, the Klyde's treble never sounded coarse. Bass was extremely generous, giving a thunderous kick to whatever was being played, but it was also rather loose and not the fastest around, as its rather fat, laconic rendition of the bass sequencing with 'On a Mission' proved.

This said, the Klyde had the biggest sound of the group, with fantastic imaging and an expansive sound stage in all dimensions. As if that wasn't enough, it has a feel for music that all the others, with the notable exception of the van den Hul, lack. It gets into melodies like there's no tomorrow, and

#### review



rhythms like they're going out of fashion.

The Klyde's midband was deceptively good, carrying Marlena Shaw's singing with a beautiful, mellifluous quality that was both tuneful and detailed. As the frequency extremes weren't quite up to the same standard, this was a welcome surprise.

This cartridge is also strong on dynamics and rhythm as well, meaning it enjoys the fortunate combination of Ortofon-style warmth with a grippy presentation, rather than falling back on a rising treble to attach an artificial edge to transients.

Primal Scream's guitars were well carried, with a satisfyingly natural rhythm that worked with a really fluid, unmechanical drum track. Bobby Gillespie's smooth, lazy vocals projected right out into the listening room, all of which made for a highly musical presentation.

Some might describe the Klyde as a bass-heavy cartridge with a perfunctory treble. I'd rather call it a sumptuoussounding cartridge with a varied tonal palette and a real feel for music. And having also heard it with an LP12, I can vouch for its synergistic qualities when carefully partnered.

#### VAN DEN HUL MC10

From the second it hit the groove, the £840 van den Hui MC10 had me enraptured. All the other cartridges had

real strengths, but to hell with qualities in isolation, the MC10 tugged at the heartstrings! It's simply the most tuneful device here, with an uncanny capacity to turn a series of notes into a song, and a series of beats into a rhythm. Bobby Gillespie's voice on 'Gentle Tuesday' suddenly sounded like he was crooning the lyrics, avoiding the insipid indie-style wailing that some other cartridges (present company excluded) can produce. The bass line was

immediately fluid and tuneful, guitar playing really emoted, while the drummer appeared to have more



empathy with the other players.

Okay, you say, so the MC10 is gushing and emotional, but is that all? The van den Hul equalled or bettered all the others in almost every respect. It was as tight as the Excel, but had the warm, effusive presentation of the Ortofon, all with the Lyra's smoothness! No mean feat indeed.

Treble was very finely etched, proving more detailed than that of the others. Where gentle tambourines at the back of the mix had sounded fluffy and blurred, they became once again real tambourines. But unlike the bright sounding Excel or the analytical Ortofon, it didn't seem so pedantic. Detail wasn't thrown up for its own sake, but as essential subtlety within the mix.

I found the midband equally clear, with notably better space than all except the Ortofon, while bass was as capacious as the best, although lacked the Klyde's over-generous nature. All this results in a cartridge that's very hard to fault. Although it lacked the tunnel-like front-to-back sound staging, on balance the van den Hul MC10 is a honey, pure and simple.

#### THE VERDICT

Being the most expensive of the group, the vdH MC10 had more than a fighting chance of coming out on top. It displayed the best combination of

> virtues, with almost no vices worth mentioning. It's a truly compelling cartridge to listen to, the sort of thing to remind CD fans there's more to music than instant track access.

The other four are all highly capable, but their strengths are more acutely matched to personal preferences. The smooth, polished Lyra is probably the next best all-rounder, while the excellent Ortofon has a distinct tonal balance that will charm many. The Goldring is also a seriously good cartridge, but should be

partnered with warm-sounding ancillaries. And if you want an encounter with low frequencies that you won't forget, the Linn is the one.

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# PICKUP CARTRIDGE SET-UP

#### Noel Keywood describes vital aspects of arm/cartridge setting up.

rm set up can be quite a ceremony, but it is important to get it right for best sound quality. Here's what you need to do and the reasons why.

#### TRACKING FORCE

Keep to manufacturers' recommended tracking forces. Low down forces encourage mistracking at low frequencies; excessive ones can make the stylus gouge the vinyl by exceeding its elastic limit.

Long-contact stylus profiles distribute down force over a greater area, which allows a high-ish tracking force to be used without going beyond the plastic limit of vinyl. A figure of 1.7gms is common nowadays, but moving coils often need 2gms.

#### TRACKING ERROR

As an arm swings across a record small angular errors in the orientation of the cartridge relative to the groove produce second harmonic distortion. Moving the cartridge in the headshell or, with SME arms, sliding the whole arm, minimises the error and the distortion.

It is crucial that the cartridge be perfectly aligned in the headshell, since this has a greater influence on angular errors than overhang. Try and get the front-back axis of the cartridge very parallel with the edge of the headshell.

There are two zero-error points in an arm's arc of movement, one set close to inner grooves, one 120mm out



from the centre spindle (see diagram). I align on the latter, because it's easiest and because it ensures optimum performance across most of the disc (optimising at one zero-point should automatically make the other correct of course, if the arm has been designed properly).

#### VERTICAL TRACKING ANGLE (VTA)

This is the angle a cantilever makes with the groove, and should be 22degrees. That's a very low angle, meaning a cartridge must either ride close to the disc or have a long cantilever - both bad. Most cartridges have 25-30degree VTAs, which produces second harmonic distortion on left and right stereo images. To correct this, a 9in arm must be lowered 20mm below horizontal at the pillar, which is impossible. Even a few mm down (0.5degrees) will have the cartridge dragging its backside along the plastic. There's something else to consider -



stylus rake angle. This is an important parameter, but it is tied to VTA. My view is that the sound quality changes associated with VTA adjustment (i.e. arm pillar height) more likely come from rake angle alteration.

Finally, laquer springback, an effect that occurs during cutting, randomises modulation slant angle in real life, meaning all discs differ. So changing arm height for best results with one disc won't necessarily optimise it for all others. Generally though, the arm pillar should go as low as possible to optimise VTA.

#### **BIAS FORCE**

The axial force on an arm, developed by groove friction on the stylus, pulls an arm inward. To counteract this, a spring or a weight on a thread (or sometimes a magnet) is used to apply a neutralising outward force. The equal pressure on each groove wall this creates optimises tracking ability and keeps the cartridge generator centred. Because the frictional force on the arm is influenced by many factors, bias force is again approximate. I find that this force can sometimes be usefully increased 10% or so over manufacturers arm settings, for best tracking and sound quality ●

.... Continued from page 47

With kits this is quite easy, since a spec often identifies them and, as often as not, the kit supplier will also supply the drivers separately, making their price and even their technology open to scrutiny. I wasn't surprised that Wilmslow should rate their Kevlar One highly, because Kevlar drivers do generally sound both clean and detailed. NK

**SOUND IN STORE** 

I have recently unpacked my

hi-fi after storage for a few

months following a house

move. I am now finding that

the sound is dull and lifeless

and urgently need to do

something to remedy the

situation. I'm also intending to

add a CD source sometime in

the not-so-distant future and

would like to ensure that any

changes I make now will not

change system characteristics

The system comprises

to make CD matching too

difficult.

#### change of cartridge to a Goldring 1042, modifications to the LK1 (a la Russ Andrews), replacement of the LK1 with a second-hand Kaim or valve preamp and changes to 'speakers, which would need to be wall or boundary types for space reasons.

My budget is limited to £1000 at the moment and any solution within this limit would allow more to be spent on the CD source later on (current thoughts lie with the Pink Triangle Cardinal/Ordinal). Alan Talbot Preston Lancs.

If the system has been in storage you need to let it settle down by leaving the power on for several days. This will help form up electrolytic capacitors. This applies to any system.

We agree you should consider upgrading the K18, which we aren't so fond of, to a Goldring 1042. However, the Goldring has a warm balance which may not integrate with your current speakers too well, so be



Marantz's CD-63SE has a sharply etched sound with plenty of detail.

LP12, Valhalla, Ekos, K18, LK1, LK280 and AR18BX on Sara stands. I had originally thought that a change in speakers would help and tried a pair of Linn Saras but found they added no life to the sound and made it dry and flat. It would appear that I have become too used to the AR18's presentation but would like more clarity in the bass and midrange.

Thoughts to date include a

careful. Another possibility is the excellent Ortofon MC15 Super II moving coil cartridge, whose brighter, more forward presentation may be just the tonic.

Linn's £299 Cirkus modification to the LP12 is another possibility, offering what amounts to a full rebuild to improved specification by substituting a new inner platter, bearing, subchassis, springs and grommets. This should be seen as an additional improvement to the use of a better cartridge, not an alternative.

Castle Durham loudspeakers sound warm and rich and image very well, but do not especially suit wall placement. Linn have just produced the Sekret for this very purpose, which we will be reviewing soon. Otherwise you could consider Linn Tukans or LS3/5as from KEF or Rogers. NK

#### LOUDER EASY LISTENING

I have an Arcam Alpha CD, Musical Fidelity A1 amplifier and Epos ES11 loudspeakers. Interconnect is QED Incon and 'speaker cable is biwired 79 strand.

I had planned to change the amp next for a similar sounding but more powerful model. As most of my listening is through Sony MDR550 headphones when the children are in bed, I wondered if a new CD or

> DAC would be a more worthwhile upgrade? **P. Taylor** Leeds.

Audition the Marantz CD-63SE in your system and see what you think. The old Alpha has a rich sound

which you may prefer to the sharper Marantz. If so you'll have to spend a sizeable sum to effect an all-round improvement. The highly musical DPA Enlightenment DAC at £695 would be my choice.

As for amplifiers, the £500 Audiolab 8000A has a silky sound that would easily surpass your A1, and Meridian's new 551 for a few hundred pounds extra builds on the Audiolab's strengths with more detail and grip.

As always, only a good dealer can help you decide the most cost-effective upgrade. You're lucky to be spoilt for choice in Leeds, so why not try Audio Projects (tel: 01532 304565) or Aston Audio (tel: 01943 467689) who both stock the aforementioned products? DP

#### TEST TAPE

My Aiwa AD-F640 tape deck has provided me with several years of service, but now its channel balance and VU meter calibration need adjusting. I have access to signal generators and 'scopes but I was unable to obtain a suitable test tape from Aiwa. Can you suggest other sources and is there more than one standard for these tapes? | notice that some decks have Dolby level at 0dB and some at +3dB. Does this indicate an incompatibility or merely a different 0dB reference?

Nick Smith Beeston Nottingham.

There's no agreed standard for the level at which the **0VU** peak record level is set on cassette decks. Dolby flux (200nWb) is most commonly used for quality decks like your AD-F640, but on budget designs with inferior heads that will overload at a lower level, 0VU is set -3dB below Dolby, as you've noticed. Some top line models have 0VU set high, up at IEC 0dB flux of 250nWb, which I think is most sensible.

You're likely to be happy with the Harrison Test Cassette available from Canford Audio, Tyne & Wear (tel: 0191 417 0011), at a very reasonable £20. This has Dolby level, plus various other tests.

Canford also supply BASF IEC test tapes if you

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are feeling wealthy. To establish IEC 0dB the "Level Control 315Hz" (code - XB) tape is necessary. Since this is an IEC Primary Reference Standard it costs £69.20. I use it in our cassette deck and tape tests to establish IEC reference level to a degree of certainty manufacturers cannot question!

Having established IEC 0dB you can record to around +4dB above it on musical peaks on metal tape and around +2 on ferrics and chromes. Add 2dB to these figures if you place 0VU at Dolby flux. NK

#### TURNTABLE TOO GOOD FOR CD

My present system consists of a Philips CD840 CD player, NAD 533 turntable with Linn K9 cartridge, NAD 1000S/2200PE amps and TDL RTL2 'speakers. All interconnects are QAX112 LC-OFC purchased via R.S. Components, 'speakers are biwired with Cabletalk Concert 2/Van Den Hul "The Snowline". Supports are by Target with Michell isolation cones.

Overall sound is good, with depth and wide soundstaging, but I have doubts regarding the CD840. Although the Linn K9 can sound too harsh and forward, the general sound of the turntable is superior.

With this in mind, where do I go from here? Do I ditch the Philips for a Micromega Stage I or Arcam Alpha Plus, or go for a DAC and purchase a superior transport later? My musical taste is varied, from Bowie to Beethoven.

Trevor Gager Maldon Essex.

The CD840 is smooth and delightfully detailed, so I'd advise caution when replacing it because you could get a nasty shock!

One good option worth trying would be a DPA Little Bit II convertor. This is bright, clear and dynamic. There are few other convertors that would offer a clear improvement at your likely price level. Good players to consider are the Arcam Alpha 5 Plus and the Marantz CD-63SE, both of which provide a more lively up-front presentation without harshness. NK

#### THANKS FOR THE ARGUMENTS

My compliments on an excellent magazine, always a good read to the uninitiated such as myself, and a mine of interesting snippets, viewpoints and information. I also like the discussions and arguments carried out openly in the letters pages. That's really what a magazine can and should do, such a difference from the consumerdriven "Joe Bloggs in the High Street" treatment that takes place elsewhere. It comes from knowledgeable and interested staff, so long may your magazine run.

I particularly like the DIY stuff, and am going to cut my teeth on your KLS-5 HDA transmission line loudspeakers. I am a solid-state black box type of purchaser myself, or I had been until I heard a 300B valve kit with its walk-through soundstage and wonderful detail reproduction. One day I'll either buy or make one myself, but not before CD improves, as I'm sure it will. In the meantime, can you recommend a book or books which will teach me to read circuit diagrams? I can already -[i] wire a house safely [ii] avoid frying myself

[iii] read a multimeter

[iv] I already know something soft maths and semiconductor physics.

What can I put between my Marantz CD52 II SE and the KLS-5 speakers that I am going to build?

#### G. Allen Bedfont, Middlesex.

You could get Alternating Current Theory (BP63, £3.50) from Bernard Babani Books, The Grampians, Shepherds Bush Road, London W6 7NF. 'Phone them on 0171 603 2581 for a catalogue, in which there's a huge range of inexpensive beginners titles. Another good source of technical books, albeit more expensive and complex, is the Modern Book Co., 19-21 Praed Street, London W2 1NP, 'phone 0171 402 9176. They can also send you a catalogue. Just be aware that there are very few books that tackle simple fundamental difficulties that commonly foil starters. If possible, it's best to try and peruse first.

Dominic Baker who designed KLS-5, likes the crystal clarity of the superb Sugden A21a Class A, but less expensive, superbly smooth and amenable in presentation is Aura's VA-80. The latter really offers a classy sound for the price, suiting a forward, revealing 'speaker like KLS-5. NK

#### THE FUTURE IS GLOWING

I have recently pensioned off a Marantz PM64 in favour of a bargain priced valve Dynaco Stereo 70 and a home-built valve preamp. The increase in musical detail and perceived dynamics is quite astounding, even though the Dynaco has old valves. I feel that I have missed twenty years of musical experience by going the transistor route!

The preamp has a phono section with a passive RIAA network and a high-level gain stage for other sources. It uses no feedback and sounds like a "wire with gain", so I'm rather pleased with it.

Now I'm tempted to

replace the Stereo 70 with something better. I have seen much reference to the clarity of single-ended triode stages (using the 300B), but don't know what 'speakers to choose. Would such a small amp drive your KLS-3s adequately?

My CD player is a Marantz CD65II with a digital output as well as the normal audio outputs. Would it be worthwhile to get an external DAC (perhaps the kit you reviewed) or do you feel the transport accounts for so much of the audio quality that it's better to get a new player? I have £800 to spend.

#### Michael Kornby Lund, Sweden.

KLS-3 loudspeakers were designed to suit all amplifiers, including low power/high output impedance, load-sensitive valve amps, including single-ended triode designs. They're very sensitive at 90dB - you can drive them with a 4watt amplifier, something we do at shows to demonstrate how loud you can go. They also have a relatively flat impedance curve that keeps closely to 80hms right across the audio band, giving a true  $8\Omega$ value when measured with a music-like test signal (pink noise), meaning they match valve amps properly. They would suit your Dynaco, as well as giving transistor amps, which are more load tolerant, an easy time.

Your Marantz is a good model, and you will have to buy a quality convertor to significantly improve upon it. A Pink Triangle Ordinal would be a good choice, since this is a real honey with a wonderfully smooth, open sound very much suited to 'valve heads'. This can be paired with a top class transport like the Cardinal at a later date. NK



# **THOMAS HEINITZ**

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#### review



# Heaven Orelle

### Dominic Baker finds Orelle's new DA-188 CD convertor is looking at the stars.

relle's move from anonymous grey boxes to more Britishlooking black brushed alloy front panels has improved their image no end. They're now more in the upmarket Audiolab mould, with thicker front panels and more rigidly screwed together casework. Orelle have always made high performance products for the audiophile, and this new styling now underlines the point to prospective purchasers.

The £400 DA-188 is the latest product to get the make-over, and it's worked, making it a neat and compact CD convertor. Internally, component quality is high too. The DA-188 uses Analogue Devices' AD1864 convertor chip, a sprinkling of quality passive components and a Burr Brown OP275 op-amp to drive the output signal to the preamplifier. Around the back both optical and electrical digital inputs are provided. The dry, sparse recording of 'Disturbance at the Heron House' from REM's Document had Michael Stipe clearly projected centre-stage, with a cleanliness to his voice that immediately caught my attention. The DA-188 stays polite with it though, forward enough to push images out into the room, but not forcibly so.

It has a snappy sound, refusing to linger on notes past. Leading edges were fast and articulate and the treble had a crisp bite giving a freshness to acoustic pieces. Bass was well represented too, with notably more punch and solidity than my reference DPA Enlightenment. When I measured the DA-188 it had a slight bass lift, which always gives CD a more solid foundation, but the effect is far more notable than you'd expect. With good grip and control too, this makes the DA-188 a fine choice for systems which need help in this area.

This adds up to a convertor where enthusiasm is the key word. The Lightening Seeds' 'Open Goals', a combination of briskly played percussion, Hammond organ and a deep, funky bassline burst out into the room. Sound staging was good too, and images focused well allowing individual performers their own space across the stage. Some of the better Crystal-equipped players around like Quad's 67 have more warmth through the midrange, giving greater richness. But the DA-188 stayed on more neutral turf, not as full sounding as the Ouad or as cold as some earlier bitstream convertors.

This was confirmed by Strauss' Rosenkavalier Suite on Chesky's CD35, where strings and woodwind were clean, with a naturalness of tone and lucidity beyond many similarly priced competitors. With more complex passages the DA-188 could occasionally reveal a lightening of tone in the upper midband, and a slight sharpness in the treble, but this mild effect didn't detract from the performance as a whole, which was coherent and well mannered. Swapping to the optical input relieved this a little, but to the cost of definition and dynamic contrast, which I found less enjoyable overall.

I feel Orelle have made a good move with the DA-188. Nicely built using high quality components throughout, it's compact, reasonably priced and has a lively and communicative sound. It is enjoyable too, having a good solid bass, tidy midrange and crisp treble. There's a myriad of convertors to choose from at this price, but the DA-188 should feature very highly on your shortlist

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World Radio History

IMAGES ... LIMITED

review

n a transistor-dominated amplifier market, it's encouraging to see new valve designs and exciting to listen to them. With their gunmetal grey finish and valve covers on, the VRR Adurs look unprepossessing, a bit like Quad IIs. And with around 6watts in single-ended mode, they're certainly not high powered, but valve designs generally don't need to be, tending to deliver more music per given watt, or so the theory goes.

I began listening in push-pull mode, but finding its presence a touch overwhelming, I soon switched to single-ended operation, making for a noticeably smoother and easier sound. Rickie Lee Jones' 'Chuck E.'s in Love' was made to feel welcome, striking an immediate chord with the valves. The acoustic guitar was well carried, with impressive individual note definition. Double bass however, was boomy, the VRRs losing the bass

Adurable

### Douglas Floyd-Douglas listens to an enigmatic valve amplifier from VRR, the Adur.

line's integrity, lost in a wash of foreign subsonics as if a 'loudness' button had been switched in. Although floor toms were powerful and resonant, the bass drum lacked impact and neutrality.

On 'Saturday Afternoons in 63' the overall balance was better, with a smooth vocal warmth that drew me in. The plucked bass was placed well to the left in the sound stage, and the cor anglais sounded quite superb in accompaniment with the cello.

I tried switching to push-pull again, and my suspicions were confirmed. What the VRR's make up for in gain in push-pull mode, they lose in finesse. The sounds of push-pull and singleended operation are so distinctly different. I'd thought the former would be better suited to rock music, but it wasn't the case, the single-ended mode being vastly superior. In push-pull there was audible distortion in the higher frequencies, with the Marche Slav from Tchaikovsky proving too much for the otherwise gentle VRR's.

Like a temperamental musician, the VRR's have their moments. Considering the way they get around Chopin, they're particularly suited to piano, almost as if they were designed by Steinway and Sons. Indeed his preludes were presented with a grace and neutrality that seems to elude a number of more expensive amplifiers. The largos are a particularly good example, with a strong piano sound, although the Adurs had a tough time getting around more complex pieces and larger arrangements. Unfortunately, even at the most modest listening levels these amps

sound like they're running out of headroom.

The violin in Paganini's violin concerto had an excellent edge, suggesting a natural timbre and convincing presence. Solo instruments were carried well, but sadly marred by large instrumental accompaniment or heavier impedance loads which forced the amplifiers into early retirement.

This is sad because the VRR Adurs have the ability to really engage you in the music, with particularly sensitive handling of single instruments. I'm sure this amplifier will gain favour among lovers of Baroque and light piano-based music



see p105-111

# IN THE **IULY ISSUE**

Summer is really getting going now, and what better way to spend your time than lazing in the sun reading Hi-Fi World? So make sure you don't miss out, fill in the coupon and hand it to a newsagent to reserve your copy. Here's just some of what we hope to bring you in the July issue.

#### DUAL CS505.5 vs. PRO-JECT

0.5 TURNTABLES Dual have recently introduced the latest version of their evergreen entry-level turntable, the CS505.5. We pit it against the class leading Pro-Ject 0.5.



#### THORENS CONSEQUENCE PRE/POWER AMPLIFIER

Thorens have recently introduced a range of amplifiers. We audition the black and gold Consequence pre/power, complete with drivers' keys!

#### ROGERS LS3/5A and ABI LOUDSPEAKERS

Rogers have recently introduced the ABI, a stereo subwoofer system tailored to match the BBC LS3/5a monitor. Also thrown into the test is KEF's latest Raymond Cooke series LS3/5a

### COMPETITION - WIN EPOS LOUDSPEAKERS WORTH OVER £2750

Epos are giving away a pair of their ESII, ES14 and ES25 loudspeakers, all of which are super clean, rhythmic designs with enough speed to frighten Damon Hill! Hi-Fi World offers you the chance to win them next month.

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#### NAD 514 CD PLAYER

NAD's answer to Marantz's CD63SE, the £339.95 514 uses an 18bit MASH convertor chip and a custom designed 5pole analogue filter with a DC-coupled output stage. Could Marantz be about to hand over their lead?

**B** ack in the days of radiograms (which I have to admit I do remember!) people would say of them "they have a lovely tone" - well, some of them at least. The description really meant that they sounded pleasantly warm and relaxing to listen to, double bass, cello and viola sounding incredibly natural because of an enhancing wooden thrum.

Sometime in the seventies we got clever and started correcting all those things that were wonky when measured. Cartridges lost their upper midband droop, responsible for that pleasing richness. Loudspeakers gained polymer dome tweeters that reached up to 20kHz, and engineers learned how to design drivers and crossovers that gave a flat frequency response right across the audio band, instead of a suckout at 3kHz caused by driver mismatching. This suckout still exists today in some 'speakers, where it gives a nice "easy" delivery. It's all very well being clever and engineering it out, but if you do and the drive units aren't up to it, the final sound will not only seem brighter, but harsher too. The 'speaker will develop an unpleasant tone.

It seems to me that much of the art of hi-fi design lies in knowing what does and does not offend. Any engineer brandishing the latest test equipment can fairly easily discover hi-fi's common problems. There was a myriad to be found in any radiogram, but all the same people used to enjoy music through them and many swear today that amplifiers and 'speakers back then sounded better.

Today's engineers have to be careful not to throw the baby out with the bath water. It's easy enough to produce high technology products these days, but that doesn't guarantee they'll sound good. And having a nice tone is quite an important part of it.

# kaleidoscope

When wooden cabinets gave people wooden voices, it was thought of as unwanted colouration. When they gave cellos a rich, resonant thrum, the added naturalness would pass unnoticed.

Funnily enough, much the same sort of thing is happening today, but in a more subtle form. Audio technology has improved the breed over the years, but as some of the more serious problems have been overcome, so lesser ones have surfaced. The problem of tonality, and the need for "a good tone" is still with us today. albeit in a new form that many of today's engineers don't recognise.

I was prompted to write about this by much recent talk amongst us of "tonal colour". Most products have it, or an apparent lack of it. Few audio products nowadays thrum like old speaker cabinets, but many have a characteristic sound. In general I believe this comes from resonances which impart delicate colourations which go to make up the sound of a system, even one that measures perfectly. The problem here being that low level resonances are difficult to measure, especially when they add to a high level signal, so they are a part of it, forming a composite.

Quite how the ear and brain resolve such data, heaven knows. Current psycho-acoustic research hasn't got very far on this one. Whilst our best analysers perform time domain analysis, including the digital FFT spectrum analyser we use to test products, they just haven't got enough resolution to capture some of the most important information. Super resolving analysers able to resolve this problem are on the way I'm told. In the meantime, we have to believe what we hear!

Reflections

from Noel

Keywood

With loudspeakers it isn't so difficult. Flick the cone of a drive unit (not a tweeter please!) with your fingernail and you'll hear the characteristic sound of the cone material. If it's plastic it'll sound a little soft, easy and possibly plasticky or quacky. If it's paper you'll likely hear a warm, fibrous thud, and carbon fibre a sharp, bright crack. These material resonances will colour the 'speaker's sound to a greater or lesser extent, according to signal input, damping, subsequent masking and what have you.

What fascinates me as an engineer is that no matter how well we design the 'speaker - and these days we can design it very well - we cannot, by the nature of the beast, get rid of these colourations until the perfect drive unit has been produced. No end of fancy boxes and crossovers will do it, no amount of theory. We must have better drive units. Now flick a bit of clingfilm. What characteristic sound did it make? That's the sound

make? That's the sound, or lack of it, of an electrostatic drive unit (ignoring all the other bits that resonate!).

So when we talk about tonal colour in reviews, we are talking about whether something has "a good tone". But it's a modern, subtler version of an age-old problem. On much the same theme, Tannoy and Marantz (and us!) believe that capacitors "sing", or resonate, and that they too have a characteristic sound as a result. I'm sure this is the reason capacitors with an oil impregnated paper dielectric have wonderfully dark, damped inter-transient silences they are literally oil damped!

A good tone is very important. We can put up with quite a lot, providing the pervasive tone of a product is pleasant or attractive. Two products I find have a very nice tone are the Marantz CD63SEII CD player and the KEF **Reference Series** loudspeakers. They are nice to sit in front of, without thinking about it. At the end of the day, I rate this more highly than apparent technical perfection. I've heard too many products that claimed the benefit of advanced engineering, but sounded awful. Just give me something with a nice tone, 1990s style



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"All theory aside, the RINGMAT really works." Robert Deutsch (Stereophile, Vol.17 No.5 May '94)

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Vol.18 No.1 January '95) "Essentially, RINGMAT helps give LPs the kind of firmness and stability normally only available from master tapes.... Given the excellence of the original RINGMAT, I was a bit sceptical about whether or not the

MkII would provide a worthwhile improvement - it did!" Jimmy Hughes (Hi-Fi Choice, February '95)

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hard for and, as yet , I've found no adverse effects." Dominic Todd (Hi-Fi World, January '95)

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opinior

Hi-fi it's not. Nonetheless, one of the marvels of recording technology is the micro-cassette recorder into which I monthly narrate this column - on this particular occasion whilst driving down the M4.

The lowly cassette still plays a hugely important role in the culture of recording and recorded music.

In the context of my work as a producer and arranger, I listen to cassettes which are sent to me. Sometimes I'll listen to a tape sent by a composer for arranging, other times I'll listen to preliminary mixes or to other producers' work for research. The car is an excellent place to contemplate this material because long-haul driving provides just the right level of sensorydeprivation to free the mind for concentrated auditioning, and the car stereo has very effective tone controls so a woolly recording can invariably be brightened or a boomy recording tightened-up.

Finally, once I have decided to work on a particular project, the tapes come out of the car and are played in the house. And that's when the disappointment so often occurs because there are no tone controls on my hi-fi system. OK, you can argue that the importance of the material on the cassettes outweighs its recording quality and that I should not allow form to win over content - and I don't. But in these instances, I could achieve fatigue-free listening by the inclusion of tone controls on my audio system, a happy state denied by their omission. It is with this background that I justify the inclusion of tone-controls on the Maximalist Preamplifier design which has begun to take shape in this column over the past few months.

In designing the tone control stage, I considered two

# recorded message

alternative approaches. I could either opt for a classic Baxandall circuit or go for something more unusual. The former has acquired something of a reputation for lack of subtlety in its equalisation duties. In fact, it's capable of extremely useful and musical results. As is often the case in electronics it really is not possible to perform a perfunctory look at the general form of circuit to judge the degree of care which has gone into the design. A superficially similar collection of active and reactive components can be very far from

similar. The most common fault I have heard in badly designed Baxandall controls is of the boost and cut controls acting too early in the frequency range. In other words, so often a poorly designed control will boost the bass by lifting all the frequencies in the range below 1kHz. Now bass does not begin below lkHz. After all middle C is about 200Hz which is almost two octaves below 1 kHz and, musically speaking, middle C isn't even in the bass clef! If suitable curves are chosen, and with the availability of lowdistortion, highgain op-amps, the Baxandall circuit

can accomplish both delicate and difficult equalisation tasks without any real vices.

Left by

**Richard Brice** 

I opted for a modified Baxandall equaliser for a portable mixer I designed some years ago\*. This circuit has proved excellent in practice.

A Baxandall control based around a high-gain op-amp rather than the transistor stage as illustrated may be the ideal solution for the tone control stage of the Maximalist preamplifier. If anyone out there is considering building the preamplifier I hope you will give this circuit mental house room. However, partly due to innate perversity and natural curiosity I decided to look elsewhere for a different tone control stage for my own use. I believe I have found it in the design of a classic valve studio equaliser of yesteryear, one which launched many



of the best studio equalisers of today. Among its many advantages is the ability to select the frequency range over which boost (or cut) may be applied. This action is capable of subtlety well beyond that of a standard tone-control circuit. Actually, in its original form it is too complicated for domestic use, the challenge is therefore to strip-out some of the complexity whilst preserving some of its virtues. That task is the subject of next month's column.

Finally, as I have said before, if you have any comment about the Maximalist preamplifier I should be glad to hear from you at CompuServe ID 100601,1614 or via Internet email 100601.1614@ compuserve.com.

 \* Radio Mixer Design, Electronics and Wireless
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#### Dolby S may well have Yamaha's KX-580 cassette deck racing off the shelves, but Noel Keywood has doubts about it.

DECK KX III

S-TYPE

There a flap of the Yamaha KX-580 lurks a little button marked Dołby S. That apart, you wouldn't know this £250 cassette deck had Dolby's latest noise reduction system, to date reserved for more expensive models.

YAMAHA

But does Dolby S turn it into an MD or DCC beater by banishing analogue tape hiss? Superficially, Dolby S seems to put cassette on par with digital media like MD and DCC, but in practice the cassette is a bundle of mechanical, electrical and magnetic technologies from the 1960s. It cannot be redeemed solely by the use of a sophisticated noise reduction system.

Our tests show that what Yamaha have spent on Dolby S, they have saved elsewhere. An inexpensive combination record/replay head is used, making off-tape monitoring impossible, and also has a singlecapstan transport. The cassette door is manually operated and a flap conceals the minor controls. Unfortunately it obstructs the rotary controls, making adjustment difficult, especially of record level.

The KX-580 has an automatic tape tuning system, as well as manual tape tuning. The idea is to use auto-tune to get the deck approximately right and then manually tune for your preferred balance, be it bright or dull. I was disappointed to find that neither tune system affected metal tape and that the deck wasn't well adjusted for metals in any case, sounding overly bright. Dolby selection lies beneath the flap, and Play Trim. This useful facility is designed to get the best from prerecorded tapes, eliminating their associated dullness by acting as a specialised treble tone control placed in front of the Dolby system.

Keeping record level strictly to 0VU on peaks and with Dolby S on, I found the KX-580 gave well balanced and tonally smooth recordings with TDK SA, with some softness and muddle audible. Overall quality was satisfactory but not exceptional by any means. I strongly suspect head overload was the cause of the muddle, because the head is none too hot.

Metal tape (TDK MA) gave cleaner transients. Cymbals crashed more convincingly, but there was still some coarseness and brightness, probably attributable to distortion from the head, or flutter, or both. TDK AR ferric gives decks an easy time with cleaner bass on the KX-580, but again some muddle was apparent. Dolby S certainly eliminated hiss with chrome, but didn't prevent the Yamaha's compromises showing through. I've heard cleaner, smoother recordings before on similarly priced decks.

Prerecorded tapes played well enough, Play Trim offering plenty of adjustment to counter the dullness that afflicts so many prerecordeds, especially with Dolby switched in.

The Yamaha KX-580 is for those who want balanced recordings without tape hiss from ferrics, chromes and prerecordeds alike. Little effort has been made to move much past these simple goals in quality terms, as recording quality is mediocre. The latest DCC decks leave this sort of performance standing, and nowadays at little extra cost



#### competition

This month's competition is definitely not one to be missed. The prize is a stylish Linn hi-fi system, comprising Mimik CD player, Basik/Akito/K5 turntable assembly, Majik-I amplifier and Keilidh loudspeakers. Of course, as with any Linn hi-fi, the lucky winner will have the system professionally installed and set up by a representative from Linn.

The Mimik CD player, reviewed in the April '95 issue, has a fast, rhythmic and detailed sound that leads music forward with great control. It uses Crystal's CS4328 Delta Sigma convertor and has an electrical digital output, so can be upgraded with an external convertor at any time.

The 30watt Majik-I amplifier is fully remote controlled, making it convenient and easy to operate. But sound quality hasn't been compromised. It has a dynamic sound, punching out drum beats with a sharp smack and images out into the room with vivid definition. The Majik-I is also equipped with one of Linn's superb phono stages. To make good use of this there is a Basik turntable included in the prize, complete with Akito arm and K5 cartridge.

Finishing this super system off in style are pair of floorstanding Keilidh loudspeakers. Nicely proportioned, the Keilidhs use a pair of 6inch bass/midrange drivers in a sealed enclosure for tight, tuneful bass. Sitting between these drivers is a small ceramic dome tweeter which gives a pleasant openness and sparkle to the treble.

So, a competition not to be missed! All you have to do to enter is complete the questions and tie-breaker opposite. Send your entry on a POSTCARD, or the back of a SEALED ENVELOPE, and completed in block capitals, to arrive no later than 3rd JUNE 1995 to:

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APRIL ISSUE COMPETITION - WIN A DPA DIGITAL ENLIGHTENMENT TWO BOX CD PLAYER

A fantastic DPA Enlightenment Drive CD transport and discrete CD convertor were on offer in the April issue. The lucky winner is Andy Biggs of Oxon, congratulations.



#### COMPETITION ENTRY QUESTIONS

- 1) Linn's Mimik CD player uses which convertor chip?
  - A. Philips DAC-7
  - B. Burr Brown PCM63P
  - C. Crystal CS4328
  - D. Analogue Devices 1862

2) Linn's Majik-I amplifier is how powerful?

A. 20watts	B. 30watts
C. 50watts	D. 100watts

3) Which cartridge is supplied with the Basik turntable?

A. K5	В. К9
C. K18/II	D. Archiv

4) How many bass/mid drivers are there in a pair of Linn Keilidh loudspeakers?

A. 2	B. 4
C. 6	D. 8

#### TIE BREAKER (obligatory)

Switching on the Majik-I You'll hear the sound of Linn, Music flowing sweetly by With power enough to win...

Complete the above ditty in no more than thirty words.

#### **COMPETITION RULES AND CONDITIONS OF ENTRY**

[1] Only one entry per household will be accepted. Multiple entries will be automatically disqualified.

[2] In the event of more than one entrant submitting all correct answers, the winner will be picked from the tie-breaker by the editor. Will will endeavour to publish the results in the August 1995 issue. Purchase of the magazine is not a precondition to entry.

[3] No correspondence about this competition will be entered into and the editor's decision is final.

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05/95

opinior

This month's column was inspired by the new DPA Digital Renaissance CD player. We came across it at the Bristol show when designer Rob Watts dropped one in for review. Out of interest we plugged it into our World Audio Design demonstration. The change was dramatic, everyone immediately commenting on how the sound had gained an extra lease of life, opened out and was creating a vivid sound stage with superb projection.

This was a bit of a shock, because the player the Renaissance replaced was DPA's more expensive two-box Enlightenment. After extensive listening back at our offices, the Renaissance continued to impress with its captivating portrayal of music. Everything came to life in an extraordinary manner, images leaping out from between the 'speakers. Even mediocre recordings were given a new level of fidelity, with driving rhythms and fantastic detail.

A hi-fi product is much like a highly tuned musical instrument. Its particular combination of components, such as cabling, layout, casework etc. all combine to bestow a particular character. The **DPA Renaissance** is a bit of a Stradivarius in this respect, in which a unique combination of materials has produced an inexplicable result. It's difficult to find any technical explanation for this player's striking properties. Measurement is essential when developing new products, ensuring individual 'building blocks' within a product are correctly optimised and aligned. But it has yet to evolve to a point where we reliably predict or build in a particular sonic character, and I doubt it ever will.

dB on the level

We've come across other products which sound greater than the sum of their parts. Arcam's BB50 is similar, although not quite to the same extent, with an uncanny ability to charm music out of CD. After a few months of listening to the Arcam we were less convinced though, the harmonic sparkle to the treble adding sibilance to recordings that became more noticeable as listening went on. The

• The DPA, like the Decca London of the CD world, continues to produce an inexplicable level of musicality. •

> DPA seems to avoid this, so like the Decca London of the CD world, continues to produce an inexplicable level of musicality.

But is it accurate? As Noel mentions in the full review of the Renaissance, if it is, then everything else is wrong. Over years of reviewing you learn this is rarely the case, but does it matter? Unlike the Decca which was notorious for the damage it did to LPs, the DPA has no such vice. And it does inject music with a level of excitement and energy that brings even modest systems to life. So like all hi-fi, it must come down to a matter of personal taste. DB

Dominic

Baker

#### **David** says

There's something very 'strange' about DPA's new £895 Renaissance CD player. When put against our Audiolab Transport and Pink Triangle Da Capo Convertor (almost three times the price), I expected the big two-box combination to take the Renaissance in hand and remind it of its lowly place in the scheme of things. But I was wrong.

Like a quality turntable, the Audiolab/PT combination boasts supremely sweet treble, deep bass and pin-point imaging. But unlike vinyl at its best, this combo fails to image fifteen feet behind the speakers and several feet in front. What's more, you never lose the feeling that those instruments playing aren't real. It all sounds a touch too closed-in and ordered, par for the course from CD.

On the first point, the DPA can't compete. The Audiolab/Da Capo is simply far smoother, with real wallop in the lower regions. But on the second . and third, things are different. The DPA does remarkable things with imaging, locating instruments way out of the box, reminiscent of Pacific Microsonics' HDCD system we tested back in February. It's as if it has zoomed in on the music;



images are wider and more tangible, projecting out closer to you and falling further back. The spatial differentiation between lead parts of the mix such as vocals, and minor parts is more pronounced.

But the most impressive aspect of the Renaissance is timing. Compared to your average CD player it's like the difference between a Dansette and an SME 30. Rhythms come across unlike almost every other silver disc player I've heard, with subtle inflections that make music a real event rather than just a join-the-dots representation.

So yes, I was impressed. The Renaissance assaulted my lack of faith in Compact Disc's capacity to sound musical, like vinyl at its best. But there's a caveat. For all its glory, the Renaissance leaves you wondering whether the music was actually recorded like this in the first place. There's a lack of low level detail compared to the Audiolab/Da Capo, making many recording nasties magically disappear. As Noel remarked, it was a mightily impressive Abbey Road he heard on the DPA, but it wasn't the Abbey Road. Therein lies the dilemma: should we recommend the DPA Renaissance as the best thing since free money? This is where opinions are divided • DP

# SPALDINGS

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Arcam, Audiolab, Linn, Meridian, Naim, Quad, Denon, Marantz, Ruark

opinion

I wasn't so long ago when the country seemed griped in a wave of 'Green Fever', with even the hi-fi industry feeling the heat. So how has this affected those in the hi-fi business five or six years on?

As is often the case the fears of those in the industry haven't materialised. Hi-fi isn't subject to strict regulation concerning efficiency and maximum power consumption levels. Big current-hungry monoblocks haven't faced the Green wrath, which has hung on the consciences of luxury car manufacturers for some time now. Yet neither have many companies stood still, as many can now boast impressive Green credentials.

There are four main areas where companies have shown marked improvements. First is in manufacturing. Second is in packaging. Third, the materials used in the final product. And finally their interest in offering products capable of accepting retro-fitments, shunning the "throw away society" image often associated with the Fair Views

enabling printed circuit boards to be cleaned using water-based products

In the area of packaging, most manufacturers now use recycled card for outer casings and an increasing number, including Mission, Grundig and Naim, are now also taking this further by using CFCfree based internal packaging.

The biggest change concerning actual raw materials used in hi-fi products has been with real wood 'speakers. Mission and Ruark are

Despite dating from over thirty years ago, with the latest arms, cartridges, plinths and power supplies the Garrard 301/401 is still capable of holding its own against modern high-end equipment.

consumer electronics industry at large. In terms of manufacturing there seems to be equal concern from the smallest of companies to the largest giants. Improvements stretch across the manufacturing process from using flux (when soldering) with an organic rather than chemical base, to adapting manufacturing techniques (as Harman Kardon have)

among two manufacturers to use sustainable soft woods rather than exotic (and more threatened) hard woods. The results have been extremely successful. Just because a pulp soft wood is used there's no reason why it can't be made to look luxurious, as Mission's rosewood 750 series and Ruark's Templar prove. In the case of Mission, many customers have been fooled into believing the

rosewood veneer is the real thing, such is its striking appearance. I hope other 'speaker manufacturers follow suit after Mission and Ruark's success.

- from Dominic

Todd, our man in

Scarborough

The company that has to take the biscuit for ingenuity at the moment is Maxell, which has created a video cassette with a shell made from recycled plastic cups! It's still very much early days though, because despite the environmentally friendly casing, the spools and tape are as before. And even though further products are promised, including audio tapes, it remains something of a one-off, "toe in the water", exercise. Cynics would suggest this latest effort has more to do with exploiting the marketplace rather than any twinge of conscience by Maxell.

The fourth method of earning Brownie points from the Green lobby is by offering products that aren't afflicted with builtin obsolescence. Over the years two companies at entirely different ends of the spectrum have upheld this philosophy. QED has been the saviour of many an elderly system designed before CD, let alone the plethora of inputs needed for today's Audio Visual systems. Their products allow extra 'speakers and headphones to be added, multi room systems installed and even older CD players can reap the benefits of the latest



DAC technology with the Digit.

The other company to reject built-in obsolescence is Linn. They argue that an LP12 bought fifteen or so years ago can be gradually improved over the years to the point where it's virtually identical to the latest model. This is to be commended, but this really applies to just about all turntables. It's nearly always possible to upgrade the arm, cartridge and even power supply with many turntables, upgraded plinths and motors are even available. Just look at the Garrard 301/401. Despite dating from over thirty years ago, with the latest arms, cartridges. plinths and power supplies it's still capable of holding its own against modern high-end equipment.

Here in lies hi-fi's strongest Green credential of all. What makes real hifi environmentally friendly is not some scheme dreamed up by the marketing men, nor is it even worthy improvements in manufacturing, but the fact that good hi-fi rarely gets junked but passed on instead (just look at the classified section for proof). Even when it reaches the stage where it's not even fit for the title of 'grunge hi-fi', it can still be cannibalised for parts. Good hi-fi never dies, it would seem, it simply matures!

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The Synergy was designed for maximum pleasure minimum fuss.

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#### RECORD REVIEWS

<b>ROCK &amp; POP73</b>
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JAZZ ......86 Simon Hopkins Simon Cooke

CLASSICAL ......93 Peter Herring



ANNIE LENNOX Medusa 74321 257172 RC

Aside from occasional fashion vagaries when she featured as lead singer for The Tourists on the cusp of the punk/power pop crossover, Annie Lennox can barely be said to have put an elegant foot (or hairstyle) wrong. (We shall of course politely pass over the soundtrack for the fiasco film adaptation of George Orwell's "1984"). Her work with fellow Eurythmic Dave Stewart was a stellar liaison that proved Lennox to be one of the most evocative and eloquent vocalists to have emerged on either side of the Atlantic in the last fifteen years.

Strange then that her second solo long player should kow-tow to the current trend for albums of cover versions, particularly as a sequel to the deservedly well received Diva debut. And sure, Duran Duran have just tried to revive their long-dead careers with a similar offering and Bryan Ferry once took a similar sabbatical, not to mention Bowie's pioneering and still relatively evergreen Pin-Ups, whilst John Lennon's Rock and Roll remains the indisputable benchmark for all such forays.

But why a chanteuse - surely one of the few female singers worthy of the name and a provenly capable songstress of Lennox's abilities should stoop to the contemporary equivalent of one of those early seventies Top Of The Popsstyle pastiches of largely familiar material, is something of a mystery.

And while it's true that the selection of material is nothing if not eclectic her undeniable power as a soul-singer is more than evident on reruns such as AI Green's 'Take Me To The River', The Temptations' 'I Can't Get Next To You' and The Persuaders 'Thin Line Between Love and Hate', all of which she does with considerable power and panache even if she doesn't quite cap Talking Head's 1977 version of Mr. Green's classic or come close to the bittersweet angst the Pretenders' Chrissie Hynde brought to her version of 'Thin Line'.

But The Clash's 'Train In Vain' (hardly a Strummer/Jones masterpiece anyway or the insufferably banal 'Whiter Shade of Pale' are, to be charitable, about as essential as the centre of a polo mint. At least she didn't go the hole (sic) hog and do 'Nights in White Satin'. And why bother to take on a classic song like Neil Young's 'Don't Let It Bring You Down'? Everybody's allowed the odd mistake, and it seems like the diva just made hers.

This Medusa definitely didn't get me stoned. Nice graphics though, but then H.R. Geiger did the same for a Debbie Harry LP, and that was naff too.



#### GENE Olympian COSTERMONGER GENE I

If you've never heard (of): The Smiths. you're probably (a) stone deaf (b) fresh born (c) freshly still-born, or a combination of the three. This may make hearing Gene a fresh and exciting listening experience. Unfortunately most of us fail to fall into the aforementioned categories. Thus Gene's overall effect is to bring on an instant deja-vu along the lines of surely I've taken anti-depressants before, played it as an accompaniment to my 21st nervous breakdown; dreamed it whilst undergoing serious ECT, or found it the perfect background to a wrist-slashing session of the sort where if you're smart you cut the veins length-wise so they're a lot harder to stitch back up.

If there is a redeeming feature, it's the deft guitar styling of Steve Mason. That said, Olympian hardly exists at the peak of the mountain of the old Greek Gods; in fact it tends to be a wholly desultory affair. If you're dying to hear it, rest in peace...AMEN.



Anyway, if you're after a safe substitute for Mogadon you could do mildly less irreversible neural damage to yourself by listening to the Orb's newie. Or hit yourself over the head three times with something large, heavy and blunt and get the same effect gratis. In conclusion, may I just inform you that the briefest cut here - 'Slug Dub' clocks in at a mere 17.07. But then maybe it is after all down to your chemical content. the number of so-called Smart Drugs you've ingested. But to these ears this merely sounds like the soundtrack to a patently dated light-show. So either my chemistry's seriously damaged or the Orb are producers of seriously pretentious crap. I'm putting my money on the latter. Try spelling "white" with an "s" and we're maybe getting somewhere.



#### THE MAVERICKS What A Crying Shame MCA MCD10961

• I don't know if you're familiar with the term but the phrase currently sweeping the US Country and Western world is "Big Hat Country".

It doesn't take an Einstein to work out that the inspiration for this latest umbrella phrase originated with Big Hat king Garth Brooks, who just happens to have sold more records than the Gideons have given away Bibles. But Miami born Raul Malo, singer and writer with this big-selling quartet takes the cake when it comes to headgear. It's no exaggeration to say next to him even Mr. Brooks looks like a pinhead and then some. Plus he wears a different and seemingly ever larger Stetson in every picture that adorns the packaging of this second Mavericks' long-player.

The music's pretty much what a Big Hat would lead you to expect: clean, catchy C&W that carries echoes of everyone from Hank Williams to the Everly Brothers, auspicious antecedents one and all. And The Mavericks carry it all off with aplomb. The whole thing embellished with the requisite violin and pedal steel fills. Nice disc. And like Marvin Gaye once said, "wherever I wear my hat, that's the top of my head." Or it could've been Paul Young maybe. (n.b. As jokes go, this one's definitely crap. My hat's obviously too tight.)



#### SONNY LANDRETH South Of I-IO BMG 72445 LL070 2

Memo to aspiring journos worldwide: when in doubt, refer to the press release. These sheets of patent guff are sent out with review copies in the hope of inspiring the potential reviewer with ecstatic responses to the record in question. Now it appears that not only is Master Landreth "one of the most celebrated guitarists in the world" but his bottleneck work bears comparison with such palpable masters as the late Duane Allman, the equally defunct Lowell George, Eric Clapton and George Harrison. George who? Surely some mistake. Maybe they meant Woody "Natural Born Killer" Harrelson, late of "Cheers" fame.

Anyway, Sonny does play a mean axe has worked with the likes of John Hiatt, John Mayall, as well as Michael Doucet (who?) and Beausoleil (double who?) Well me, I like Elmore James as much as the next Blues dilettante. Sonny Landreth is no way as good as either but this doesn't prevent South Of I-10 from being a sturdy, well-wrought example of a particular genre, that will find happy homes with aficionados of any of the aforementioned masters, living or dead. Hot stuff, sho' enuff.



THE ORB Orbvs Terrarvum ISLAND CID 8037

I've frequently wondered what The

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#### **RECORD OF THE MONTH**

#### TINDERSTICKS This Way Up 526303-2

Hardly the most mind-bogglingly imaginative record title of all time, but any notions that this group are lacking in imagination end here. After all, two double albums issued a mere eighteen months apart can hardly suggest laziness. Plus there are vast differences between this new offering and its predecessor. Where the earlier disc was a rather sparse but immediately persuasive affair, this release proves altogether subtler in tone, broader in range and certainly unlikely to yield its bounties in a couple of listens. Rather it's one of those special LPs that'll still be unravelling its mysteries and delights in five or more years time.

to be overcome it's more likely than not the superficially morose, not to

say deadpan vocalising of figurehead Stuart Staples. Seen in an unkind light, you could say his moribund tones make Leonard Cohen sound as jolly as George Formby at a V.E. Day concert

side to the man's edge-of-despair intonations. And to be fair he exploits a limited (deliberately?) vocal range to the utmost and I don't mean just for what used to be called the bedsit market.

There are echoes here of influences as far apart as Scott Walker and Marc Almond. With contributions from a full orchestra, bits in Spanish and French, even a spoken narrative ('My Sister') as gruesome as anything lan Banks, let alone Lou Reed ever wrote, it'd be easy to dismiss Tindersticks as pretentious to the nth degree. Maybe they are but they do it with such style, wit and wild imagination that such a cavil simply doesn't hold water. And when was the last time you heard a saw played on a record? These cheeky buggers even have

rock & pop record reviews

the gall to do it twice, no less. Investigate - and pronto.

enstick

If there's an initial hurdle

acts have been revived as bigger and better things. Born-again Christian Moby, formerly known for his hectic summer house anthem 'Go', from a couple of years ago, has his debut studio LP Everything Is Wrong released this

or The Marx Brothers on laughing gas.

month. While a pessimistic album in concept, in reality it's refreshingly uplifting and interesting. Packaging the whole spectrum of dance sounds reggae, jungle, house and techno - Moby even manages to include a slice of his hardcore past in 'All That I Need Is To Be Loved' straight out of his days with little-known west coast punk band Flipper.

And Moby's got things to say on eco-politics, and the stylish sleevenotes give space to an angry diatribe on environmental exploitation. Hence Everything is Wrong. Right on, smart, PC and interesting: The Butthole Surfers meet Reel II Reel. If there's such a thing as Crusty House, this is it.

**STEVIE WONDER Conversation Peace** 530 238-2





THE man once known as the king of Motown, Stevie Wonder bounces back to confirm that while he's still there and very much respected as a major force, he's on the journey home.

That's not to say that Conversation Peace, his first album since the Jungle Fever soundtrack a few years ago, is bad. It's not. With Stevie's musical talent and 30 years experience in the business, it was expected to be good. The problem is, it's not as sharp as the earlier masterpieces like Inner Visions and Talking Book.

## Jon Clarke



MORY **EveryThing Is Wrong** MUTE CD STUMM 130

WHILE the artist formerly known as Prince prances around accepting awards, playing live Wembley dates and conducting interviews with just about any publication prepared to sympathise with his new "slave" stance, many better

World Radio History

**JUNE 1995** 75 Nevertheless, Conversation Peace is a heartfelt, pensive and mature album, comprising a special mix of sounds and thoughts. Perhaps at times it is a little over-produced, but it grows on the listener and will ultimately warrant a special spot in anyone's collection.



#### S\*M\*A\*S\*H Another Love (Song) VIRGIN FLATMLP10

• "I HAVE seen the Starship Enterprise rushing from behind my eyes", states vocalist Ed on the opening line of S\*M\*A\*S\*H's new mini-album, Another Love (Song).

What exactly is going through his mind is a touch unclear, but whatever it is, it sounds hectic, a fitting word to describe Britain's best neo-punk group. 'Another Love', the title track, is the band at their best. A fresh rock and roll ballad for the times - aggressive, hard and grungey, but above all, poignant. Making a comparison between drug and love dependency, it digs at addictive and directionless people.

Another Love (Song) mixes a combination of studio and live tracks recorded in Brighton, and is another fine release from the Welwyn Garden City punks, who have been building up quite a following in the provinces. The way they balance melodies and meaning, with thrashy and gritty rhythms is their strength, no better than on 'Time', a haunting look at our decaying society.

While only a mini-LP and really only a touch on last year's excellent Self Abused album, Another Love (Song) is a decent hard-core buy.

David Price

LEFTFIELD Leftism HARD HANDS 01 478142-10



Followers of electronic music from The Human League onwards may have noticed the propensity of techno musicians to badmouth anything remotely rock, given half the chance. Morrissey, bless him, assuaged matters at the beginning of the nineties by proclaiming a liking for the slippery rhythms of 808 State, but it wasn't until Leftfield's pairing with John Lydon on 'Open Up' that the indie-dance void was well and truly breached, placing whining rock vocals and a killer club anthem in uncanny adjacent. Suddenly you couldn't move for DJs uttering the word "crossover".

Until then, confined to the dropdead-cool but obscure Outer Rhythm label, Leftfield had scored minor club hits with a couple of definitive UK garage cuts, 'Not Forgotten' and 'Song of Life'. But despite their underground cred, they manifestly failed to hit the national charts. That is, until now. So seductive an album is Leftism that it should outsell all their past releases put together.

A triumph of entryism over elitism, it's obvious they're no longer content to patrol the outer regions of commerciality, going instead for the jugular of the British record industry, the album charts. A true populist album, Leftism has all the ingredients to pull people in whilst still satisfying techno die-hards. It's all there - killer bass sequences, hardcore noises and Augustus Pablo samples, plus a generous helping of tunes. This is its genius -Leftfield know where they're going and are already well en route to success. Once again, British techno, at once innovative and populist, has reason for self-congratulation.

#### VARIOUS ARTISTS Trance Atlantic TOTAL BMG TA CDI

• "Not one person back then thought a record would make it to the next city, let

alone overseas", confesses Farley Keith, AKA Farley Jackmaster Funk, the man responsible for some of the founding moments of house music. The story begins with anthems like 'Love Can't Turn Around' in Chicago in the mid eighties. Taking disco beats and adding harder kick drums, laying Roland drum machines over Philly soul samples or stripping down MFSB club classics was how house started. At the same time in America's motor city Detroit, DJs were melding Motown and P-Funk with Kraftwerk and Pink Floyd to make techno.

But it wasn't until the two were brought together by British DJs high on Balearic beats, chemically altered by Ecstasy and mindful of their electropop heritage that this music hit pandemic proportions. While rock fans were patiently waiting for the new Smiths, 1988's sun-drenched 'second summer of love' put Chicago House and Detroit



Techno together to make 'dance' music.

This quadruple album compilation captures it all. Packed with some of the most innovative, eclectic music to emerge from the other side of the pond in years, it enjoys the lavish packaging and 192 page booklet of its forebear, the Trance Europe Express compilation, now in its third edition.

In one of many excellent interviews, ex-Psychic TV collaborator Fred Gianelli laments that the US music biz isn't interested in anything "pure or danceable" anymore. So it's a sad irony that such a vibrant scene needed the patronage of distant British clubbers to establish itself. All the better then for Trance Atlantic, which gathers up disparate threads from Jonah Sharp and Yennek to Meat Beat Manifesto and Joey Beltram, for bringing it all together. Plastikman's Richie Hawtin sums up the music's project to "push the funkiness and make it sexy". If this sounds right to you, this supreme collection of soul, electro and ambient music won't disappoint.



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800H

915H

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## Simon Hopkins



JOHN SURMAN/KARIN KROG/TERJE RYPDAL/VIGLEIK STORAAS Nordic Quartet ECM 527 120-2

• Classic ECM line-up, classic ECM sound, classic ECM cover art. Nordic Quartet, recorded last August, is certainly a portentous release for the German label, and to some extent lives up to its promise.

John Surman remains one of this country's few truly great jazz musicians. His baritone and soprano saxophones, alto and bass clarinets and synthesisers have graced dozens of great European jazz records over the last couple of decades, always bringing to them his trademark West Country pastoralism. In particular, his series of solo recordings for ECM - luscious, multitracked part-composed, partimprovised constructions of horns, sequencers and synths - have stood up as one of the most enduring, and most audacious, bodies of work by any European jazz musician.

Mind you, Terje Rypdal is certainly up there with him. The Norwegian guitarist is one of the very few electric jazz guitarists to have truly explored jazz rock as a musical arena, rather than use it as a platform for showing off his (admittedly considerable) guitar chops. Albums like Whenever I Seem to be Far Away and Odyssey are among the finest jazz rock albums recorded in the seventies, easily ranking alongside, say, Weather Report's first handful of albums, or The Mahavishnu Orchestra's early work (and indeed, the rarefied, spiritual air of McLaughlin's work with Mahavishnu often finds echoes in Rypdal's work).

And while Scandinavian chanteuse Karin Krog, another ECM stalwart, has neither of these musicians' rich histories, she's undoubtedly one of the most beautiful singers currently working in contemporary jazz. In fact, pianist Vigleik Storaas is the only non-star here.

This quartet work their considerable collective charm on nine new compositions penned by various combinations of players, which veer from the haunting, elegiac opening tone poem 'Traces' to the psychedelic 'Double Tripper' or the blissed-out rock busk 'Gone to the Dogs'. And much of it, particularly the more sombre moments, is captivating music. It's certainly a joy to hear Rypdal's distorted guitar mesh with Surman's heartstring-pulling soprano saxophone (as I've said, these are unquestionably two of the most distinctive and original voices in contemporary jazz), and Krog's half-whispered intonings are often magical. Nonetheless, there's an air of this music being thrown together in the studio which makes it all a tad unsatisfying. Of course, jazz is meant to wing it, but the couple of days or so that ECM allow their sessions to go on for just don't seem to have given this band the room they need to stretch out.

There's a fine line between improvisation and jamming, and on a couple of occasions too many, this session crosses that line into the latter. Which isn't to say that there aren't some very fine moments here, but one ends up feeling as if it could all have been so much better.



MILES DAVIS Voodoo Down MOON RECORDS MCD063-2

• Altogether shoddily packaged, Voodoo Down's a bit of a throw-away collection, but essential for sixties period Miles fans. This CD brings

together bootleg live recordings of gigs from 1965, 1966, 1969 and 1972.

The '65 and '66 gigs (from Milan and New York respectively), of course see the classic mid-sixties Miles group at its creative peak: saxophonist Wayne Shorter, pianist Herbie Hancock, bassist Ron carter and drummer Tony Williams. This is acoustic, post-bop jazz taken to breaking point, as far as the music will stretch, and always an absolute pleasure to hear.

The 1969 show recorded in Milan features the core of the group which recorded Bitches Brew, and hence the centre of what undoubtedly ranks as one of the greatest moments in the history of recording. Davis, Shorter, pianist Chick Corea, bassist Dave Holland and drummer Jack de Johnette are at once parents and midwife to jazz rock, and thank God for it. Essential.

And then there's the forgotten Miles, the Miles of the seventies, the Miles who fused Sly Stone and Stockhausen and James Brown and Jimi Hendrix and Stravinsky and hard-bop into a ritualistic voodoo gumbo. Davis, soprano saxist Gary Bartz, Keith Jarrett on piano, Stevie wonder sideman Michael Henderson on bass, drummer Leon Chancler and percussionists Don Alias and Mtume, weave their scary, intoxicating magic on the eight-minute 'Hush!', which, given the rarity of seventies Miles stuff, makes it worth the price of the CD alone.



#### RAY ANDERSON/HAN BENNINK/CHRISTY DORAN Azurety HAT ART CD 6155

• Jazz rock nigh-on thirty years later, with three of contemporary jazz's boldest players on fine form. Chicagoan Ray Anderson has been a regular of the downtown New York jazz and new music scene for well over a decade, with a style at once full of blues swagger and avant garde freakism. Han Bennink is of course one of the world's greatest jazz percussionist-drummers, whose manic, schizoid performances often seem to have been at the centre of half the European free jazz ever recorded. He's a prolific musician, one who's done more to humanise the very densest improv than any other single musician I can think of. Meanwhile, underrated Swiss guitarist Christy Doran plugs into a battery of distortion and echo effects and easily melds Hendrix and Rypdal and McLaughlin with more taste and verve than a whole army of lesser US fuzak guitar technique fetishists.

Together the distinctively bassless trio turn in a unique strand of chamber jazz rock, where fusion meets free jazz. A blast.



#### PRAXIS Metatron SUBHARMONIC SD 7007-2

• The supergroup Praxis have previously turned in three super albums of urban collage and cut-up, with San Francisco avant-metal guitar monster Buckethead centrestage burning up proceedings. Here the group is reduced to its core power trio. Sure, we miss Bernie Worrell's funky Hammond B3 and Bootsy Collins' space bass, but even Praxis' skeleton has more meat on it than a dozen other more corpulent supergroups, and on Metatron they mash up the usual mix of rock ballad, funk and thrash all suitably dubbed out to perfection by BL.





#### MJ HARRIS/BILL LASWELL Somnific Flux SUBHARMONIC SD71012-2

 On Somnific Flux and Visitation, (both essentially duo records, pointing up the plain fact that since techno, more and more fine music is being made by smaller and smaller groups), Laswell turns to the kind of ambient that characterised his acclaimed Divination compilations. SF sees him back with Mick Harris, another third of Painkiller and erstwhile Napalm Death skin banger. Not that you'd know it here. SF bears more of the hallmarks of Harris' solo project Lull than of, say, the ambient disc of Painkiller's Execution Ground. At once wistful and oppressive, this is dreamscape music with shadowy nightmares constantly threatening to break on through.



#### BILL LASWELL/JONAH SHARPE Visitation SD 7006-2

• While Visitation takes a distinctly more techno approach, two long 30 plus minute pieces, 'Zurvan Akarana' and 'Aion' delight in their own space, with the former's space rock-meetstechno beats constantly mutating but never fading away, and the latter's edgy ambience, marking for my books, one of Laswell's most successful adventures in

this kind of ambient-improv to date. Cool stuff, for sure.



AUTOMATON Dub Terror Exhaust STRATA 0004-2

Laswell is joined by bassists Gabe Katz (of New York's great dub-thrashfunk power trio Blind Idiot God) and the mysterious The Alchemist (don't ask) as well as a bunch of tape loops donated by the legendary reggae sessioner Sly Dunbar. Of course, dub's a popular bandwagon in Britpop right now, what with the emergence of the Bristol scene and jungle's domination of urban clubs around the country, but Laswell's been using dub reggae as a launch pad for musical astral projections for over a dozen years. Dub Terror Exhaust sees Laswell's Automaton strip the music to its drum & bass core, with the sampladelic weirdness shifted way back in the mix as a ghostly supporting cast.



AZONIC HALO Azonic Halo STRATA 0002-2

• And talking of Blind Idiot God, here's group guitarist Andy Hawkins in a white noise-feedback-distortion wall of sound that stands you hair on end. BIG colleague Gabe Katz helps out with the occasional bass drone, and Bill Laswell of course is at the mixing desk. As you come out of hyperspace into the blackness of deep space, a thousand light-years from the nearest star, this is the sound of your engine burning itself to ashes, the sound of no return.

Simon Cooke



#### THE ORIGINAL AMERICAN DECCA RECORDINGS A Piano Anthology GRP 16392

 This latest issue in the 'Original American Decca' series is an impressive attempt to fill a brief which must be impossible; a history of jazz piano from Jelly Roll Morton to Bill Evans in twenty tracks.

They succeed, just about. Fats Waller is here with James P. Johnson on 'What's the Use of Being Alone', followed by Duke Ellington's 'Black and Tan Fantasy'. It's far too seldom that the distaff side gets a look in on jazz history, but there's a token appearance from Mary Lou Williams on her self-penned 'Nite Life'; her debut recording, apparently. Basie, Willie 'The Lion' Smith, Art Tatum, Nat Cole, and Dodo Marmarosa are all included

Like the rest of the series, it's a great slice of history, but the sound of the piano suffers more than most instruments, not only from splashy early recordings, but also from the noise of the masters used here. This can make the solos tiring - but no less interesting - listening while the ensemble pieces suffer less and make the whole thing worthwhile. Maybe not the best piano anthology available, nor the best remastering ever done, but worth any jazz historian's money



THE TEODROSS AVERY QUARTET In Other Words GRP 97982

• The book notes make much of comparisons between the ubiquitous Winton Marsalis' entrance into the Jazz Messengers and Teodross Avery. Well, I'd hesitate to say he's quite that good, but then again, twenty is a rough age to be cutting your debut disc in jazz, especially when the twelve tunes are all your own work, and Avery brings it off with panache that many older players should seek to emulate

The band itself is led by Avery on tenor sax, with Charles Craig on piano, Reuben Rogers on bass, Mark Simmons on drums, and Roy Hargrove on trumpet and flugelhorn. Between them they blend exuberance, interest, and expertise on each chosen instrument with a recording of passable standards, into a satisfying listen.

The above could be read as a condemnation through faint praise, which is far from my intention. Avery is an excellent player, as are all in the band, but hasn't the experience of older players or writers, the band itself sounds too well rehearsed, and the recording is a little less crisp and welldefined than it should be. It makes for a satisfying listen, but a faintly unsettling disc. Strongly recommended nonetheless, and I expect to recommend their next release even more heartily.



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SHROPSHIRE HIFI, St Michael Street, Shrewsbury, Shrops. SY1 2ES. Tel. 0743 232065. Stockists of Musical Fidelity, Mordaunt Short, Sony, Kenwood, Pioneer, Rotel, Denon, B&W, Proac. Audio Visual. Products available. Open 9.30 -5.300m Mon-Sat.

MID SHROPSHIRE AUDIO, 24 Peveril Bank, Dawley, TElford TF4 28U (0952) 502097. Pink Triangle, T.D.L., Marantz, Denon, JPW, Ordon, Project, Yamaha, Ruark, Royd, Michell, Musical Fidelity, Yamaha, Target (Tables, Speaker Stands, best prices). Free Delivery nationwide. Good Discounts with no plex. Surround sound specialist. Home demonstrations a pleasure. 0% finance.

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ACTIVE AUDIO, 95, Stafford Street, Hanley, Stoke-on-Trent, Staffs. Tel; 0782 214994. Fax: 0782 283346. We have four studios including a dedicated Audio Visual studio for the demonstration of quality equipment from the largest range in the Midlands. Open six days per week. Own service department. Free local delivery, home trial facility. Current special offers and buyers fact pack and quotation service on request.

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BURY AUDIO, 47 Churchgate Street, Bury St Edmunds, Sulfolk, IP33 1RG. Tel. 0284 724337. Arcam, Audio Alchemy, Heybrook, Marantz, Michell, Mendian, Nakamichi, Pink Triangle, Quad, Rotel, Sonus Faber, Stax., Tube Technology.. Single speaker dem room. Free install. Credit facilities. Mon-Sat 9.30-6.00, closed Wed. Evening dems by apoointment.

EASTERN AUD40, 41 Bramford Road, Ipswich, Tel. 0473 217 217. Fax 0473. 215705. Quad, Arcam, Audiolab, Meridian, Mission, Denon, Rotel, Marantz, NAD, Sony, Rogers, Nakamichi, Systemdek, Technics, Celestion, B&W, Tannoy, Morel Thorens and Top Tape. Also stock a wide range of accessories. usual credit facilities. A BADA dealer.

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SPALDINGS HI-FI, 352-4 Lower Addiscombe Rd.. Croydon, Surrey. 081 654 1231/2040. 3 dem rooms and home dem. Free installation/credit. Linn, Naim, Quad, Arcam, Audiolab, Mission, Denon, Tannoy, Marantz, Ruark. Mon-Sat 9-6, Tues 9-8, Closed Wed, Service dept.

PJ HIFI, The HIFI Shop, 3 Bridge Street, Guildford, Surrey GUI 49Y. Tel. (0483) 504801. 9-6 Mon-Sat. Linn, Meridian, Rega, Arcam, Quad, Revox, Musical Fidelity, Rotel, NAD, Nakamichi, Marartz, KEF, Reference etc.

ROGERS HIFI, 13 Bridge Street, Guildford, Surrey, (0483)61049. Aiwa, Creek, Denon, Dual, JPW, Marantz, Onix, Pioneer, Systemdek, Ruark, Tannoy, Teac. Dem facilities available, no appts necessary, free installation, service dept. Access/Visa. Instant credit upto £1,000 subject to status. Monday-Saturday, 9.30-6pm, later by appt.

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## Peter Herring

**Climb aboard the musical** 'time machine' and relive the grandeur of the coronation of King George II in 1727, or the splendour of the celebration of High Mass in the Royal Chapel, Lisbon around 1635, or revive memories of one of the finest concerto collaborations of recent times. Some music, however, appears not only timeless, but not even to belong to its own time, the piano works of Gabriel Fauré being a prime example.



#### SAMUEL BARBER Piano Concerto Op36/Medea's Meditation and Dance of Vengeance Op23a/Adagio for Strings OpII

Tedd Joselson, piano; London Symphony Orchestra; conductor, Andrew Schenck ASV DIGITAL CD DCA534 (DDD/50.05)

 Barber's Piano Concerto, commissioned by the music publishers Schirmer to celebrate their one hundredth anniversary in 1961, may not have the spiritual profundity of the elegiac Violin Concerto, but it remains full of invention and excitement, and provides a veritable obstacle course for the unsuspecting soloist. This is nowhere more evident than in the rumbustious allegro molto finale, six minutes or so of deft fingerwork and spirited orchestral accompaniment, and all in 5/8 time, comparisons with Bartok's Second Piano Concerto are not misplaced. But in this reissued 1985 performance, the Belgian-American pianist, Teddoselson, proves the master of the score, and his playing is quite breathtaking.

However, Joselson's interpretation

is not solely about power and dexterity. In the lyrical second movement, marked canzona moderato, his playing has a jewel-like translucency, and in the opening allegro appassionato, he displays a firm grasp of the movement's classical structure.

A particular feature of this performance is the evident rapport between soloist and conductor, established in some memorable concert collaborations in the United States. Andrew Schenck, who died tragically young at just fifty-one back in 1992, is in commanding and confident form, and the LSO is at its most responsive: hushed and gentle in its treatment of the wistful melodies of the second movement; precise and agile as it sprints alongside the soloist in the rondo finale. Given the quality of the playing, and of Bob Auger's warm, well-balanced, open recording (All Saints', Tooting), I don't know of a more recommendable version of the Barber concerto on CD.

The other two works on this disc are both 'excerpts', one from a ballet, the other from a string quartet. Barber wrote the ballet Medea for Martha Graham's company (who also inspired Aaron Copland's magical Appalachian Spring). An orchestral suite was formed from the ballet and from this Barber extrapolated a short orchestral piece entitled Medea's Meditation and Dance of Revenge, darkly compelling and wonderfully scored. it is superbly played here by the LSO, who also turn in a noble and unforced account of Barber's most popular work, the Adagio for Strings.

The Adagio dates from 1936. It was the molto adagio second movement of the String Quartet Opll which Barber wrote while staying near Salzburg in the

World Radio History

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### **RECORD OF THE MONTH**

classical record reviews

Born in 1845. Gabriel Fauré received his musical education at Louis Niedermeyer's School of Classical and Sacred Music in Paris between 1854 and 1865. His piano teacher there was Camille Saint-Saens, with whom he became firm friends. Upon graduating, Fauré took posts as church organist. first in Rennes and then back in Paris. eventually succeeding Saint-Saens as choirmaster at the Church of the Madeleine. Externally, the musical world was dominated by Brahms, Wagner and Liszt. By the time of Faure's death in 1924, it would have been further transformed by the revolutionary notions of Stravinsky, Schoenberg and Bartok, and by Faure's compatriot, Claude Debussy. Yet these upheavals passed Fauré by.

#### **GABRIEL FAURÉ**

Barcarolles/Impromptus/Nocturnes/ Trois Romances sans Paroles/Mazurka in B flat Major Op32/Valse Caprice No.4 in A flat Major Op62 Kathryn Stott, piano Conifer Classics 75605 51751 2 2 CD SET (DDD/129.24)

 The titles Impromptus and Nocturnes suggest Chopin and Fauré did inherit the mantle of the Polish master, striving to explore the lyrical nature of the piano rather than, for example Bartok did, its percussive potential. But Fauré was Fauré, not a second Chopin. He wrote exquisitely for voice, his Verlaine settings La Bonne Chanson are the supreme example, and much of his piano music has a 'vocal' quality. Melody is everything, sometimes plaintive, sometimes rapturous, springing, soaring from figures developed in the bass and sustaining the overall texture even through the most intensive passagework. It is true there are moments when the invention flags a little, yet the constant feeling of spontaneity, even improvisation, cleverly disguises an astute and polished musical craftsmanship.

The most profound and searching of Faure's piano pieces are the Nocturnes, where eloquent melodic lines and sumptuous harmonies build to impassioned, ecstatic climaxes, the kind of romantic outpouring that appears at odds with Faure's perceived image of Gallic refinement. The He briefly explored Debussy's 'whole tone' system, and expressed an admiration for Wagner, travelling to Bayreuth to hear the Ring cycle.

But the dazzling keyboard pyrotechnics of Liszt, or the epic themes of Wagner were not for Fauré, who pursued a less adventurous but no less individual path of musical expression which yields quite different rewards. It is perhaps indicative of this individuality, some might say insularity, that Fauré joined his colleagues, Vincent d'Indy, **Emmanuel Chabrier and Georges** Bizet in founding the Societé Nationale de Musique Francaise which was dedicated to the furtherance of 'Gallic art'. To that end, as well as composing Fauré became a

Barcarolles, another form explored by Chopin, and the Impromptus are more extrovert works, but still devoid of empty rhetoric or virtuosity for its own sake. Some pieces have a lighthearted air, while others hint at an inner turbulence. Some of the



harmonic writing here is surprisingly stark, while the melodies are often merely sketched in with a few deft lines, in the manner of an artist who can fully convey an image with the utmost simplicity.

Getting to the heart of Fauré's piano music, understanding and then interpreting its very personal idiom calls for sensitivity as well as pianism. Curiously, three of the finest performers on record have been English: Albert Ferber on Saga, Paul Crossley on CRD and, here, Kathryn Stott on Conifer Classics who in this two-disc set offers what must be the distinguished teacher (one of his pupils was Maurice Ravel), and held the post of Inspector of Music for the provincial conservatoires (music schools) of France.

Fauré's restrained, refined style of composition is nowhere better heard than in his best-known work, the Requiem, begun in 1885 after the death of his father but not finished until 1900. Its sweet, angelic piety is emphasised by the fact that Fauré does not even set the Dies Irae (Day of Wrath) section of the liturgy. The impression is that the very idea of expressing wrath in musical terms was alien to him. But listen to his chamber and piano music and it is soon evident that Fauré is far from being all elegant, if soul-less, serenity.

best introduction to the keyboard works currently available (and notwithstanding the single-CD case, it is a two CD set with the second disc neatly housed on the underside of the tray).

Kathryn Stott immerses herself in the passion and lyricism of this music, but what makes her performances utterly absorbing is the range of subtle, luminous colours which she finds in each piece. Occasionally, in the F sharp minor Barcarolle for example, the playing can be just too intense for the music's sensibilities. but rather this than an excessive reticence. The playing has personality and character as well as intelligence and perception, and its wide dynamic range is captured in the full-bodied and truthful recording. Both CDs were engineered by Tony Faulkner, but in different venues: Walthamstow Town Hall for the first, and the hall of Haberdashers' Aske's School for the second.

As well as the pieces discussed above, Kathryn Stott also offers beguiling performances of the Mendelssohn-inspired Romances sans Paroles, miniatures of deceptive simplicity, the effervescent Mazurka Op32, and concludes her well-planned program with one of the graceful Valses Caprices, where Fauré's skill at decorating a sensuous melody with filigree harmonies and enticing rhythms is perhaps nowhere better heard: just one of the many pleasures waiting to be discovered here.

would have been most reluctant to leave their seats! Masters of The Royal Chapel, Isbon

spring of that year. It was the conductor, Arturo Toscanini, who recognising the special quality of the piece persuaded Barber to score the movement for string orchestra. And its quasi-liturgical feel, almost unbearable poignancy and air of resigned melancholy, have ensured the popularity of the Adagio ever since. Thankfully, it is fine enough to have endured such exposure unscathed. Here, it completes a valuable introduction to Samuel Barber at his finest, and provides a reminder of the sadly-unfulfilled conducting potential of Andrew Schenck.



#### **GEORGE FRIDERIC HANDEL**

Coronation Anthems: Zadok the Priest HWV258/The King shall rejoice HWV260/My heart is inditing HWV261/Let thy hand be strengthened HWV259\* Concerti a due cori Nos2 and 3#

Choir of Westminster Abbey\*; The English Concert; directors, Simon Preston\*, Trevor Pinnock# ARCHIV MASTERS 447 280-2 (DDD/72.25)

 Handel's four Coronation Anthems were written for the enthronement of King George II and his consort, Queen Caroline in Westminster Abbey on October 11, 1727. Four years earlier, Handel had been appointed 'Composer to the Chapel Royal', and assent to his application for English nationality had been one of the last parliamentary acts of the late King George I. However, Handel had a rival for the prestigious task of supplying music for the coronation, another 'Chapel Royal' composer, the English-born Maurice Greene. The story goes that it was the incoming monarch himself who decreed Handel rather than Greene should undertake the role. Whether George II based his decision on personal judgement or on the advice of others, we do not know, but it was a wise choice. Handel, supplied four anthem

settings of a splendour and nobility to match the occasion, which have subsequently become four of the jewels of the English choral repertoire.

One of the earliest of the 'period instrument' recordings, Simon Preston with the Westminster Abbey choir and the English Concert, has always remained among the leaders in the field. It now reappears on this reissue in the Archiv Masters label, sounding as fresh as ever. The recording, made in London's Henry Wood Hall in 1982, remains exceptionally fine: clear, spacious and with truthful balances.

As to the performances, the thrilling opening to Zadok the Priest typifies all four, the lightly sprung orchestral introduction leading to the radiant entry of the chorus. The Westminster choir does not have the weight of numbers of some other versions, but the immediacy and power of the singing quickly establishes that huge forces are not required to bring out the magnificence of these anthems. The result is exhilarating, and in no sense lacking the necessary grandeur.

On the surface, it might seem odd to couple music of such regal proportions with what is, essentially, incidental music, but the juxtaposition of the Coronation Anthems with two of the Concerti a due cori works rather well. It was customary for instrumental concertos to be played during the intervals in performances of Handel's oratorios, and evidence suggests the two works here served that role in the 1747-48 productions of Judas Maccabeus and Joshua.

The Concerti a due cori (Concertos for two (instrumental) choirs) are in fact for three groups of instruments: a string ensemble and two wind bands, each made up of two oboes, bassoon and (in the second and third concertos) two horns. For the most part, the music of the first two concertos consists of reworkings of earlier material, chiefly oratorio movements. Whether this was pure expediency on Handel's part, or a deliberate attempt to remind audiences of 'lollipops' from earlier works, we cannot say, but the chorus 'Lift up your hearts' from Messiah eminently suits its instrumental clothing.

Unlike its predecessors, the third concerto appears to consist largely of freshly-composed material, and fine music it is. The performances here come from another eighties London recording by the English Concert under Trevor Pinnock. The performances are lively and stylish, and you cannot but feel that, presented with 'interval music' of such quality, Handel's audiences MASTERS OF THE ROYAL CHAPEL, LISBON

Music by Carreira, Coelho, Guerrero, Alvarado, de Brito, Magalhaes and Anon Stephen Farr, organ A Capella Portugesa; conductor, Owen Rees HYPERION CDA66725 (DDD/62.50)

• In last month's issue, it was seventeenth century Venice, and a liturgical concert given by the girls of the Pieta under the direction of maestro Vivaldi; this month, we travel west to Lisbon for another splendid musical recreation. The year is circa 1635, the date, September 8, and the churches of the Portuguese capital are alive with music, for this is one of the major feast days of the liturgical calendar. They are celebrating the Mass for the Nativity of the Blessed Virgin Mary, and nowhere more magnificently than in the Royal Chapel.

Since 1580, Portugal had been annexed to Spain, and when the Spanish monarch, Phillip II, first visited Lisbon, he appears to have been much disappointed by the musical standards he found there, especially at the Royal Chapel. His displeasure was such that in 1592 he had statutes drawn up specifying the minimum numbers and standards of the musicians to be employed there. Today these documents supply an invaluable insight into the performing traditions of the Portuguese court during this period.

There was considerable 'musical traffic' between Madrid and Lisbon and several eminent Spanish musicians filled important positions at the Portuguese court, among them Diego de Alvarado, a Basque composer who had already been in the service of the Spanish royal family. In 1604, he was replaced as mestre de capella by a Portuguese musician, Manuel Rodrigues Coelho.

The most important figure however, was Filipe de Magalhaes who had joined the staff of the Royal Chapel around 1596. He succeeded to the post of mestre de capella in 1623, by then a fully-fledged composer in his fifties. He remained in charge of musical affairs at the Chapel until his retirement in March 1641. having published two volumes of vocal polyphony, a book of Magnificat settings and one of Masses. It is one of Magalhaes's Masses, the Missa O soberana luz (Mass O Sovereign Light) which forms the centrepiece of this reconstruction, and what rich and sensuous music it proves to be.

The performance of the Mass is augmented by a varied selection of other vocal music and organ pieces, all contributing to the Marian theme, including Magalhaes's only surviving motet, the sublimely expressive Commissa mea pavesco. Here the pathos of the penetential text is most effectively communicated by a striking, and for the period, radical use of dissonance. This dramatic and contrasting word-painting is repeated in Magalhaes' Mass setting, where passages of serene counterpoint are set against more animated and declamatory sections, full of sudden changes of mood, rhythm and scoring.

Much else here is no less beguiling to the ear: the celebrated five-voice offertory motet Ave virgo sanctissima by Francisco Guerrero, for example, first published in Paris in 1566. Here, the two soprano lines are cleverly and distinctively combined in canon throughout, and to telling effect.

Organ music served several roles during the celebration of Mass. It might serve merely as a processional accompaniment, or more importantly to mark moments of key importance in the ritual, such as the Elevation of the Host. Here that moment is conveyed by an anonymous organ piece, the only one extant in a Portuguese source specifically directed to be played at the Elevation. The instruction declared that music played at this point should be 'grave, devoto & suave' (serious, devout and gentle).

The sacred music of these Portuguese masters proves every bit as a vibrant, intense and enthralling as that of their contemporaries in Italy, Spain and northern Europe, and I trust the choir of A Capella Portugesa and the Hyperion label will continue to mine this rich and exciting vein of repertoire. Surprisingly enough, this superlative liturgical recreation is an all-British affair, recorded in Oxford quite beautifully by Tony Faulkner. The choir is sensitively directed by Owen Rees and his codirector of the A Capella Portugesa, Bernadette Nelson, contributes a fascinating and informative programme note. A first-class production.



#### DMITRI SHOSTAKOVICH Symphony No8 in C minor Op65

London Symphony Orchestra; conductor, André Previn DEUTSCHE GRAMMOPHON 437 819-2 (DDD/67.42)

• In the past, the combination of Previn and the LSO was responsible for many enduringly fine recordings, not the least of which was a superlative reading of Shostakovich's Fifth Symphony for RCA Victor. It was both pleasing and promising, therefore, to see the combination revived in the music of a composer with whom Previn clearly has an empathy. But the Fifth and Eighth Symphonies are quite different musical animals.

The Eighth is a work of epic proportions, one of two large-scale symphonies which Shostakovich composed during the darkest years of the Second World War, at least for the Soviet Union. The Seventh Symphony, the 'Leningrad' was composed as a tribute to the people of the composer's home city as both they and he endured the 900-day siege by the Nazis. It contains much finer music than is often acknowledged, but remains essentially a 'public' work.

The Eighth Symphony, however, seems to spring from an altogether deeper, more personal well. Astonishingly for a work of such length and complexity, the composition occupied Shostakovich for just forty days during 1943. The circumstances of its creation are painful to imagine: death and destruction are an ever-present threat; peace is still just a faint glimmer of light on an otherwise dark horizon. Yet Shostakovich's invention proved at its most fertile, doubtless because of the compulsion he felt to express his own deepest feelings at the time. The quotation of the motto theme from Tchaikovsky's Manfred Symphony supplies an immediate clue, a work based on the brooding, angst-ridden hero of Byron's poem.

The epic first movement evolves on a Mahlerian scale, though its vast, broadarched string melodies have a strong affinity to Bruckner. But in Shostakovich's Eighth, any moments of serenity have to be wrenched out of a bleak, brutal realism. The second movement, the musical equivalent of a tortured grimace, is Shostakovich at his most acidic and sardonic. In the ensuing allegro non troppo, that grimace is blown away in the musical equivalent of a blitzkrieg, a 500-bar onslaught as violent, ferocious and barbaric as the personal images it may have been intended to represent. Shostakovich never gave this movement any kind of programme, but the feeling that you are hearing the sickening crump of explosions and the whine of shells is inescapable. It was once wholly accurately summed up as a 'Toccata of Death'.

The violence and fury are then dissipated in masterly fashion, in a reflective, atmospherically scored largo. But you sense the tension and fear are far from entirely subdued. Shostakovich ends the symphony not with a triumphal call to arms, but with a tranguil expression of relief and release. This set of free variations is a considered summation, permitting itself just a hint of optimism. In so doing, it was probably a fairer reflection of Shostakovich's state of mind, than the symbolic message enshrined in the Seventh Symphony. It is this lack of a monumental conclusion to what, is a monumental work that has made the Eighth Symphony difficult to penetrate. Previn though, has achieved that here. His pacing of the long first movement is ideal, with an evident understanding of its structure that allows the climaxes to build to shattering effect. The second and third movements have the brutal impact intended, while the following largo - taken at a daringly slow tempo - has truly elegiac quality. The finale is equally well-judged, bringing to a conclusion what is a compelling performance of this mighty symphony. The final word of praise, though, must go the LSO, with virtuoso playing from every department of the orchestra. This is a Shostakovich recording to rank with the best, and could well go on to attain a similar status to Previn's celebrated version of the Fifth Symphony.

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## SOLID STATE

## THE ART OF ELECTRONICS, by P. Horowitz and W. Hill. £35

The definitive electronics book. The Art of Electronics is an ideal book for the beginner through to the engineer. Written in easy to understand English, each chapter takes you from basic first principles through to full design exercises and practical circuits.



#### THE ART OF LINEAR ELECTRONICS, by J. Linsley-Hood. £16.95

Concentrates specifically on analogue electronics for audio and goes into detail on obscure topics like the drawbacks of feedback, as well as its advantages. Covers mainly solid state but also includes valves. A must for serious enthusiasts and budding designers.



#### AUDIO ANTHOLOGIES

#### Audio Anthologies - When Audio Was Young

There are five volumes of the Audio Anthologies, listed below with a brief description and guide to their contents. They cover one of the most exciting and important eras of hi-fi, from the end of the second world war, through the introduction of stereo, magnetic recording, binaural recording and the FM Multiplex decoder. They contain many ground breaking circuits and theory covering all aspects of hi-fi design. A must for valve enthusiasts.



#### Volume One - May 1947 to December 1949

The first new audio amplifiers, tuners and speakers designed after the long delays of the Great Depression and World War II. **Summary of Contents:** 9.5watt, 5watt and 6.5 watt 6AS7G amplifiers, 30watt 300B amplifier, valve FM tuning indicator, 30watt 211 power amplifier, cathode follower amplifier using 6V6, an adaptation of the Williamson amplifier, valve phono preamplifier, several horn and reflex loudspeaker designs and much more.

#### Volume Two - January 1950 to July 1952

More great amplifiers, preamps, loudspeaker designs, and the first glimmer of the stereo revolution plus magnetic recording aids.

Summary of Contents: Ultra linear 6L6 design and operation of the Williamson, a direct coupled amplifier, Williamson type amplifier using 6A5s, 40watt 845 push-pull amplifier, valve phono and line preamps, valves and loudspeaker damping, design and construction of reflex and hom loudspeakers.

#### Volume Three - August 1952 to June 1955

Seven power amplifiers, eighteen preamps, twelve loudspeaker designs, including four horn types and binaural recording techniques.

**Summary of Contents**: Simple valve phono stage, transformerless amplifier using 6082, 20watt 5881 amplifier, 10watt 6V6 amplifier, stereo valve preamp, high quality valve phono stage, a preamp for the Williamson, low distortion tone control preamp, binaural or stereophonic?, transistor phono amp, corner hom loudspeaker, concrete hom loudspeaker.

#### Volume Four - July 1955 to December 1957

How to plan an audio system, twelve amplifiers and preamps, solid state techniques and circuits introduced and six loudspeaker designs.

Summary of Contents: 18watt 5881 amplifier, 4watt single-ended tweeter amplifier, budget 11watt amplifier, versatile bass/treble control, transistor theory, transistor preamp, transistor techniques, battery powered transistor phono preamp, loudspeakers explained.

#### Volume Five - January 1958 to December 1959



Stereo comes to full flower with four FM Multiplex decoder designs, seven power amps, eleven preamps, a commercial killer, five loudspeakers, and theory articles by Olson, Crowhurst and McProud.

**Summary of Contents:** Stereo valve multiplex decoder, 7watt EL84 amplifier, valve active crossover and 20watt treble amp/50watt bass amp., monaural, binaural, monophonic and stereophonic explained, heterodyne FM multiplex adapter, transistor preamp, 60watt EL34 amplifier, high power audio amplifiers, hi-fi loudspeaker enclosure.

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Swinging bluesy jazz from two masters of the genre. Here we have one of the Ellington small groups in outstanding form playing. 'Basin' Street Blues', 'St. Louis Blues', Royal Garden Blues' and more. £25



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## **MEASURED PERFORMANCE**

## **AMPLIFIERS**

#### AUDIOLAB 8000Q

The 8000Q is an all-direct coupled preamplifier which will, in theory, pass d.c. It possesses sophisticated protection circuits to prevent this occurring, should a d.c. input to presented by a signal source. This ability helps give it an extended subsonic response to 3Hz. High frequencies roll off above 42kHz.

I was a little surprised to see some high frequency distortion at 10kHz on a (high) 10V output signal, as shown in our analysis. However, at 0.01% it was at a low level. The 8000Q needs 180mV in for 1V out, giving a conventional sensitivity value of 180mV.

Noise was very low -117dB below full output and separation high at 101dB. NK

CD/tuner/aux.	
Frequency response	3Hz-42kHz
Separation	101dB
Noise	-95dB
Distortion	0.004%
Sensitivity	180mV
Overload	13V out
Gain	x5.5 max



#### HARMAN KARDON HK610

The HK610 produced a healthy 50watts into 80hms, which increased usefully to 72watts into 40hms, so although a budget design, it has enough output to go loud, even with 'speakers of mediocre sensitivity (i.e. less than 88dB).

Harman design their amplifiers to have a wide bandwidth, this one having a measured frequency response (-IdB) that stretched from a low 3Hz right up to 82kHz.

Distortion was low at all frequencies and output levels, not exceeding 0.03% even when close to full output at high frequencies, an arduous test. Low noise and wide channel separation figures were returned, and a healthy input sensitivity of 200mV is enough to cope with nearly all

sources. NK	
Power	50watts
CD/tuner/aux.	
Frequency response	3Hz-82kHz
Separation	103dB
Noise	-99dB
Distortion	0.01%
Sensitivity	200mV
dc offset	4mV



#### **VRR ADUR**

The VRR has switchable push-pull and singleended modes. Push-pull gives highest gain and output power, giving a modest 12.5watts for 1% distortion in the midband (i.e. IkHz). This dropped to 6watts in single-ended mode, for the same output conditions. Input sensitivity stayed at a high 220mV for full output, allowing the VRR to work from most modern sources without any need for a preamp with gain (e.g. passive preamp).

Whilst distortion at low levels was predominantly second harmonic in both modes, much above 5watts or so higher odd-order distortions (i.e. third, fifth, etc) started to appear and grow to significant levels, which is not a good sign and not a feature of a top rate design. Clipping in single-ended mode was strongly asymmetric, suggesting working point error or bad valve selection.

The VRR peaked by +4dB in the bass (12Hz) and output was limited, as usual with valve amps, by strong distortion caused by transformer core saturation. **NK** 

12/6watts
1200112.000
25Hz-48kHz
-85dB
03%
200mV

#### Distortion



#### **DENSEN DM-10**

The Densen DM-10 produced a sturdy 69watts into  $8\Omega$  and 115watts into a  $4\Omega$ load, so it will go loud even with insensitive loudspeakers and can cope with awkward loads. The DM-10 is a wide bandwidth design, response stretching from 7Hz to 100kHz (1dB limits). This allows it to reproduce subsonics from CD and at the top end should give it a bright and clear sound.

Distortion was considerably higher than the best of solid-state, but remained predominantly innocuous 2nd harmonic right up to clip. The DM-10 has low noise at -100dB, a good result. Sensitivity was healthy enough for all but the lowest output sources at 320mV, but DC offset a little high at 28mV which may displace 'speaker cones slightly. DB

Power	69watts
CD/tuner/aux.	
Frequency response	7Hz-100kHz
Separation	60dB
Noise	-100dB
Distortion	0.15%
Sensitivity	320mV
dc offset	28mV

#### Distortion



Continued on page 107

## SOUND-BYTES high density filler material for hi-fi speaker stands





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As any hi-fi specialist will tell you, to get the maximum benefit from your loud-speaker / speaker stand combination, you should fill your stands with a su table material. Until now, the most common medium has been sand or a sand-based alternative. The other option was leadshot that, although very dense, is extremely expensive and difficult to source.

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## **CD PLAYERS**

#### DPA DIGITAL RENAISSANCE

The new Renaissance CD player uses DPA Digital's discrete I-bit convertor. Like the Enlightenment DAC tested in the March '95 issue of Hi-Fi World, it shares similar distortion characteristics. Distortion is high and widely spread across the audio band, but is mainly non-harmonic, i.e. unrelated to the IkHz test tone. Being inharmonic this is likely to be audible.

The frequency response of the Renaissance player has a slight bass lift and gentle treble roll off - usually a good sounding characteristic with CD. Dynamic range is limited to 90dB because of the high distortion at -60dB (EIAJ test), but noise is low, separation respectably wide and output healthy at 2.4V. **DB** 

Frequency response	4Hz-21.4kHz	
Distortion (%)		
-6dB	0.02	0.02
-30dB	0.04	0.05
-60dB	1.11	1.69
-90dB	80.8	49.0
-90dB dithered	59.3	28.7
Separation (dB)	left	right
IkHz	75	71
20kHz	64	69
Noise		99dB
with emphasis		103dB
Dynamic range		90dB
Output		2.4V

#### CAMBRIDGE DACMAGIC I

This was a bit of an eye opener in measurement terms. At the price there is absolutely nothing you can fault. The frequency response rolls off gently in the treble to give a sound free from sharpness, and there is a moderate amount of bass lift for solid lows.

Distortion was extremely low too; at -30dB there is just a small amount of 2nd harmonic and some higher order distortion and at -60dB the super low 0.2% figure gives rise to one of the widest dynamic ranges I've ever measured at 115.5dB (EIA) test).

Elsewhere the DacMagic I continues to measure well with wide separation, low noise and a high output of 2.9V which allows extra headroom for users of passive preamps. **DB** 

Frequency response Distortion (%)	4Hz	4Hz-20.8kHz	
-6dB	0.006	0.006	
-30dB	0.01	0.02	
-60dB	0.2	0.2	
-90dB	29.1	29.0	
		4.9	
-90dB dithered	4.7		
Separation (dB)	left	right	
IkHz	125	125	
20kHz	113	114	
Noise		-106dB	
with emphasis		-106dB	
Dynamic range		115.5dB	
Output		2.9V	

#### ORELLE DA-188

The Orelle DA-188 has an interesting frequency response characteristic. From around IkHz upwards there is a gentle lift which will give a brightness to its sound. Below this, it is counteracted by a corresponding bass lift, which will give the DA-188 solid bass too, so subjective tests should prove interesting.

Rising treble combined with high distortion can often result in a sharp sound. The DA-188 isn't too bad here, having reasonably low distortion at -30dB, a level picked to represent a typical music signal. It is predominantly odd order though, so a sharpness or coarseness may result.

Elsewhere the DA-188 measures competently, showing good engineering. DB

Frequency response	4Hz	4Hz-21.5kHz	
Distortion (%)			
-6dB	0.003	0.003	
-30dB	0.04	0.03	
-60dB	1.08	0.86	
-90dB	32.9	33.4	
-90dB dithered	12.5	14.2	
Separation (dB)	left	right	
IkHz	123	122	
20kHz	97	96	
Noise		108dB	
with emphasis		110dB	
Dynamic range		101dB	
Output		2.2V	



Frequency Response



Distortion 0.03% Very low distortion o very low distortion very low

Frequency Response



Distortion



Frequency Response

Continued on page 109

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# LOUDSPEAKERS

#### **TANNOY PROFILE 637**

Tannoy's Profile 637s show good integration between midrange and treble, which will give them a neutral balance in this area, plus good detailing. But between 600Hz - IkHz there is a dip of around 3dB which may remove some warmth and projection from the lower midrange.

The 637s are very sensitive, pushing out 90.5dB of sound pressure at Im with a nominal watt (2.83V) pink noise signal. But they have a low overall impedance of  $4.3\Omega$ , so an amplifier capable of supplying plenty of current must be used for balanced results. Below IkHz impedance starts to fall rapidly towards 2.5 $\Omega$ , a very low figure that many amplifiers will struggle with. For this reason, I'd recommend amplifiers capable of producing at least 50 watts into  $4\Omega$  and plenty of ability to supply high current into low impedance loads. DB

#### **Frequency Response**





# TUNER

#### **TECHNICS ST-GT350**

Technics' budget ST-GT350 has falling treble, as our analysis shows. This will give either a warm sound or a dull one, depending upon extent. Only listening tests can tell.

Otherwise, the ST-GT350 measured well enough for the price, with low distortion, good selectivity and sensitivity, little spurious output (19kHz pilot and 38kHz subcarrier), adequate channel separation and hiss low enough for all except the most critical Radio 3 listeners. NK

#### **AUDIOVECTOR 6**

The Audiovector 6 loudspeakers use Focal drivers, known for their high tech. materials, high efficiency and quality. They have a smooth and even response which shows quality engineering. There is a gentle lift through the midrange which will help them project vocals well, and bass goes deep.

Sensitivity of the 6s measured 91.5dB at Im with a nominal watt (2.83V) of pink noise. Although this means they will go louder than most for the same volume control setting, they have a lower than average impedance of  $6\Omega$ , meaning current and therefore power will be consumed. The impedance curve has a strong dip to around  $2\Omega$  at 500Hz, so they will draw most current at this point, making them unsuitable for valve amplifiers. I'd recommend a sturdy 40watt solid-state power amplifier for best results DB

#### **UKD DIVINA**

The Divinas have a reasonably smooth overall frequency response with fine treble extension. Below this there is a shallow, but wide dip which may well remove some projection from vocals and lead instruments. The bass appears to start rolling off smoothly quite early on, but the Divinas have a rear firing port which will boost level up. Just listening to the pink noise test signal suggested that the Divinas will have deep and powerful bass.

I was surprised at their low sensitivity of 84dB measured at 1m with a nominal watt (2.83V) pink noise signal. But they have a very high overall impedance. I measured 17 $\Omega$ , meaning they will draw just under half the current of a typical  $8\Omega$  load. Impedance is smooth too, and stays well above  $8\Omega$ . This means that the Divinas will work well with valve amplifiers, even zero feedback designs, but will require at least a 50watt amplifier for decent volume levels. DB

#### **Frequency Response**





Frequency response	10Hz-5kH
Stereo separation	340
Distortion (50% mod.)	0.2
Hiss (CCIR)	-690
Signal for minimum hiss	630µ

#### Hz dB 2% dB uV

#### Distortion



Frequency Response



Impedance



Selectivity (at 0.4MHz)	78dE
Sensitivity	
mono	3µ\
stereo	30µV

#### Frequency Response



Continued on page 111



World Radio History

### test results

# CARTRIDGES

#### **GOLDRING EXCEL**

Tracking force	1.5-2gms
Weight	8.5gms
Vertical tracking angle	30degrees
Frequency response	20Hz-20kHz
Channel separation	23dB
Tracking ability (300Hz)	
lateral	63µm
vertical	45µm
lateral (IkHz)	18cms/sec.
Distortion (45µm)	
lateral	1%
vertical	4.3%
Output (5cms/sec rms)	0.65mV
Channel imbalance	0dB

#### **Frequency Response**



#### LINN KLYDE

Tracking force	1.55-1.75gms
Weight	Bgms
Vertical tracking angle	30degrees
Frequency response	20Hz-20kHz
Channel separation	24dB
Tracking ability (300Hz)	
lateral	60µm
vertical	45µm
lateral (1kHz)	15cms/sec.
Distortion (45µm)	
lateral	0.75%
vertical	8.5%
Output (5cms/sec rms)	0.25mV
Channel imbalance	0dB

#### **Frequency Response**



#### LYRA LYDIAN

Tracking force	1.8-2gms
Weight	10.5gms
Vertical tracking angle	24degrees
Frequency response	20Hz-20kHz
Channel separation	33dB
Tracking ability (300Hz)	
lateral	63µm
vertical	45µm
lateral (IkHz)	18cms/sec.
Distortion (45µm)	
lateral	0.8%
vertical	2.8%
Output (5cms/sec rms)	0. <b>37</b> mV
Channel imbalance	l dB

#### **Frequency Response**



#### **ORTOFON MC30 SUPREME**

Tracking force
Weight
Vertical tracking angle
Frequency response
Channel separation
Tracking ability (300Hz)

2gms 10.7gms 25degrees 20Hz-20kHz 36dB

lateral	70µm
vertical	45µm
lateral (IkHz)	20cms/sec.
Distortion (45µm)	
lateral	0.95%
vertical	3%
Output (5cms/sec rms)	0.7mV
Channel imbalance	0dB

#### **Frequency Response**



#### VAN DEN HUL MCIO

Tracking force	1.35-1.5gms
Weight	7.5gms
Vertical tracking angle	27degrees
Frequency response	20Hz OkHz
Channel separation	34dB
Tracking ability (300Hz)	
lateral	63µm
vertical	45µm
lateral (1kHz)	l6cms/sec.
Distortion (45µm)	
lateral	0.5%
vertical	4.3%
Output (5cms/sec rms)	0. <b>75m</b> ∨
Channel imbalance	0. <mark>5dB</mark>

#### **Frequency Response**



# **CASSETTE DECK**

#### **YAMAHA KX-580**

The Yamaha had accurately adjusted head azimuth and replay equalisation, giving a flat replay frequency response, so the deck produces recordings compatible with other players, It also replays prerecorded tapes properly, without dullness, and Play Trim very usefully adds 3dB variation at 0kHz.

Chrome-bias tape (TDK SA) tuned reasonably flat, with some upper treble loss, correctable manually. Ferric tape (TDK AR) tuned absolutely flat and gave the highest recording levels.

The combination record/replay head managed just + IdB on chrome and metal tapes, and suffering 8% bass distortion on metals. Recording levels must be kept to indicated maximum (i.e. 0VU) and Dolby S used to suppress hiss.

Although a single-capstan type, the transport worked well, exhibiting just one major flutter peak. Otherwise it had stable speed and low wow. NK

REPLAY (prerecorded tape	s)
Frequency response (-2dB)	30Hz-18kHz
Speed accuracy	+0.3%
Hiss (70uS, Dolby out)	-60dB
RECORDING (blank tapes)	
Frequency response (IEC Pr	imary Refs.)
ferric (IECI)	30Hz-15kHz
chrome (IECII)	30Hz-18kHz
metal (IECIV)	30Hz-19kHz
Separation (1kHz)	-50dB
Distortion (315H)	1.7%
Hiss (70uS, Dolby out)	-57dB
Speed variations (DIN total	0.06%
Flutter energy (3-3.13kHz)	-22dB
MOL/SAT (IEC Refs)	315/10k
IEC I (ferric)	3.5dB/-5.5dB
IECII (chrome)	ldB/-5dB
IECIV (metal)	0.7dB/2dB



World Radio History

Test Tone

# SERIOUS KIT

#### **NEWSLETTER NO 2**

LAST MONTH'S NEWSFLASH SPOKE MAINLY OF MY RECENT EXPERIENCE WITH AUDIONOTE UK'S OTO S.E. AMPLIFIER. UNDOUBTEDLY <u>THE</u> DEFINITIVE £1500 VALVE INTEGRATED PRESENTLY AVAILABLE!

THIS MONTH WE WILL DISCUSS THE MORE POWERFUL SORO S.E., MEISHU 300B AMP AND A MOST MUSICAL RANGE OF DACS MANUFACTURED BY AUDIONOTE U.K.

IT HAS BEEN NOTED DURING MANY REVIEWS THAT LOW POWER VALVE AMPS ARE NOT UP TO DRIVING THE MAJORITY OF TODAY'S CURRENTLY AVAILABLE LOUDSPEAKERS. HERE AT SERIOUS KIT I AM FINDING THIS NOT TO BE THE CASE! RECENTLY ONE CLIENT EXPRESSED INTEREST IN SOME NEW AMPLIFICATION FOR HIS SONUS FABERS. ON SPENDING THE NEXT WEEK OR SO, TRYING VARIOUS 'MUSCLE' AMPLIFIERS AT HOME, THE CLIENT MADE HIS DECISION. A MERE 9W AMPLIFIER DID ALL & MORE THAN HE HAD IMAGINED POSSIBLE. THE AMPLIFIER CHOSEN WAS THE MEATY, BEATY, BIG AND BOUNCY AUDIONOTE MEISHU 300B. NOW, PHYSICALLY THIS IS A LARGE AMPLIFIER, OF THE FULLY INTEGRATED TYPE, AVAILABLE AS LINE ONLY (OR MM DISC INPUT OPTION)! THERE IS OF COURSE A POWER AMP VERSION ONLY, (THE P3) WITH VOLUME CONTROL FOR THOSE WHO ONLY WANT TO RUN A CD PLAYER. BACK TO BASICS HERE, NO EXTERNAL PRE-AMP NECESSARY, WITH INTERCONNECTS THAT MAY COST AS MUCH AS SOME COMPLETE SYSTEMS. YOU SEE, AUDIONOTE DEVELOP THE INTEGRATED SYSTEM FIRST, & THEN SPLIT THE VARIOUS GAIN STAGES & POWER SUPPLIES TO SUIT THE REQUIREMENTS OF THE SYSTEM OR POCKET OF THE LISTENER. THUS ALLOWING THE RIGHT CHOICE TO BE AVAILABLE. HIGH END PRODUCT FOR THE MASSES!

I AM CURRENTLY AT THE TIME OF WRITING USING THE MORE POWERFUL SORO S.E. AMPLIFIER (18W) INTO MY PRO-AC RESPONSE 3.5 LOUDSPEAKERS, WITH QUITE PHENOMENAL RESULTS. THE 3.5'S ARE A LARGISH FLOOR STANDER, THAT WHEN DRIVEN CORRECTLY CAN BE SO DIMENSIONAL AND 3-D, SO SWEET IN THE TREBLE, LIQUID IN THE MIDRANGE AND THUNDEROUS IN THE BASS REGION, THAT PERHAPS THEY



COULD BE MISTAKEN FOR SOMETHING MUCH MORE EXPENSIVE (ESPECIALLY IN A BLIND LISTENING TEST!). THE BOTTOM LINE, HEAR THESE SPEAKERS DRIVEN BY AUDIONOTE AMPLIFIERS FOR AN AMAZING "LOUDSPEAKER, WHAT LOUDSPEAKER" EXPERIENCE!

PERHAPS, IN TERMS OF AMPLIFICATION WE HAVE INDEED "FORGOTTEN MORE THAN WE LEARNED" BUT AUDIONOTE ARE DEFINATELY FROM THE OLD SCHOOL OF CIRCUIT TOPOLOGY, USING TODAYS HIGHER QUALITY COMPONENTS. I'LL BRING TO YOUR ATTENTION, THAT ALL OF THE COMPANYS NEW AMPS USE VALVE, POWER RECTIFICATION & NOT SOLID STATE AS MANY OTHER MANUFACTURERS OF SO CALLED VALVE AMPLIFIERS.

CERTAINLY NOT "OLD SCHOOL" ARE THE RANGE OF AUDIONOTE DIGITAL TO ANALOGUE CONVERTERS THE DAC ONE SIGNATURE @ £875- HAS TO BE THE DIGITAL BARGIN OF THE YEAR. USING THE BURR-BROWN CHIP SET, AT THE DIGITAL STAGE, AND YOU GUESSED IT, A PAIR OF TUBES ON THE ANALOGUE OUTPUT STAGE. THE RESULT IS MUSIC. EMOTION, AND THAS ELUSIVE QUALITY THAT MAKES YOU WANT TO LISTEN ALL THE WAY THROUGH, DISC AFTER DISC. I RECOMMEND STRONGLY, THAT IF YOU SUFFER FROM DIGI-TITUS, LINK UP WITH ONE OF THESE BABIES IN YOUR SYSTEM FOR SMOOTH, DIMENSIONAL, ADDICTIVE LISTENING REMEMBER, SYNERGY IS THE SINGLE MOST IMPORTANT FACTOR, IN CREATING THE 'PERFECT' ALL ROUND MUSIC SYSTEM. RING SERIOUS KIT TODAY TO BOOK YOUR APPOINTMENT TO EXPERIENCE MUSIC REPRODUCTION AT IT'S **MOST NATURAL!** 

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#### Blue Note New Title @ 9.99

Lou Donaldson - Everything I Play Is Funky Grant Green - Carryin' On John Patton - Understanding Ronnie Foster - Two Headed Freak Various - Lost Grooves (Rare and previously unissued slices of funk from the vaults of blue note 67-70) John Patton - Boogaloo Donald Byrd - Kofi Lou Donaldson - the Scorpion (Live) Lonnie Smith - Live At The Club Mozambicue

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	AT 450E	£57.00	£34.80	BSR	ST 3/8/10/12		£2.
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	AT OC 5 AT OC9	£125.00 £216.00	£150 D0*	Dual Goldring	ON 145/155/165/E, G808/820/850 (D*1		£12.5
Depon	OL 110	£55.00	252.00*	duidning	G800 Sup E. G100		£12.
	DL 160	£85.00	558 00°	Hitachi	0S-ST 7/12/14/15/		£8.1
	DL 304	£180.00	£155-00*		0S-ST 5/13/23/24/		£10.1
Goldring	ELECTPA 1006	£24.00 £44.00	£16.00 £29.00	JVC Kanwood	DT 33/35/36/45/55/ N 47/48/51/53/60%		£8.0 £8.0
	1012 GX	58.00	£29.00 £30.00	(Trio)	N 35/37/43/45/56/5		£10.0
	1022 GX	£76.00	£48.00	National	EPS 23/24/25/80.3	3/51 CS/270 D	£8.0
	1042	£94.00	£61 00	(Technics)			£8.I
	EROICA (LX/H)	£90.00	£80.##*	Ortoton	P30 E(upgrad+), EF FF 15/VMS 10/20 E		£12.
- Hill Control	TAXABLE IN CO.	THIS PARE UPS	AM YOUR	Philips	GP 371/400/7%0/40		E8.0
	CARLENCE FLR	A Local Ruspice			GP 330/370/401/40	11 11/412 11	£10.1
				Pioneer	PN 210/220/240.KE		£8.I
Negapka	MP11	\$25.00	£12.50	Sansul	SN-27/28/29/53/34 ST 8D/10D/15J/G6/		1.82 1.82
regauna	MP 11 Epron	N/A	£26.00	Sanvo	ST G 8/9/10.ST 78/		£8.0
	TS 10	N/A	£20.00	(Fisher)	STY 104/111/116/1		£8.I
	TS 11 TS 12	£63.00 £72.00	£32.00 £36.00	Sharp	N 15-6/C/G,N-91 G,		1.83 1.013
Ortollon	OM10. 0MP10	£25.00	£18.00	Snun	N 44 E.N 70 EJ.N 7 N 15 E N 95 ED/EJ.		£12.
	OM20	£54.00	£31.50	Sony	ND 133/134/* 42/15	60/155/200 G	£8.0
	OM30	£72.00	£58.00		NE 115/143/148/15		£10.
	OM NICLUB S	£29.00 £29.00	£18.00 £19.00	Toshiba	N 53/55/60 DY N 6	2/292,N 71/290	£8.
	520	£49.50	135.00		LAND AND A	AVEC ALLE OF T	
	530	£76.00	257.00		ORH STYLUS CAN DA		m
	MC1 Furtio MC3 Turtio	£54.00 £99.00	£45.00° £#2.50°	RECON	AMENDED REP: ADEM		USAGE
	MC 10 Super	\$76.00	\$55.00				1
	MC 15 Super	£99.00	£52.50°			1000	1
	MC 10 Supreme	£200.00	£150.00*	PROFESSI	ONAL/DJ ITEMS	DJ PAC	STYLI
	MC 2D Supreme MC 3D Supreme	£315.00 £382.00	£236.00*** £384.00*	Briefen	CM Pro S	£40.00	£15.
Shure	VN 35 MR	(V15II)	£63.00		Concorde Pro S	£54.00	£15.
	VN 45 MR	(V15 IV)	60.083		C / Nightclub 4	£54.00	£18.
	V15 V MR	N/A.	£130 00 £18 00		CM Nightclub E Conc Nightclub S	£58.50 £75.00	£21. £18.
	N 75-3 (78rpm)	n/A			Conc Nantclub S	\$7.00	£10. £21.
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	050 000 1 . 5			Presentatio	In Box	CARTRIDGE F20 00	STYL
Shure Altai	SFG.2Stylus Ford Carthride Alignm		£18.00 £5.00	Ortoton	CIM Pro S CIM Nightclub E	£20.00 £33.00	£15. £21.
Sontra	Anti-State Carbo		£9 00		Conc Night-lup S	£48.00	£18.
Audio	Universal Headsh	ell c/w Leads	£8.50	Stanton	-00 AL Disco	£30.00	£18.
Technica Deteter	ANT-5.44 Inner E	ar Stereophones	£16.60 £5.60		580 ALX DISCH	£44.00 £54.00	E32.
Ortoton	T Forte Gauge		1.5.60		SOU ELA DISCO	134.00	2.39.
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World Radio History

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	NOW	LIST
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Clements Loudspeakers		
300Si x/d	£250	£595
400Si x/d	£395	£695
800Si x/d	£595	£1095
Reference 7 x/d	£1200	£3750
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VALVES         OIL FILLED CHOKES         4UF         800V         £12           65N7 U.S.A.         £5 co         16H 80MA         £15         .25UF         1000V         £8           300B CHINA         £50 co         10H 180MA         £20         .5UF         1000V         £8           EL34 CHINA         £10 co         10H 75MA         £15         .5UF         1000V         £8           KT66 CHINA         £10 co         10H 75MA         £15         .5UF         1000V         £8           KT66 CHINA         £10 co         10H 75MA         £30         .5UF         1000V         £8           KT88 CHINA         £10 co         10H 75MA         £30         .5UF         1000V         £8           CATAR CHINA         £20 co         10H 350MA         £30         .5UF         COVERED WIRE VARIOUS         .5UF           GZ34 MULLARD         £15 co         16H 120MA         £20         SECONDARY 325-0-325 200MA         COVERED WIRE VARIOUS         .2UF 8AND COLOUS         .2UF 8AND COLOUS	-	ussex	Surpl	us T	ATION ROAD, HORSHAM, V elephone: (0403) 251302 Test Equipment • Componen Electromechanical • Mechanic	Fax: (0403) 270339 ts • Accessories
65N7 U.S.A.       £5 eo       16H 80MA       £15       .25UF       1000V       £8         3008 CHINA       £50 eo       10H 180MA       £20       .5UF       1000V       £8         EL34 CHINA       £10 eo       10H 75MA       £15       .5UF       1000V       £8         KT66 CHINA       £10 eo       10H 75MA       £15       .5UF       1000V       £8         KT86 CHINA       £10 eo       10H 350MA       £35       OIL FILLED H.T. TRANSFORMERS       SUVER PLATED, P.T.F.E.         GZ34 MULLARD       £15 eo       16H 120MA       £20       SECONDARY 325-0-325 200MA       COVERED WIRE VARIOUS         GZ37 MULLARD       £7 eo       16H 150MA       £25       5V 3A       £35eo       SIZES AND COLOURS         GZ33 BUIBOUS       £13 eo       5H 200MA       £15       SECONDARY 325-0-325 250MA       WITH DATA BOOK TESTED         ECC32 MULLARD       £12 eo        SECONDARY 220-220/240       AVO CTI 60 VALVE TESTER, WITH DATA BOOK TESTED         EF86 MULLARD       £8 eo       1UF 1500V       £8       PRIMARY 10/0/200/220/240       E5 POSTAGE TO BE ADDED TO         ECC32 MULLARD       £8 eo       1UF 1500V       £8       PRIMARY 200/210/220/240/250       £5 POSTAGE TO BE ADDED TO         ECC8	VALVES		OIL FILLED C	HOKES	4UF	800V £12
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ECC82 MULLARD       £8 ed       .1UF 1500V       £8         ECC83 MULLARD       £10 ed       1UF 600V       £6         E88CC MULLARD       £10 ed       2UF 600V       £6         EF37A MULLARD       £8 ed       4UF 600V       £6         6380 VARIOUS       £10 ed       8UF 600V       £6         6080 VARIOUS       £10 ed       8UF 600V       £8         A2900 G.E.C.       £20 ed       8UF 800V       £10         FM34 MULLARD       £10 ed       8UF 1000V       £12         SECONDARY 230V ONLY       £20 ed       8UF 1500V       £12			OIL/ PAPER CA	APACITORS		
ECC83 MULLARD       £10 ea       1UF 600V       £6       PRIMARY 200/210/220/230/240/250 £5 POSTAGE TO BE ADDED TO         E88CC MULLARD       £10 ea       1UF 600V       £6       SECONDARY 250-0-250 50MA       UK ORDERS.         EF37A MULLARD       £8 ea       4UF 600V       £6       6.3V 1A £25 ea       VAT AT 17.5% TO BE ADDED         6080 VARIOUS       £10 ea       8UF 600V       £6       0VERSEAS POSTAGE AT COST.         A2900 G.E.C.       £20 ea       8UF 800V       £10       PRIMARY 230V ONLY         EM34 MULLARD       £10 ea       8UF 1000V       £12       SECONDARY 310-0-310 160MA         ECC88 FOREIGN       £4 ea       8UF 1500V       £30       6.3V 1A/6.3V 3A/6.3V 4A			11 E 1 500V	00		
E88CC MULLARD         £10 ea         2UF 600V         £6         SECONDARY 250-0:250 50MA         UK ORDERS.           EF37A MULLARD         £8 ea         4UF 600V         £6         6.3V 1A £25 ea         VAT AT 17.5% TO BE ADDED           6080 VARIOUS         £10 ea         8UF 600V         £6         0VERSEAS POSTAGE AT COST.           A2900 G.E.C.         £20 ea         8UF 800V         £10         PRIMARY 230V ONLY         TO TOTAL AMOUNT ORDERED.           EM34 MULLARD         £10 ea         8UF 1000V         £12         SECONDARY 310-0-310 160MA         ECC88 FOREIGN         £4 ea         8UF 1500V         £30         6.3V 1A/6.3V 3A/6.3V 4A					PRIMARY 200/210/220/230/240/25	50 £5 POSTAGE TO BE ADDED TO
EF37A MULLARD         £8 ea         4UF 600V         £6         6.3V 1A £25 ea         VAT AT 17.5% TO BE ADDED           6080 VARIOUS         £10 ea         8UF 600V         £6         OVERSEAS POSTAGE AT COST.           A2900 G.E.C.         £20 ea         8UF 800V         £10         PRIMARY 230V ONLY         TO TOTAL AMOUNT ORDERED.           EM34 MULLARD         £10 ea         8UF 1000V         £12         SECONDARY 310-0-310 160MA         ECC88 FOREIGN         £4 ea         8UF 1500V         £30         6.3V 1A/6.3V 3A/6.3V 4A						UK ORDERS,
6080 VARIOUS         £10 ed         8UF 600V         £8         OVERSEAS POSTAGE AT COST.           A2900 G.E.C.         £20 ed         8UF 800V         £10         PRIMARY 230V ONLY         TO TOTAL AMOUNT ORDERED.           EM34 MULLARD         £10 ed         8UF 1000V         £12         SECONDARY 310-0-310 160MA           ECC88 FOREIGN         £4 ea         8UF 1500V         £30         6.3V 1A/6.3V 3A/6.3V 4A					6.3V 1A £25 ea	VAT AT 17.5% TO BE ADDED
A2900 G.E.C.         £20 ea         8UF 800V         £10         PRIMARY 230V ONLY           EM34 MULLARD         £10 ea         8UF 1000V         £12         SECONDARY 310-0-310 160MA           ECC88 FOREIGN         £4 ea         8UF 1500V         £30         6.3V 1A/6.3V 3A/6.3V 4A						
EM34 MULLARD         £10 ea         8UF 1000V         £12         SECONDARY 310-0-310 160MA           ECC88 FOREIGN         £4 ea         8UF 1500V         £30         6.3V 1A/6.3V 3A/6.3V 4A	A2900 G.E.C.				DDIALADY 2200 ( ON UN	TO TOTAL AMOUNT ORDERED.
ECC88 FOREIGN         £4 ea         8UF 1500V         £30         6.3V 1A/6.3V 3A/6.3V 4A						
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World Radio History



## HIGH END AUDIO BOUGHT/SOLD EXCHANGED ISUMEZ

	CALE		LIST
	SALE		
MARK LEVINSON ML7A PREAMP MINT CAMBRIDGE CD1 CD PLAYER HEAVILY MODIFIED WITH	2995	S/HAND	£6800
MASSIVE POWER SUPPLY SUPERB	£1 295	S/HAND	PHONE
METAXIUS CARUS INTEGRATED AMPLIFIER CHROME - MINT PINK TRIANGLE PIP 2 MK2 VISHAY MODIFIED PREAMP - MINT	£595 £1,795	EX/DEMO S/HAND	£895 £4 500
CARY CAD 5500S PREAMP PHONO & PROCESSOR - MINT	2995	EV/DEN O	£2,250
MARK LEVINSON ML2 REFERENCE MONO POWER AMPS. BALANCED SUPERB V G C	£3,995	S/HAND	£15,000
MARK LEVINSON ML3 POWER AMP. MINT	£3,995	S/HAND S/HAND	£8,250 £2,500
CONRAD JOHNSON MV75 VALUE POWER AMP - MINT OCTAVE RESEARCH ORI POWER AMP. V.G.C	£1,295 £1,795	S/HAND	£2,500 £4,500
CELLO AMATI SPEAKERS TWIN MOUNTED PAIR IN OAK ON	\$5,500	S/HAND	£20,000
GRANITE STANDS SUPERB V G C MERIDIAN ARGENT 3 SPEAKERS ROSEWOOD - MINT	£995	NEW	£1,495
PROAC PROSTATIC ELECTROSTATIC SPEAKERS RARE V G C SNELL A3 SPEAKERS WALNUT V G C	£1 995 £4,495	S/HAND S/HAND	26,995
METAXUS IRAKUS MK2 POWER AMP CHROME - MINT	£895	EV/DEMO	£1,500
AUDIO RESEARCH D125 KT90 VALVES AMP MINT METAXUS CHARISMA PREAMP CHROME - MINT	£2,250 £895	S/HAND £ EX/DEMO	4,650 £1,500
EQUATION ZERO SPEAKERS PIANO BLACK - MINT	2695	S/HAND	£1 300
CARY 300B VALVE MONO POWER AMPS 40 WATT TRIODE HELVIS CYALENE ARM - MINT	£2,995 £795	EX/DEMO S/HAND	£4,800 £1,400
AUDIO RESEARCH M300 MK2 VALVE MONO AMPS - MINT. CABSSE IROISE MC SPEAKERS CHERRYWOOD - MINT	£4,995 £1 995	S/HAND EX/DEMO	£12,000 £2,700
CABSSE IROISE MC SPEAKERS CREAN TWOOD - MINT	21 300	0000000	
NEW IN THIS MONTH MUSICAL FIDELITY 3A PREAMP MINT	£225	S/HAND	£400
RESTEK CHALLENGER INTERGRATED AMP MINT NEW	£799		
B& W ACTIVE 1 SPEAKERS OAK & STANDS VGC ROKSAN DPI CD TRANSPORT MINT	£695 £795	S/HAND S/HAND	£1,400 £1195
ENLIGHTENED AUDIO DSP1000 DAC - MINT.	£595	S/HAND	£1000
CJ PREMIER 4 POWER AMP MICROMEGA TRIO CD PLAYER - MINT	£2495	SAHAND	£4499
KLYNE SK 5A PREAMP - MINT	£1495	S/HAND S/HAND	£2750 £650
CITATION 18 TUNER ORIGINAL ATIERICAN V.G.C SUGDEN AU51C PREAMP 2 BOC MODIFIED BY AVONDALE V.G.C.	£295 £895	S/HAND	£1800
ROWLAND MODEL 3 MONOS POWER AMP BALANCED - MINT	£2495 £1995	S/HAND S/HAND	£4000 £4400
SOTA COSMOS VACUUM PLATTER MINT CRYSTAL REFERENCE TURNTABLE (WALLMOUNT)	£1995 £1495	S/HAND	£2500
NAKAMICHI OMS 7E CD PLAYER VGC	£795 £3995	S/HAND S/HAND	£1500 £8000
GRYPHON LTD EDITION PREAMP BALANCED - MINT SNELL TYPE C SPEAKERS WALNUT - MINT	£1295	STHAND	£2550
KEF 105/3 SPEAKERS BLACK ASH MINT. CRYSTAL SIGNATURE TABLE TOP TURNTABLE BRUAR 8 ARM	£1395 £2995	S/HAND S/H	£2100 £6450
MARK LEVINSON NO 23 5 POWER AMP BALANCED - MINT	£3995	S/H	27450
SONUS FABER EXTREMAS & STANDS WALNUT WALNUT - MINT SONIC FRONTIERS SFD 2 DAC BALANCED MINT	£4795 £2995	S/H S/H	£6900 £4700
ROWLANDMODEL5 POWER AMP BALANCED MINT	£2750	S/H	£5250
UNN LP12 EKPS 2 CIRCUS LINGO BLACK - MINT NOTTINGHAM ANALOGUE PARAGON LINEAR - MINT	£1595 £895	S/H S/H	£2642 £1600
HELIOS ORION 2 SILVER WIRED ARM - MINT	£295	S/H	£595 £300
ALPHASON ZENON ARM - MINT NAD 402 TUNER	£150 £99	S/H S/H	£169
MERIDIAN 606 DAC 7 MK2 DAC - MINT	£795	E/D	£1450 £1200
CYRUS DAD 7 CD PLAYER & PSX - MINT CYRUS 3 INTEGRATED AMP & PSX & SYSTEM REMOTE	£895 £595	S/H S/H	0063
AUDIO LAB 8000C & 8000P PRE & POWER LATEST	£2495	S/H S/H	£1140 £4480
AUDIO RESEARCH V70 HYBRID VALUE AMP - MINT ONX TUNER MINT	\$225	S/H	£400
NAKAMICHI BX 300E CASSETTE DECK - MINT	£375 £695	S/H S/H	£805 £1295
ARAGON 2004 POWER AMP MINT ARAGON 4004 POWER AMP MINT	£895	S/H	£1895
QUAD 606 POWER AMP - MINT QUAD ESL 63 SPEAKERS & STANDS ROSEWOOD MINT	£475 £1495	S/H S/H	£875 £2500
CELESTIAN SYSTEM 6000 SUBWOOFER - MINT	£795	S/H	£1500
MISSION 753 SPEAKERS BLACK ASH - MINT DYNAUDIO SPECIAL ONES SPEAKERS ROSEWOOD - MINT	£450 £795	S/H E/D	£700 £1249
ACCOUSTAT 1100 ELECTROSTATIC HYBIRD SPEAKERS - MINT	£795 £895	S/H S/H	£1395 £2300
CARVER SPEAKERS PIANO BLACK V G C WADIA 6 CD PLAYER BALANCED MINT	2595	E/D	3995
WADIA 15 BALANCED DAC REMOTE CONTROL MINT	1995 395	E/D S/H	3790 549
AUDIO RESEARCH BL1 BALANCED CONVERTER MINT AUDIO RESEARCH LS2B BALANCED PREAMP MINT	1995	S/H	3355
QUAD 44 PREAMP AVONDALE SUPPLY MINT QUAD 405/2 AVONDALE MODIFIED MINT	395 295	S/H S/H	730 600
MERIDIAN 605 MONO POWER AMPS BALANCED MINT	1550	E/D	1900
SALE			
SOTA STAR SAPHINE 3 TURNTABLE MINT	995	E/D	2500 5800
MARK LEVISON ML7 PREAMP - MINT AUDIO RESEARCH SP15 REVISON A BLACK - MINT	1995 2995	S/H S/H	7000
COUNTERPOINT SA11 & SA9 PREAMP REMOTE - MINT	4995 1295	S/H E/D	12600 2250
QUICKSILVER SILVER NIONO AMPS KT88 VALVES MINT NRG A401M MONO 400W CLASS A AMPS BAL - MINT	3995	S/H	13000
NRG A201S STEREO AMP 200W CLASS A - MINT DYNACO ST70 SERIES 2 VALVE POWER AMP - MINT	2995 495	S/H S/H	6600 1100
DUNTECH CROWN PRINCE SPEAKERS BLACK VGC	2995	S/H	8500
DIAMON ACOUSTIC REF2 SPEAKERS OAK & STANDS MINT AUDIO PLAN KONTRAST 2 SPEAKERS ROSEWOOD - MINT	795 1295	S/H S/H	
SUMO ARIA PANEL SPEAKERS OAK VGC	795	SAH	
GENESIS 8300 SPEAKERS & STANDS PLANO BLACK - MINT MARTIN LOGAN MONOLITH SPEAKERS OAK - MINT	995 2495	E/D S/H	
CONRAD JOHNSON SYTHESIS REF SPEAKER SYSTEM 4	0405	S/H	8000
TO VER SYSTEM FINISHED IN OAK - MINT MERIDIAN 204 TUNER MINT	3495 £ 495	E/D	£695
MARK LEVINSON ML/DA PREAMP MM/MC MINT	£1395 £495	S/H S/H	£3800 £1500
BURMEISTER 838 PHONO STAGE BALANCED - MINT AUDIO RESEARCH LS1 PREAMP - MINT	£795	S/H	£1797
KEE 107/2 SPEAKERS & CUBE MAHOGANY - MINT HOKSAN XERXES T/TABLE ARTEMIZ DS4 SUPP - MINT	£2395 £1095	S/H S/H	£3800 £2360
CAL TEMPEST 2 VALVE CD PLAYER	£1595	S/H	£3900
ROKSAN DAC & DS4 POWER SUPPLY - MINT PHILIPS BLACK TULIP TUNER AM FM - MINT	£495 £250	S/H S/H	
AUD'O RESEARCH SP14 PREAMP BLACK - MINT	£1795	S/H	£3300
BRYSTON 12BPREAMP BALANCED OUTPUT MINT CLASSE AUDIO DR15 POWER AMP BALANCED - MINT	£695 £1895	S/H S/H	£3400
ACOUSTIC ENERGY AE1 SPKS & STDS BLACK MINT	£595	S/H	£1100
APOGEE MINI GRAND GS SPEAKS PIANO BLK - MINT DYNAUDIO KRAFT SPEAKERS & STANDS V G C	£4995 £1295	S/H S/H	
RESTEK EXPONENTS MONO POWER AMPS GERMANYS REFER		E/D	£12000
MPS CHROME 1800WPC BARGAIN BALANCED - MINIT VESTROVIC A1 VALVE MONO AMPS BALANCED - MINIT	£1595	S/H	26600
MARK LEVINSON ML2 REFERENCE MONO AMPS WADIA X32 DAC MINT	3750 S/H 695 S/H	15000 2000	
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"OODLES OF HIGH END CARTRIDGES AVAILABLE RING I STOCK, EFFICIENT SERVICING DEPARTMENT. WE	ARE LOCATED	IN WELWYN,	HERTS

STOCK, EFFICIENT SERVICING DEPARTMENT. WE ARE LOCATED IN WELWYN, HERTS ALL ITEMS GUARANTEED - ALL MAJOR CREDIT CARDS ACCEPTED RING FOR DETAILS AND DEMONSTRATION 01439 714039 10.00 AM - 7.00 PM MON - SAT 10.00 AM - 1.00 PM SUN Mobile Tel. 0831 250985

For details on how to place a Classified Advertisement, please see page 129

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DELTEC DPAS0s, four box pre, power, phono, amp combination, Including speaker and interconnect cables, latest spec., boxed, manuals, mint, see review H.F.W. April '91. £1,295. Tel: 0703 223065.

CR DEVELOPMENTS Calypso, new £395. Stax SR30 – SRD4 headphones £90. Linn Kans black bl-wireable £250. Leak Stereo 20, £200. KT 88–6550. Single ended monoblocks £695 PR, part exchange welcome, valve equipment wanted for cash. Tel: 0121 784 8765.

VALVE COLLECTION: McINTOSH MA-230 integrated, £490, Radford STA-25/3 £450. Leak: ST-50 £450, Troughline Stereo £140. Rogers HG-88/2 £190, Cadev3 £90. GEC 4xKT-88, used £150, new £350. Mullard 4xEL-37 new £160. Tel: 0171-625 8966.

AUDIO INNOVATIONS L2 Pre-amp (new £800) £495 (recent service). Semmheiser HD 480 headphones £25. Upgrading again! Telephone day: 01484 429844 Night: 01484 534890. West Yorks. Ask for Simon.

LINN KABERS PASSIVE Black £925. Kaber Aktiv cards £525. Linn Keltiks, new stands, walnut £2,795. Marantz CD10 £695. Linn LK1 and LK280 £495. Tel: 01525 860000 Ext.2349 days; 01582 456137 evenings.

ROGERS LS4a/2 speakers. £110. Nakamichi IA3 amplifier with separate phono amp. £125. Tel: 01948–667520 (North Shropshire).

LINN AXIS turntable with Auto tonearm and Linn K9 carridge Boxed £325 Quad 33 control amp. £100 Quad F.M. 3 tuner. £100 Afrormosia sleeve for above £30. Tel 0233 732673, Ashford, Kent.

ROGERS P22 LOUDSPEAKERS Walnut, including 4 No. 8m lengths of Cable Talk, Concert 2 cable £450 00. Tel: 01252 843391 (Hartley Wintney, Hants)

DNM PA2 MONOBLOCKS, 4 chassis 70 watts, balance:...triewire, stallearthed. £1,500, ono. (May also sell matching 3B twin pre-amp and cables). Magneplanar SMGA panel speakers, £350. Tel: 01506 825546.

AUDIO RESEARCH LS3 pre-amp. black, boxed, mint condition £900. Tel: 071–622 2350.

MICROMEGA C.D.3 transport £675, mint condition. Year old, cost new £1,200. Alphason Orpheus speakers with Alphason Titan stands, walnut, Cost £1,190. Sell for £475. Phone 0884 32465.

IMPLUSE H2 loudspeakers. in cherry. little use, less than I year old, mint, boxed, £1,350. Audion 300B Silver Night monoblocks, export model (20 WPC), little use, mint, boxed, £1,400 Tel: 01734 664001 (Reading) Buyer collects.

THORENS 124 T.T. 4-SPEED. Plinth mounted. S.M.E. arms 12" and 9", extra arm boards. Audio Technia M.C. transformer and cartridge (as new). Pair Lowther horns, fitted new Swedish speakers, grills, stands and bi-wired. Mahogany. 6–8 hours use. Hitachi, solid state receiver S.R. 700. Sanusi cassette deck, Dolby S.C. 700. Motion Electronics television sound receiver, Fitted in small solid oak cabinet circa 1910. Offered as working whole £1,150.00 or might separate. Also Haffler amp and pre amp, £300.00, WANTED: Audio Research stereo valve amp.

Tel: 051-924 6808 any time.

SUGDEN: A-48/2 lintegrated amp £150, C-51/ P-51/R-51 separates £295, Craftsman/3 turntable£75. Garrard 401 chassis £175. Lowther PM-6 Acoustas, handcrafted, beautiful £330 2xKEF Kantor, uftra slim 2-way £80.] Tel: 0171-372 3724.

PHILIPS REEL-TO-REEL Radio and REC deck hi-fi, orginal boxes and manual. Bristol. Offers. Arrol. Tel: 01705 \$24811, work. QUAD ELS-63s, + 606/2, + Burmester 785A £2,450. Luxman PD-300 + Alphason HR-1005 + Ad:om v.d.Hul £875. Nakamichi 620 poweramp, 100 wpc. + M. Fidelity 'The Pre-Amp' £425. Technics 5L-1400/2 £145. Revox A-78;3 integrated amp £175. Tel: 6171-372 3724.

MUSICAL FIDELITY A370.2 power amp (£3,000 new) and P173 preamp with separate power supply (£775 new). Both 26 months old, mint and boxed. £1,850 ono, may split. Tel: 0131 225 9030.

AUDIONOTE VALVE DAC 3 Signature DA Converter. Unused prize. New £2,700 accept £1,600. Audionate AN-L. Speaker Cable 5 metres Bi-wiree pair unused, new over £600, accept £300. Tel: 01303 840 303.

REVOX A77 REEL TO-REEL (3.75/7.51.P.S.) Two-track tape deck with cover, remote control, Dolby, immaculate condition, very little use. £400.00 o.n. o. Tai: D181-2487.594

ARCAM ALPHA Series II speakers with quality stands £100. A & R A60 amplifier £100. Sansui TU217 tuner £30. One owner, all boxed. Tek 01993 775623 Witney (evenings).

SUGDEN A258 Amp, black, £160. HFW 5-20 valve monoblocks, 36 wpc, Class A, £350 (PX Quad 606) Systemdek IIX/900AP/Mission 7745M/ Eroica (£750) £295. Rotel RCD9658X LE Discrete, Trichord Clock 2'D, (£566) £300. BASF tuner, small, digital display VGC, only £25. Tei; 01706 345418.

LINN SONDEK LP12, Lingo, Trampolin, Ittok, Asaka (under 150 hours use). Afro finish, mint, boxed – £925. Tel: 01978–780580.

G¥RODEC RB300 QC power supply £775 – one off black finish, Snell Type C £1,300. Magnum A200 monoblocks P200–PS200 preamp £2,800. Pioneer CT91a cassette deck £175. Blackslink interconnect £110. Tel: 0272 –730819.

NEW VALVE AMP, 20 watts Class A, push pull, oversize custom designed Sowter transformers for maximum frequency response, steel case, gold phono 3 line inputs, balance, Alpn vol. £460. Tei- (01928 713676.

REVOX B77/11 (H.S.) with manual £600 ono. May P/EX for pre/power amp (Naim/Quad or Musical Fidelity). Technics (ultimate) analogue tuner ST9600 £200 o.n.o. Luxman 507x amp (Rosewood) £150 o.n.o. Tel: 091-4877796.

SUMIKO BLUE POINT special cartridge £150, Drigin Live speaker stands advanced model £135, Kimber 4PR speaker cables 2 x 20 metres £40, QED Discsaver phono stage £20, QED CD switchbox £15. Tel: 0171-769 7074.

MARK LEVINSON AMPLIFIER. Pre (ML12A), power (ML11) with dual power supply (PLS-124) plus 2 adapters, 2 pairs of silver interconnect cables, total cost over £6,000, quick sale for £2,000 ono; SilverSound speaker cable (4/16), 2x2m, £100. Tel: 0181-542 5025 (London).

MERIDIAN A500 LOUDSPEAKERS, black ash, £450. Meridian 508 CD player £850. Meridian 551 integrated amplifier £450. All brand new, redundancy forces reluctant sale. Classical record cellection for sale. Tel: 021–783 8214.

EXPOSURE SYSTEM dual wired VKK. two VI PSU's, IV power amp, superb condition, all boxed, must sell, bargain £750. Monitor Audio Studio 10s, Rosewood, excellent condition, boxed, £475. Tel: 0296 623762.

DECCA SH4E £99.00, Decca FFSS £49.00, SME 300952 £45.00, SME 3009 DET £40.00, SME 3009 DET £40.00, Marconi 78 Pick-up £20.00, Garrard TP pick-up £20.00, Ortophon VMS III £5.00, Shure M75EDII £5.00, ShureVISIII body £5.00, MLA, IOmm Gold Tweeters £20.00, Tel: 0525 384174. WANTED. NEW TAPE HEADS for Philips N4506 open reel tape deck. Tel: (0602) 383897, Nottingham.

LEAK STEREO 20, mint, original condition 6225. Leak Point One stereo pre-amp 685. Leak Troughline II mono. 640. Connoisseur Craftsman with arm and Decca needs plinth and restor 675. Tel: 01629 733634.

PIONEER A400. Little used. As new £130. Tel: 0795 425355.

FOR SALE – PRIVATE: Apogee Divas with Dax de-luxe version (list £17,500) £5,250. Krell KR\$200 amps four 200watt Class 'A' monoblocks (list £12,000 each) £4,800 each; KRS pre-amp 6 components (list £11,500) £4,700; Cardas Cable 2 x 15M single twin-link (list £9,500) £3,800. Tel: 0945 63077

WANTED – PRIVATE: Denon POA 6600 mono-block amps must be mint – cash or P/X Rolleivision 35 twin projector with IR remote control and 2 x 70–120mm Zoom B.5 lens. Tel: 0945 63077.

SUMO ANDROMEDA power amp 275 watts per channel. Sounds, looks superb. £450. Monitor Audio MA14 Gold, £240. Klipsch Heresy £450. Garrard 401, SME, £130. Musical Fidelity 2A £80. Tel: 0280-706488.

PINK TRIANGLE Anniversary Deck. All mods. £825 (£1,800.) Van-den-Hul MC Two cartridge. Special sample, unused. £750 (£1,300.) SME V arm £795 (£1,300). Tel: 081-450 7384.

RUARK BROADSWORDS; black, up-graded crossover, bi-wireable £300. Phone 01223-290619 anytime.

DOLBY SURROUND System: Audioplan speakers, Monitor Audio centre channel speaker, 4-rear effect speakers, passive control centre and 3 Rotel power amps, Lexicon CP2 processor. True quality T.V. audio system costing £2,250 new, sale for £1,100. Tel: 0442 219394 (9 – 5pm).

MITCHELL ARGO line level pre-amp with extra heavy P.S.U. cost £850. As new £475 o.n.o. Also phono stage by Bill Beard, MM-MC, (Beats Mitchell ISO), cost £600 as new £325 o.n.o.

Tel: 01634 365153 (Kent).

PROAC EBS SPEAKERS and stands (mint) £799. Exposure VII-pre, IV-power, IX-Mps (all mint) £800, Marantz CD94 (mint and superb) £395.

Tel: 0492-580 201 (North Wales after 6pm).

WANTED: Serious collector of Paul Voigt's loudspeakers, horn's, pick-up's and microphones. Also searching for any sales brochures, ephemera and information on Voigt patents and P.G.A.H. Voight. Please contact John Howes 01892–540022.

LOWTHER/QUAD/Vitavox loudspeakers (pairs), Lowther PM6 Mk1s, rear horn loaded, efficient, £185, Quad original ELS, £250. Vitavox HF horns, \$3 drivers, plus enclosure, £450.

Tel: 01452 760746 (Glos.).

ROGERS RAVENSBROOK stereo tuner; Rogers Ravensbrook stereo amplifier; KEF Chorale speakers, Thorens deck, Pioneer stereo cassette tape deck and tuner – CTF 2121 (with Dolby). Tel: (01276) 23072.

SUPRA 4mm (2 x 3M), gold plugs £24. Monster optical DAC cable £25. Kontak digital cable £30. Stan Curtis system "A" heatsinks, (0.5c/W) 12 x £10 each (PCB's available). 530VA toroid 30-0-30v £18. Tel: 01254 264593.

QUAD ESL-63 SPEAKERS. Chocolate brown. Excellent condition. Bought 1983. £1,100 o.n.o. Tel 01366 728129 (Norfolk).

SPENDOR \$100 monitor loudspeakers triwire, black, boxed as new £650. Custom stands for above or N\$1000 £100. Tel: 01623 755347 after 6pm. QUAD 67 CD PLAYER, cost £825, sell £570: Audio Innovations A500 integrated amp, triode coupled, cost £1,049, sell £450: Ruark Talisman II speakers, cost £700, sell £399. All immaculate condition and boxed. Tel: 0404 814188.

DELTEC (DPA) PDM I Series 2 DAC, co-ax in, vgc £220; Philips CD473 CD player, co-ax out, remote, FT5 £75. Tel: 0727–827630 after 6.30pm.

WANTED: AVANTIC DL7-35, Leak TL12, Avantic 5P21-2, good SME arm, boxed valves, 'Hi-Fi News' magazines 1950s – 1980s buy or exchange others, two for one. TJM, 18 Silver Street, Thorverton, Devon EX5 SLT. Tel: 01392 860182

NAIM 42.5 PRE-AMP and 110 power amp, SNAIC – £280. Tel: (Leeds) 0113 279 1337.

MICHAELSON AUDIO ODYSSEUS valve amp, 45w per channel £600, Pioneer F91 tuner £160, Both in excellent condition. Tel: 0181–889 6457.

PRIMARE (SERIES 928) pre-amplifier with matching monoblock power amplifiers. Fully balanced or unbalanced operation, these amplifiers are world famous for stunning looks, staggering sound, reliability and are really rather special. Sold separately or together. Mint, receipts, reviews, manuals, boxed. Pre £1,750, power £2.250 (new £8,750) together o.n.o. WANTED: Electronic stylus balance / remote for Nakamichi 505. Phone (01943) 466381 Fax (01423) 567765.

HEYBROOK SEXTET speakers with stands. black/walnut. Mint condition - (New £1,100) bargain at £700 with boxes. Tel. 0181 203 9712 - any time.

TEAC X1 (1) R open reel including all accessories and stand £480. Naim NAC 12s/ NAP 120 £275, Yamaha K960 cassette £40. All ONO and original boxes. Consider exchange LP12 or ARO. Tel: 01962 852378 Ed.

EMINENT TECHNOLOGY MkII tonearm Features parallel tracking and air bearing. Superb sound quality. Boxed £500.00 Tel. 0222 492783 (Glamorgan).

MARANTZ CD12LE Trichord / Rata up-grades ultimate CD performance, new £3,050 c/w £300 Siltech / Kimber leads £1,200 EAR 802 valve preamp / power amp combination £1,200 Alphason Orpheus speakers £250. Tel: 0727 867645.

AUDION FINALE 24 Watt Class A valve monoblocks, 18 months old £480 ono. Lowther Acoustas PM6a Units,1 year old £220

Tel: Howard (01363) 866151.

#### MERIDIAN M20 active speakers, walnut, immaculate, with balanced/unbalanced leads (7 metres), fully boxed. £390. Tel. 0181 689 6855 evenings/weekends Croydon, Surrey

DPA PDM2, TWO BOX DAC, boxed, all leads, £1,300. Tel: 01962 774218 (Winchester).

ROGERS LS6/a speakers, bi-wired with Vdh cable, RATA and Delflex modified internals, excellent condition, in boxes £120. Tel: Lincoln 01522/694871.

GARRARD 401, SME 3009II, original plinth restored, superb, £249 ono. Leak Troughline, pristine £120. Valve phono stage £130.00. Plus other vintage equipment, Arcam Two's £130.00. WANTED: SME309, VPL pre. Paul 0895 446713.

LEAK STEREO 20 (rebuilt, serviced), Audio Innovations L1 preamp with Sovtek, Gold Aero and spare valves. Rotel RQ970BX phono stage. 2x3m Audioquest F14 cable. Excellent condition and sound. £570, may split. Tel: 0171-8330482.

NAKAMICHI DRAGON cassette deck. Mint condition. Boxed c/w manuals. New £2,350, accept £1,200 ovno. Mark – 0752 691273 (Devon).

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PRICES SUBJECT TO CHANGE WITHOUT NOTICE

LINN HI-FI FOR SALE: Klout £1,390; Kabers (black) £980; Kaber Aktiv modules £550; LP12 (black, Valhalla, Cirkus, solid base) £690; Ekos £980; Arkiv (10 hours use) £690; Tel: (01922) 640737.

MUSICAL FIDELITY The Pre-amp 2A. excellent condition, boxed £125.00 ono. Mission 767 Loudspeakers, rosewood with active LFA unit and PSX power supply, includes Linn speaker cables £1,700,00 o.n.o Carlisle 0228-21533

APOGEE CENTAUR Minors with stands £900; consider part exchange for Harbeth, ATC, Spendor, Sony 337ESD CD player £275. Nakamichi ZX-7 cassette deck £400. All mint, with original packing. Tel/Fax: 01273 464449.

CHAPMAN VALVE POWER amplifier. Refurbished by Definitive Audio – Cornwall. Partridge transformers, etc. Ideal partner for Horn speakers. Excellent condition. £575 ovno

Mark - 0752 691273 (Devon).

ORELLE DA 180 MKII DAC £295, Arcam Delta 170.3 CD transport £295. Both as new, can demonstrate Reading 0734 753335.

AUDIO RESEARCH SP14 pre-amp, cost £3,298 accept £1,295 and Stax CDP Quattro II integrated CD player, cost £2,995 accept £795 both three + half years old and mint condition. Tel: Robert Wilson on 0181–981 1401

MERIDIAN 206B, immaculate £395 o.n.o (£1,000). SD Acoustics SD1 mark 2, walnut, 4 feet, mint. £750 o.n.o. (£1,800), Audiolab 8000C pre-amp, mint £250 o.n.o. (£480) Musical Fidelity B200 MK2, mint, £145 o.n.o. (£370). Tel: (0141) 6210636

### ARCAM DELTA 290 integrated amplifier, excellent condition, still under warranty. £300

#### Tel: 0442 66628

LINN SONDEK LP12, Ittock, black, little use, immaculate £525. Naim 32.5 pre-amp MM/MC boards, excellent condition £250. Naim NAP 250 old style £550. Linn Karik CD as new £875

Tel: 0181-871 0424

PIONEER A400 £200, EPOS ESI4/Stands £295, Linn Axis – Basik Plus – K9 £295, Philips remote CD850 £75, Aiwa ADF360 cassette £5, Litti ward Alli arwarlana and ali **£45.** Little used. All in excellent condition. East Sussex 0797 253073.

GARRARD 401 BOXED brand new. 2–Aco Lustre GST1 tonearms boxed, brand new. Offers – ring 0384 375656, before S.30pm.

MST TECHNOLOGIES valve presamp with 2X recent service Very Quad 303 po high quality, all Triodes. Any trial welcome. Also Leak Troughline 3 and 33pre. David on (01489) 878534 or (0973) 316046.

LINN KAIRN £850, Kaber Active £700 (or £750 Passive) Active X over £550 Ekos arm £750. Hafler DH101 pre inc MC Xformer £175. Quad ESL63 stands £120. Ring 0753 851429 evenings or weekends.

FACTORY SERVICED QUAD II amplifiers, 22 control unit and FM tuner, (modified for stereo). All with original manuals. £340. Also Garrard 301 with manual £120. Both together £450. All in V.G.C. Tel: 01334 472645 (Fife)

CHORD SPM 1000 power-amp, 250 watts per channel, rave reviews, magnificent sound Immaculate condition £1,200. (List price £2,400). Tel: 0206 825887

HI-FI WORLD

WANTED: HEYBROOK arm for use on Heybrook turntable. Tony Harlow, 11, Perrycoste Court, Taylor Close, St. Albans, Herts. (Neighbour's Telephone – 0727 862228).

REVOX G36, I/2 TRACK £225. Meridian 205 power-amps, 3560. Pair B & W 804, rosewood £850. Tel: 01892 536919, West Kent.

#### PRIVATE

QUAD ESL BRONZE, Quad Its, resistors and capacitors replaced. Recent new valves. Quad 22 £700.00. Hadcock 228 Super £20.00. WANTED: H.F.N. January 1985. Tel: 0243 576073 (Chichester).

FOR SALE - LINN LP12, (Lingo, Cirkus, Trampolin, Ekos) turntable (£1,295). Pink Triangle Da-Capo DAC (1307 Filter) (£975). Kinshaw Perception stereo power amp, (only 3 months old, 150W x 2, balanced and normal inputs, (new £975) (£595). Heybrook Sextet speakers (rosewood) (£695). All items mint and hoxed will demo nstrate Phone 01324-563364.

LEAK TROUGHLINE '3' stereo tuner, excellent £135. Quad FM tuner mono £35. Quad E.L.S. bronze, grills marked hence £175. Stern S-10 valve monoblocks with pre-amp £85

#### Call Barry 01472-871199.

QUAD ELS (boxed), Revox A77, DBX 119, Uher 40001c report, Linn Sondek LP12 Valhalla and Nirvana and Basik and P77, Naim 125 and M/M and M/C boards and PSU. All owned from new, 0825 890607 or 0825 761054 or Fax: 0825 890104

MUSICAL FIDELITY AT F.E. and Mk II amps; Audiolab 8000A/II; Snell Ks; NAD 3130; Kudos stds. (18in); Audiotech sub-table x2; Seismic Sink; Base boards x 2; S Ran and Granite platforms; XLO, Sil. Sds., Audioplan and Deltec Interconnects; various speaker cables (short lengths); RATA and Sonic Link mains cables; RATA super clamp; Art QD ampers; Target TT2; Audiotech wall shelves. Open to offers on all. Phone Steve on (01685) 385898 after 6pm.

GOLDRING 1042 cartridge (30 hours) £55. One each 5 & 8 metre cabletalk 2 bi-wire cable terminated £60. Tel 0384 637230 (W. Midlands)

SPENDOR SP2/2 Loudspeakers, teak, Target stands £395. Linn LK100 power amp, seven months old £450. Linn LK400 bi-wire cable, 2 x 6 metres £140. Linn Intek amplifier, £295 Tel: (01603) 36203.

### LINN LP12 VALHALLA Afro Ittok arm, Nev Audio Technica OC9 cartridge, £495.00.

DECCA GOLD "Garrotted", line contact stylus £908 KEF B139 bass units £100 ono; pair vintage Chapman Multiwave tuner S6BS-FM £45; Thorens TD 150 £35; Rogers Ravensbrook £35. Rotherham 010709 555403

WANTED: CELESTION 66 loudspeakers. Mint condition would be nice, but not essential. Can collect. Phone Charles on 021-628 2085.

MERIDIAN 208 £650. Exposure VIII monoblocks £750. Denon AVC 1530 prologic £325. Canon S30 with stands/bass station subwoofer £275. Canon SC10 £85. Tel: 01252 878200.

CASTLE WINCHESTER loudspeakers, very good condition, £780. Tel: 0171-917 2465 (day), 0462--712583 (other times).

HI-FI WORLD BACK ISSUES for sale. Volume I, numbers 8 and II. Volumes 2, 3 and 4 complete. All supplements included. Tel: 0181-519 8817 (evenings).

QUAD ESL loudspeakers, bronze £300. Colchester (0206) 868314.

CYRUS II AMPLIFIER £150.00. Tannoy Cheviot speakers (classic design) £275.00, Yamaha CDX700 CD, Player £135.00, All excellent Tel: 01462 442717.

QUAD 44/405. FM4 TUNER. Thorens turntable. SME 3009 Series 2 with Ortofon MISe Super. B & W P2H speakers. S00. Nakamichi Tri Tracer with remote control 120. Sony TA-5650 amplifier 99. Tel: 0769 540353.

KEF 104/2 SPEAKERS, walnut, bi-wired £650. Quad 34/606 pre/power amplifier £550. Thorens TD-125 II / SME3009 IMP arm / A8R P77 £250. Sony TC-K 1010 cassette deck £70. Tel: 0895 271953 (Uxbridge).

LOWTHER BEL CANTO speakers (£2,400) £1,150. Maggie 1.5 QR (£1,650) £1,050. Brand new, Martin Logan CLS c/w brand new panels £1,200. Impulse H1 speakers special mods by designer £1,100. Tel: 0181-289 3875 evenings.

COUNTERPOINT SAII line remote pre-amp (£7,500) £2,750 mint (silver); Oxford Crystal floor standing £1,050; Meridian 606 DAC £350. Audio Synthesis DAR £350 and PS02 pre-amp £175, VPI TNT3 T/T complete. Brand new £7.000 (£4.500). Tel: 0181-771 2476 evenings.

LINN ISOBARIKS - walnut, late spec., with stands, panels and external crossovers, boxed, can demonstrate. £1,200. Linn Active Isobarik crossover, late spec., with Dirak power supply, boxed, can demonstrate - Peter. £650 Tel: 0753 866042 after 6pm.

CYRUS II PLUS PSX amp and tuner, excellent condition £200. Arcam Alpha 6 amp 13 months old £180. B & W Rock Solid loudspeakers – grey – £100. B & W Solid Team base subwoofer black base station (new £350) £150. Tel: 0161 4499980.

MONITOR AUDIO MA202 floorstanding loudspeakers. Mint condition. 6 months old Boxed. Cost new £450.00. Accept £300.00. Could delive Tel: 0116 244 0758 (Leicester).

MERIDIAN MCD PRO, 500 hours use, £150 (new £650). Sony CDP100 (the original Sony CD Player of 1983), 250 hours use, £70 (new £550).

Tel: (0642) 477205, evenings.

LEAK STEREO TROUGHLINE £120 A.T. stylus cleaner £22. SME Series 3009 Arm £35 Satin MC cartridge, recent re-tip £150, 1940s radio valves in boxes, offers. Flutterbuster turntable p/supply £55. Tel: 0209 219483.

LINN KAIRN pre-amp £900. Linn LK100 (latest) £350. Linn Kabers £700. Linn Keilidh £375. All boxed as new. Musical Fidelity A120, boxed as new £350. Telford (01952 502097). Possible P/EX.

MISSION CYRUS III £385, Rogers Cadet III £79, Rega Ela speakers (black) £275, Naim Nac 4 speaker cables (2 x 4 metres) £20, Audio Alchemy DDE and Powerstation Two £350, Denon TU 260L tuner £75 Tel: (0462) 678158.

CELESTION 5000 MK II ribbon speakers. American walnut finish. Dedicated stands. Immaculate condition, Boxed, £350.00 ono Tel: 0181-654 6292. Croydon area

MICHELL GYRODEC, bronze and black, plus black Tesserac T.A.G.S., power supply. Both mint condition £700.00 o.n.o. May split. Tel: 0181–854 6738.

LINN ISOBARIKS AND STANDS and 6' Nac A4. very good condition £650.00. Brand new ATOC9 cart £160.00. Naim Nac 42.5 Nap 90 £450.00. Rotel RC870 and Rotel RB850 £250.00. Deltec 50/S pre-amp, mint condition £500 o.n Tel: Jules 01792 280061.

AUDIOPHILE FURNITURE base platforms (3 off) – £35 each. Tel: Malcolm 0483 275389.

DYNAUDIO TWYNN SPEAKERS, fast, detailed and well finished by audio-pro. £600 with warranty. KEF CS9 (105.1) speakers still good, built by cabinet maker £300. Sony CDP 555 CD player, mint £350. Tel: 01295 780363.

World Radio History

OAKLEY – IMAGE SIX, valve pre-amplifier, 6 inputs inc., gold plated phono and output jacks listen and monitor switches, 2 years old, 6 recent Dragon valves, sale due to up-grade. cost £795 sell at £345 o.n.o. Tel: 0925 756068.

REVOX B260-S FM tuner with RDS (black) 60 station memory, excellent condition £650 o.n.o. Quad AMII tuner with separate PSU, good working order, Offers. Tel: 01608 682341.

RUARK TALISMAN SPEAKERS hardly used, excellent condition, beautiful sound, all original packaging. £37S (£660 new). Tel: 0181-852 4308 evenings

HARBETH HL-P3 monitor speakers (list £699) will accept £325 o.n.o. REL Stygian Mk,2 active sub woofer (built in 100w amp) £315. Several Michell speaker cones and gold speaker plugs -£1 each. Tel: 0794 514916 (Romsey, Hants.).

MERIDIAN 1018 M/C £70. Naim 32 pre, Nap 90 power amp, Snaps, £400. Cranfield Rock turntable £495. Mullard S-20 monoblocks top build quality £275. Wharfedale sand filled baffle loudspeakers £100. Tel: 0742-738153 or 723621.

SYSTEMDEK IIX, RB250, Goldring 1022. acrylic platter, metal armboard, £225. Creek 4140s2, £110. Both excellent, boxed. Wanted: Naim Nait 2, (MM phono). Tel: 0171-711 4633 (work). 0732 842287 (evenings) Sevenoaks.

MISSION CYRUS II + PSX, perfect, boxed with manuals only £295. Tel: (Leeds) 0532-843232.

CELESTION 5 MK II cost £170 sell £129, NAD CD 5425 cost £200 sell £139. Both boxed as new. Mission 737 Renaissance, own stands, £99 v.g.c.

Steve, Oxford: 59737.

STAX SR SIGMA professional headphones with SRM-1 Mk2 professional driver, perfect sound and condition, hardly used with original boxes. £495

Tel: (01793) 766293 (near Swindon).

PIONEER A400 two years careful use. Good condition, Boxed. Up-grade reason for sale. £150.00.

Clive NOTTM 01159 400355 . 8.00am 5.30pm

ION OBELISK 3X/XPAKI 2 box intergrated amplifier with enhanced moving coll input. Superb sound, cost  $\pounds 600 + - \pounds 180$ . Linn LVX tonearm with K9 cartridge - £35. Tel: 0403 711778.

QUAD 33 and 303, with QUAD ESL (pair) gold £500. Thorens TD 150 with SME £50. All with original manuals. Near Cheltenham. Tel: 0242 820380.

NAD 2100 POWER AMP £180. Rotel RTC 850L Remote pre-amp/tuner £100. Cary CAD955 CD with Trichord Clock £250, Audio Alchemy DDE 1.0 DAC £150. Tel: 01260 274470.

MERIDIAN 200 CD transport with 263 Delta Sigma Dac, mint condition, excellent sound, new up-grade forces sale £750. Tel: 0114-2476759 (Francis).

NAIM / LINN BUY SELL : 52 CDs, 250 135, 140, ARO etc Tel: Bob 0382 819732.

MAGNEPLANAR MGIIla and SMGa. Boxed and in pristine condition. Genuine reason for sale. Cost £2,000 and £650, Asking £975 and £340 respectively Tel: 0585 731683 after 1pm.

MkI CASTLE CHESTERS Mid Oak, mint £450 ono. Sugden A48 amplifier, matching T48 stereo FM tuner, pair £160 ono. Tel: David 0181–741 3119 or 0181–348 0612.

ARCAM ALPHA CD/BBI DAC £250, L\$3/5a pair inc. wall and floor stands £250. Audioelectronics TC10 pair £120. Crimson nousoeiectronics 1 C10 pair £120, Crimson pre/power £120, Koetsu Black £150, Corus Blue £25, RB250 £45, Grace 707 £30, Leak Stereofetic £50, B&W Acoustitune subwoofer £60,

Tel/Fax 01243-553531

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# Hi-Fi Consultants BRISTOL SOUND & VISION '95

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All you customers out there are keeping me so busy, I can only assume you must be reading my AD's! It also means I had little time to spend at the show this year, but I don't think I missed too much. Until I manage to produce a good sound at such a show myself, it's probably not fair to criticise, but one or two managed it. In particular Portfolio were getting fine sound out of various Boston 'speakers fronted by my favourite AMC CD6 CD player, plus a new line in Thorens amplification. John Michell was playing his new <u>ORBE</u> turntable and very beautiful it looked. Although fellow listeners in the Naim's room with £50K's worth of home cinema seemed suitable impressed, I can't say the sound was that impressive; even if the effect in 'Jurassic Park' was good, that was mainly due to the size of the screen. It was interesting to note how much better the Naim SBL's sounded in the vinyl room compared to the CD room, and how many rooms were using vinyl. The Shahinian speakers were sounding much better than last year.

### **RUARK EQUINOX**

During the QLN speaker demo at the show the representative commented that when they first produced the production samples, they couldn't understand why they didn't sound as good as development samples, but then discovered it was due to the x-overs being inside on production units - hence the x-overs are now outside the cabinet. Co-incidentally I now have in stock the 'Equinox' which has the x-over in the stand pedestal and my demo pair or Ruark Accolades have external x-overs, so that I can experiment with driving them actively. According to QLN it is better to have THE x-over close to the amp, so that is a test we must try when time permits. In the meantime do come and audition the Equinox - we are still running them in and finding out what works best with them. In addition another beautiful speaker, the Opera Callas, is warming up and proving to be a fine performer on rock as well as classical, as it's name might otherwise imply.

If, by the way, you are interested in auditioning an item we don't normally stock and you can't hear locally, do give me a ring. Manufacturers are usually happy to supply for auditions.

GARRARD 401 excellent condition, from new Rogers Cadet III integrated Pye FM tuner (Mozart). Brenell reel to reel tape recorder. All In good condition. Offers please. Tel: 01252 626073 (Fleet)

DENON DTR2000 D.A.T. recorder 18 D.A.T. tapes £358. Denon DRM44HX cassette recorder £90. Beyer DT411 headphones £18. Cabletalk Concert 2 loudspeaker cable 3M. pair £35. Audioquest video X cable £10. Tel: 01422 206495.

#### MUSICAL FIDELITY, F.C.D. Mint condition. Boxed £1,100.00. o.v.n.o. Tel: 01752 775887

SPENDOR SPI speakers on Target sandfilled, spiked stands. Real walnut veneer. Boxed, mint condition, £425 o.n.o. Tel: 01630 661497 (Shropshire) – evenings and

KEF Q50s boxed, unwanted prize £425, Tel: 01634 727962 evenings.

UNN LP12 VALHALLA/Hadcock Unipivot/ Coral MC8I moving coil, £299, can demonstrate. Meridian 101B preamp, MC boards £75. 140 carefully used LPs 70/80's Pop/few Classical £140. Tel: 0622 820 716 evenings/weekends.

KEF 105/3 Reference speakers. Walnut, Mint condition. Still under guarantee. Available in Dublin £1,200. Tel: 010 3531 4591432

PT ANNIVERSARY/SME IV/OC9 £1,200 ono. Deltec 505 phono pre/pre/power + 2 x 5m. Slink £1,200 ono. Rotel 965 BX £200. Hitachi FT-MD 5500 £50. EPOS E514 and edicated stands £250. S.O. T/Table table £35 S.O. 3 tier table £40. Tel: 0171-277 6012

VINTAGE RADIO RESTORATION. New and used valve amplifiers, Quad II from £400 pair. BTH monoblocks £450 pair. Leak Troughline III stereo £120. Tel: 01903 501158

MERIDIAN 200 TRANSPORT, mint £400 o.n.o. various Hi-Fi mags late 70's, 80's and 90's. Reasonable offers. Quad valve bits and pieces 2 x 22 preamps, FM tuner and multiplex decoder original KT66 valves. Tel: 0204 529443

AUDIOPHILE EQUIPMENT FOR SALE! Cary SLP-90 pure single ended vlave pre-amp with phono stage. Hard wired. Latest spec. (Cost £2,990). Asking £1,500. Cary CAD 300m 40w monoblocks. (Cost £5,000) asking £2,550. Also Thiel CS 2.2 full range speakers (Cost £2,900) asking £1,550. Tet: 0171-281 0821

KEF 104/2 REF SERIES One year old, black ash, as new with boxes £850. Tannoy Little Gold monitors 12 inch, dual concentric mahogony cabinets, excellent £425. Tel: 0181-368 9759

MUSICAL FIDELITY A370 MkII power amp 185 watts per channel Class A, was £2,400 new £975. MVX preamp with PSU Class A, was £2,200 new £925. Both with manuals and boxes. Tel: 0181-368 9759

LINN SONDEK LP12 Lingo Circus EKOS K18, excellent condition £1,195, Naim SBL speakers walnut, excellent condition £800. Nakamichi Dragon cassette deck £800, Revox B780 receiver £325. Tei: 0181-7410152

AUDIO RESEARCH SP14 pre-amp (valve phono stage). As new cost £3,298 asking £1,550. Reason for sale upgrading to LS2/PH1. Tel: 01902 632415 after Spm

AUDIO TECHNICA OC9 Cartridges, brand new, guaranteed £180.00, Naim NAC 42.5 NAP 90 £450.00, Rotel RC870, RB850, £250.00, Deltec DPA 50S preamp, mint condition. £550. Tel: Jules on 01792 280061.

ORELLE DA180 D to A Converter, Little used and in new condition; boxed, £325 o.n.o. Tel: 0161-432 6120 (Stockport).

**HI-FI WORLD** 

#### PRIVATE

ROTEL RB850 power amp, 50wpc, bridgeable, mint condition, boxed with instructions £95. Upgrade forces sale. Tel: 01638-507694

QUAD II CONTROL unit and amplifer, A.M. and F.M. tuners and electrostatic loudspeaker. Also Truvox reel to reel tape recorder. Approx. 35 years old. Tel: Huntingdon (01480) 860339 anytime

ROKSAN XERXES, RB300, AT-OC9, Rosewood, immaculate condition and boxed £375. Also 130 LPs, pristine condition, including 20 Zappa and 3 box sets, Miles Davis, SRV, etc. won't split £190. Tel: 0444 248424

DYNACO ORIGINAL Classic PAS 2 and PAS 3, valve preamps. No mods. £175 each. PAT4 transistor preamp £100. FM5 transistor tuner £100, All in excellent condition. Tel: Esher 01372 467 264

CELESTION SL6 speakers (walnut) with Celestion sand filled stands, Leak Delta 30 amp VG. condition. Solid Teak construction, All offers considered. Tel: 0181–568 6383 evenings; 0181–758 8085

LOGIC TEMPO turntable with Valhalla power supply. Fully restored unit with Basic Plus arm and AT110E cartridge £85.00. Leak Delta 75 receiver. Good condition with manual. £30. Tel: (Oxon) 01993 702402

RUARK TEMPLAR speakers Burr walnut £275; Castle Richmond MK2 speakers on Target HS16 stands VGC £75; Quad 33/303 prepower, mint, boxed manuals £175. Buyer to collect. Tel: 0114 2378731

LINN LP12, Ittock, Audio Technica ATOC5. Sound Organisation table £375. Tel: Aylesbury 0296 22668

NAIM ARO TONEARM, perfect boxed instructions £450. EPOS ESTI with stands £250. EAR "The Head" £90. Micromega Microdac £150. Van Den Hul "The First" Im pair £75.

#### Tel: 0603 633451

#### MERIDIAN 200 TRANSPORT - Trichord Research clocked and Russ Andi ew's modified 2545.

#### Tel Preston 0772 626660

BEAM ECHO AVANTIC integrated with manual £125. Celestion 7000 ribbon speakers, bi-wire, nice with valves £475. Avondale M.F. pre-power superb £575. Genesis turntable and arm £950. P.X. Tel: 0274 545219 (Yorks)

ACOUSTIC RESEARCH EB101/Mission 774/ Ortofon MC10 Super, £170; Marantz PM-44SE amplifier, £125; Heybrook HB2 (teak), £130; Mordaunt-Short MS20 speakers, £70; Cyrus One amplifier, £110. Tel: Chester 01244-316005 evenings

BEARD 505 Mk2, power supply, 100 Mk2 100W £750.00, Celestion SL600 bi-wired and stands £250.00. Tel: 0953-455617

#### REVOX B77 Mil2 reel to reel 7.5 – 15 IPS. Two NAB adapters, two 10.5 2,500' Ampex Studio Tapes, new. Recent major service. £700 ono

#### Tel. 01274 564189 after 7 00pm

TOWNSEND ROCK turntable. Rega arm, van den Hul rewired £450. Naim 62 preamp with Avondale 6 channel power supply, good as Naim 82 with Hi-Cap £700. Tel: 01803–297691 South Devon

TECHNICS SUV660 amp 85w.p.c. £150; NAD 4225 tuner £80; Sansui SR 222 Mkll turntable with Nagoaka MP11 cartridge £50. B&W DM110 speakers £70. Tel: 01582–575673 (Luton)

GAMMA, ERA REFERENCE and Space Reference am lifters (23.999 and 24.999 new) Available for (22.500 and (3.500 ono. Will split Mint condition, less than one year old. Tel 0181-452.2781 AUDIOLAB 8000A/II £250.00; Audiolab 8000P three months old £400.00; Garrard 401 SMEII IMP, immaculate with original docs. £150.00; Rega RB300 arm £50.00. Tel: Chris 0702-79743 (evenings) 0171-324 8648 (day)

COLLECTOR'S ITEM. 1950's HMV Meistersinger stereo radiogram Model 1641 – very high quality Burr Walnut cabinets – main radio/record player and separate speakers. £180. Tei: 01582 760050

MAGNAPLANAR MG1.4 panel loudspeakers, seven months old, absolutely as new, finished in light oak with oatmeal cloth; complete with custom foundation stands, boxed £595. Tel: 0895 631299 (Ruislip) evenings/weekends

QUAD ELECTROSTATICS, fully refurbished by Quad, new black grilles, protection circuits, plus GFD stands. Best offer over £400. Quad 33/303, offers over £90. Tel: 01222 753247

MOD SQUAD LINE Drive £200. Bruce Rae Audio active cable drive (balanced) RCA inoutputs with 5 metres interconnect, but can run up to 100 metres with no loss. Great passive or active pre amps £250, Denon 250L tuner £60, Audio Technica ATH 70 headphones custom banana outputs £85. Audioquest Sorbothane turntable mat £25. BLQ I speakers £60. four PM Comp 6DJ8 £20, Robin Soot Multimeter £25. Tel: 0181-502 3017

ACOUSTIC SPEAKERS Studio Monitor series 3312, features 12" POL/Woofer 5' midrange driver 3 x 7 Horn Tweeter max power 150 watts, carpet exterior £350, boxed as new. Tel: 0121-4545 760, Birmingham

KEITH MONKS PROFESSIONAL record cleaning machine. Perfect working order. New parts fitted to bring to current spec. Can deliver. £400 (£1,100). Tel: Castleford 01977 519454

LINN KLOUT POWER amp, mint £1,200 ono. Tel: Mike 0145783 4465 (Manchester)

MOD SQUAD LINE DRIVE passive pre-amp, boxed, as new £200. Mission Isopiatt £10. DPA and Monster Interconnects from £20. Tel: Simon 0171–915 9208 (daytIme); 0181– 743 4654 (home)

MERIDIAN 551 integrated amplifier, as new, boxed £520 00. Tel: (evenings) 021-705 6980 (Solihull, West Midland

LINN AKITO tonearm, purchased 24-1-95; also Roksan Corus Black cartridge, little used. Excellent combination £170. Tel: Telford 01952 249627 Harold

TANNOY D700 speakers seven months old £2.100, will sell for £1,500 ono (Rosewood). AVI tuner cost £600 sell for £300 ono. Musical Fidelity A120 cost £550 sell £350ono. Tel: 0171-793 1291

APOGEE CENTAUR MINOR speakers, immaculate condition, one careful owner, boxed, can demonstrate, a bargain at only £650 ono (£1,350 new), also Im pair Sonic Link Violet £60. Tel: 01734 314546 (Reading)

rei. 01734 314340 (reading)

MICHELL GYRODEC with power supply and Rega RB300 silver wired £450. The Head MC transformer £175. Decca Super Gold cartridge VDH new, unused £150. Tel: 0.181–771 1300

MERIDIAN 601 DSP pre amp. Meridian 602 transport C.D. Meridian 605 mono amps. All mint condition with remote £3,750,00 the lot Tel: 01527 543442

MERANTZ CD10 £695, KEF 104/2 Kube 200 £695; Audiolab 8000c Mk2 £275; Meridian 205 monoblocks £645; Nakamichi DR2 £375; tuner MF/TI £125; Yamaha KX650 Cassette £135; Dual CS305/4 turntable £125; Rotel RT850L tuner £75. All boxed and perfect. Tel: 0279 724804 (Herts) LINN LP12/LINGO/Ekos/Klyde/Trampolinn Afro finish £1,200. Ion Nexus SP1 pre-amp/ Xpak-2 power supply/pair 140 monoblock power amps £600. Heybrook HB3 loudspeakers and stands £200. Tel: 01244–345461 (Chester)

QUAD II, pair of power amplifiers serial numbers 74752 and 78393. Original KT66 valves and G232 rectifier valves. New Carbon film resistors. Reluctant sale £260.00. Tei: 0282 422601

MICHELL ALECTO MONOBLOCKS - £1,200 Meridan 208 and 209 CD - £1,000 ono. All as new. Please ring Dave - 0399 1133 and quote pager number: 710950. Leave your phone number and name - I will ring ASAP, or Tel: 0115 9821785 (evenings).

ADCOM MONOBLOCKS, GFA 565, 300w per channel, boxed, as new, offers £490 the pair (£1,800 new). Sumo Polaris power amp, 150w/channel, boxed, as new, offers over £180.

Tel: (Harrogate) 01423 521758.

AKAI 4000 DS MKII reel/reel £175, Tandberg Model 6 valve reel/reel, very clean but needs service £75, 220 7" Reels all early collectable Radio shows £200 the lot, Target Basic 5 tier stand £45, 5 tier delux £95, 31 72 stands £60. Tel: 0279 724804 (Herts).

THORENS TD 124 turntable, HW, SME, still the best, £195. Olympus XA ultra compact camera with A11 flashgun, £15. Riley Snooker-Dining Table, £990. Lowther PM6As wanted, any condition. Tel: 0181-991 0762.

QUAD 33/303 amplifier – £180; Transcriptors Hydraulic Reference turntable with fluid arm, stylus scales, sweep arm – £295; Shure V15/3 cartridge/stylus –  $\pm$ 25. All in excellent condition, very low use. Tel: 01684–562538 (evenings).

MUSICAL FIDELITY pre-amp P173 and PSU 4400 – MA50 monoblocks £400. Tel: 0432–268484 (Hereford).

SONUS FABER Minuettos as new, complete with stands (745, Tel: 0263 711706 after 3pm,

NAKAMICHI 1000 ZXL cassette deck complete wich Dolby C, plus cordless remote, original box and manual. Unmarked, perfect working order. £2,100. Meridian 602 transport, twin processors plus AT & T output. Audio Synthesis Dax, fitted all crystals plus AT&T input, gold front export version, factory built, £2,200 the pair, Tel: 0137-211058

EXCELLENT T.D.L. MONITOR loudspeakers with dedicated stands. Black Ash. Absolutely as new, with original boxes and manuals (£2,100 new) £1,500.00 ono. Tel: Keith 0126-668631

KEF 104/2 REFERENCE Loudspeakers black ash. 92dB sensitivity. Dynamic, detailed sound. £650.

Tel: (01903) 892451 (West Sussex).

EDISON 12 £225. Matching Edison One preamp (silver wired) £275. Together £425. Townshend Rock/arm/M.C. cartridge £435. Leak Troughline (mono) £115 ono. Walker CJ55/SMEIII/Nagoaka MPII (valdi standard) £195 ono. JPV AP3 speakers £115. Tei: (0113) 2559475.

EXPOSURE VII pre-amplifier and VI power supply £375 ono. Tel: Horsham (0403 241304).

GYRODEC/PSU/SME 3009R latest model £700 (£1.400). Thorens 124/11/SME3012. Revox G36 valve tape recorder, new condition. Teac A3440 4CH-H5 tape recorder with 4CH-DBX unit. Teac A450 Cass. Yamaha receiver CR1020. All mint/boxes/manuals/spares. Tel: 01202-823818 for details.

NAIM 250/32.5/Hi-Cap old style, immacuł £825. May separate. Tel: 0181–989 3609 (£18) evenings).

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MERDIAN 208 CD, preamp, MSR Remote 215 phono stage. Little use. Boxed. Mint. 2700.00. Meridian M3 active speakers. £275.00 Musical Technology. Kestrel speakers plus base. Boxed. £200.00 Tel: 0226-710605.

HI-END SUMO AHENA2/Polaris2 pre-power MM/MC stage £290.00 each, both boxed, handbooks, exemplary, Thorens TD125/2 SME309 exempiary, handbooks, £280.00; Ferrograph Logic 7 4THSD, NAB spools, new heads, service by Ferrograph, boxed, all manuals, leads, nine 10" tapes exemplary, serious offers? Pair Ultimus Classical Atkinson transmission lines (f.r. 16 Hz – 22.5 KHz) large, over hundredweight each, offers around £460.00 exemplary. Upgrading. John Owen Ellis 01403 251935

T.D.L. Studio Is black ash with stands £380; Dual CS 505-3 with AT-F3 £75; Original Mullard valve amp. circuits £6.50; Valve and transistor data £5; Foundations of Wireless, Scroggie £3.50. Tel: 0507/601096 (Lincs).

WANTED SONY 700 ES tuner. Tel: 01344 886324

MERIDIAN 563 DAC only two months old. Cost £750 sell £600 ono. Genuine sale. Tel: 0483 222876 (Woking)

pre-ump<sub>e</sub> AVI 52(00MC CD player, Five months old, immaculate condition, still under warranty with remote, cables and interconnects, £5,000 ono. AVI 52000M

QUAD 66 REMOTE control pre-amp, as new ndition £500 Tel: 01403 271244.

DECCAVOLT LOUDSPEAKERS, Volt 10 inch bass/mid. Decca ribbon tweeter in heavy floorstanding reflex. Wilmslow Audio kit. Very efficient, high power handling. Effortless spacious sound. Bi-wireable external crossovers with polypropylene capacitors, air-cored inductors, Walnut effect, £240. Tel: 0952 814600. Can deliver.

GARRARD 301 VGC - £130. SME 3009 V.G.C. with Shure V15 type IV - £150. B&W CM2 walnut veneer, boxed, excellent - £450. Ask for Matthew: 01903 813323.

EXPOSURE 15 INTEGRATED amplifier. moving magnet and moving coil phono boards, boxed, excellent condition £300, Quicksilver moving coil head amplifier £S0, Audiolab 8000C six months old, mint, boxed £300. Tel: (017083) 44334.

ACOUSTIC ENERGY AE-2, bi-wireable, dedicated AE stands, boxed £695. Meridian 2068 DAC-7, boxed £550. Denon TU-550L tuner £95. DNM Solid 3-core 2 x 5m £30. Naim CD boards £25. Tel: (01449) 676335.

CELESTION SL65i black as new, boxed £250; KEF Quattro (C10 and CS200 subwoofers) (165, Gale 301 black ash (170, Dual CS505) (65, AR18BX (80, All boxed VGC. Tel: 01257 263403 (Lancs).

AUDIO SYNTHESIS ultra-analogue DAC Silver wired, Vishay resistors, AT&T input module and matching APS-02 power supply. High-end sound for £595. Tel: 01784 457332

MONITOR AUDIO R352 speakers. Good condition. £180,00 o.n.o. Tel: 0272 486375.

QUAD 66 CONTROL 606 II power, 66 tuner £1,400 o.n.o. Rogers LS3/5A and foundation stands £350. Sound style shelves for Quad £150 Tel: 01344 772157 (Berks) or 0585 175658.

QUAD ESL63 loudspeakers including stands. excellent condition. £1,250. Leak Troughline stereo tuner, offers. Radio Designer's Handbook by F. Langford Smith, first published 1940, offers. published 1940, oners. Tel: 01642 724953 (answerphone).

PROAC EBS SPEAKERS. Teak. Custom made, rigid spiked stands. Fabulous sound for only ¥750 Tel: 01296 641172 (Bucks).

LINN PRE/POWER AMP LK I/Powertek with leads and remote control. £400. Pair KEF Kit 2s incomplete project comprising B139, B130, B130, T27 DrIve, units crossovers, Baffe Boards in floor standing MDF Cabinets. £300 ono. Tel: 0131 664 1358 / 0831 239958 (Edinburgh).

HIGH-END PRE / POWER combination Finestra pre, MC and 4 line, mint, boxed (£1,300 new). Trio L08M, powerful Class A Monoblocks (over £2,000 new). Truly excellent sound. Accept £900 o.n.o. for both,

may split Tel: Adil 0181-677 6272 (evenings / weekend). No time wasters please.

#### RUARK TALISMAN II Floorstanding Speakers rosewood, one year old, mint condition (425 Linn LK I preamp (tweaked) and LK2 power amp, excellent condition and remote control tion £425 Tel: (0375) 378526

MERIDIAN 206 Deita Sigma £595, Linn Keilidh. new January, including bases £550, Pink Triangle, Linn Basik plus £300, Deltec little bit DAC £175, VTL deluxe valve pre £525. Mick 01926 831388

PINK TRIANGLE Ordinal DAC 1307 Filter. seven months old, mint, boxed, superb. Accept 650 9cost £900). Tel: 0161-775 5379 ask for Simon

NAIM +2.5 PRE-AMP and OED 4 - line input

expander £125. Linn Kans plus original stands (spiked) £200. All mint condition with boxes. Tel: 0993 841768 DOR SPIs £365 (£1,400), Spendor SP2/ 2s £350 (£900), NVA Phono 2 (superior to ISO) £320 (£650) inc. power supply. Leak

#### Troughline 2/Paravicini decoder £295. All Tel. 0462 432499

MARANTZ 63 SPECIAL Edition C.D. (275 Audio Alchemy D.A.C. VIO £175. Both immaculate, boxed and under manufacturers guarantee. Superb sound. Tel: 01204 811021.

LINN LP12 / Lingo / Ittock / Karma / K18 (both low hours) three years old £880 ono. Naim 72 / 140 new style £780 ono. Ruark Talisman MK1, rosewood £395 ono. All boxed VGC Tel: 091-4385046.

# WANTED QUAD 66 Preamp, 66 tuner, Quad 405/2 late model, all boxed, mint, only for sale Quad 34 £240. Quad 306 £200. Quad FM4

2260 All mint boxed. Tel C121 313 2241 (evenings). MERIDIAN 205 MONOBLOCKS, Meridian

601 Pre-amp, superb condition £1,100 Wanted, good quality speakers and C.D. may P/X Tel: 01844 260182 9Oxon).

LINN KAIRN PRE-AMP (900; Linn LK100 Power Amp £375; Linn Kabers £750. All latest specification. Mission Cyrus 2 £150. Arcam Delta 70, C.D. £230. Arcam Alpha 5 C.D. 2230. Arcam Alpha 3 amplifier £130. Rotel RCD 965 LE (new) £275. Telford 01952 \$02097.

QUAD SYSTEM: ELS (pair) - bronze: £325; II amp ifiers (pair), 22 control unit, radio: £250; Quad serviced. Excellent condition. Pioneer tape deck: CT F2121: £50. Tel: 0494 763774 (Bucks; equipment in Wimbledon)

#### idjustable stands. Can be heard in action Relocation forces sale: £1,500. Tel. 0181-441 8892.

CONRAD JOHNSON PVS, valve Pre-an excellent sound, mint condition, cost £2,200, sell £799. Kef Q90 Loudspeakers, unwanted gift, still in boxes unopened and unused, £499. Te: Weekends 01227 742566.

LOGIC DM 101 TURNTABLE, Kuzma STOGI Arm, Flutterbuster Power Supply £350 ono. Chris Roger's Pro 9 Transmissionline Speakers, superb sound £350 ono. Original Cranfield Rock Turntable, Excalibur Tone Arm, serious piece of kit, £400. Sonic Frontier SFL1 Pre-amp, cost £1,500 except £875. Tel: 0114 2738153

KLIPSCH FORTE II 3-way Speakers Fr 32-20 KHZ. 99 Db efficient. One year old. Works outstanding in theatre configuration or stereo. Walnut oil finish. Very clean, tight sound. £750 o.b.c

Tel: 01638 532769.

McINTOSH PRE-AMP C26, excellent sound and condition £795 ono (new £1,800). Quad 405-2, one of the very latest, mint £260. Ring lan (01932) 830267 evenings and weekends

CONCORDANT EXCELSIOR Valve pre-amp separate power supply £650 (£1,200 new). Nottingham Analogue Mentor Turntable, Mentor Tonearm, London Decca cartridge (1,695 (£3,300 new). Target Turntable wall shelf (50

Tel: 0181-943 2006 evenings (Chris).

CAMBRIDGE CD3 player Pioneer A400 Amp TDL RTL2 Speakers, all mint complete system £500, may split. Tel: 01279-504926 (Bishops Stortford).

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WANTED ARCAM DELTA 100 Cassette Deck. Anything considered, will collect. Cash

Tel: 01752 794893.

OUAD II VALVE AMPS, Quad serviced, excellent: 4250 pair. Leak Troughline 3 Stereo : £150. Garrard 301, strobe, fully serviced : £170. Various other turntables, arms etc. : cheap!

McNicoll, 0121 - 455 6829.

VANTED HELP HAVE you got an equaliser / owe sumply box for an Audiostatic lectrostatic Panel Speaker, If so, please phone 01796 472387.

KEE 105 EXCELLENT Monitors As £495.00. Rega Ela, boxed, as new (£500.00) only £375 00 ono. Audiolab 8000A, as new, only £350.00 ono. Tel: 01225–480990. May P/X.

LEAK TROUGHLINE 3 (GT Audio restored) wood cabinet £290. Mono Troughline £85, Rogers Cadet II £60, Rogers Cadet III £50, Armstrong 222 Integrated £60, Armstrong 521 £45, Leak Stereo 30 £40. Tel: 01834 860681 (Dyfed).

FOR SALE : PAIR Musical Fidelity M.C.3.s Speakers black woodgrain with stands. Cost (450 - £150. Thomas 0582 765871

ROTEL RCD 965BX LE Discrete CD Player, boxed, immaculate, £260. Tel: 0277 655 621.

WANTED : SAGE AUDIO Supermos-2 or Supermos-S00 Modules, Also soft-start filter modules and flyback capacitors, and a digitrap. Tel: (staffrodshire) 01543 263154.

NIGHTINGALE NMI LOUDSPEAKERS, Teak Finish. Excellent Sound. Reason for sale – upgrade. £195. Tel: 01734 868541 daytime (ask for G. Bailey), or 01344 776370 evenings.

STAX TALENT DAC (Triode Valve Output) L650 ono (L1,400). Audio Synthesis DSM-DAC (Ultra-Analogue) L650 ono (L1,300). Meridian 2068 £425 ono. Audiolab C £275 (£520). Meridian 208 +209 £700 ono (£1,700). Wanted : KCAG Digilink. Tel: 031 447 1642.

REL STADIUM Subwoofer Teak £350. Sequence Speakers 20 & 30 £100 and £120. Rotel Tuner RT – 85 OAL £90. Technics Cassette Deck RS – BX626 £100. Tel: (01422) 200075

WANTED : FIDELITY Research 12 inch Arm (66s) Philips Integrated Tube Amp for free. Please write to E. Goewie, Minckelersstr. 12-03 5041, An Tilburg, Holland.

AUDIOLAB 8 C/P Pre Power Amplifiers immcaculate £660. Linn K20 Speaker Cable 2 x 7 metres £50. Tel: 01376 330644 evenings, Essex. Wanted

Van den Hul Second Interconnects.

AUDION 300B 5/E Amp £600 one year old, Micromega Stage 1 £350 one month old, Snell K2s and Pirate Stands £275 or £1,175 the lot. Tel: 01323 841472.

LINN AXIS BASIC with K9 Cartridge. dition, £120. Excellent o Newbury (0488) 648913.

BRAND NEW TECHNICS SU-A900 MK2 amplifier £300. Cable clear out : Solid silver interconnects, WBT Plugs 80cm £100. Furakawa 90cm £25. Monster Interlink 400 one metre £25. Monster CD 0.5 metre £25. Van den Hul Videolink 75 £35. Tel: 01621 (Essex) 860 630.

NAKAMICHI IA3 AMPLIFIER, three weeks use only, absolutely mint condition, boxed as new, £195 (new £350). Genuine reason for sale. Monster Powerline 3+, precision wound speaker cable. Combines multi-strand with solid-core. 4 x 6 metres, £95 (new £180). alphason R444, 4 tier rack, rosewood shelves, sand filled, spiked. vgc, £105 (new £215). Tel: Martin 0181-518 8577.

TEAC X1000 OPEN REEL Black £425.00. Denon DRM 800 A 3 Head Cass. £175.00. Leak Troughline Tuner and Stereo 30 Amp £90.00. Ariston RD80SL T/Table and Mission arm £90.00. Offers considered. Tel: 0161-725 8081

TANNOY ARDENS in ASH Cabinets re-coned 15" HPD Drive Units, Crossover re-wired with silver OFC Cable and bi-amped with gold plated posts. £1,850 ono. Tel: Edward on 01628-486100 evenings.

BARGAIN EQUIPMENT: Meridian tuner £75, QED Digit + Positron £100, Cambridge CD2 £250. Tel: 071 286 4143

B&W SPEAKERS P2H (Ionofane Type). DM2A. DM2. DM4. Pioneer. Trio. Tuner amps. Valve stereo de-coders, Leak tuners, Fisher, Ouad, Leak. Revox. Radford. Armstrong. B.T.H. and other items Tel: 01903 239980/211746.

#### SITUATIONS WANTED

HI-FI ENTHUSIAST, 39, seeks full/part time position in Hi-Fi industry or on home consultancy basis (demo room 21 x 12 feet). Friendly personality, GSOH and excellent communicator. Brighton based. Chris (01273) 541462 (24 hour A/F).

SITUATIONS WANTED : Consultant Presence Audio. Spica TC50 SE's. dems Heathrow, Belfast. Proprietor Sounds Exclusive hi-fi. Responsible for Evans/Michell partnership. Electronics instruction booklets. Consultant Jamo U.K. Ltd. speakers. Heathrow, Bolton Tel: 01483-267516.

SITUATIONS WANTED: Graduate and Hi-Fi enthusiast seeks work in sales or as rep. Good communicator, good product knowledge. Tel: (0116) 812074 (based in Midlands).

ELECTRICAL ENGINEER (Honours) graduating this summer seeks work in hi-fi market. A hi-fi enthusiast, I aim to increase my spare time interest from a hobby into a challenging career. Tel: 0501 741495.

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ADIS JA30	mint s/h	£2250	SONUS FABER AMATORS	mint s/h	£1795
RELL KSA 80	mint s/h	£1695	EPOS ES14 + stds	g.c	£350
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