JUNE 1995 £2.00

AUDIO  VE

SUPPLEMENT NO. 15
(overseas - inside)
free with this issue.
FEATURED: ALL-VALVE
PHONO PREAMP.
MC & MM

SUPER NEW DPA
RENAISSANCE
CD PLAYER

COMPETITION - WIN A £2400
LINN SYSTEM

Scoop! Exquisite Solid Walnut UKD Divina Loudspeakers

FIVE PAGES
OF BARGAIN
USED HI-FI

5 top MC cartridges tested
Trust your instincts.
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
## Amplifiers

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

SETTING UP YOUR CARTRIDGE 53
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.
Can sound be this simple?

The answer is an audible Yes. Unlike many electronics companies, NAD specialises in delivering innovative, award-winning audio and home cinema products - and nothing else. Simplicity and symmetry. A free-ranging approach to design. Balancing acoustic excellence, ease of use, reliability and value. Principles which need for little else.
TEAC SCORE A CONVERSION
TEAC have just announced their D-TI CD convertor, designed to partner the popular VRDS T-I 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 Martin House,
The Croxley Centre,
Watford,
Herts WD1 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 phono's, coaxial digital output and Sony control circuity. 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
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!

---

**VRDS T-1 CD TRANSPORT**

With the acclaimed VRDS mechanism, highly rigid chassis and remote control - the TEAC ethos of sonic performance, build quality and ease of use are typified in the T-1.

---

**D-T1 D/A CONVERTER**

The matching DAC for the T-1 uses Bitstream Conversion in dual differential operation, a copper chassis to minimise RF interference and offers 4 digital inputs.

---

**V-8030S Cassette Deck**

The latest example of TEAC's expertise in tape engineering features a 3-Head Dual-Capstan drive transport, Dolby S Noise Reduction and separate Bias and Level controls - proof indeed that the cassette is still a viable source.

Also available is the V-6030S.

---

**A-BX10 INTEGRATED AMPLIFIER**

An audiophile amplifier which gives superb dynamic power and performance. Featuring a balanced stereo input and a fully balanced circuit configuration, the A-BX10 offers 100 Watts per channel and an optional phono input for MM and MC cartridges.

---

*Bitstream Conversion is a trademark of the Philips Corporation.*

---

**TEAC** 5 Martin House, The Croxley Centre, Watford, Herts, WD1 8YA  TEL: 01923 816830  FAX: 01923 236500
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 WF11 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 I8B 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 I8B 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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Hi-Fi Choice

“Wonderfully transparent, polished sound that really allows you to hear into the music easily”
What Hi-Fi

“Tamed unwanted sibilance making the sound more natural”
Audiphile

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

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The Chord Company, 30a Sarum Business Park, Portway, Salisbury, Wiltshire SP4 6EA. Tel: 01722 331674 Fax: 01722 411388

World Radio History
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 KT 13 0XW
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 buy 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.

Noel Raywood, Editor
Golden Dragon

RETAIL PRICE LIST
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- 12AU7/AE82CC/ECC82 £6.95
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- 6S7GT/ECC93 £8.95

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Golden Dragon 300B Range

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- 4300BLX Super £124.00 £250.00 £500.00

Please enquire of any tube types not listed. We have an inventory of over 2,500 different types in stock.

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<td>B9A Chassis (pre amp)</td>
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<td>Power Valve Retainer (EL34 etc.)</td>
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Golden Dragon Triodes

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- 2A3 4PIN £22.50 £50.00 £100.00
- 2A3 OCTAL £22.50 £50.00 £100.00
- 211 £28.50 £60.00 £120.00
- 811A £11.50 £25.00 £50.00
- 845 £36.50 £75.00 £150.00
- 805 £36.50 £75.00 £150.00

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- EL34/6CA7 £25.00 £50.00 £100.00
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- EL84 £6.95 £120.00 £240.00
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- 6L6WG/5881 £25.00 £50.00 £100.00
- KT66 £25.00 £50.00 £100.00
- KT88 (NOS Dupont) £57.95 £116.00 £232.00
- KT88 Super (Lamptron) £57.95 £116.00 £232.00
- 6L6GC £19.95 £40.00 £80.00
- 6550A £42.95 £86.00 £172.00
- 6550A Special (German) £64.95 £130.00 £260.00
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M8137/ECC83 MULLARD 24.00

A selection from our stock of over 2,500 different audio quality valves. Please enquire for items not listed

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EXPORT WELCOME

CARRIAGE AT COST

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Master Stroke

DPA's aptly named Renaissance CD player is a clever piece of electronic artistry, says Noel Keywood.
**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, Silver (fully overhauled by Absolute Sounds) £895
Classe 30 Remote Preamp Balanced (£1,370) Ex. Demo £1,095
Classe 70 Power amp 70w Balanced (£1,400) (Class 30 and Classe 70 sold as a pair) £1,095
Krell KSL Linestage Fully Balanced (£2,300) Spec. Price £1,995
Counterpoint SA 100 Hybrid Power £1,495
Amp 100w (£1,500) S/H (Mint) £750
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**111 JUNE 1995 HI-FI WORLD**
Renaissance. It's one unusual player. Much like its two-box brother, the Enlightenment convertor and transport, the Renaissance player is dimensionally compact and sturdy 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 Harrison and McCartney were unusually forward and apparently convincing. In contrast, the 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 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 16kHz 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 in-house 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 dynamism and 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 0E1.
Tel: 01222 795621

See p105-111
The DAC-I 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-I'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."

"...the kit arrives with one of the best written manuals you will ever read."

"The DAC-I's most compelling virtue is... that it bites into the music's rhythms sharply, reproducing dynamic accents crisply and cleanly."

"...the DAC-I is well balanced in its top to bottom tonality."

"...the DAC-I renders sound stage dimensions superbly..."

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

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

"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-I. It is easy and fun to build, competitively priced, and delivers fine sonic results too."

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

At $449 US, the Assemblage DAC-I 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 package (the DAC-I 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-I Digital Processor goes together in a snap (typically about one hour) and requires only a soldering iron and a few hand tools. We've even included the solder!

The DAC-I's component list is exemplary. It employs a poted toroidal power transformer, low ESR power supply capacitors, 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 polypropylene capacitors, and 1% metal film resistors. It accepts both Co-ax RCA and Toslink digital inputs.

The instructions were superb in every way.

"...the DAC-I is well balanced in its top to bottom tonality."

"...the DAC-I renders sound stage dimensions superbly..."

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

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

"The DAC-I 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-I sounded more effortless when reproducing high level complex passages than the DITB."

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<tr>
<th>Type</th>
<th>Linear SE Power (W)</th>
<th>Rf (Ohms)</th>
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<th>Us (V)</th>
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<td>5-11</td>
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<td>12-20</td>
<td>1500-3000</td>
<td>100-120</td>
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ASSEMBLAGE

Western Electric's 300B is back.

Western Electr Corp. is now re-releasing the WE 300B using the original tubing, materials, manufacturing processes, even some of the key original production personnel! These tubes will be identical to the late production WE 300B, including the "flash" logo. The only difference will be the date code! Projected availability is September, 1995. Price is $350.00 U.S. each.
# New Old Stock Paper-In-Oil Capacitors

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<td>0.033uF/1000V</td>
<td>Vitamin Q</td>
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<td>0.10uF/100V</td>
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<td>0.18uF/100V</td>
<td>West-Cap</td>
<td>Axial 0.62&quot; D x 1.75&quot; L</td>
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<td>0.22uF/600V</td>
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<td>Radial screw mount 0.8&quot; D x 1.6&quot; L</td>
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<td>0.5uF/400V</td>
<td>Gunderman</td>
<td>Axial 0.6&quot; D x 1.5&quot; L</td>
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<td>2 x 0.5uF/600V</td>
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<td>Sq. can sol. lug 2&quot; x 2&quot; x 7/8&quot;</td>
<td>$9.50 ea.</td>
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<tr>
<td>10uF/300V</td>
<td>Vitamin Q</td>
<td>2-1/8&quot; L x 3/4&quot; dia. axial</td>
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<td>1.0uF/600V</td>
<td>Aerovox or G.E.</td>
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<tr>
<td>8.0uF/400V</td>
<td>Cornell Dublier</td>
<td>Radial square can solder flange mount 4.5&quot; H x 3&quot; W x 1.56&quot; Dp</td>
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<tr>
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<td>KT88-US</td>
<td>Beam Power Tetrode</td>
<td>National (Ceton) (USA) 1992/93</td>
<td>Made to MO Valve/GEC spec's, Gold Lion Eq</td>
<td>$240.00 pr.</td>
</tr>
<tr>
<td>2</td>
<td>211/VT-4C</td>
<td>Power Triode</td>
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<td>In original U.S. Army boxes</td>
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Oh 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 115x36x42cm 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 505 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 6s 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...
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
The Chord Co.
30a Sarum Business Park,
Portway,
Salisbury,
Wiltshire SP4 6EA
Tel: 01722 331674
£4600

Measured Performance
see p105-111

JUNE
Danish company Densen have an interesting product in the DM-10 integrated amplifier, finds Dominic Baker.

Dansen 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.

Tonaly, 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. Sheryl 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**

Morel UK
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Distributors of Audiovector speakers for F3/LYD, Meinungsgade 8, D2, DK-2200 Copenhagen N, Denmark. Tel: 01 39 60 60
For 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 stand-alone 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.
few people on earth would not profess a love of music. And at the far end of the scale are those who make it their life's work. They build equipment but something deeper and more consuming - a grand, heartfelt passion.

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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 75Ω). 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 feed-through 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, 44.1kHz 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 thud 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 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.
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Technics' little tuner bargain, the ST-GT350, is a mere £140, for which it has FM, MW and, miracle of miracles, LW, a 30-station memory (20 FM, 10 AM), all in a slim line case. Only RDS is missing.

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. Listening to a Radio 3 play, The Duchess of Malfi, there was plenty of atmosphere and a full 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 burring 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-to-stern depth of top tuners.

There was not much wrong either with the tonal quality 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 frets. 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 cuppiress 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 talk radio.

I found Technics' budget baby was thoroughly capable when wired up to a Harman-Kardon 600 amplifier, whose bright, perky presentation sharpened up its act neatly. All in all, the ST-GT350 is not a bad little buy and a very good fit for budget and mid-price systems.

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**Technics STGT-350**

£139.95

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**Measured Performance**

see p105-111
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UKD'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 Charlo 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 soundstage with voices hanging eerily in mid-air was one I rather enjoyed. This has duly made me acutely 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 pin-point 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.

---

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see p105-111
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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 three-dimensional 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.,
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Measured Performance see p105-111
THE RIGHT PROFILE

Have Tannoy finally got the balance right with their mid-market floorstander, the Profile 637?

David Price finds out.

A 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 latest Profile range continues their traditional approach to loudspeaker design, using a dual-concentric 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.

TheProfiles' 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&V 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 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!

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

Like 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...
When we listen to music, both the high and low frequency sounds help our brains to paint a 3 dimensional stereo picture. But when we listen to CD, the high and low pictures do not perfectly realign. With their clinically clean electronics, CD players lack the beneficial, subtle signal handling of analogue equipment which can actually "re-converge" the two stereo images. So creating the convincing illusion that is the hallmark of good analogue systems.

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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, midi-systems 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 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.”

As a retailer we need to educate customers about the benefits of real hi-fi 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 TURNING

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 LP12, Lingo, Itoh, 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.

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 vinyl. 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 SPURNS CD!

As a classical record collector for twenty five years and a dealer for four years, Ian 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

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 market seems to have had an effect on many dealers who sell high-end gear who have ignored and even ridiculed vinyl fanciers. 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

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

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 questionnable 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.
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, Circus, Akito, K9, Ion Obelisk 2 amplifier and Linn Index Plus loudspeakers, connected to a dedicated mains supply. To my ears this outperforms any CD-based 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 'dead'? 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

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 full-price 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 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 Month

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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.
Recently 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 microprocessor-based 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...
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 acularity. 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 self-conscious, 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 Q was also streets ahead, far more fluid and expressive. Gregory Reeves' bass guitar wasn't just deeper, but also more supple. The 8000Q let the players play their own tune with their own individual 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 VERDICT

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 Technology, Spitfire Close, Ermine Business Park, Huntingdon, Cambs PE18 6XY
Tel: 01480 52521

Measured Performance see p105-111
... continued from page 41

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 just
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
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
CD635E, 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
audio, 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
convenience. 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 reconstructed 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
too 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 super test 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 hi-fi thirst appears, leading 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 expect 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 hi-fi'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.uk, including ourselves hopefully in the near future. DB

ENOUGH QUAD HYBRID!

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 hybrid Quad '63 system using bass horns. We have experimented with dipole, 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 again, I would hate to wire them up for sound as 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

Quad's ESL63s can sound fantastic with a good subwoofer. Major J. E. M. Ruffer uses 20ft folded horns for powerful bass.

JUNE 1995
STAGED IMPROVEMENT
My system consists of Micromega Stage One CD player, Audiolab 8000CP (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 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.

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 with Audiolabs, so try to hear it against a Seismic Sink, which seems to have more variable results. DP

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 1 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 (Taverner 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?
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 “silky”. 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 LS7s, 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 oxidation. Get your local hi-fi dealer to 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/Speex turntable, Philips CD 8501 CD player, Pioneer CT-5320 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 SU9001 might be useful, or another preamp to replace the 101B. What do you recommend?

H. Cleverly Epping.

When the Meridian 101 preamp was designed in 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

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 Wilsmslow Audio and have in mind the Digital 90 costing £293 or the KEfalar 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 828 09) or Bill Hutchinson in Leeds (tel: 0532 427777), or phone Systemdek themselves at 0294 721 251. Wilsmslow 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 KEfalar cone speaker warrants its extra cost. If you fancy the trip, ‘phone 0565 650 605 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 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...
Introducing the Riverside 4040 Valve Amplifier...

The Riverside 4040 brings high-end features – in kit form:

- Integrated amplifier with dual mono configuration with a generous 40W rms of valve sound per channel.
- Mirror finish stainless steel chassis with gold plated audio connectors.
- Quality British made transformers and tested valves.

The kit comes with a “guaranteed to work” promise and a full parts warranty. Kit price £780 including delivery (in UK) and VAT; or send £3 for the 18 page construction manual.

Phone or fax Cambridge (01223) 501997 (7 days, 24 hours) for further information.

Technical specifications:
- Dual mono construction, 40W rms per channel using McIntosh output topology, 8D and 4.0 outputs, 240/230V input, five line level inputs, monitor output, 13Hz to 20kHz bandwidth.

Riverside Audio (Cambridge) Limited, 18 Riverside, Cambridge CB5 8HL.

Music Communication Systems Inc. California USA

The Sumo Class-A Tradition

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.

AUDUSA & Co

Power Amps - Class A
The Ten 100 wpc £2,834
The Five 60 wpc £1,784

Power Amps - Class AB
Andromeda III 240 wpc £1,784
Polaris III 120 wpc £891

Preamplifiers
Artemis - Remote + PSU £1,574
Athena III £944
Athena II £734

Digital
Axiom transport £781
Theorem DAC - Clock locking/jitter free £875

Subwoofer X’Over
Deililah Stereo/Mono Crossover at 50, 53, 80, 100 or 125Hz £629
David Price auditions high-end moving coil cartridges from Goldring, Linn, Lyra, Ortofon and van den Hul.

Nowadays there are some great ‘mid-price’ (around £100) cartridges to be had such as the Goldring 1042, not forgetting Ortofon’s excellent MC 15 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 ‘valve-like’, 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
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.

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 vise-like 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.

**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. Tonal wise, 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.

**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 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
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 sumptuous-sounding 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 Hul 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 equalized 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.

Goldring 01284 701101
Linn 0141 644 5111
Lyra 01494 441736
Ortofon 01753 889949
van den Hul 0181 8109388

Measured Performance see p105-111

HI-FI WORLD JUNE 1995
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PICKUP CARTRIDGE
SET-UP

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

Arm 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 -

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

Louders 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? I 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 level is set on cassette decks. Dolby flux (200mWb) 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 250mWb, which I think is most sensible.

You're likely to be happy with the Harrison Test Cassette available from Canford Audio, Tyn & 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
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 chrome. Add 2dB to these figures if you place OVU 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 OAK112 LC-OFc purchased via RS. Components are bi-wired with Cabled Talk 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 do, such a difference from the consumer-driven "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 of maths and semiconductor physics.

What can I put between my Marantz CS25 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 persevere 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 preamplifier. The increase in musical detail and perceived dynamics is quite astounding, even though the Dynaco has no 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 CD651 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 8ohms right across the audio band, giving a true 80 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 converter 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

NAIM • CYRUS • B&O • REGA • DENON ETC.
Thomas Heinitz Ltd. 35 Moscow Rd, (Off Queensway) Bayswater, London W2 4AH
0171 229 2077
Dominic Baker finds Orelle’s new DA-188 CD convertor is looking at the stars.

Orelle’s move from anonymous grey boxes to more British-looking 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 neutral turf, not as full sounding as the Quad 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.

This adds up to a convertor where enthusiasm is the key word. The Lightning 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 Quad or as cold as some earlier bitstream convertors.

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Orelle DA-188
Orelle Hi-Fi, Unit 11, I-MEX House, 6 Wadsworth Road, Perivale, Middx UB6 7JD
Tel: 0181 810 9388

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Cyrus III

AT

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In 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 6 watts 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 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 single-ended 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.

VRR Adur single-ended £1495
VRR, 30 Melbourne Avenue, Worthing, West Sussex BN12 4RT

Measured Performance see p105-111
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.

**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 5-pole analogue filter with a DC-coupled output stage. Could Marantz be about to hand over their lead?

**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.

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**IN THE JULY ISSUE**

JUNE 1995
Back 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 thump.

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.

When wooden cabinets gave people wooden voices, it was thought of as unwanted colouration. When they gave cellos a rich, resonant thump, 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 thump 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!

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 plasticy 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 the signal input, damping, 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, 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, subler 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 CD63SEI 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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"RINGMAT gave a sharper, cleaner, more solid sound, with better fine detail and clarity... RINGMAT 330 must be cost-effective, upgrades you can make to any turntable." Jimmy Hughes (Audiofile, October '93)

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For Further Information
HIFI 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, cassettes which are sent driving down the M4.

...column - on this...denied by their omission.

...controls on my audio system, a happy state for concentrated...because long-haul driving provides just the right...level of sensory-deprivation 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.

...considered two 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 1kHz. After all middle C is about 200Hz which is almost two octaves below 1kHz and, musically speaking, middle C isn’t even in the bass clef! If suitable curves are chosen, and with the availability of low-distortion, high-gain op-amps, the Baxandall circuit can accomplish both delicate and difficult equalisation tasks without any real vices.

...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.

...natures 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.

...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.

...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.


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10K 220K 7 22n 22K
R4 10K 10u 22 10u
C4 22K 22K 100K 220K
R5 10K 10K 220K 220K 7
C3 22n 22n
C7 10u 10u
C8 10u 10u
R6 220K 220K
VR2 100K 100K
VR1 100K 100K
D1
C7 10u
R3 47K
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R1 22K 22K
C5 22n 22n
IN
OUT

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**Diagram:**

A circuit diagram illustrating the tone control stage of the Maximalist Preamplifier. The diagram shows the various components and their connections, including resistors, capacitors, and transistors. It also includes labels for boost and cut controls, and the input and output ports. The diagram is detailed and technical, highlighting the complexity of the design.
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**SILVER PLATED, P.T.F.E. COVERED WIRE**

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**AVO CT160 VALVE TESTER**

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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.

Under a flap of the Yamaha KX-580 lurks a little button marked Dolby 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.

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 single-capstan 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 prerecorded, especially with Dolby switched in.

The Yamaha KX-580 is for those who want balanced recordings without tape hiss from ferrics, chromes and prerecorded 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.

Yamaha KX-580
Yamaha Electronics UK
Yamaha House,
200 Rickmansworth Rd,
Watford,
Herts WD1 7JS
Tel: 01923 233166

£249.95

Measured Performance
see p105-111
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 Crystel'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:

LINN SYSTEM COMPETITION
Hi-Fi World Magazine,
64 Castellain Road,
Maida Vale,
London. W9 1EX.

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

1) Linn's Minik 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
   B. K9
   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.

[4] No employees of Audio Publishing Ltd. or any of the companies associated with production or distribution of the prizes may enter.

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05/95 Please allow 28 days for delivery
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. combine to bestow a particular character. The 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.

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 DPA Renaissance 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

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 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
It wasn't so long ago when the country seemed gripped 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 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 CFC-free 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 rosewood veneer is the real thing, such as its striking appearance. I hope other 'speaker manufacturers follow suit after Mission and Ruark's success.

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 built-in 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 EP12 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 hi-fi 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!

"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 Tempelar prove. In the case of Mission, many customers have been fooled into believing the wood is the real thing, such as its striking appearance. I hope other 'speaker manufacturers follow suit after Mission and Ruark's success.

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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 Pops-style 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 Al 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 1

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-slicing session of the sort where if you're smart you cut the veins lengthwise 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.

THE ORB  
Orbvs Terrary um  
ISLAND CID 8037

I've frequently wondered what The Orb were all about and after considerable aural exposure to this latest offering I must confess I'm no nearer to arriving at any coherent conclusions. Imagine Pink Floyd at their dullest sans the Roger Waters verbal cobbler's of old.

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 newbie. Or you can go with 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-10  
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.
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.

If there's an initial hurdle 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. 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 Ian 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 the gall to do it twice, no less. Investigate - and pronto.

Jon Clarke

MOBY
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 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 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
S30 228-2

• 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.
David Price

**LEFTFIELD**

**Leftism**

**TOTAL BMG TA CDI**

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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.

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**SMASH**

**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 grungy, 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 City punks, who have been building up in 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 drop-dead-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**

- "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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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 synthesizers 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, multi-tracked part-composed, part-improvised constructions of horns, sequencers and synths - have stood up as one of the most endearing, 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 psychedelically '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.

Voodoo Down

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 Chancier 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

RAY ANDERSON/HAN BENNINK/CHRISTY DORAN

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.

M.J. HARRIS/BILL LASWELL

Somnific Flux

SUBHARMONIC SD 71012-2

- 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 Napol 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-meets-techno 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-thrash-funk 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, 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.

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**Simon Cooke**

**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 well-defined 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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AZONIC HALO

Azonic Halo

STRATA 0002-2

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**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 re-mastering ever done, but worth any jazz historian’s money.

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Hi World
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 Op11
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 Bartók’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 Op11 which Barber wrote while staying near Salzburg in the
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-Saëns, 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-Saëns as choirmaster at the Church of the Madeleine. Externally, the musical world was dominated by Brahms, Wagner and Liszt. By the time of Fauré’s death in 1924, it would have been further transformed by the revolutionary notions of Stravinsky, Schoenberg and Bartok, and by Fauré’s compatriot, Claude Debussy. Yet these upheavals passed Fauré by. 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 Société Nationale de Musique Française which was dedicated to the furtherance of ‘Gallic art’. To that end, as well as composing Fauré became a distinguished teacher (one of his pupils was Maurice Ravel), and held the post of Inspector of Music for the provincial conservatories (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.

Gabriel Fauré
Barcarolles/Impromptus/Nocturnes/
Trois Romances sans Paroles/Mazurka
in B Flat Major Op32/Valse Caprice
No.4 in A Flat Major Op32
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 evoke 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 Fauré’s piano pieces are the Nocturnes, where eloquent melodic lines and sumptuous harmonies build to impassioned, ecstatic climax. The kind of romantic outpouring that appears at odds with Fauré’s perceived image of Gallic refinement. 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 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.
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 Maccabees 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 coloring.

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 would have been most reluctant to leave their seats!

**MASTERS OF THE ROYAL CHAPEL, LISBON**

Music by Carreira, Coelho, Guerrero, Alvarado, de Brito, Magalhaes and Anon

Stephen Farr, organ

A Capella Portuguesa; conductor, Owen Rees

HYPERION CDA66725 (DDD/62.50)

● In last month's issue, it was

In 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 Comissa mea pavesco. Here the pathos of the penitential 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’s 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, vibrant, intense and enthralling as that of their contemporaries in Italy, Spain and northern Europe, and I trust the choir of A Capella Portuguesa 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 co-director of the A Capella Portuguesa, 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, broad-arched 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 triumphant call to arms, but with a tranquil 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 to 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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<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measurement</th>
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<td>50watts</td>
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<tr>
<td>CD/tuner/aux.</td>
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<tr>
<td>Frequency response</td>
<td>3Hz-82kHz</td>
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<tr>
<td>Separation</td>
<td>101dB</td>
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<td>Noise</td>
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<td>13V out</td>
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<td>Gain</td>
<td>x5.5 max</td>
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**VRR ADUR**
The VRR has switchable push-pull and single-ended modes. Push-pull gives highest gain and output power, giving a modest 12.5watts for 1% distortion in the midband (i.e. 1kHz). 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

<table>
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<tr>
<th>Parameter</th>
<th>Measurement</th>
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<td>Frequency response</td>
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<tr>
<td>Noise</td>
<td>-85dB</td>
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<td>Distortion</td>
<td>0.3%</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>200mV</td>
</tr>
</tbody>
</table>

**DENSEN DM-10**
The Densen DM-10 produced a sturdy 69watts into 88ohms and 115watts into a 48ohm, 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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>69watts</td>
</tr>
<tr>
<td>CD/tuner/aux.</td>
<td></td>
</tr>
<tr>
<td>Frequency response</td>
<td>7Hz-100kHz</td>
</tr>
<tr>
<td>Separation</td>
<td>60dB</td>
</tr>
<tr>
<td>Noise</td>
<td>-100dB</td>
</tr>
<tr>
<td>Distortion</td>
<td>0.15%</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>320mV</td>
</tr>
<tr>
<td>dc offset</td>
<td>28mV</td>
</tr>
</tbody>
</table>

High distortion, but predominantly innocuous 2nd harmonic
As any hi-fi specialist will tell you, to get the maximum benefit from your loudspeaker / speaker stand combination, you should fill your stands with a suitable material. Until now, the most common medium has been sand or a sand-based alternative. The other option was lead shot that, although very dense, is extremely expensive and difficult to source.

Now available to fill this gap are SOUND-BYTES, uniquely shaped steel chips that provide a heavy, dense medium, ideal for getting the best out of your speaker system.

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World Radio History
CD PLAYERS

DPA DIGITAL RENAISSANCE
The new Renaissance CD player uses DPA Digital's discrete 1-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 1kHz 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.

<table>
<thead>
<tr>
<th>Frequency response</th>
<th>4Hz-21kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distortion (%)</td>
<td></td>
</tr>
<tr>
<td>-6dB</td>
<td>0.02</td>
</tr>
<tr>
<td>-30dB</td>
<td>0.04</td>
</tr>
<tr>
<td>-60dB</td>
<td>1.11</td>
</tr>
<tr>
<td>-90dB</td>
<td>80.8</td>
</tr>
<tr>
<td>-90dB dithered</td>
<td>59.3</td>
</tr>
<tr>
<td>Separation (dB)</td>
<td>left: 75</td>
</tr>
<tr>
<td></td>
<td>right: 71</td>
</tr>
<tr>
<td>20kHz</td>
<td>64</td>
</tr>
<tr>
<td>Noise</td>
<td>99dB</td>
</tr>
<tr>
<td>with emphasis</td>
<td>103dB</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>90dB</td>
</tr>
<tr>
<td>Output</td>
<td>2.4V</td>
</tr>
</tbody>
</table>

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 & am 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 (EIAJ 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.

<table>
<thead>
<tr>
<th>Frequency response</th>
<th>4Hz-20.8kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distortion (%)</td>
<td></td>
</tr>
<tr>
<td>-6dB</td>
<td>0.006</td>
</tr>
<tr>
<td>-30dB</td>
<td>0.01</td>
</tr>
<tr>
<td>-60dB</td>
<td>0.2</td>
</tr>
<tr>
<td>-90dB</td>
<td>29.1</td>
</tr>
<tr>
<td>-90dB dithered</td>
<td>4.7</td>
</tr>
<tr>
<td>Separation (dB)</td>
<td>left: 125</td>
</tr>
<tr>
<td></td>
<td>right: 125</td>
</tr>
<tr>
<td>1kHz</td>
<td>113</td>
</tr>
<tr>
<td>Noise</td>
<td>-106dB</td>
</tr>
<tr>
<td>with emphasis</td>
<td>-106dB</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>115.5dB</td>
</tr>
<tr>
<td>Output</td>
<td>2.9V</td>
</tr>
</tbody>
</table>

ORELLE DA-188
The Orelle DA-188 has an interesting frequency response characteristic. From around 1kHz 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.

<table>
<thead>
<tr>
<th>Frequency response</th>
<th>4Hz-21kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distortion (%)</td>
<td></td>
</tr>
<tr>
<td>-6dB</td>
<td>0.003</td>
</tr>
<tr>
<td>-30dB</td>
<td>0.04</td>
</tr>
<tr>
<td>-60dB</td>
<td>1.08</td>
</tr>
<tr>
<td>-90dB</td>
<td>32.9</td>
</tr>
<tr>
<td>-90dB dithered</td>
<td>12.5</td>
</tr>
<tr>
<td>Separation (dB)</td>
<td>left: 123</td>
</tr>
<tr>
<td></td>
<td>right: 122</td>
</tr>
<tr>
<td>1kHz</td>
<td>97</td>
</tr>
<tr>
<td>Noise</td>
<td>108dB</td>
</tr>
<tr>
<td>with emphasis</td>
<td>110dB</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>101dB</td>
</tr>
<tr>
<td>Output</td>
<td>2.2V</td>
</tr>
</tbody>
</table>

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 - 1kHz 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 1m with a nominal watt (2.83V) pink noise signal. But they have a low overall impedance of 4.3Ω, so an amplifier capable of supplying plenty of current must be used for balanced results. Below 1kHz impedance starts to fall rapidly towards 2.5Ω, a very low figure that many amplifiers will struggle with. For this reason, I'd recommend amplifiers capable of producing at least 50watts into 4Ω and plenty of ability to supply high current into low impedance loads.

**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 1m 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 6Ω, meaning current and therefore power will be consumed. The impedance curve has a strong dip to around 2Ω 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.

**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 17Ω, meaning they will draw just under half the current of a typical 8Ω load. Impedance is smooth too, and stays well above 8Ω. 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.

---

**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

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**HI-FI WORLD**

Continued on page 111
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- Frequency response: 20Hz-20kHz
- Channel separation: 23dB
- Tracking ability (300Hz)
  - lateral: 63μm
  - vertical: 45μm
  - lateral (1kHz): 180μms/sec.
- Distortion (45μm)
  - lateral: 1%
  - vertical: 1%
- Output (5cems/sec rms): 0.65mV
- 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 (1kHz): 180μms/sec.
- Distortion (45μm)
  - lateral: 0.8%
  - vertical: 2.8%
- Output (5cems/sec rms): 0.37mV
- Channel imbalance: 1dB

**ORTOFON MC30 SUPREME**
- Tracking force: 2gms
- Weight: 10.7gms
- Vertical tracking angle: 25degrees
- Frequency response: 20Hz-20kHz
- Channel separation: 36dB
- Tracking ability (300Hz)
  - lateral: 63μm
  - vertical: 45μm

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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 1kHz.

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

The combination record/replay head managed just +1dB 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 tapes)
- Frequency response (-2dB): 30Hz-18kHz
- Speed accuracy: +0.3%
- Hiss (70uS, Dolby out): -60dB

RECORDING (blank tapes)
- Frequency response (IEC Primary Refs.)
  - ferric (IEC1): 30Hz-15kHz
  - chrome (IECII): 30Hz-18kHz
  - metal (IECIV): 30Hz-19kHz
- Separation (1kHz): -50dB
- Distortion (315Hz): 1.7%
- Hiss (70uS, Dolby out): -57dB
- Speed variations (DIN total): 0.06%
- Flutter energy (3-3.13kHz): -22dB
- MOLSAT (IEC Refs.): 315/10kHz
- IEC I (ferric): 3.5dB/-5.5dB
- IECII (chrome): 1dB/-5dB
- IECIV (metal): 0.7dB/2dB

**Speed Stability**

**FLUTTER**

**WOW**

**3170**

**2970**

**HI-FI WORLD JUNE 1995**
LAST MONTH’S NEWSFLASH SPOKE MAINLY OF MY RECENT EXPERIENCE WITH AUDIONOTE UK’S OTO S.E. AMPLIFIER. UNDOUBTEDLY THE 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 TODAY’S HIGHER QUALITY COMPONENTS. I’LL BRING TO YOUR ATTENTION, THAT ALL OF THE COMPANY’S 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 BARGAIN 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 THAT ELUSIVE QUALITY THAT MAKES YOU WANT TO LISTEN ALL THE WAY THROUGH, DISC AFTER DISC. I RECOMMEND STRONGLY, THAT IF YOU SUFFER FROM DIGITITUS, LINK UP WITH ONE OF THESE BABIES IN YOUR SYSTEM FOR SMOOTH, DIMENSIONAL, ADDICTIVE LISTENING.

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<table>
<thead>
<tr>
<th>Product</th>
<th>RRP</th>
<th>NOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orelle CD-160.2 CD player</td>
<td>£749</td>
<td>£399</td>
</tr>
<tr>
<td>Orelle CD-480 CD player</td>
<td>£399</td>
<td>£299</td>
</tr>
<tr>
<td>Orelle SP-150 Power amp</td>
<td>£499</td>
<td>£299</td>
</tr>
<tr>
<td>Orelle Orators Speaker system</td>
<td>£699</td>
<td>£349</td>
</tr>
</tbody>
</table>

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HI-FI WORLD

World Radio History

JUNE 1995
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<td>Reference 7 x/d</td>
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<td>Reference 7 &quot;NEW&quot; Piano Black</td>
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- TO TOTAL AMOUNT ORDERED.
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- BUT NOT CALIBRATED £99 ea
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<td>Quad ESL 63</td>
<td>mint 1499</td>
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<td>ProAc Super Towers</td>
<td>v.g.c. 1350</td>
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<td>Mark Levinson 30/35</td>
<td>mint 9500</td>
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<td>Micromega 3.1.C.D</td>
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<td>Audionote ANJ speakers (ex-demo)</td>
<td>ex-dem 1700</td>
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  - DP2060

- Marantz
  - CD55SE
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BRISTOL SOUND & VISION '95

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 AMG C60 CD player, plus a new line in Thorens amplification. John Michell was playing his new ORBE 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 Shahnin 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. Coincidentally 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 condition, from new. Rogers Cadet III integrated FM tuner (Mississauga). Brand new to real tape recorder. All in good condition. Boxed. £300. Tel: 01322 620673 (Tees). DENON DR7300 D.A.T. recorder. £180. DR7200H cassette recorder £100. Both in great condition. £150. Cabletech Concert 2 loudspeaker cable £32 per pair £55. Audiophiles video X cable £10. Tel: 01322 620673 (Tees). MUSICAL FIDELITY M5F. Fine condition. boxed. £1,000.00 o.n.o. Tel: 01722 737687 (Tees). SPEDNIOR SI speakers on Target sandfilled, stands Real. Walnut veneer. Boxed, mint condition. £400. £350. Tel: 01630 641647 (Tees) -精神病院每天的药品和生活用品，包括但不限于食物、药物和卫生用品。所有物品需要由医护人员监督，并按医嘱分发给每个患者。精神病院的医疗团队包括医生、护士和其他专业人员，他们负责患者的医疗护理和康复。精神病院的环境设计旨在提供安全、舒适的氛围，有助于患者的康复。精神病院的活动包括康复训练、社交活动和娱乐活动，旨在提高患者的生活质量。精神病院的患者需要遵守医院的规定和行为准则，以维护一个安全、有序的环境。精神病院的医疗团队与患者的家属和其他相关机构保持沟通，以确保患者得到全面的护理。
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DS 1.5 Power Supply

NI 1.5 Mono-Power Amplifiers

Ojan 3X

DS 1.5 Power Supply

L 2.5 Pre-Amp

S 1.5 Stereo Power Amp

M 1.5 Mono-Power Amplifiers

ROKSAN

L 1.5 Pre-Amp

Atessa DP 2 DA 2 DS 5

Ojan 3X

HOTCAKES Loudspeaker
What Hi-Fi? - Best Design 1989
"Recommended"

DARIUS Loudspeaker
Hi-Fi Choice - Product Excellence 1990
"Recommended"

TABRIZ Tonearm
What Hi-Fi? Awards 1991
"Recommended"

CORUS Cartridge
What Hi-Fi? - Best cartridge 1991
"Recommended"

RADIUS Turntable
C.E.S - Innovation Design & Engineering 1991
"Winner"

RADIUS Turntable
British Hi-Fi Awards 1992
Best turntable under £500
"Winner"

ROK-DPI CD Transport
Audiophile - Award for excellence 1992
"Winner"

Touraj Moghaddam Signature (TMS) Turntable
Audiophile - Award for excellence 1993
"Winner"

Touraj Moghaddam Signature (TMS) Turntable
Stereo Sound - Reviewers Top Turntables 1993
"Number 1"

XERXES Turntable
Stereo Sound - Reviewers Top Turntables 1993
"Number 2"

OJAN 3 Loudspeaker
Hi-Fi Choice - 1994
"Recommended"

ROK-DPI CD Transport
Fedeltà del Suono - L'oscar del anno 1994
"Winner"

ATTESSA ATT DP2P
Suono Magazine - CD Player of the year 1994
"Winner"

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Facsimile: 01895 436 385