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& computer audio

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Michell's TecnoDec turntable

plus

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- Monitor Audio B2 speakers
- Tannoy ST50 SuperTweeters
- Living Voice Avatar OBX-R 'speakers
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- Linn 2250 amplifier

Computer Audio World

- VideoLogic ZXR-200 multimedia speakers
- SONICblue RioVolt SP150
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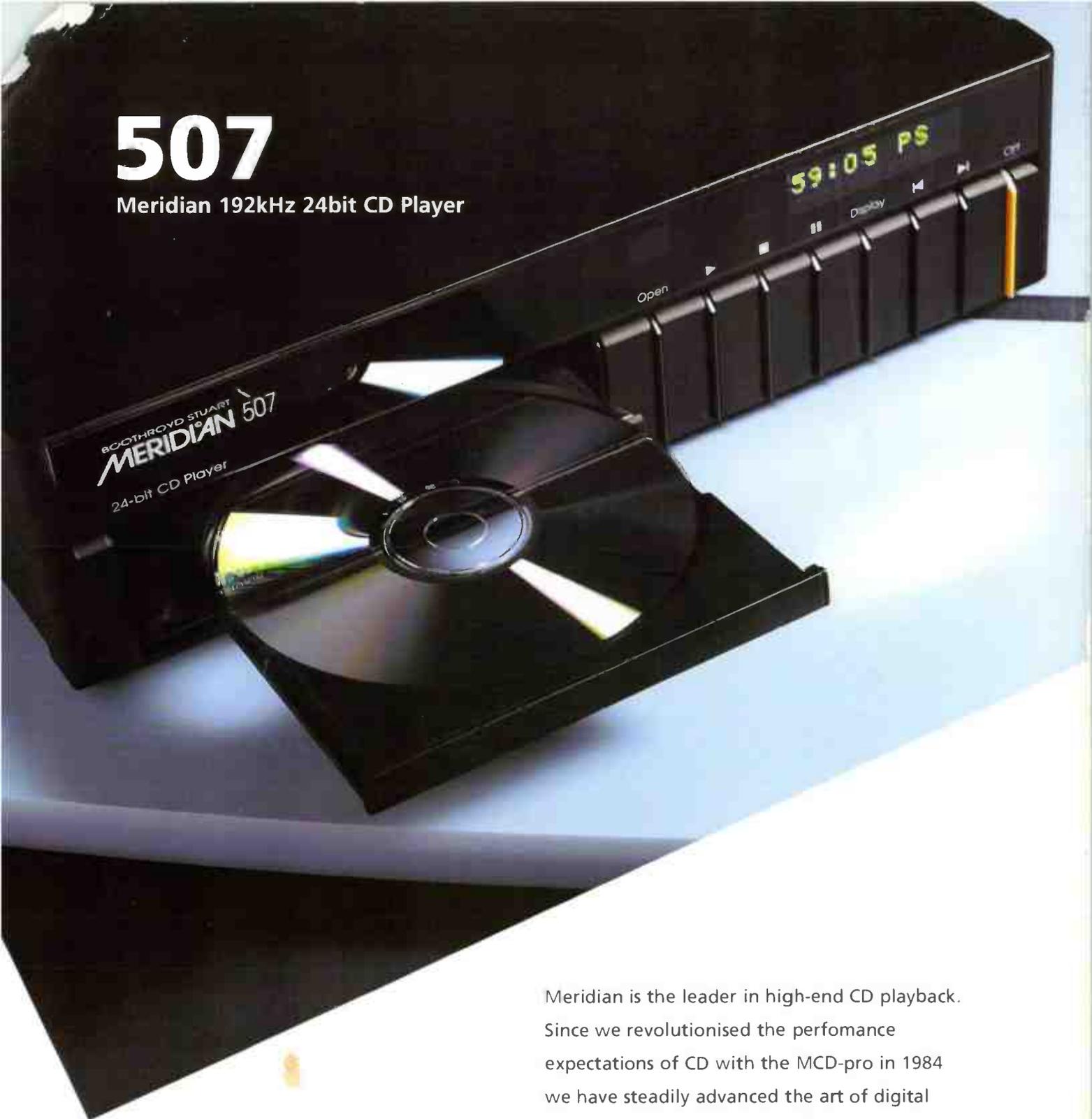


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World Radio History

507

Meridian 192kHz 24bit CD Player



BOOTHROYD STUART
MERIDIAN[®]

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the crew

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Subscriptions & Back Issues

9:30am - 12:00 noon
tel: +44 (0) 1923 270 833
fax: +44 (0) 1923 260 588
e-mail: subscriptions@hi-fiworld.co.uk

Distributed by

Comag Magazine Marketing,
Tavistock Road, West Drayton,
Middlesex UB7 7QE
Tel: +44 (0) 1895 444 055

Printed by

Southern Print, Dorset
Tel: +44 (0) 1202 628 300

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simon pope

After almost five years on the magazine it's time for me to lay down the editor's quill. Deciding what to put in your final 'ed intro' is a bit like deciding what to have for your last meal after five years on Death Row! Not that it's been like being on Death Row - unless the USA's high security prisoners

get to travel the world and listen to the best sounds!

As I pack my knapsack and wander purposefully into the civilian wilderness, I can reflect on a superb time during my tenure. We often have to deal with head-scratching advanced technology that takes the job well out of the audio sphere, but many manufacturers and fellow hacks have a deep knowledge and love of music above technology. But so do our readers. Log on to any of the various manufacturer or web magazine forums and follow a strain about who recorded the definitive Bruckner Eight and you'll see what I mean.

The five years I've spent on the magazine have perhaps seen the start of the end of hi-fi as we know it, with the emergence of A/V, although specialist two channel music is still going strong. What got me into all this in the first place was music, and whilst, yes, music is still the essential key to the rise of DVD-A, for example, some of the 'sit and listen' mystique has been irreparably taken away by lobbing a TV into the equation. Even the strongest advocates of multichannel would have to admit this. So where do I fit in among it all?

The one question you'll all want to ask is, after all I've listened to, what will I choose for listening to my music collection? Well, coming from a classical music background, but with a love of Rock and Dance too - I'm not that old - a pair of Quad 988 electrostatics found their way into the Papal residence some time ago. These unique beasts are subtly underpinned, as it were, by a REL subwoofer. A Meridian 507 CD player does the honours at the front end and I swap between an original Audio Analogue Puccini SE, Musical Fidelity A1001 and a pair of monoblock valve amps depending on mood! The telly? It's at the other end of the room, with hopefully a Pioneer DV656 universal DVD player under it very soon for sheer compatibility and value. But this could all change quickly. I've had my eye on a Marantz SA12 for quite a while, for example! Now music won't necessarily be work anymore - praise be - and I can start enjoying it again. Where's that Carpenters album?

how we test the products

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

£	NICE PRICE	- Represents excellent value for money.
● ● ● ●	EXCELLENT	- Superb sound, among the best available.
● ● ●	VERY GOOD	- Well worth a listen.
● ●	ADEQUATE	- Room for improvement.
●	POOR	- Seriously flawed. Forget it!
◐	Half globes are added for those products that we feel are between categories	

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HI-FI WORLD

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LONDON, NW6 5LF

contents

features

SURROUNDED BY SOUND 36

As an audiophile, how do you go about changing from two channel to surround-sound without breaking the bank or degrading the sound of your hi-fi. The Hi-Fi World boffins make some suggestions...



reviews

digital players

MARANTZ DH9300 18

This is the first hard disc music server from specialist audio company Marantz. Find out what we think of it.

PIONEER/TOWNSHEND AUDIO DV747 62

An interesting combination featuring Max Townshend's customised power supply upgrade for Pioneer's universal DVD player. David Price evaluates.

amplifiers

PRO-JECT PRE & POWER BOX 23

Dominic Todd listens to this stylish and compact preamp and monoblock power amp package from the turntable specialists!

TAG MCLAREN AUDIO AV30R/100 X 5R 39

We take a look at this high end preamp/processor and modular five channel power amp combination. Will it be the audiophile's choice for surround-sound?

LINN 2250 42

Hi-Fi World listens to the new 'midprice' power amplifier from the Scottish stalwarts.

loudspeakers

£600-£1000 BOOKSHELF 'SPEAKER GROUP TEST' 9

We gather in six of the latest quality bookshelf loudspeakers to find out which will top the class. Noel Keywood reviews.

MONITOR AUDIO B2 34

Here are new budget bookshelf models from Monitor Audio. How will they compete in such a strong sector, wonders Dominic Todd?

LIVING VOICE AVATAR OBX-R 50

The Avatar OBX-R is top dog in the high sensitivity Auditorium range from Living Voice. Simon Pope listens with interest.

TANNOY ST-50 SUPERTWEETERS 59

Tannoy's latest external Supertweeters are a pared down version of the luxurious ST-100s. Find out if we think they're a viable purchase.

vinyl

MICHELL TECNODEC 55

Michell's hot new entry level turntable gets the full HFV treatment in this exclusive review.

CLASSIC CUTS 70

Andy Giles chooses the Sibelius Violin Concerto and Fifth Symphony from EMI - a 1987 classic.



PAGE 39



PAGE 18

PAGE 59



computer audio

- COMPUTER AUDIO NEWS** 81
All the latest news and views from the world of computer audio.
- TUNER IN THE NET** 83
Onkyo's brand new TX-NR900 receiver is one its most complete exponents to date, reckons David Price.
- PHILIPS PSC605** 84
David Price experiences the new Philips PSC605 Sonic Edge 5.1 soundcard.
- LOW VOLTAGE** 85
The new RioVolt SP150 is SONICblue's answer to the rapidly growing CD-based MP3 portables market. David Price is neither shocked nor stunned.
- LOGICAL CHOICE** 86
David Price tries out VideoLogic's new ZXR-200 multimedia speakers.

supplement No 72

- DIY NEWS** 97
All the latest news and views for the do-it-yourself audio enthusiast.
- PARAGLOW AMP KIT** 98
Ray Paice puts together a low powered single ended kit amp of the purest type.
- BOOK REVIEW** 103
This month's bedtime read is Audio Measurements by Norman Crowhurst reviewed Neal Gibbons.
- THE REFLEX DIY CABLE** 105
Nick Lucas assembles a high end cable that makes a highly cost effective upgrade.



PAGE 9

BUYING GUIDE

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competition

This month you can win the wonderful Michell TecnoDec turntable, a brand new model to bring LP into the 21st century no less!



PAGE 26

regulars

- WORLD NEWS** 6
- NEXT ISSUE** 7
- READERS LETTERS** 44
Hi-Fi World's wise men will reply to your letters and e-mails and put you back on the right course. And don't forget, every letter or e-mail we print wins a superb prize.
- HI-FI WORLD KITS** 64
Solder in one hand, glue in the other, satisfy your creative urges with a World kit.
- HI-FI WORLD LIBRARY** 68
A comprehensive selection of titles covering audio, valve amplifiers, loudspeakers, solid state electronics and more.
- SPECIALIST HI-FI DEALERS** 72
The perfect mix - excellent coffee, a comfortable sofa, and someone who really knows how to guide you through the world of hi-fi.
- COLUMNS** 71,73,75
The World team get to grips with issues facing both the industry and hi-fi alike.
- OLDE WORLDE** 77
David Price highlights Marantz's CD-73 as this month's bit of classic gear.
- DIAL-A-DEALER** 78
Look before you leap, or alternatively listen before you buy. These are the people to talk to.
- MEET YOUR MAKER** 80
Not a call to the spiritual, but a list of manufacturers detailing who makes what, and how to get in touch.
- WORLD FAVOURITES** 87
Thinking of an upgrade or even a new system? Here's where to find our recommendations from the mass of hi-fi we've reviewed.
- SUBSCRIPTIONS** 88
Spare yourself the frenzied riot as you struggle with the hordes to claim the last copy of Hi-Fi World in the newsagent - Subscribe today!
- WORLD CLASSICS** 92
Our list of products that have stood the test of time.
- MARKETPLACE** 107
- READERS CLASSIFIEDS** 125
The definitive place to find classic audio components.
- ADVERTISERS INDEX** 130

TANNOY'S NEW DUALS

Tannoy have announced details of a brand new range of mid-price 'speakers. The Sensys range will cover a price area of £200-£650 and the models at the top of the range will feature a brand new and re-engineered version of the classic Tannoy dual-concentric drive unit. In addition, the range encompasses the company's Wideband technology in the shape of their SuperTweeter, which reaches frequencies in excess of 50kHz - ideal for DVD-A and SACD.

The entry level product is the Sensys 1 bookshelf which uses a standard 175mm mid/bass driver along with a Wideband tweeter. There is also a Sensys 2 floorstander which uses two of the same mid/bass units. The next level bookshelf is the Sensys DC1 which features a dual concentric drive unit partnered with a Wideband tweeter placed on top of the cabinet in a dedicated pod unit. The DC2 floorstander features a 175 standard drive unit that accompanies the dual concentric on the front baffle; the tweeter again sits in a pod. There are also two centre models in the range, one dual concentric and one standard, as well as the Sensys R rear speaker that features an inverted drive unit configuration.



Tannoy Ltd.
Tel: 01236 420199
www.tannoy.com

NAD SPEAKS OUT!

NAD has announced details of its new range of compact loudspeakers. There are two main channel and two centre channel designs and each speaker has been engineered for mix-and-match compatibility so that in various combinations they can compose either a music system or home cinema system, fulfilling a wide range of needs. The smaller NAD 810 range and the NAD 820 range (which offers enhanced bass extension and dynamics) are in a wood grain finish and feature aluminium dome tweeters for the main left/right models. The 810 mini monitors are £145 per pair with the larger 820 bookshelf model at £200 per pair. The two centres are priced at £130 (810C) and £150 (820C) and the 800SW subwoofer is £250.



Lenbrook UK Ltd.
Tel: 01908 319360
www.lenbrook.co.uk

HIGHLY DISTINCTIVE

After recently concentrating on AV, TEAC has announced details of its brand new Distinction Series of hi-fi products. These consist of the C-ID CD player (£239.95), the A-ID integrated amplifier (£279.95) and the T-ID FM/AM tuner (£199.95). Also, in a break from recent tradition, the products are full-size components and the range has been engineered and tuned to provide audiophile levels of sound quality. Like the reference 500 mini-system, the Distinction Series will introduce matching new technology components as they emerge; there is a PC compatible touch screen remote available for the range. Extensive use of quality internal components is matched by the external use of sleek



aluminium front panels, stylishly finished in the TEAC tradition.

TEAC UK Ltd.
Tel: 01923 819630
www.teac.co.uk



Energy, Chord Company, NAD, Pure, REL and Primare.

IDEAL TO A T!

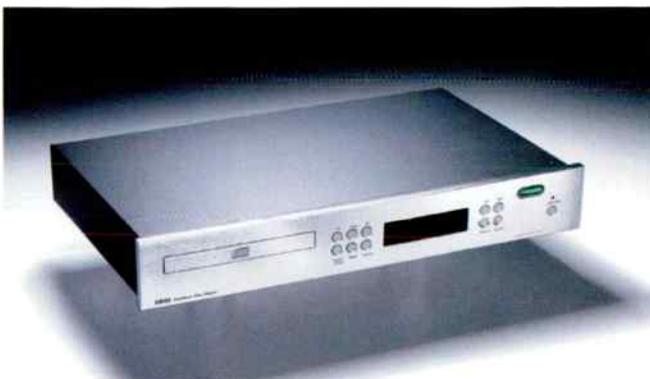
Audio-T are set to demonstrate what they can bring to the modern day living environment as they exhibit at the 2003 Ideal Home Exhibition from the 12th March-16th April at Earl's Court. The company can be found at stand 224a and will be showing new technologies to the public, such as plasma and LCD TVs, touch screen controllers and multi-room audio systems. Audio T will feature five systems installed in a variety of situations, environments and prices. Names on demonstration will be, among others, Acoustic

www.audio-t.co.uk

CREEK'S LATEST SPIN

UK specialists Creek Audio are set to release a new midprice CD player. The CD 50 is evolved from the CD43 Mk2 and is styled the same as the recent 53 series of products with a solid aluminium front panel. Inside the chassis is a Philips CDM12 transport with a CD7 chipset. Custom Creek software controls the mechanism and display functions and a 24/96 DAC is used. The DAC, master clock generator and jitter reduction circuitry each sit on a separate removable and replaceable circuit board which makes the CD50 ideal for future upgrading. The CD50 is priced at £699 and is available now.

In addition to the CD50, Creek have replaced the OBH-11 headphone amp with two new models. The OBH-21 and 21SE use more advanced circuitry and feature a 50% larger chassis than their predecessor, fitted with an aluminium front panel. Two quarter-inch headphone jacks feature on both models and the SE version uses higher grade components throughout for improved sound quality. It also features two pairs of stereo Phono sockets (RCA jacks) on the rear panel for input



from any line level source and chain linking to another product in a tape loop circuit. Prices are £150 for the OBH-12 and £250 for the SE version.

Creek Audio
Tel: 01442 260146
www.creekaudio.co.uk

next issue

Here's a little taster of what we hope to bring you in May's issue

TOSHIBA SD520 DVD-A PLAYER

This is the slick new budget DVD-A player from the Japanese manufacturer and at just £300 it could be a landmark product

MIRAGE OM-7 LOUDSPEAKERS

These superbly built floorstanders offer a lot for the money, but will they match the strong competition? Find out in the next issue

HEART CD6000 CD PLAYER

Heart hail from China and this is their valve modified CD player which promises to impress on many levels.

next issue

Put The Needle



On The Record



And The Drum Beat



Goes Like This



Pro-ject,
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World Radio History

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Worthing - Phase Three 01903 245577

NEW MINIS



Audiovox A3



Dali Royal Menuet II



Kef XQ ONE



NEAT Petite 3



Opera Operetta



Vienna Webern

Do today's small loudspeakers give a big enough sound to make floor standers unnecessary? Noel Keywood reviews six potential candidates.

Big loudspeakers can dominate a small room and even look imposing – perhaps too imposing – in a large room, especially when others around you might fancy using that valuable piece of floor space for furniture or toys. So do you get a high quality miniature? There are plenty on the market and not all of them are wooden boxes. We gathered in six very different candidates for this group test to see how various approaches, including differing cabinet styles, measure up in every way to the task of providing high quality sound from a small cabinet.

Immutable laws of physics, rather than design skills, determine how much bass depth and power comes from a cabinet of any particular size, so small 'speakers cannot produce really deep bass of either power or quality. Luckily, most musical instruments reach down to 40Hz and

no lower and it is possible to get this from a large-ish shelf mounter nowadays. But our tests show that small shelf mounters struggle to produce the 40-80Hz bass octave, which is where bass power lies. So don't expect miracles from minis.

There's more to loudspeakers than just bass of course and to quite some extent high quality miniatures like the Rogers LS3/5a and its equivalents have traditionally had a clear run in the past by capitalising upon properties such as accuracy and low colouration. Times change though and these days small, inexpensive loudspeakers like the Wharfedale Diamond and Mission 780 miniatures set a cracking pace, with people like Mordaunt Short providing dynamite competition with models like the superb 912s I reviewed recently. By providing high quality from small cabinets, with low price included, they make it far more difficult for expensive miniatures to justify their existence nowadays.

That said we have a brand new model from KEF in this group, the XQ One, that is small but costs no less than £999 (inc. VAT). Phew! Designed to open a window on the wide bandwidth and dynamic range of DVD-A and SACD, can it give a better sound by doing so? After all, in the past miniatures just had to cope with CD, which offered no increase in performance over LP, so they weren't overstretched. Now, there's a new avenue of development that is far more challenging: high definition digital.

In DVD-A and SACD we have a music carrier that, even in two-channel mode, has considerably more bandwidth and dynamic range than LP or CD. Leveraging this ability, can the brand new hi-tech. XQ One blow trad. stereo 'speakers into the weeds? It's an interesting question, raised by this fascinating new design from one of Britain's most illustrious loudspeaker manufacturers. Or do more traditional designs still cut it?

AUDIOVOX A3

The cabinetwork of the A3s was unimpressive, crudely routed cutouts for the drive units showing rough edges and surface stain penetration, or lack thereof. On one cabinet the veneer had chipped off from a narrow bridge between port and bass driver, probably during routing, and it had been stuck on again, showing quite obvious signs of damage.

The front baffles come without means of attachment; if you want to fix them then some sticky pads supplied have to be used.

Perhaps ours were reviewer specials using reject cabinets. If not the A3s would not fare well in a showroom; they just don't reach current or acceptable standards.

Audiovox claim to make their own drive units, fitting a treated paper bass driver and a silk dome tweeter to the A3. The standard of finish of each was unimpressive; it has been a long time since I've seen cone mounted connecting tags. These disappeared in the 1970s when laser interferometry showed they produced asymmetric cone movement.

At the rear the small A3s have single-wire terminals that accept 4mm plugs axially or radially, as well as bare wire.

SOUND QUALITY

In spite of poor finish and a mediocre measured performance, the A3s had some sonic merit. They sound very clean, quite lively and

dynamic across the midband, handling vocals very well. Harmonies from Things She Said were clearly portrayed, crisp imaging helping establish a nice, clear sound stage across which the members of Toy Matinee were clearly positioned. However, a DVD-A like this carries clean, taut bass and the A3s predictably managed to convey little of it. Their small bass peak likely helps toward their sense of general liveliness and enthusiasm at the bottom end of the musical scale, but proper bass was missing.

It was on less than perfectly balanced recordings, like Toni Braxton's He Wasn't Man Enough that had the A3s sounding glassy bright and hard, as well as unable to reproduce bass dynamics. Their strong sense of clarity and control was a bonus though and some listeners may well feel other properties are worth sacrificing for such a tidy, dry sound, totally free from box boom and low on colouration too. A Radio 4 play, where speech was untinged by colouration emphasised this characteristic of the A3s.

With classical recordings, like Beethoven's Eroica on DVD-A this loudspeaker's emphasised treble

brought a coarseness that had violins sounding harsh. Otherwise, the A3s again managed to discern individual orchestral sections with some ability, but there wasn't the sense of atmosphere that modern high technology 'speakers like the KEFs can find within high resolution DVD-A and SACD discs.

The A3s have some sonic merit, but as a package they really cannot justify either their price or a place in today's marketplace where much more ability than this is available.

Audiovox A3 £750

Eminent Audio
Shropshire WV15 6BX
Tel: +44 (0)781 3622315
www.bluenote.it



MEASURED PERFORMANCE

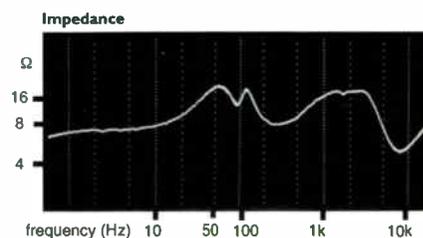
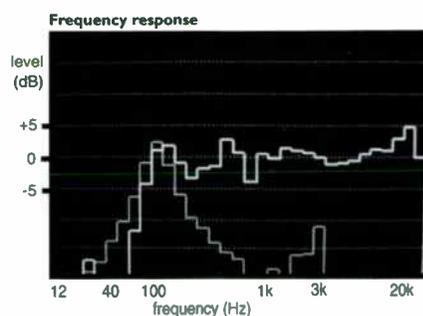
The Audiovox A3 has an uneven frequency response across the audio band, as expected from treated paper with surface coil terminations. The tweeter peaks up at 16kHz and will sound fierce, the pink noise test signal suggested. Unevenness in the midband suggests colouration.

The bass driver reaches down to 80Hz before output falls away steeply. The ports are tuned to 95Hz – a very high figure – but have little damping effect upon the bass driver our impedance analysis shows. This is almost an infinite baffle design. Bass will be light since there's little downward extension, but a small amount of peaking will add some life to the bottom end.

The A3 has a high measured impedance of 9.5ohms yet is quite sensitive, producing 86dB SPL from one nominal watt. As a load it is fairly easy, although a sudden impedance change at 5kHz means it is reactive at high frequencies.

The A3 will sound dry, coarse, fierce in the treble and bass light. Technically, it is none too advanced, although some may like such a sound. **NK**

W 300mm, H 190mm,
D 190mm, weight 5.6kg



World Verdict £

Dry, tight and with treble detail, the A3 also sounds fierce and bass light. It reveals little low level info. Mediocre, but some may like it.

DALI ROYAL MENUET II

The Dali Royal Menuets really are small loudspeakers. They would easily fit any bookshelf, although a rear port means at least an inch or so of rear clearance is needed, but a firm 8in shelf would do nicely and that, for many people might make them just the ticket – if they deliver good sound quality that is. There's no doubt the little Royal Menuets could be squeezed in just about anywhere. Ours would always stand out, except in a room painted blue, but Cherry, black and white painted finishes are available. Ours had clean edges and a deep lacquer sheen.

The black drive units are neatly inset on the front baffle and comprise a soft dome tweeter and a small synthetic coned bass/midrange unit, a normal enough arrangement these days. For those who don't want to see the drivers simple black grilles are provided.

The rear panel carries a useful set of bi-wire terminals able to accept 4mm plugs coaxially or bare wires (or plugs) radially. Links are provided for single wiring, as normal. A small port exits just above this connection panel.

SOUND QUALITY

Tina Turner's Break Every Rule showed the Royal Menuets are enthusiastic miniatures, handling the

striding bass line with some verve and ability. Really small cabinets of these dimensions inevitably attenuate bass a little and the Royal Menuets were a trifle light in this area, lacking fundamental power, yet at the same time the bass they had was of good quality.

Tina Turner's vocals came across well, due to good imaging and lack of colouration, and the speakers showed a generally strong sense of insight and tidiness when stressed with muscular Rock like this, even at some level.

The Royal Menuets handled Toy Matinee's Last Plane Out on DVD-A with similar aplomb. The apparent power of their delivery belies their size. Bass was firm and fluid, the strong bass line behind this track coming across well. Drums had impact and the complex vocal harmonies were nicely set up in a wide stage between the 'speakers.

These loudspeakers have the ability to mine a lot of detail from a performance, finding atmosphere and location where others see little more than the primary instruments and vocalists. The Royal Menuets were cohesive and clear, but they do



audibly emphasise high frequencies, which adds a little tinsel to the top.

Wagner's Reinzi from the London Philharmonia had violins sounding both well lit and vibrant. Trombones had a convincing rasp and bassoons were full and woody. Again, the Royal Menuets were able to mine the full character behind an instrument, giving it both timbre and body. These are high quality miniatures with a great set of abilities.

Dali Royal Menuet II £600

FBI Distribution
Hull HU1 3TD

Tel: +44 (0)1482 212213
www.dali.dk

MEASURED PERFORMANCE

The small Dali Royal Menuet II has a frequency response that extends from 63Hz fairly smoothly right up to 20kHz, our analysis shows. With no crossover suckout and rising treble the Menuet II will sound bright, but also detailed.

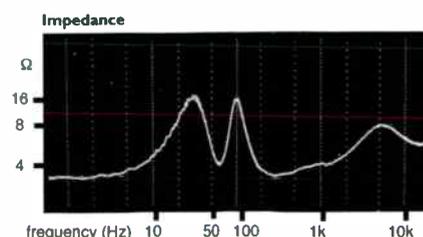
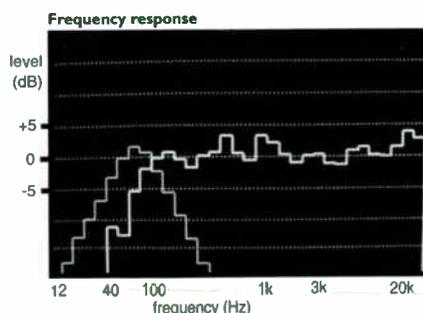
A fairly well damped bass end that rolls off at 63Hz is about as expected from a box of this small size and suggests near-wall mounting is expected. The port is tuned to 63Hz so this 'speaker will have fast bass, rather than deep bass – but then, really small cabinets like this one don't go low.

A low nominal impedance that measured out at 4.7ohms helps keep sensitivity high at 85.5dB – good for

such a small 'speaker. To minimise impedance swings and phase changes the Royal Menuet uses as 4ohm bass unit and tweeter, giving it a smooth, even impedance plot. It is a fair load for an amplifier, drawing current, but with little reactance at high frequencies.

The Royal Menuet II is a neatly engineered, conventional loudspeaker that will sound dry and bright. **NK**

W 257mm, H 156mm,
D 185mm, weight 4kg



World Verdict £

A clean, dynamic sound that's also cohesive and generally revealing, the little Royal Menuet is an impressive miniature. Light on bass though and with strong treble.

KEF XQ ONE

The XQ One is a small 'speaker that isn't really so small. Visually it is conspicuous, but then this is a technically sophisticated 'speaker whose style idiom is no bluff.

The main Uni-Q driver has a bass/midrange cone, at the centre of which lies an aluminium dome tweeter. A titanium hypertweeter on top extends response, KEF claim, right up to 55kHz to capitalise on the wide bandwidth of DVD-A and SACD.

The XQ One is slickly finished, but all panels are curved, including the base. As a result it must either sit on spikes, which have a large footprint and wouldn't fit many shelves, or dedicated KEF stands.

The rear panel carries bi-wire terminals with single wire links. Plastic plugs must be eased out before coaxial 4mm plugs can be inserted axially.

SOUND QUALITY

With a 24/96 recording on DVD of Rebecca Pidgeon's *Fhear a Bhata* her voice was not only projected with vivid clarity, but also with a cohesive believability well beyond the other loudspeakers in this test.

Strings of the Berliner Staatskapelle were vividly clear and, to my surprise, sweet sounding too, from a DVD-A where - until the XQ Ones - I had found strings to sound edgy. Imparting a sense of orchestral

scale wasn't a problem for these 'speakers; they are drum tight yet full bodied too, a rare combination. Beethoven's *Eroica* was delivered with a level of fidelity that was beyond question, unless you prefer a 'darker' picture of things, such as that from carbon fibre.

No other loudspeaker in this group could deliver Renee Fleming with such startling realism, every fine nuance of her vocal insinuations being conveyed with almost embarrassing clarity.

The XQ Ones have no difficulty with Rock either. The initial drum strike on Angelique Kidjo's *Agolo* these 'speakers captured nicely, unlike the others - Neat Petites excluded. However, the walking bass line had more bass bounce than real depth, but this did help toward a fast and enthusiastic bass line that firmly underpinned the track, keeping a tight rein on tempo.

That the XQ Ones go low but are tuned to play upper bass (40Hz and above) was demonstrated by the organ of Saint-Sermin. It sounded gloriously large and there was a



good, firm push from the Contrebass, but with some attenuation compared with a floorstander. That the XQ Ones are big on dynamics and scale was highlighted by the strength of the major chords, bringing the might of this organ into the room. Impressive.

The XQ Ones are a vividly modern loudspeaker that, in every area, are deeply impressive.

KEF XQ One £999

KEF Audio (UK)
Kent ME15 6QP
Tel: +44 (0)1622 672261
www.kef.co.uk

MEASURED PERFORMANCE

This 'speaker covers the full audio range and it shows very little variation from flatness. Large standmounters get down to 40Hz with some ease these days, including the XQ One. The port reaches down to 30Hz so there's a little more available extension from this source, although KEF tune it high, to around 45Hz our impedance plot shows. This should make the XQ One sound weighty but fairly fast.

At high frequencies there's no crossover suckout and treble extends flat to 20kHz, so the 'speaker will sound quite bright and certainly well detailed. The Uni-Q driver images well and strong treble reinforces this property.

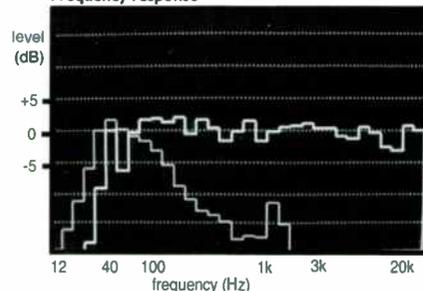
The XQ One is loud, producing a high 88dB SPL from one nominal watt (2.84V) of input. However, nominal impedance measures a low 5ohms, and not all amplifiers will like its violent impedance and phase changes. As a load the XQ One is not easy.

This is quite obviously a quality stand mounter with a lot of ability, but it needs a good amplifier.

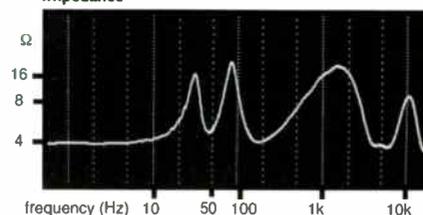
NK

W 418mm, H 231mm,
D 308mm, weight 9.2kg

Frequency response



Impedance



World Verdict £

An incredibly impressive loudspeaker that is fast, tight and very, very revealing. It has solid and powerful bass too. Strong treble gives it a bright character.

NEAT PETITE 3

The Neat Petite 3 is a well finished loudspeaker, quite simple in appearance, with a pleasant light wood veneer and bevelled cabinet edges. The treated paper bass/midrange unit is bigger than many in a cabinet of this size, being fitted with a 14cm diameter cone (nominally 6in). It is reflex loaded, a small port being sited on the rear panel, along with bi-wire terminals able to accept 4mm banana plugs or bare wires.

Above the bass unit sits a novel EMIT ribbon tweeter with a coil etched onto its front radiating surface, to minimise moving mass, optimise transient performance and reduce coil-to-dome coupling problems.

SOUND QUALITY

With Eric Clapton placed clearly at left and B.B. King at right, acoustic bass sounding firm and large in the background, the Petites showed they have a big, generous and detailed sound suitable for Rock from DVD-A.

The tweeter is a good one and Neat's surface wave acoustic treatment around it seemed to be doing its job, since the Petite 3s imaged clearly and unequivocally, instruments and vocals sounding tightly located.

Radio 4 speech had earlier revealed a little cuppiness and

congestion from the large coned bass driver, but this was small and didn't intrude.

Similarly, Larisa Stow's rich intonations weren't lost through these loudspeakers and their grip on tempo was tight. Drums sound very taut and believably powerful; the unusually broad and effective bass damping shown up by tests on the Petite could clearly be heard in practice – these 'speakers deliver the sort of tight bass a lot of listeners crave, although they don't have the power of big floorstanders.

With the organ of the Basilica of Saint-Sernin the Petites did an impressive job of resolving this instrument's rich tones as it glid ethereally through Cesar Franck's Choral No2, even managing to reproduce the 16ft Contrebass (32Hz) if not the 32ft Principal pipe. Most 'speakers can't manage 16Hz so the Petites omission was nothing unusual.

Bassoons of the London Symphony Orchestra sounded rich and fruity in their accompaniment to Ashkenazy playing Rachmaninov's



Piano Concerto No 4 and, most of the time, strings sounded natural enough. The tweeter has its metallic moments and on occasion it sounds a little hard and bright. The general impression though is of timbral richness from the instruments of an orchestra, backed with power and scale.

The Petite 3 has a likable sound with some rare properties. It is strong in all areas and exceptional in some. This is an interesting product.

NEAT Petite 3 £845

NEAT Acoustics
Durham DL12 8UJ
Tel: +44 (0)1833 631021
www.neat.co.uk

MEASURED PERFORMANCE

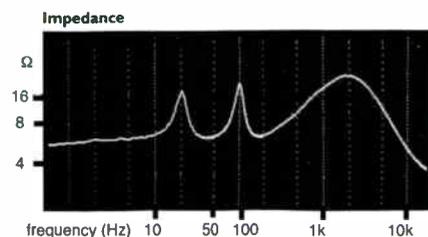
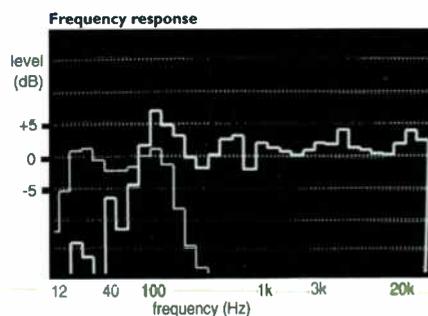
NEAT's Petite 3 has some unusual characteristics. Bass output is very well damped by the port, the impedance plot shows. This gives rise to broad, flat port output, the corollary to good damping, and the port goes very low - right down to 20Hz. I would expect tight, deep bass. This may be modified by a bass peak at 100Hz, likely to add speed and perhaps colouration too.

Over the rest of the audio band the Petite looks a little lumpy in its response, suggesting colouration of some sort, but it gets up to 20kHz strongly, without any dips. As a result it should sound quite bright and detailed too. The unusual EMIT ribbon tweeter has a little peakiness

so its contribution may be audible at times.

An impedance of 7ohms makes this a true 8ohm 'speaker in effect, mainly because it uses a 6ohm bass driver. Sensitivity of 86dB is healthy in spite of this, so the Petite is a reasonably easy load and will match a wide variety of amplifiers. **NK**

W 300mm, H 200mm,
D 180mm, weight 6kg



World Verdict £

The Petite 3 has a set of strengths that set it apart. Drum-tight bass that goes deep, a revealing midband and fast treble make it a fast and exciting rocker.

evolution

Cyrus' legendary amplifiers have evolved!

Back in 2001, Cyrus began a project to evolve our integrated amplifier designs to incorporate technologies researched over the last five years. After many months of acoustic tuning and detailed electrical re-evaluation lasting more than a year, we are proud to announce the arrival of our evolutionary new Cyrus 8. This extraordinary amplifier sets new standards and strengthens Cyrus' position at the leading edge of what's possible in audio design today.

For the full story on how our amplifiers have evolved, please visit our website at www.cyrusaudio.com.



integrated
Cyrus 8

CYRUS

Advanced Audio and Video Systems

Cyrus Electronics
Huntingdon, Cambridgeshire, PE29 6XY

Tel: +44 (0)1480 435577
Fax: +44 (0)1480 437715
email: info@cyrusaudio.com

www.cyrusaudio.com

OPERA OPERETTA

Crafted in Italy from solid Mahogany of a light hue, the Operettas feel robust and look good. The cabinets are not only rigid, but angular and well hewn to have some visual interest. Detailing is good, the drive units being inset cleanly into a silky smooth front baffle. Opera supply black cloth grilles which clip on and, with or without them, the Operettas look pretty enough, albeit traditional.

Although Opera seem to think, on their website at least, that this loudspeaker's port is front mounted, enabling the Operetta to be mounted "directly to the wall", in fact it is rear mounted, so some space is needed. Also on the rear is a sizeable pair of gold plated terminals that allow single or bi-wiring, with bare wires or 4mm plugs as termination.

The bass unit has a clear Neoflex polymer cone and it works in conjunction with a silk dome tweeter, making this a reflex loaded two-way design, like most these days.

SOUND QUALITY

Although Opera claim their 'speakers have an Italian sound, it certainly isn't the same Italian sound as the Audiovox A3s, that's for sure. I was met with a supremely soft, mellow sound from the Operettas, distinctively so in fact. Where the A3s had painted a hard, dry and brightly lit picture of Toni Braxton, the Operettas gave her a soft, warm

delivery, set further back on the sound stage; it was quite a shock to go from one to the other. The truth, I feel, lies somewhere in-between: she has deep and quite rich vocal tones, but the recording has some edginess the Operettas glossed over.

They were also very keen to insert a strong bass line, at times sounding a little too keen perhaps. Quite a strong box boom coloured what was slightly loose but fulsome bass. These are not tight sounding loudspeakers, but mellow and a little floppy down at the bottom end. Imaging was not strong but the Operettas gave an easy, quite well detailed and supremely smooth rendition of Toni Braxton's vocals, accompanied by convincingly strong, if not too tuneful bass.

Fleetwood Mac's *Go Your Own Way* on DVD-A gave much the same picture, with a relaxed sense of pace and easy dynamics giving a smooth if slightly uninvolved delivery.

Turning to the classics and Ashkenazy playing Rachmaninov's Piano Concerto No 2 revealed the Operetta's real forte: orchestra. Violins swept in easily and

majestically, piano sounded large, resonant and timbrally rich. I detected a slight flattening of dynamics though and noticed again that the powerful Musical Fidelity amplifier had quite a time getting the Operettas to go loud.

The Operettas are silky smooth and easy going. Arguably, they suit classical music better than Rock, but they make a good case for themselves with both, for those with refined tastes.

Opera Operetta £900

UKD

Bucks SL0 9DA

Tel: +44 (0)1753 652669

www.operaloudspeakers.com

MEASURED PERFORMANCE

Opera have opted to make this a nominally 8ohm loudspeaker, but it measures out at 9ohms. With little impedance variation it is an easy, unreactive load. The downside to this is that the Operetta is insensitive, producing just 82dB SPL for one nominal watt of input. It needs an amp with voltage swing (i.e. high specified power output) to go loud and it will take a good twist of the volume control for this to happen.

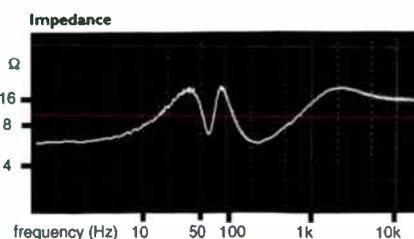
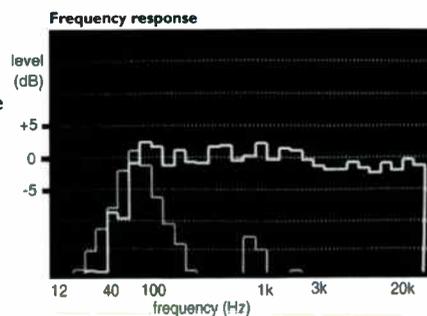
This apart, the Operetta turns in a neat and conventional performance, with smooth extended treble set just a little lower – a few dB – than the midrange to give a slightly less sharp sound than is so

often the case nowadays. It should be well detailed though, since there's plenty of treble energy. Opera use good drive units; each has a very smooth response, giving a silky sound.

Bass output extends down to 50Hz before rolling away and the port helps out a little, although not so much since it is tuned narrow and high. I would expect bass to have some bloom to it.

NK

W 295mm, H 160mm,
D 330mm, weight 12kg



World Verdict £

Soft, smooth and easy to listen too, the Operas are refined. However, they need a lot power.

VIENNA WEBERN

The Webern is intriguing to look at and it is very well made too. The cabinet feels solid and well hewn, and mechanical detailing is first rate. If you don't like the alloy fronts, black cloth grilles can be attached.

Wall brackets or bases are available. Henley Designs, who import Vienna Acoustics products, price the Webern individually; they don't come in pairs. The implication is that you may want from two to five in a surround-sound system.

The Webern is an infinite baffle design (i.e. sealed box), so there is no port and Vienna Acoustics suggest it should be placed close to a wall. The cabinets can be mounted either way up, putting the asymmetrically placed tweeter on inside or outside. Normally, for best imaging, it should be on the inside to minimise surface wave interference.

Two bass units offer plenty of cone area for bass and the single tweeter sits between them in a D'Appolito arrangement. Single wire terminals are fitted, capable of accepting 4m banana plugs.

SOUND QUALITY

Radio speech immediately highlighted the fact that the Webern basically offers a smooth, slightly warm balance. The ear hears its upper midrange dip, and the tweeter's top end peaking went largely unnoticed, except for a little 'hiss' now and then.

Janis Joplin's Cry Baby showed the Weberns to be fairly enthusiastic performers, drums and Hammond organ coming across as well embodied, lively and dynamic. There was a slightly clothly colouration though, which I would guess was caused either by 'cabinet return' or internal damping intended to minimise it. This is a difficulty with shallow cabinets, which is why they are uncommon.

As measurement suggested, the Weberns do not have deep bass. The strong walking bass line of Angelique Kidjo's Houngbati came over as upper harmonics only; fundamental energy, or real bass power, hardly existed. The cabinet complained a little at this sort of thing, yet the Weberns went on to handle the next track, Idje-Idje, beautifully, Angelique Kidjo's vocals hanging between the speakers, clear as a bell, well balanced and totally believable. With her backing singers forming a sweetly painted and nicely clear panorama of sound behind her the Weberns showed they could set up a convincing sound stage. They have great poise in this respect, are largely



vice free and a very easy listen.

Not surprisingly the Weberns proved adept at portraying a large orchestra, the Philharmonia sounding both sizeable and vigorous as they worked though Wagner's Reinzi. Strings, which can sound a little edgy on my CD of an old Kingsway Hall 1960s analogue recording, were gently smoothed and made palatable. With classical, as with most Rock, the Weberns were thoroughly entertaining.

Vienna Webern £500 (each)

Henley Designs
Oxfordshire OX11 7HP
Tel: + 44 (0)1235 511166
www.henleydesigns.co.uk

MEASURED PERFORMANCE

Vienna Acoustics use an input capacitor to feed the bass unit of this infinite baffle enclosure. It gives the 'speaker a very fast bass cut off below 80Hz, something both the impedance and frequency response curves show. The Webern will have no low bass at all, as a result – not even a little port output! This is quite drastic and I wonder why it was found necessary; perhaps the shallow alloy cabinet started to complain.

Above 80Hz the Webern is flat enough, although it is no match for modern monitors. The upper midrange falls gently before the tweeter peaks at 16kHz. The slow fall will add softness but the upper

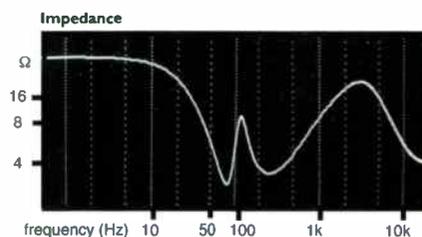
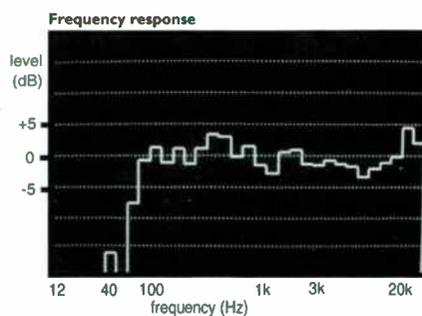
peak may be heard with discs possessing extended treble energy.

An impedance of 5.7ohms helps this 'speaker deliver a high sensitivity of 88dB. However, the bass unit has a DCR of 3.5ohms or thereabouts, so bass current will be drawn.

The Webern measures reasonably well and its twin bass drivers might have some impact. Low bass doesn't exist though.

NK

W 525mm H267mm
D 101mm weight 7.5kg



World Verdict £
With a strong design emphasis on easy placement and good looks, the Weberns also sound entertaining.

conclusion

You'll have guessed by now, if you have read the reviews, that the small Bluenote Audiovox A3 wasn't really up to scratch either in its standard of finish or level of performance. Unlike the others it doesn't represent the mainstream and as a one-off is unrepresentative of what is possible today. That isn't to say it's without any ability, since the dry, bright and apparently detailed sound of the A3 is a recurring theme in loudspeakers – so someone out there likes it! I'm reminded of Rega's Ara, although I fancy the Rega was a tad better in terms of smoothness and general fluency, as well as standard of finish, for a fraction of the price.

For a really small 'speaker Dali's Royal Menuet II works well. It gives a fairly strong insight into a performance and fine imaging from a small cabinet. Enthusiastic and certainly engaging, the Royal Menuet II is a fine miniature, perhaps the sort of thing many people are after. I am not quite convinced it is a great step forward in the art of loudspeaker engineering so much as a competent design, with just a few small quirks. Since there is no difficulty in ensuring a loudspeaker has smooth, accurate treble, any rise in output is usually deliberate, probably added to give some zing in the showroom. This is more common in mainland Europe than the UK, where we tend to go for a softer sound and certainly one that is more accurate in measured terms. The curtailed bass output of the Royal Menuet II is merely a function of its small size; you cannot expect any more. In spite of these minor criticisms the Royal Menuet IIs were enjoyable.

At £500 apiece the Vienna Webern carries a premium for the complexity of its cabinet design and quality of construction. If you have a modern home and the style of these speakers appeals to you, they are an easy sounding and enjoyable option. On the softer side of being accurate they are easy to listen to over a long period – which is important. Apart from price the only drawback of the Webern is lack of deep bass. A small subwoofer would add in the missing bottom octave, giving a

stylish modern alternative to the wooden box.

Opera's Operetta is a carefully engineered alternative to the phenomenon of the bright modern loudspeaker. I understand the approach and can sympathise with it because a loudspeaker like this allows you to relax with any recording, no matter how harsh. Opera use top quality components, our measurements show, carefully combined to provide smoothness with a high degree of accuracy. My only observation here is a technical one: the port doesn't exert enough damping upon the bass driver and could be improved. This affects Rock more than classical in use, but I suspect the Operetta is more for classical buffs, or listeners who like soft Rock.

Talking of which, for Rock the NEAT Petite 3s have some great credentials. They are tight, detailed and fast. They go low and they go high – with a lot of vigour. With these loudspeakers you are aware of spectrum extremes, which draws emphasis away from the midband, yet they are quite clear and concise with vocals too. The NEATs aren't perhaps the last word in smoothness or subtlety, but they are honest, revealing and exciting. NEAT loudspeakers have always had a following and the Petite 3s show why clearly enough.

And finally come KEF's new XQ Ones that really are in a class of their own. With a depth of insight that is unmatched, plus a sense of cohesion that is rare the XQ Ones are starting. Tight as a drum, very dynamic and supremely accurate too, they show just how it can be done nowadays. Do they capitalise on DVD-A and SACD? Yes, definitely, but whilst their sound is vividly clear, it is quite challenging too. The aluminium tweeter and titanium hypertweeter give these loudspeakers a shiny-bright presentation that with DVD-A in particular is strenuous. Matched with a smooth amplifier – perhaps an Arcam – the XQ Ones will sound breathtaking. They are expensive, but they are special and definitely worth a listen if you want the very best from DVD-A or SACD, in a small package.



Audiovox A3



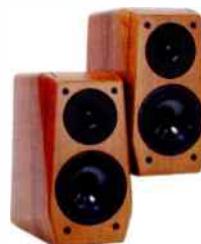
Dali Royal Menuet II



Kef XQ ONE



NEAT Petite 3



Opera Operetta



Vienna Webern

MODERN MUSIC



Marantz is moving into new dominions with its brand new DH9300 digital audio server, the DH9300. David Price proffers a critical ear.

It was three years ago when I first set ears on Terratec's M3P0 hard-disk based MP3 music player. I was sufficiently impressed to say that, "what you're looking at here could well be the future of music". Well for once I wasn't completely wrong, as since then we've seen a welter of hard-disk based 'audio servers' launched, from Linn's Kivor to Yamaha's CDR-HD1300. And very popular they're proving too - hardly surprising then, that Marantz would want a piece of the action.

Although HD-based 'audio servers' are not a new thing, they're still relatively risky to do considering the development work required and the need to grapple with rapidly changing PC devices. Furthermore, it's one thing to get music out of computer devices, but another to get anything approaching a decent sound. Indeed, it's only the likes of Linn's aforementioned Kivor that have come close to offering a truly uncompromised solution. It's into this territory that Marantz wants to tread, with the DH9300 you see before you.

It's not cheap though. Granted, at £2,500 the DH9300 is a quarter of the Linn's retail price, but considering that Perception Digital has just launched its PDHercules Jukebox II (which is also a proper grown-up hi-fi separate) for just £350, nor is it 'sale of the century' material either. Rather, it treads a path between serious audiophile esoterica and affordable hi-fi. It also offers uncompressed digital recording and playback of about 120 CDs worth of music, plus 320kbps, 192kbps VBR (variable bit rate) and 128kbps MP3 functionality. In addition, the DH9300 has extensive video output options for its on-screen display, and the ability to drive multiple 'zones' as part of an Opus multi-room system. It has a built-in modem which it uses to access the CDDb online database for full text information, and a future-ready communication port to upgrade new software releases or to enhance system control for integration with other network devices. Impressive stuff.

Inside the bespoke metal casing (440x375x98mm, 7.8kg) you'll find Marantz's own CD6000 OSE CD

drive mechanism (itself a computer CD-ROM drive unit) for music ripping and CD playback duties, plus op amps from the same player's audio output section. The operating system, however, comes from Imerge - the XiVA system is well known in multi-room circles and justifiably popular. The result is a versatile product that can drive four separate stereo amplifiers (via Marantz System Control connectors) and four separate TV displays via SCART or Composite video connectors. In this review however, we auditioned it as a good old, unreconstructed stereo hi-fi separate with all video displays disconnected.

XiVA isn't exactly as nice as using a Mac computer, but I guess that it's 'terse and to the point' - you can get stuff done with relatively little fuss. The four-line fascia mounted backlit LC display is easy to read (in low light, at least) and gives you easy, logical options. The unit can be configured extensively by the Settings menu, but there are no direct buttons on the front panel. For example, if you want to set the recording quality (bitrate), you have



to go into this menu and scroll through the various options (phone settings, etc.) using the four fascia mounted (or remote controlled) cursor keys until you reach this particular submenu. Whatever happened to 'hot keys' that do things with just one press of a button?

Anyway, without giving a XiVA-for-beginners lesson, the Marantz is reasonably easy to use and looks and feels more like a standard 'hi-fi separate' than most similarly equipped rivals. And unlike Imerge's own S1000 (reviewed in May 2002), it doesn't look like a supercomputer that's been half-inched from a research lab and entrusted to music duties.

Ironically, the machine's rear panel is far more densely populated than the front - four sets of RCA phonos out, modem socketry, USB, VGA, Ethernet, four S-video outputs, digital and coaxial inputs and outputs - the list goes on and on. Anyway, connected up to my reference Cyrus 7/PSX-R amplification and Mission 752 loudspeakers, the DH9300 offered a most uncluttered sound. Brian Eno's 'Backwater' showed it to be a genuinely clean and open performer with a good deal of depth, detail, subtlety and finesse. Of course, its CD replay performance is miles behind similarly priced CD players, but this isn't comparing like with like.

The key to this machine's sound is its open and engaging midband. Fluid and rhythmically coherent, the track's central piano part was extremely tight and fast whilst retaining a good degree of its natural warmth and timbre. Open enough to celebrate the excellent sound quality of late nineteen seventies recording technology, the Marantz did its best to dissolve and simply let the music flood out. Bass was decently full and

warm - albeit nowhere near as tight as, say, Meridian's £1,000 507 CD player - with a nice, bouncy feel to Paul Rudolph's string work. At the other frequency extreme, the DH9300 showed itself to be a touch curtailed, but warm and smooth with it.

The Pixies' 'Hang Wire' showed this machine's ability to stay smooth in conditions of (sonic) adversity. Despite cranked up amps and distortion pedals at full tilt, there was little in the way of hardness. Instead, it conjured up an impressively deep and capacious recorded acoustic. Once again, it wasn't up to the best of the £1,000 class, but it was comfortably up with the likes of Marantz's own CD6000OSE. Switching to uncompressed hard disk copies of the same, I noticed a very subtle edge to the sound, which livened things up a tad and pushed the midband forward ever-so-subtly. There was also a very marginal flattening of stereo depth perspective, but this was the subtlest

of things.

Overall, it's an excellent product. Both a fine silver disc spinner and an extremely capable HD recorder that gives very, very little away to the original CD source - it's a superb product. However, I'm simply not convinced its worth £2,500, especially as Imerge's own S1000 (admittedly sonically inferior) is a grand less. If Marantz did a stripped down DH9300 without the multi-room stuff - which is of only limited appeal - and knocked a good few hundred spones of the ticket price, then they'd have a winner. Although probably the best audio server this side of a Linn Kivor, it's just a touch too much in the capital outlay department for my liking. Recommended nonetheless.

Marantz DH9300 £2,500

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www.marantz.com



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OPERATING NOTES

Imerge's XiVA 'Hard Disk Media Appliance Software' is at the heart of the DH9300 and can be found on everything from Linn's Kivor to Imerge's own S1000. Designed to integrate all the various parts of the machine (i.e. hard drive, memory, modem etc) and make the management of audio libraries simple, it's a flexi-

ble system. Music tracks can be stored and played back by album, track, artist or genre. The software takes care of playback, automatically selecting tracks from the entire music collection to fit the mood or style selected. It connects to the internet via the XiVA-Net portal, and lets you get web-based music content onto your TV screen via your hi-fi. It sends users information tailored

to their own tastes, such as music purchases, ticket and artist information. Computer geeks may be interested to know that it's a scalable high level language that's portable across operating systems (including Windows and your beloved Linux!) It's even upgradeable online - the Marantz DH9300 tested here uses the very latest version 3.0.

MEASURED PERFORMANCE

Although some engineers would still have us believe that digital recording is a thoroughly transparent process, in practice this is rarely the case.

While remaining bit-for-bit accurate, any change in the timing between bits will still cause additional jitter, which can be audible once converted back into the analogue domain. Jitter is not affected so much by the partitioning and buffering of data that occurs when more than one output is driven simultaneously, but by the degree of MP3 data-compression. In common with the ATRAC system used by Sony's MD, jitter increases according to the block rate of the encoding which, in turn, depends upon the nature of the signal. Greater frequency-selectivity is given to a relatively constant signal, including that used in the jitter test, so the sidebands visible on the green

spectrum (Graph 1) are extensive but low-rate in origin.

The dark blue trace depicts the Marantz DH9300 under ideal conditions (one output driven from an uncompressed recording), with an inherent level of jitter at a moderate 450psec. With more compression invoked during recording, jitter increases until it reaches a heady and subjectively debilitating ~8000psec with 128kbps MP3 data.

Other parameters, such as noise and distortion, are not so obviously affected by compression although its bandwidth most certainly is. Graph 2 shows the recorder's frequency response when forced to deal with multi-frequency signals, like 'real' music. Uncompressed recordings (dark blue trace) enjoy the full CD bandwidth while those compressed to 128kbps stop dead at 14.9kHz, over 5kHz shy of CD's original

response. Otherwise, the levels of noise, distortion and linearity would be perfectly respectable in a budget CD player (don't forget, the DH9300 behaves like four CD players in one box), although the 1.85V peak output is a

little low. Graph 3 shows a 20kHz signal recorded with no compression at 0.013% distortion. Note the stopband image (a feature of the modest digital filtering) and rather 'grassy' noise floor which indicates the presence of low-level quantisation distortions. So while the DH9300 could be 'cleaner', it's worth bearing in mind that this particular solution faces no direct competition. **PM**

Frequency Response

CD	20Hz - 20kHz
	(0.0/ - 0.2dB)
128kbps MP3	20Hz - 4.9kHz
	(0.0/ - 0.2dB)

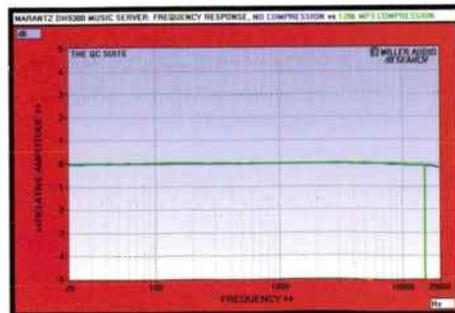
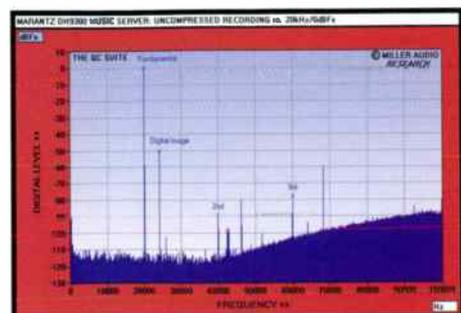
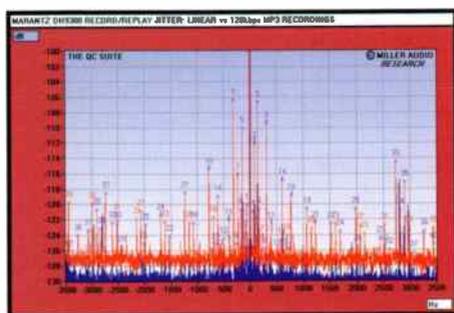
Distortion	Left	Right
-6dBfs	0.0007%	0.0008%
-30dBfs	0.0065%	0.010%
-60dBfs	0.26%	0.27%
-90dBfs	3.0%	2.2%

Separation

1kHz	106dB	107dB
20kHz	95dB	94dB

Noise (IEC A)	98.5dB	98.2dB
---------------	--------	--------

Output	1.85V	1.83V
--------	-------	-------



World Verdict

Excellent sound compared to its rivals, allied to fine build and a slick user interface, make this a top product - if a little on the expensive side.

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Roy Gregory Hi-Fi+ Issue 19 Sept-Oct 2002

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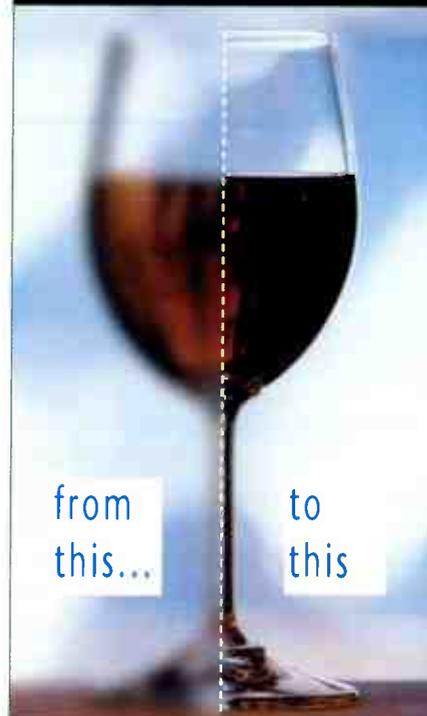
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~Paul Messenger Hi-Fi+

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~Toby Burnham The Times [B2 review]

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BOXING CLEVER



If you thought that Pro-ject was noted only for its range of turntables, then think again, says Dominic Todd as he encounters this cute little pre/power combination. . .

In a world of ever more audio integration, it's fine to see someone bucking the trend. When I first became interested in hi-fi in the late 1980s, it was companies such as Moth, Meridian and Crimson who, with their component amplifiers, helped fuel my passion. The more boxes the better as far as I was concerned, especially as it meant even more interconnects, mains leads and supports to get stuck into.

These days a lot has changed and, with the exception of Musical Fidelity's successful X-series amps, are usually pretty boring integrated

affairs, at least at the 'budget' end of things.

Imagine my delight then, to be sent from the saviours of budget turntable design, Pro-ject, a new, reasonably priced, component amplifier system. In essence it consists of a powered pre-amp and two 65watt mono-block power amps. As you would expect, a decent quality phono pre amp is also available, but not reviewed here.

On the outside, at least, the little 'Pros certainly look the part. The powder-coated, ribbed aluminium case feels sturdy, and the black Perspex and blue LEDs finish the

design off neatly. Inside, it's perhaps a little more disappointing. The build quality certainly isn't quite up to the standards of MF's X range, and the components are rather ordinary. True, the power amps have toroidal PSUs, and the Edgar circuit boards appear to be of good quality, yet there's nothing here that really stands out. Apart from, that is, the volume control and switch selector which are mounted at the rear of the Pre Box's casing; just as was always the way with the best budget audio. Shorter signal paths result, as does the rather unfortunate consequence of sticky control knobs.

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World Radio History

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One of the consequences of a good monoblock design should be a broad sound stage and excellent individual 'speaker control. With The Art Of Noise's 'Metaforce' the Pro-jects lived up to this expectation. The bass response was especially solid and punchy, even though it did chicken out from producing some of the lowest bass notes. I was also occasionally aware of a slight softening in the low bass, in contradiction to the overall high levels of control.

Vocals weren't so much projected, as thrown from the 'speaker to land at my feet. This gave me plenty of insight into the staging of the recording, yet it may be a little too forward for some. The balance was very much one which would grab you by the scruff of the neck rather than seduce and beguile you. That may or may not appeal, yet the dynamic control, and leading edge instrumental attack could hardly fail to impress in a Naim type way, even if that's not your type of sound.

With this in mind I was interested to see just how the Boxes would cope with something a little more subtle and acoustic, in this case Claire Martin's 'Monk's New Tune'. Whilst they did show the same qualities of a broad sound stage and fine vocal separation, the amps also revealed some less pleasing traits here. The percussion I found to be a little splashy, and there was a noticeable 'transistor' edge to Martin's vocals. Generally, however, the piece was lively and helped along by a fine piano timbre.

'In A Room' by Dodgy provided a similarly edgy but fast presentation. In



this case, though, the rough edges suited the music more, and I felt the Pro-jects to be true to the nature of the recording and music. Having said that I could see that with 'speakers on the sharper side of neutral, things could potentially become a little too brash. The bass guitar didn't have quite the presence I would have expected, which did little to help the rather forward balance. Had it had a little more weight, then the balance would be more cohesive. The interloping brass section was portrayed in an entertaining manner as it should be, and showed off the Boxes strength with brass, being both vibrant and detailed.

Chabrier's colourful orchestral piece Espana had the first rate drive and attack that I'd been expecting. Even the dullest sounding amp can be whipped into life with this piece, so you can imagine the fireworks the

Pro-jects created. Once I'd unpinned myself from my chair, I did find the piece rather too mechanical though. Yes, the brass section was presented with great gusto, and the detailing was quite good too, yet the strings were a touch grainy, and the piece could have proceeded with a little more grace and less pace. In short, whilst providing moments of excitement, it wasn't the most mellifluous of presentations.

As you can probably tell by now the Pro-ject Boxes are something of a curate's egg. I so wanted to like these amps, but ultimately found them just too flawed to really take to heart. It's ultimately down to a lack of refinement, at least for many a British ear. With certain types of music such as vigorous Rock and dance music this really doesn't matter, and can even enhance the recording. Classical and vocal jazz, however, proved somewhat tiring to listen to. Partnering with smooth and sweet components will reduce this effect; brighter equipment would exacerbate the problem.

Yet, there's no doubting the Pro-jects wide dynamic range, and exceptional mid-range and upper bass control. For rock, thrash and dance music lovers looking to spice up a particularly bland system, the Pre and Power Box are well worth a look and offer good value for money.

Pro-ject Pre Box £300
Power Box £250 each

Henley Designs Ltd.
Tel: + 44 (0)1235 511166
www.henleydesigns.co.uk

MEASURED PERFORMANCE

The Project clipped very softly at full output, usually a sign of low feedback. All the same, it produced very little distortion once warmed up and was remarkably clean at high frequencies. The little distortion it did produce was low-order only, so on balance I would expect these amps to sound very smooth and easy going, even when pushed hard. They handled 4ohms well too.

Power from each monoblock measured 60watts into 8ohms and 81watts into 4ohms, enough for most situations, if not the largest rooms or the most insensitive

loudspeakers.

Frequency response was wide, stretching from 7Hz up to 73kHz (-1dB), so these amps handle DVD-A and SACD.

With useful input sensitivity of 320mV these little units provide good power with minimal distortion. **NK**

Power 60watts

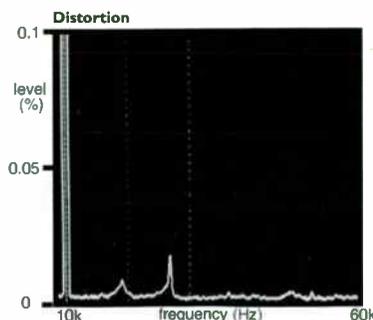
CD/tuner/aux.

Frequency response 7Hz-73kHz

Separation 64dB

Noise -91dB

Distortion	0.013%
Sensitivity	320mV
dc offset	1/0.9mV



World Verdict
Small, stylish and reasonably good value. They will excite with dance and rock but ultimately lack the refinement needed for jazz and classical

HI-FI WORLD'S GREAT COMPETITION GIVEAWAY

WIN A SUPERB MICHELL TECNODEC TURNTABLE IN THIS MONTH'S HI-FI WORLD GIVEAWAY



It's hard to believe that a small family run business in north London is one of the world's foremost manufacturers of high end turntables, but this is indeed the case. Michell Engineering run a small but highly professional outfit that produces turntables of astonishing build and sound quality that continue to be references throughout the audio world.

The added bonus is that the company's products really look the business, mixing cutting edge design with solid engineering. And when you look at their lineage this should come as no surprise.

Michell has been involved in audio for almost forty years: it was started in the early sixties. Founder John Michell created J.A. Michell Engineering as a precision engineering company, dealing with the local film industry. For example, they created model spacecraft for Stanley Kubrik's "2001 - A Space Odyssey". This work extended to motorcar and aircraft builders, as well as audio component manufacturers. Eventually the company launched itself into the audio market

when it took over the manufacturing of the ultra-modern looking Hydraulic Reference turntable (seen in yet another Kubrik film, "A Clockwork Orange") from Transcriptors.

From here, the Hydraulic reference was followed up by similarly styled products, such as the Prisma, an up-market version of the Focus One, the company's entry level product in the seventies.

In addition to turntables, Michell also produced the Fluid and Focus unipivot tonearms, right up to the early eighties. A few oddities were also developed, such as the bizarre Double Prisma, which housed two platters on the same plinth with a shared drive system - a few of these were made for the German market.

Eventually, in 1981 Michell developed the now classic GyroDec, which was a ground breaking floating chassis turntable with balanced armboards and stabilised suspension. After this came the Syncro entry level turntable, then the Mycro, which was ultimately replaced by the Gyro SE. At the top of the range came the Orbe turntable

In the late eighties the company partnered their range of vinyl products with amplifiers designed by Tom Evans and Graham Fowler. The Iso phono stage was one of the first specialist high-end phono head amps to use op. amp ICs.

After the Iso came the Delphini phono stage, as well as the Argo and Orca line stage preamps and the 'top hat' styling of the Alelecto monoblock power amps. A prototype CD player

emerged in 1997 but production was eventually scrapped due to the emergence of high resolution digital formats.

In 2001 amplifier production was moved on to Graham Fowler's Trichord Research, leaving Michell Engineering to concentrate solely on their range of turntables and accessories.

What we have to give away this month is the brand new turntable from the company, the TecnoDec. This has been reviewed by David Price this month. He commented: "the TecnoDec has a very open and neutral sound. . . it is speed-stable, rhythmically coherent and secure, dynamically uncompressed and tonally neutral". This superb turntable has all the attributes of the other spinners in the company range and is powered by the excellent Trichord developed DC power supply.

If you want to benefit from the enjoyment this turntable could bring to your system, then here's your opportunity. Winning a TecnoDec couldn't be easier. Simply answer the following questions on a postcard and send it to the address below by March 31st. The first correct entry out of the bag will receive this superb prize.

Competition Questions

[1] Who was the founder of Michell engineering?

- [a] Joan Michell
- [b] John Michell
- [c] Jeff Michell
- [d] Michell Mybelle

[2] In which Stanley Kubrik film does the Hydraulic Reference turntable feature?

- [a] 2001 - A Space Odyssey
- [b] Full Metal Jacket
- [c] A Clockwork Orange
- [d] One Flew Over the Cuckoo's Nest

[3] Which turntable featured two platters on the same plinth?

- [a] Double Prism
- [b] Double Mycro
- [c] Double Trouble
- [d] Double Prisma

[4] Which took over manufacture of Michell's amplification in 2001?

- [a] Chord Company
- [b] Audio Research
- [c] Trichord Research
- [d] Acoustic Research

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1. Only one entry per house hold.
2. Multiple entries will be automatically disqualified.
3. Purchase of the magazine is not a pre-condition of entry.
4. No correspondence will be entered into.
5. The Editor's decision is final.
6. No employees of Audio Publishing Limited, or of any companies associated with the production or distribution of the prizes may enter.

CONGRATULATIONS

...to Mr. J. Furtado of Essex, Mr. J. Hobbs of Bristol, Mr. K. Twine of Somerset, Ms. L. Everett of Kent and Ms. N. Mihalovic of Scotland the winners of our February competition.

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MUSICAL FIDELITY Tri-Vista Series

Celebrating Musical Fidelity's twentieth anniversary, the new limited edition Tri-Vista series offers both audio excellence and value for money. The first products released are the Tri-Vista 300 Integrated Amplifier and the Tri-Vista CD/SACD Player, with Pre and Power Amplifiers following later this year. Both products are already receiving excellent reviews - Hi-Fi World (January 2003) said "If you want extreme power with superb grace the new Tri-Vista 300 is quite exceptional" - while the CD is, according to Hi-Fi Choice (January 2003), "Simply the best CD Player MF has ever made and one of the finest available anywhere."



ARCAM F.M.J. SOUND & VISION

Arcam has been at the forefront of designing home cinema since 1996 and has established an international reputation for audio excellence. This highly specified combination is enhancing this reputation even further, having already been described as "Arcam's best ever product to date."

The ultra-flexible AV8 Pre-amp Processor offers Dolby Digital, THX-EX, Dolby Pro Logic II and DTS decoding and is among the first processors to have THX Ultra II certification for music and movie post processing. According to Arcam, the partnering P7 Power Amplifier is a 'true audiophile powerhouse' delivering over a kilowatt of power from seven channels each THX-Ultra rated at 150 watts.

This combination has recently been awarded 'Editor's Choice' by Hi-Fi Choice magazine - being described as "A fantastic achievement from this respected UK brand - an AV processor par excellence." - while Hi-Fi World (March 2003) concludes, "Right now, this is the best reason to go multichannel I can think of. Exquisite."

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Please refer to Page 7 for full address and telephone number details.



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Videologic DRX-701ES DAB Tuner	£249.95

is a fine turntable, and it clearly reveals the benefits of listening to vinyl, with a rich and detailed soundstage, and a good dynamic response.

It's available in six funky colours, so you should find one to suit your decor, and at just a smidge over £100, you can have no excuse not to keep that old vinyl collection in employment for a good few years yet."

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RCD-02 CD Player "Whether it's the raw, and sometimes just plain barking vocals of Tom Waits, or the stinging guitar stabs of Pete Townsend on some old Who tracks, the Rotel is one of those players that can't help but bring a smile to the face - it's a breath of fresh air."

WHLAT HI-FI? *** September 2002**

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Marianne Faithfull's deliciously smutty vocals on *Kissing Time* with real relish. Add in decent levels of equipment - and the convenience of remote control, and we reckon Rotel has a winner on its hands."

WHLAT HI-FI? *** August 2002**

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 worth £30 with **ALL**
 Speakers over £170

"The original Aegis Ones were great speakers, to the extent that they were category winners in our 1998 awards. Since then a host of new models have raised the standards in the sub-£200 category, and the Aegis Ones soon went from stunner to also ran. AE's response to that is an EVO version.



WHLAT HI-FI? BEST BUY 2002
 Hi-Fi & HOME CINEMA AWARDS
SPEAKERS
 Up to £200

The Aegis Ones genes are clearly evident. The original's refinement and bass weight are preserved and backed up with better openness and more free-flowing dynamic ability. The old speakers would have delivered a cool and calm version of Pink's *Missundaztood* set - they'd be enjoyable, but would lack a little drive and excitement.



Also Available
 KEF Q1 • £249.95

The new speakers, however, address those limitations... Add authority and good stereo imaging to the list of plus points and it comes as no surprise to find these speakers at home with classical, too. Indeed, running

through our test room's extensive CD library we couldn't find a genre that these AE's weren't happy playing."

WHLAT HI-FI? *** July 2002**

Free Interconnect Cable* worth £60
 with **ALL** CD Players over £300

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World Radio History



Amplifier Selection

Arcam DivA A65 Plus Amplifier	£369.95
Arcam DivA A75 Plus Amplifier	£469.95
Arcam FMJ A32 Amplifier	£1149.95
Cyrus 6 Amplifier	£599.95
Cyrus 8 Amplifier	£799.95
Denon PMA355 Amplifier	£179.95
Linn Kolector Pre Amplifier	£494.95
Linn LK85 Power Amplifier	£494.95
Marantz PM4200 Amplifier	£139.95
Musical Fidelity A3.2 Pre Amplifier	£999.95
Musical Fidelity A3.2 Power Amplifier	£999.95
Musical Fidelity A308 Amplifier	£1999.95
Musical Fidelity Tri-Vista 300 Amplifier	£3994.95
Quad 99 Power Amplifier	£549.95
Roksan Caspian Amplifier	£894.95
Rotel RA-01 Amplifier	£249.95



ARCAM

SOUND & VISION

Claim £150 Off the Speakers* of your choice
When purchased together with any Arcam CD & Arcam Amplifier combination. Min Spk Value £300

DivA CD82T CD Player £599.95
DivA A85 Integrated Amplifier £799.95

DivA CD82T "Arcam's latest sounds like a more mature version of its little brother. On an initial listen the increased solidity and refinement are obvious, but over time the subtler dynamic shading and more assured handling of transients come to the fore. The Arcam CD82T is one of the best CD players available at this price point." **WHAT HI-FI? ***** September 2002**

DivA A85 "You'll have realised by now that we rather like this amp. It took us completely by surprise, and further strengthens Arcam's already impressive product range... The A85 is superb, and we can't wait to put it up against its peer in a group test." **WHAT HI-FI? ***** March 2001**



Also Available **NEW** Arcam FMJ AV8 & P7 £5,499.95



WHAT HI-FI? *****
Best Buy
2002
Hi-Fi & HOME CINEMA AWARDS
CD PLAYERS
£201-£350

B&W Bowers & Wilkins DM602S3 Speakers £299.95

Free
Speaker Cable*
worth £50 with **ALL**
Speakers over £280

"But the B&W 602 S3 are our winners. They're big and not particularly beautiful, yet if it were our money they're what we would buy. No rival can match the wide ranging dynamics or low frequency performance of these not so compact standmounters. Add all-round sonic excellence and the choice is easy. Give them sufficient space to breathe, then sit back and enjoy the music." **WHAT HI-FI? ***** Supertest Winner August 2002**



Also Available (Pictured Right)
B&W CDM NT Series • Prices start from £749.95

PURE DIGITAL DRX-701ES Digital Tuner £249.95

This new tuner from the recently renamed Pure is based on the 2001 Award-winning Videologic DRX-601ES, but under the lid is an all-new third-generation digital radio engine, in the form of Frontier Silicon's Chorus FS1010. Its biggest advantages are lower energy consumption and above all cost - it's the major reason why the DRX-701ES is £100 less than last year's model.

The tuner uses 24-bit/192kHz conversion with 4x upsampling and data interpolation, and is powered by a low-noise toroidal transformer - such attention to sonic detail pays off. Digital outputs are provided



WHAT HI-FI? *****
Product of the year
2002
Hi-Fi & HOME CINEMA AWARDS
CD PLAYERS
Pure DRX-701ES



Also Available
Denon TU260L/II • £99.95

on electrical and optical feed, but most people will use the analogue out, and these sound very good indeed. As usual the tuner is subject to the signal quality off-air, but when it's fed from a high-quality outdoor aerial and a good signal it's capable of a crisp, powerful and detailed presentation. Even more populist music stations like Radio 6 benefit from the mix of a neutral balance and fine weight, while speech is also neutral and easy to follow... If you want a quality home tuner for digital radio, you need look no further! **WHAT HI-FI? ***** October 2002**

pricing policy

We always try to ensure our prices are highly competitive. In the event you can find the same products and excellent service at a lower price, please bring it to our store managers' attention.

World Radio History



Claim £200 Off the Speakers* of your choice

When purchased together with any Cyrus CD & Cyrus Amplifier combination. Min Spk Value £400

CYRUS

CD7Q CD Player £1149.95
8 Integrated Amplifier £799.95

Cyrus 7Q CD "How it compares directly (with the competition) is a matter for a group test, but I can tell you now that it'll be a close one, because the CD7Q is a fantastic CD Player, offering all you'd expect from a disc spinner at this price, and more... The CD7Q's a major upgrade from the class-leading CD7. Its weighty, detailed sound puts it at the pinnacle of CD players at this price."

WHAT HI-FI ***** July 2002



Also Available
Cyrus 7 CD £799.95



Cyrus 8 Amplifier

"The 8 is a large step forward from older generations of Cyrus amplifiers, and takes the company back into the leading pack in the sub-£1000 integrated amp sector... The Cyrus 8 is a must-audition product."

WHAT HI-FI ***** January 2003

ROKSAN

Kandy KA1 MKIII Amplifier £544.95

Claim £150 Off the Speakers* of your choice

When purchased together with any Roksan CD & Roksan Amplifier combination. Min Spk Value £300

"When we last reviewed Roksan's Kandy integrated amp in February it fought off serious competition to come top in a *Supertest*. This is its replacement, the MkIII. Internal changes include an uprated power supply for the preamp section and identical mono modules for the left and right power amp sections. Roksan also claims 50 percent lower distortion on line-level inputs and a whopping 150 percent less on the phono input. The rated power output is an impressive 120 watts per channel into 8 ohms, and this amp has a confident, muscular way with music that bears this out. But don't be fooled into thinking this amp is raw but unrefined. With Van Morrison's *Down the Road* the Kandy has the guts to render the performance exciting and dynamic, but also the guile to deliver subtle details.



Also Available
Musical Fidelity Tri-Vista 300 Amplifier • £3994.95

The upgraded Kandy MkIII is an excellent amp; the MkII version was impressive, but MkIII is a stunner. It betters all the amps here in the timing department, and has a wonderfully robust character that works well with all types of music. It manages to retain the good points of the MkII while adding extra resolution and subtlety. All the amps here have a place in the market. It's just that at £550 the Kandy really does set the pace."

WHAT HI-FI ***** October 2002

Free Speaker Cable* worth £50 with ALL Speakers over £280

11L Speakers £379.95

QUAD

"Quad is best known for its superlative electrostatic designs, which start at £3500. So any £379 pair of speakers that carries the company's name has to be going some to avoid tarnishing the family reputation. The first surprise is that the 11Ls come in real-wood veneers covered with piano-gloss lacquer. This type of finish is almost unheard of at the £1000 mark, let alone at this price. Has anything been sacrificed for such a luxury finish? Here's the second surprise: apparently not.

The final surprise? Well, saving the best for the last, the sound quality of the 11Ls is phenomenally good. These are small speakers at just 33cm tall, but the scale and authority of their performance is terrific. The laws of physics dictate



Also Available
Monitor Audio Silver S1 • £299.95

mass extension limitations, but thanks to a clever dual rear firing port arrangement the 11Ls plumb the depths with the determination of a rottweiler, even when placed in free space.

If you're in the market for a pair of top quality standmounters these Quads are a must listen. Quite simply, they're good enough to scare the competition big time."

WHAT HI-FI ***** August 2002



Speaker Selection

Acoustic Energy Aegis Evo Three.....	£349.95
B&W CDM 1NT.....	£749.95
B&W CDM 7NT.....	£1249.95
B&W DM303.....	£179.95
B&W DM601 S3.....	£249.95
Cyrus CLS70 (Black).....	£799.95
KEF Q1.....	£249.95
KEF Q3.....	£399.95
KEF XQ1.....	£999.95
Linn Katan (Maple).....	£634.95
Linn Ninka (Maple).....	£894.95
Mission 780 (Not SE).....	£249.95
Mission 780SE.....	£349.95
Mission m74i.....	£299.95
Monitor Audio Bronze B2.....	£199.95
Monitor Audio Gold Reference 10.....	£799.95
Monitor Audio Gold Reference 20.....	£1499.95
Quad 22L.....	£895.95
Ruark Epilogue II.....	£344.95

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MUSICAL FIDELITY A3.2 Series

A3.2 CD Player £999.95
A3.2 Amplifier £979.95

Replacing the **WHAT HI-FI? SOUND AND VISION** Award Winning A3 CD and Amplifier, the new A3.2 models have been further refined and re-styled. The A3.2 CD Player now incorporates the same DAC, filter assembly and control mechanism as the highly-acclaimed Nu-Vista CD Player. The A3.2 Amplifier draws on experience gained through the development of the Nu-Vista M3 amplifier and as such has inherited many of its qualities, producing a sense of ease and flexibility that is normally only associated with far more expensive designs.



Claim £250 Off the Speakers* of your choice

When purchased together with any MF CD & MF Amplifier combination. Min Spk Value £500



MONITOR AUDIO Silver S6 Speakers £599.95

Free Speaker Cable* worth £70 with ALL Speakers over £500

British loudspeaker manufacturer Monitor Audio has introduced a replacement series for its acclaimed and award winning Silver Series speakers. "The aim has been to offer real advances in performance and value", says technical director Dean Hartley. "New models include the S1 and S2 standmounters, the S6, S8 and S10 floorstanders.

"With a close-miked track such as James Taylor's *Line 'Em Up* from SACD they really deliver the character of the singer's voice and they're just as expressive with the cultured rhythms of Groove Armada's latest outing, having just the right mix of rhythmic control and fluidity... But amazingly the best is yet to come: these are simply beautiful speakers for classical music, once a few days' thrashing has tamed their initial rawness. With the latest release of Holst's *The Planets* on DVD-Audio, they thunder out *Mars* with true conviction.



Also Available Gold Reference GR10 & GR20

These are rather magical speakers, with a poise and grace that belies their ability to turn on the power when required. Pair them with a good CD player and suitably accomplished amp, and you won't go far wrong."

WHAT HI-FI? ★★★★★ October 2002

Pioneer PDR609 CD-RW Recorder £199.95

"While it looks simple, the Pioneer has an impressive array of features, including the handy double-speed disc finalization and CD-Text compatibility. Internally, the PDR609 is a big step up from the Award-winning PDR-509 it replaced: the DAC is now a 24-bit/96kHz number, aided and abetted by Pioneer's Legato Link conversion technology, and it has 24-bit A-to-D conversion, which is ideal for copying your vinyl onto CD. If this is your plan, you'll appreciate that the Pioneer makes it easy to create first-rate copies from any source, helped by the manual recording-level controls. It was hard to tell our copy of Jim White's *No Such Place* from the original.



Also Available Marantz DR6000 CD Recorder • £279.95

While the Pioneer's replay quality can't match the Marantz, it costs £120 less, which would buy you a lot of blank discs. If you've already got a dedicated CD player, we'd go with this recorder."

WHAT HI-FI? ★★★★★ August 2001

Recorder Selection

- Marantz DR6000 CD-RW.....£279.95
- Sony RCDW3 CD-RW.....£229.95
- Yamaha KX393 Cassette Deck.....£119.95
- Yamaha KX580SE Cassette Deck.....£199.95
- Yamaha CDR-HD1300 CD-RW.....£519.95



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World Radio History

Free Interconnect Cable* Worth £150
When TAG AV30R & TAG 100x5R Purchased Together

TAG McLaren



AV30R AV Processor £1799.95
100x5R Power Amplifier £2994.95

TAG McLaren's AV30R AV Processor is aimed at the home cinema enthusiast who is concerned with keeping up-to-date with the latest surround formats. When partnered with TAG's 100x5R Power Amplifier it makes an exceptional combination

According to What Hi-Fi? Sound and Vision magazine in their October 2002 issue: "In use, the AV30R connected to TAG's 100x5R power amp, is superb. True, it can't quite match the clarity and power of the latest-specification TAG flagship, the AV32Rbp-192, but by any AV standard this is a very high-end piece of kit, with excellent impact and fine detail across a range of movie soundtracks from Once Upon A Time In America to the explosive actionfests. Channel steering is immaculate, and the sense of a soundfield wrapped around you - even in 5.1-channel mode - entrancing, with spine-tingling rear-channel effects. The fine Pro Logic II implementation serves music as well as it does non-discrete AV soundtracks, and with an SACD machine hooked up via the 5.1 channel inputs, the lack of coloration and sheer bass oomph is extraordinary." **WHAT HI-FI? ★★★★★** October 2002



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Tivoli Model One Radio worth £99
When You Purchase any REL Subwoofer over £700*



ACOUSTICS
REL

Strata III Subwoofer (Wood) £799.95
Q150E Subwoofer £499.95

REL is an audiophile company who take great pride in designing and building their highly acclaimed subwoofers. Because of their total commitment to performance, REL sometimes adopt unusual solutions to otherwise straight-forward problems.

"The aggression of Rage Against The Machine's Take The Power Back is near-tangible, the midrange a spitting, spiteful companion for the tight, deep, air-agitating bassline. As for the more deft creations of Chick Corea, the REL's articulate nature serves subtly to underpin basslines, rather than swamp them. The adaptability makes the Strata III a highly recommended subwoofer - it's a very versatile, musical piece of kit, and it doesn't cost the earth." **WHAT HI-FI? ★★★★★** July 1999



REL Q150E

Claim £150 Off The Speakers* of your choice when purchased at the same time as the Linn Classik Music System Minimum Value: £250

Claim £300 Off • The Speakers* of your choice when purchased at the same time as the Linn Classik Movie System Minimum Value: £500



Systems
Best Buy £1000 plus



LINN

Linn Classik Music System £999.95

The Classik Music System is an alternative to the sound and looks of mass market compact systems. Designed to be useful throughout the home, the Classik is simple and stylish with all the advanced features needed to satisfy the most demanding hi-fi enthusiast or discriminating music lover.



Classik • Movie System
£1999.95

"Since the Scottish company added a tuner to the amp/CD player, mouths have gaped even wider in appreciation. The addition of colour options panders to the public's taste for kit to match their interior design, but it doesn't just look lovely in the lounge: the Classik sounds simply marvellous. Boasting fine impact and drive, it retains its grip even as it thumps out rock and dance tracks. Ask it to play quiet acoustic music and its smooth, liquid presentation impresses still further. The Classik offers the performance you'd expect from high quality separates in one lovely package - this is a very superior product." **WHAT HI-FI? ★★★★★** Awards 2001

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- Bristol** 92b White Ladies Road, Clifton **0117 974 3727**
- Cambridge** 17 Burleigh Street **01223 304770**
- Cardiff** 104-106 Albany Road **029 2047 2899**
- Cheltenham** 14 Pitville Street **01242 241171**
- Crawley** 32 The Boulevard **01293 510777**
- Edinburgh** 5 The Grassmarket **0131 229 7267**
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- Kingston** 43 Fife Road **020 8547 0717** Open Sunday
- Southgate** 79-81 Chase Side **020 8886 2777** Open Sunday
- Swiss Cottage** 21 Northways Parade, Finchley Rd **020 7722 9777** Open Sunday
- Watford** 478 St Albans Road **01923 213533** Open Sunday

Please call to verify hours of business.

Contact our outlets via E-Mail outlet@sevenoakssoundandvision.co.uk

who are sevenoaks?

Founded in 1972, Sevenoaks Sound & Vision are one of the largest and most successful hi-fi and home cinema retailers in the country.

Each Sevenoaks Sound & Vision outlet stocks a wide range of quality products, covering all categories of specialist home entertainment, from DVD Players to Widescreen Plasma Televisions and Projection Systems, all at highly competitive prices.

Friendly staff are available in all stores to advise, demonstrate and guide you through the home entertainment jungle.

new outlets now open

We are delighted to announce that we have opened new stores in the following locations.

Poole 01202 671677 • **Solihull** 0121 733 3727 • **Swindon** 01793 610992 and **Wolverhampton** 01902 312225. Also our **Leeds** store has re-located to larger premises.



Leeds



Swindon



Wolverhampton



Poole

staff wanted

We are currently recruiting staff at several locations. If you are enthusiastic, knowledgeable, have good customer service skills and would like a career within the audio/visual industry, call Janys Ness on 01732 466214 for more information.

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There are regularly updated stock clearance lists with hundreds of products on offer and detailed pages to help you locate your nearest outlet.

For impartial advice and information, just click on sevenoakssoundandvision.co.uk

stock clearance

With 48 outlets nationwide, the Sevenoaks Sound & Vision group stock and display a wide range of products. As individual models and product ranges are changed or superseded, the preceding models are made available at a reduced price, for clearance. Visit our Website for an up-to-date list of the clearance stock, listed by outlet, within the Sevenoaks Sound and Vision group.

0% finance option*

Spread the cost of buying. 0% finance option is available on the vast majority of products we stock. *Written details on request. Licensed credit brokers. Minimum balance £400. Subject to status.

pricing policy

Whilst we do not claim always to be the cheapest, we try to ensure our prices are highly competitive. Take into account the expert advice, unrivalled product selection, demonstration facilities and excellent pre, during and after sales service and the lower price might not look such good value.

In the event you can find the same products and excellent service at a lower price, please bring it to our store managers' attention. We will always endeavour to offer you the best deal.

SEE THROUGH YOU

Budget standmounts are improving on a monthly basis, in both sound and looks. Dominic Todd encounters the smart new Monitor Audio Bronze B2.



It's no longer good enough these days to have a superb performing 'speaker with a few rough cosmetic edges. Even a budget design has to look good whatever the cost constraint, something that didn't necessarily apply in days past.

It seems that Monitor Audio are well aware of this. Never a company to have produced a shoddy looking 'speaker, the new Bronze 2 continues this tradition. The wood finish may only be a vinyl imitation, but it's immaculately applied and tightly wraps a sturdy MDF cabinet. Inside there's a central brace, good quality oxygen free cable and a well-designed crossover using high-grade film capacitors.

For the price, the drive units

look pretty impressive too. The gold coloured, metal tweeter is something of a MA hallmark now, and has been tweaked here for a smoother response.

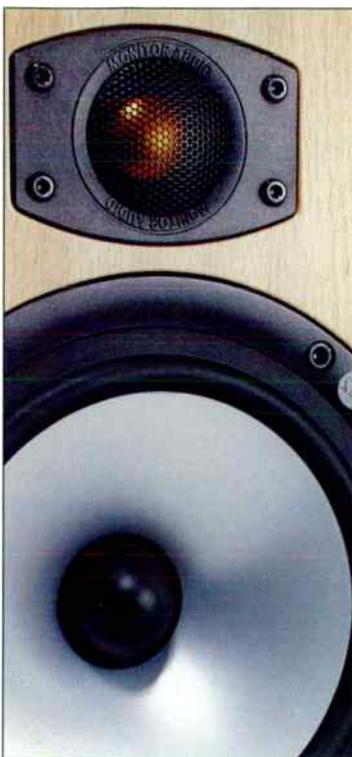
The woofer is rather more deceptive. It appears to be a metal cone, yet feels more like polypropylene. Monitor Audio call it Metal Matrix Polymer, which I suspect means it's plastic with a few bits of metal in! Whatever the case, it's shielded, and of generous diameter for a 'speaker of this size and price. The bass port is rubberised to reduce air turbulence and front mounted to allow near wall positioning. It almost goes without saying these days that they are also bi-wirable.

The list of rivals is long and

varied, but needless to say those with an interest in this 'speaker will probably also be considering the Mission m72 (£170) and Mordaunt Short 902 Signature (£200).

Kicking off with Rimsky Korsakov's *Sheherazade* produced some surprising results. There wasn't the scale of sound that I would have expected from this size of 'speaker, especially one with such a wide bass cone. However, given the budget pretensions, the level of transparency was equally as striking for its degree of insight.

Treble proved particularly incisive, contributing to good violin timbre and a fine rasp to the brass sections. It's not very often in a 'speaker of this price that one can detect subtle movements of violin



bow and string, yet the B2s really excel here. Despite this, the sound never became coarse, and maintained just the right balance of exuberance and refinement.

Having said that, there was a lack of solidity to proceedings that, whilst ensuring good timing, could also lead to listener fatigue. It wasn't as though the treble response was especially uncouth, just that its forward nature wasn't suitably balanced by the bass output.

Eva Cassidy's 'Letter' produced some mixed results. There was a wonderful openness to Cassidy's vocals and they were lent real strength and presence by the Monitor Audios. The guitar also had a

fine level of detail, however the bass guitar really lacked weight. After coming back whilst leaving them running in for another 12 hours, I returned to find the same balance. It's a balance that isn't necessarily at fault, just one that sounds completely different from what I would feel the norm for this type of design. The Mission m72, for example would offer far more grunt, even if not the transparency.

The Cardigan's 'My Favourite Game' is already quite a bright recording, and the Bronze's made no effort to hide this. The sound was very forward, yet had an excellent height of stage and detail. The vocals were as open as ever, and bass similarly lacking. The bass response did improve when the 'speakers were moved back, but this was to the detriment of the staging. I found my personal preference to be about 30cm from a rear wall. At this point the Bronzes were still bass light, yet gave the listener the ability to listen 'into' the music in the style of a more esoteric design.

To Monitor Audio's credit, the Bronze's reminded me of the late Epos ES14 - a stalwart design of the late eighties, famed for its insight but never regarded as especially mellifluous. The point is though, that the ES14 was £400, and that was nearly 15 years ago.

I tried The Divine Comedy's 'Bad Ambassador', if only because it's a smoother recording than some of the preceding ones. The MAs were certainly happier here, showing that

they are rather recording fussy. Even during the piece's complex climax, they didn't become harsh. The layering of vocals and excellent resolution shown from the guitar impressed as before, yet there was something missing. Bass wasn't so much needed to drive the piece through, as it had plenty of verve, but it would certainly have helped underpin the track.

Having listened to the B2s for quite some time I came to the rather unusual conclusion that had they cost two of three times more, then they would be a more successful 'speaker. The reasoning for this is that I fear the B2s are simply too revealing for their intended market. In the sub-£200 arena 'speakers are generally expected to be warmer and weightier in the bass, and less analytical of poorer recordings, and weaker partnering equipment. The B2s tend to go against the grain by offering a highly incisive and transparent sound that is also bright and forward in the upper mid-range.

In the right system Monitor Audio's B2s could really excel, but an audition is even more of a necessity than ever. This is system sensitive 'speaker, but I have admiration for it nonetheless. The B2 has some strong features.

Monitor Audio B2 £200

Monitor Audio Ltd
Tel: +44 (0) 1268 740 580
www.monitoraudio.co.uk

MEASURED PERFORMANCE

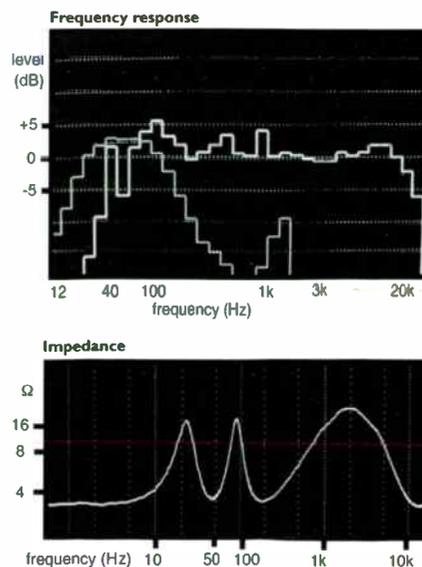
The Monitor Audio Bronze tweeter has a large-ish dome that peaks around 10kHz, giving a few dB lift in output our response analysis shows. Above 12kHz treble rolls off, but the ear will detect the peak lower down and hear some brightness. Large dome tweeters reach down into the mid-band nicely and Monitor Audio's integrates with the bass/mid unit well. The latter has a few peaks of its own though, which likely signify colouration of one form or another.

There's a peak at 100Hz which will speed bass a little, adding impact to hand drums for example. Forward output rolls down to 40Hz, a respectably low figure, below which

the port provides quite a broad, damped output. It should control the main cone well, giving this loudspeaker light but well controlled bass.

Producing 89dB from 2.8V (one nominal watt), the MA B2s are very sensitive, even for a 'speaker that measures out a 5ohms impedance. They should sound dynamic, but are not an easy load.

The B2s measure well. They may sound sharp and bright, but also tight and dry in the bass. **NK**



World Verdict

The precise and transparent B2 has the traits of a 'speaker twice its price. It's very revealing and fast but those wishing for oodles of budget bass had best look elsewhere.

MOVING TO

Hi-Fi World examines every contemporary audiophile's dilemma - whether to swap stereo for surround-sound?

Whatever you think of the reasons behind the move to multichannel,

the fact remains that it's happening, and that whether we like it or not, the music and electronics industries are gearing up for a mass exodus from stereo. Soon, large amounts of advanced resolution digital audio discs will be available, offering more sound quality than CD could ever dream of - in glorious 5.1 channel surround.

When the time comes for you to buy your next CD or DVD player, or preamp, power amp or speakers - you'll have this new technology staring you in the face.

What do you do? Is multichannel a dramatic improvement on your existing kit, or a large money pit with your name at the bottom of it - and no guarantee of satisfaction?

DVD AS HI-FI

It's easy to see, perhaps with a little hindsight, how the convenient DVD video player became so popular. As a replacement for CD, the prospect now facing us, DVD is a little less convincing perhaps. It must be hooked up to the television, but then that has already happened in most homes the argument goes, and it offers surround-sound, comprising front and rear loudspeaker pairs, a centre front channel originally



intended for cinema dialogue and a subwoofer channel for cinema explosions, earthquakes and general cataclysmic events. SACD is much the same, offering six full channels of surround-sound in DSD (but not video).

This arrangement doesn't transfer so smoothly over to high fidelity. Music producers argue over whether to use the front centre channel at all; on some discs it stays silent. They also prefer to direct music-generated low frequencies to the four main loudspeakers, rather than divorcing the lows from the rest of the music and directing them to a single subwoofer, which may be placed far from the main loudspeakers.

Right now, multichannel mixing is about the stage that stereo was in 1965 - instruments are being panned all over the place with care-free abandon. This can sound very suspect, but give it time and we'll see some very sophisticated surround sound extravaganzas from DVD and SACD. Think of the difference in stereo mixing techniques between The Beatles' 'Hard Days Night' and Pink Floyd's 'Dark Side of the Moon'

- just ten years separate them, but the differences are remarkable. Apply this rule to the

rudimentary surround mixing going on with discs such as The Eagles' 'Hotel California' DVD-A, and think how good new multichannel releases will sound in a few years time. As such, there are myriad reasons to go with the new format:

TECHNOLOGY

Stereo is just a construct, a line drawn in the sand when nothing else was possible, due to the limitations of early 33.3RPM Long Playing records. The fact that we've all become used to it, and have learned how to listen to it, doesn't mean it has any claims on being the natural format for high fidelity music reproduction. Musicians don't dream of, compose or record their music in stereo - it's purely the format that comes out at the end of a long creative process. Many studios use sixty four - or more - separate tracks on which to record all the sounds that go into the final mix, but they end up squeezed into two simply because it's the current format.

The arrival of mass market multichannel gives producers more space for creative expression, letting

MULTICHANNEL

them make a more expansive and enveloping wall of sound.

While not every casual listener will want six speakers in their living room, the pill is sweetened by the difference they make to enjoyment of DVD video. With all the hardware already in place (DVD-A player

excepted), it's a small progression from multichannel movie soundtracks to music in surround sound.

Because they've been almost exclusively designed to play the Dolby Digital soundtracks of DVD movies, multichannel music systems haven't generally sounded too good

up to now. This however is changing. Already, products from Meridian, Linn, Naim, TAG McLaren, Arcam, Cyrus, NAD, Primare and Marantz - to name but a few - have begun to transform the situation.

AFFORDABLE SURROUND-SOUND

Here are some audiophile surround-sound systems at sensible prices.

If you want to get a foot on the surround-sound ladder the simplest and cheapest option is to get an all-in-one AV receiver. They have a processor for Dolby or DTS decoding, multichannel amplification - normally five channels plus a subwoofer channel (used mainly for movie soundtracks) - and a tuner in one box. Intended for film soundtracks, quality isn't brilliant but there are models that offer acceptable results for music. The same goes for loudspeaker packages. In general, buy respected hi-fi brands, or you will end up with AV quality.

You'll also need extra cabling, including decent interconnects for analogue connection from an SACD or DVD-A player and extended runs of 'speaker cable' from the receiver to the rear channel 'speakers'. Bear in mind the rears will carry full bandwidth signals, so ideally they should be the same as the front speakers, not something you found in the loft. The front centre may carry vocals or drums, so again quality needs to be top dollar.

You must hook up a TV to see what is on a disc, preferably using a Scart cable for best picture quality

when watching video. Here are our recommendations for a first time surround-sound system.

SOURCE

It's worth considering a 'universal' DVD player that will play DVD-A and SACD as well as movies, but these usually don't come cheap. However, there is one brilliant budget option that we recommend without reservation.

for multichannel SACD playback. In other words, it's got everything.

RECEIVERS

You'll need a six-channel analogue input on the receiver. This is essential for DVD-A (although DVD-A discs have Dolby Digital you may wish to use analogue connection) and SACD playback. The following all feature this facility.



The £400 Pioneer DV656 is the best all round machine for the money.

Pioneer DV656 £400

Without doubt the best all round buy on the market and consequently the only viable budget option. £400 gets you DVD-A, SACD, CD and DVD-video playback. There's on-board decoding for Dolby Digital (movies and DVD-A) and analogue outputs

Denon AVR-1602 or AVR-1802 £350/£450

These two entry level receivers offer great value for money. Both decode Dolby Digital and DTS (with the 1802 also offering Dolby Pro Logic II). The 1602 offers 70 watts per channel and the 1802 80 watts.

Marantz SR5300 £450

The Marantz SR5300 excels in both surround and stereo and is packed full with features.

This is another budget option to consider for stereo playback as well as surround-sound. Marantz are well grounded in audiophile quality products and the 5300 offers both Dolby Digital and DTS decoding plus DTS ES and even ProLogicII at a very competitive price. Power is rated at 90 watts per channel.

NAD T761 £650

Another good all rounder that offers good hi-fi stereo playback. The 761 is powerful, at 80 watts per channel and will decode Dolby Digital and DTS soundtracks.

'SPEAKER PACKAGES

The Wharfedale Diamond Cinema system offers exceptional value for money and is superb with music.

There are plenty of good value options in this category. The following are good hi-fi 'speakers that will work well with DVD-A and SACD. Some offer a subwoofer inclusive - others give you the option of buying separately. Then you can go for a real cracker such as the tiny REL quake at £300.

ALR Jordan Entry 5.1 system £900

The small and discrete 'speakers are compact and well engineered in true German style. The sound is very good - full and detailed - and the system comes with a decent subwoofer, too.

Mission m72 system £400

With bi-polar rears, this is more of a home cinema choice but it also does the job with music. It consists of m72 speaker for the front, the m7 centre channel 'speaker and the rears. The main m72 front speakers offer superb insight, imaging and a big out of the box sound. No subwoofer is supplied.

Wharfedale Diamond Cinema £400

This system is excellent value for money and is a true music system, too. It features the 8.3 floorstanders for the fronts, a dedicated centre and the excellent 8.1s for the rears! No sub though, matching subs from Wharfedale start at £170.

THE SOUND OF DVD-A AND SACD

If you buy a shiny new surround-sound system, what sort of improvement in sound quality can you expect?

Generalising, DVD-A gives the same sort of delivery as CD, only cleaner, harder and more dramatic. What we are talking about here is recordings made at 24bit resolution and 48kHz sampling rate or - better - 24bit resolution at 96kHz sampling rate, because at present that's the best you'll get from DVD-A.

Not everyone will necessarily take to the challenging sound of DVD-A, often termed 'multi-bit' to distinguish it from SACD's Direct Stream Digital (DSD) coding scheme. It is like super clean CD on steroids - providing the original recording is good of course. Also, it takes a very good hi-fi system, well balanced, to really resolve the extra dynamic drama and cleanliness of 24/96 recordings. Because DVD-A has razor sharp transients with real leading edge power, with loud-speakers whose response extends well past 20kHz it sounds glassy bright too.

There's nothing easy and sweet about typical DVD-A, but imaging is superb, there's no treble grit and vagueness, dynamics can press you against the wall and detailing and (stereo) stage depth are awesome. It is worth having - and even old analogue recordings such as Deep Purple's Smoke on the Water sound fantastic.

Sony and Philips support rival SACD (Super Audio CD) format. SACD does sound very smooth and natural and, like DVD-A, it is very clean, although not so hard and challenging. With CD player compatibility (dual layer discs) and a wide range of interesting material, including Rolling Stones back catalogue, SACD can't easily be ignored. Vinyl buffs may well prefer SACD to DVD-A and, bear in mind, most SACD players also play DVD videos, including their Dolby Digital surround-sound track, so you can still play DVDs.

Both DVD-A and SACD are surround-sound formats. However, DVD/SACD players mix down to provide stereo, so you can get better sound quality without all the boxes, if you want.

ALL CHANGE



TAG 100X5R



TAG AV30R

Are you one of the growing number of two channel hi-fi fanatics thinking of expanding? Simon Pope and David Price discover a painless and effective way for the audiophile to go multichannel as they encounter the TAG McLaren AV30R processor and 100x5R power amp.

The TAG McLaren AV30R-100x5R reviewed here is no bargain basement affair, but at £4,794 it is theoretically within reach of mere mortals with mortgages, or should that be re-mortgages.

A relatively minimalist 5.1 channel AV preamp processor, it boasts two video switchers (one for Composite and one for S-Video), both offering one output with on-screen display and one without.

There's a wide range of options, including a DAB card and the 'multi-device' TAGtronic Bus for integration with other products and software upgrades. The partnering 100x5R power amp is essentially five identical monobloc power amp modules in one single enclosure, each containing its own mains transformer, bridge rectifier and energy storage capacitors. A great feature is its upgradeability - the amp may in fact be ordered in either two, three, four or five channel guise, with many

further modules fitted when funds allow. All amplifier functions (including muting and protection) are managed by a 16bit Siemens microcontroller, and there's even a remote control to lose!

Inside, it's neatly laid out with the latest surface mount technology and a liberal sprinkling of audiophile-grade Vishay resistors and Wima capacitors. Gold-plated Oxygen-free high purity copper (OFHC) loudspeaker binding posts complete the picture round the back.



The AV30R has all the inputs and outputs you need for high-end surround-sound.

The pre and power amps look great together, and there's no denying the superb build and finish. The AV30R's clear display is particularly worthy of note - it even functions as Digital Radio tuner window when the optional (£699) DAB card is fitted.

Thanks to TAG's excellent Setup Wizard it's easy to configure - a clever "question and answer" system will have even AV novices up and running easily.

Suitably set up, the amplifiers really sing. They possess a distinctively clean and open nature which

lies right between the ultra tight and punchy Naim sound and the warmer, sweeter strains of products like Marantz's PS17/SM17 combination.

TAG's supplied remote is the weakest part of the package. The on-screen display is good enough, but this sad bit of plastic doesn't make navigating through its menus and sub-menus any easier, but all the bells and whistles are there in abundance.

PLAY TO WIN

Starting off with the TAG McLaren combo's analogue attributes, Brian Eno's *Before and After Science* on ye olde sixteen bit CD comes through with

superb clarity - the original recording's analogue warmth is there for all to hear. Switch to a serious slice of drum 'n' bass in the shape of Spirit's *Solitaire* and you're instantly struck by how the sound changes, the TAGs matter-of-factly revealing

the striking differences between the two studio's respective sonics. The gentle upper mid-band warmth of the Eno disc is substituted for the ultra clinical and incisive sound of the latter Metalheadz release. This kind of "hear through" transparency is relatively rare - even at this price, and makes this combo a brilliantly clear window on the world.

Donald Fagen's *The Nightfly* DVD-A feeding its 5.1 analogue input was a joy. Bass is decently tuneful with plenty of power and no signs of strain even at very high volumes. It isn't the warmest or most sumptuous of bottom ends, but it's firm and strong enough to give the TAGs a very powerful and authoritative feel.

This follows up into the midband, which is extremely tidy and well ordered. The TAG can huff and puff with the best of them, delivering fantastic wallop on large dynamic transients. It's not quite as agile in communicating those tiny accents and inflections that give music its sense of intricacy. These amps serve up a brilliantly atmospheric and "airy" top end. Hi hat cymbals are superbly carried, without a hint of hardness or coldness, yet retain a brightly lit steely ring.

Feed the AV30R's digital inputs with the newly remastered Dolby Digital soundtrack from *The Wall* and you're in for a treat. That Pink Floyd

soundtrack sounds as emotive and profound now as it did some twenty three years ago. The 100x5R's monobloc architecture makes for an extremely spacious surround soundstage, with vice-like grip on the location of instruments, vocals and effects within the multichannel mix. Its sheer scale is undeniably impressive, with tremendous amounts of power in reserve. This was shown by an extremely powerful and tight performance of Rage Against The Machine's live DVD 'Battle Of Mexico City'.

Purity, clarity and realistic dynamics were the order of the day with the Dolby Digital soundtrack of Bruckner's 8th Symphony with the Vienna Philharmonic conducted by Boulez on an excellent TDK DVD-video disc. However, not only is it impressive in these clear cut hi-fi terms, but the sound ebbs and flows in an involving and musical way.

A deeply impressive combination, then. We would say that the AV30R gives about nine tenths of the sound of its more expensive AV32R bigger brother, which is borne out by the quoted measured performance, which only shows a minor degradation of signal-to-noise ratio (102dB vs. the AV32R's 104).

The only criticism is that if you buy all the options for the AV30R - well, you might as well have the AV32R. The 100x5R is simply a barrel

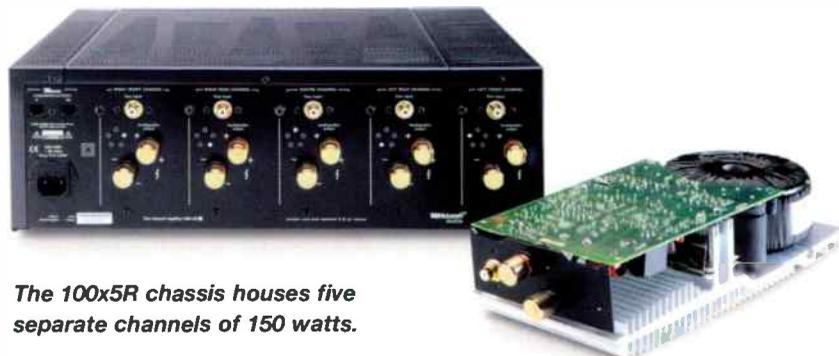
AV30R

Features: Dolby Digital, Dolby Pro Logic, Dolby Pro Logic II and DTS decoding (with optional DTS NEO 6 Music, NEO 6 Movie, DTS Discrete 6.1, Dolby Digital EX, TMS 7, MPEG2 and HDCD), programmable remote control.

Connections: 5.1 channel RCA phono audio input, 6x RCA phono stereo analogue inputs, 5.1 channel RCA phono audio output, 2x subwoofer outputs, 1x RCA phono stereo tape output, 1x 6.3mm stereo headphone jack, 1x composite video output, 1x S-Video output, 2x component video outputs (1x RCA, 1x BNC), 1x coaxial digital outputs, 5x coaxial digital inputs (one optionally configurable as an AC3-RF input), 1x optical digital input, Enhanced TAGtronic Communication Bus, 1x IEC mains input, 1x 3.5mm remote, 1x RS232C.

100x5R

5 x 150W RMS into 8 Ohms, remote control, microprocessor circuit protection. Connections: 5x RCA phono line inputs, 5 pairs of loudspeaker binding posts, Enhanced TAGtronic Communication Bus, 1x IEC mains input.



The 100x5R chassis houses five separate channels of 150 watts.

ched, no-nonsense powerhouse that's up to the job of keeping the AV30R company. Its flexible, modular design and gorgeous looks only sweeten the deal further.

Together, this combo represents a serious challenge to its class-

leading rivals from the likes of Naim, Arcam, Linn and Marantz. At this level though, the competition is super tough and constantly improving, so it's best to arrange an audition to find the sound that suits your taste.

TAG McLaren Audio AV30R
preamp/processor £1,799
TAG McLaren Audio 100x5R
power amplifier £2,995

TAG McLaren Audio
www.tagmclaren.com

MEASURED PERFORMANCE

With a peak level (0dBfs) digital input, a volume setting of "0.0" on the AV30R's display yields an output of 1.5V. A more typical 2V output is achieved at a setting of "+2.5" where jitter is spectacularly low at just ~90psec with 48kHz/24bit data (blue trace, Graph 1) and ~40psec with 96kHz/24bit data (red trace, Graph 1), provided the £300 're-timing' option is fitted. However, the crystal-based PLL requires over 10 seconds to settle when switching between sample rates in order to achieve this performance, before which jitter remains a high ~3100psec.

Distortion also increases very slightly from 0.0045%/0.0065% at 1kHz/20kHz with 48kHz data to 0.006%/0.009% at 1kHz/30kHz with 96kHz data, respectively, although this is on a par with the matching power amplifier (see below). McLaren admits that the use of a CODEC for rear, surround, centre and sub channels cannot match the ultimate performance of the two-channel 24bit/96kHz-capable DAC specified for the front channels. Nevertheless, the 94.5dB A-wtd S/N achieved by centre and rear channels is acceptably short of the 99.5dB measured on the front outputs and is unlikely to exert too obvious a subjective penalty.

The Dolby responses are revealed on Graph (2) while 96kHz PCM digital inputs extend out to -2.6dB at 45kHz. McLaren's proprietary Bass management is particularly adaptive, to the extent that mixed-bass channel levels are dynamically limited with increasing volume to prevent premature clipping. Clever stuff, and no mistake.

The multichannel power amp is considerably more powerful than its 100W moniker might suggest. In stereo mode, it achieves 2x175W/8ohm with a mere dip to 5x165W/8ohm with all five channels driven simultaneously. Into lower 4ohm loads, this increases to

2x270W. Distortion remains very low indeed at 0.001% or less through the midrange at anything up to 100W/8ohm (see Graph 3). However, distortion does increase at higher frequencies (where there's less compensation available) to 0.007% at 20kHz and 0.009% at 30kHz, particularly once the amplifier has been driven for an hour or so and thoroughly warmed-up. Nevertheless, it must be said that few amplifiers enjoy distortion as low as this at these sorts of frequencies....

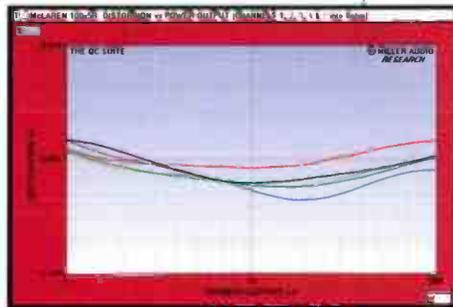
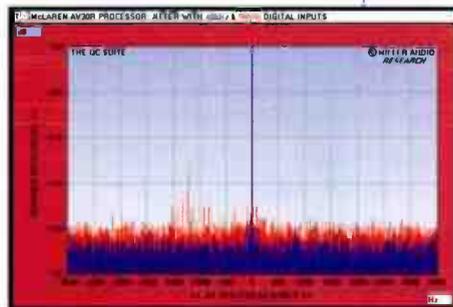
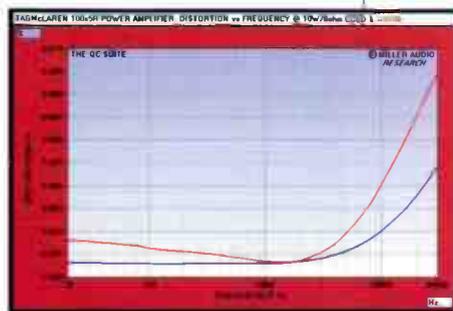
Because each amplifier 'module' is built to precise standards, they each have exactly the same distortion, response and noise characteristics. Channel matching is to within 0.04dB and separation better than 90dB at 20kHz between modules. The response of each module has a gentle HF roll-off, beginning with -0.25dB at 20kHz but reaching just -5dB down at 100kHz. This is a subtler roll-off than might be expected from an SACD player, for example, so the amplifier may still be considered both 'widebandwidth' in addition to extremely load-tolerant. These are highly advanced designs, destined for very modern, upmarket systems. **PM**

AV30R PROCESSOR

Frequency Response
48kHz LPCM
0.0dB (20Hz) to -0.1dB (20kHz)
96kHz LPCM
0.0dB (20Hz) to -2.6dB (45kHz)

Distortion	Front	Surround
-6dBfs	0.004%	0.004%
-30dBfs	0.002%	0.002%
-60dBfs	0.12%	0.13%
-90dBfs	2.8%	2.9%

Separation	1kHz	104dB	104dB
1kHz	105dB	104dB	
20kHz	95dB	96dB	



Noise (IEC A) 99.5dB 94.5dB

Output 2.02V 1.99V
(Vol = 2.5)

100 X 5R POWER AMPLIFIER

Power 5 x 155W
Distortion (1kHz) 0.001%
Separation >90dB

World Verdict
Expensive, but of superb quality, with a powerful and transparent sound, the AV30R and 100x5R combination is a fine way to move up to multichannel.

SLICK &



David Price listens to Linn's tight and taut new 2250 power amplifier.

Few companies inspire as much brand loyalty as Linn Products, so the advent of a new high end power amplifier from the Glasgow boys is bound to arouse interest. And given that the company's product range has changed dramatically – the balance shifting away from dedicated two-channel stereo to more life-friendly, multi-room and home theatre applications – many will be particularly curious to see what Linn can do when venturing back to its 'hometown' of conventional hi-fi.

The intriguingly named 2250 (any reference to Naim's 'evergreen' amp in there?) is a sleek looking piece of kit based on the company's 5125 five channel 'home theatre' powerhouse. Using 'new integrated technology' and Linn's beloved surface-mount componentry, plus the company's de rigueur switch mode power supply, it is claimed to produce 125W RMS per channel into 8 Ω (rising to 230W into 4 Ω). Linn boasts that it is "unconditionally stable into all loudspeaker loads"...

Very much in the idiom of a modern 'noughties' power amp, the 2250 is a clean, small footprint design that won't frighten the Missus or bend the floorboards. It measures just 75x381x354mm and weighs a waif-like 5.25kg – much of the reason for its petiteness is of course the use of a switched mode power supply

which obviates the need for a frying pan sized toroidal transformer. It's a neat visual match for the Klimax Kontrol, and I actually quite liked not having to give up large expanses of my room for my music – for once.

The 2250 doesn't possess vast expanses of heatsinking metal fins. Rather, two internal thermostatically controlled cooling fans whirr away, producing the same sort of noise as a notebook PC cooling fan when the going gets hot. They are actually fairly audible in isolation – but by the time they've cut in then things will be getting seriously loud and I couldn't really hear them in practice. Automatic signal sensing for remote power switching, plus user-selectable inputs for unbalanced and balanced operation and unbalanced and balanced output sockets for daisy chaining make this a very flexible product.

This power amplifier can also be configured for bi-wired operation and for multi-amping in passive and active modes with additional 2250s – I can imagine this working very happily, say, with two or three more 2250s as part of a high-end multi-channel system. Linn says that the 2250 also accepts internal Linn stereo AKTIV cards for playback with Linn AKTIV loudspeakers. Multi-room operation is possible, serving as the main or as a local room amplifier.

Round the back, gold-plated

WBT phono sockets and rugged balanced XLR connectors are used

From cold, the 2250 is not a good performer – indeed, I found it needed more than a few days of use before it really felt able to stretch its legs. Suitably burned in and warmed through, I sat down to finally use it in anger. The first few bars of Propaganda's 'P-machinery' raised a smile, on account of the fact that I found myself hearing precisely what I'd expected. You've got to hand it to Linn – it sure knows how to design products with a distinctive house sound!

The amplifier I'd just come from was Musical Fidelity's A308, a £1999 integrated which I was using as a power amp (via its AUX 2 input, which bypasses the preamp completely). Those aforementioned couple of bars, featuring a sequence of sampled 'mechanical' noises, took on a completely different significance. With the MF it had been a few 'banging' sounds, but the Linn turned it into music, extracting a coherent rhythm from what I'd previously thought to be a sort of 'lead in' sound effects sequence. Therein lies the appeal of the 2250.

Indeed, its presentation proved dramatically different to the MF, in both positive and negative senses. The good news was that it made whatever music it played into something rhythmically coherent and engaging, regardless of the source

SOUND

material. Next on was Motorhead's 'Overkill', one of the most scratched, beer-sodden, cigarette scarred pieces of vinyl I own (shurely shome mishtake!) So 'distressed' is this disc that it's more 'no fi' than 'lo fi', but once again however, the Linn cut through the mustard to communicate the fact that there was a rock band under all that surface noise, bashing it out like only Lemmy & Co. can. It didn't sound nice, but it sure was fun – a bit like the band itself, in fact...

Moving to Randy Crawford's 'Rainy Night in Georgia' and this amp threw out a welter of detail, proving particularly capable at stringing all the small percussive elements together, not to mention the singer's vocal phrasing. No less enjoyable was its dynamics – the 2250 could switch from being all quiet and shy to pumping large amounts of current at the blink of an eye - make no mistake, this is a fast, lithe amplifier. Factor in its very taut, sinuous rhythms and you have the classic recipe for – the Linn house sound!

Bass was very tight – not quite in the Naim NAP250 class I'd say – but sufficiently vice-like to keep my Yamaha NS1000M bass drivers in check. The MF by contrast sounded a touch slower and more plodding, but was able to serve up considerably

more grunt. Although Linn claims great things for the 2250, the impression I got was not of a particularly muscular amp – it went loud, but the MF went rib twistingly loud and seemed more happy with it, too. The latter's tonal warmth in this area no doubt contributed to this impression, whereas the Linn proved particularly parsimonious in this department.

Moving up to the midband and treble and here my reservations with the 2250 present themselves. Although it's undoubtedly fast and fun to listen to, I found its tonal colouring – or lack thereof – a particular disappointment. Whereas the MF was able to give you a 'feel' for the recording studio and instruments within, the Linn was so dry it almost feels like listen to 'outlines' – you could hear when each note started and stopped in relation to one another, but what was inside was oh-so uninteresting. The aforementioned Randy Crawford song is a showcase for her stunning voice – although we got all her phrasing from the 2250, that incredibly rich, full timbre of hers was lost. Having heard her live, I felt as if I was listening to a 'black and white' photocopy.

This is my problem with this amp

– although the MF wasn't quite as bouncy, it gave a far better impression of the recorded acoustic, whatever that may be. Guitars may have been less rhythmically snappy, but you could hear the tone of a Rickenbacker better. The 2250's tendency to paint 'generic' tonal colours was most obvious in the treble, where it was fast – of course – but lacked any real sense of air, space or ambience. Charlie Watts' hi-hats on the Rolling Stones' 'Emotional Rescue' sounded pretty much the same as Filthy Animal's on Motorhead's 'Overkill'. See what I mean?

Linn's new 2250 power amp gets a cautious recommendation then – it is in some ways immensely capable, but in others rather mediocre. The point is that you can decide for yourself, via Linn's excellent dealer network. Many people will love it, but others will be seriously underwhelmed. So go and have a listen yourself, and see what you think.

Linn 2250 £1975

Linn Products
Tel: +44 (0)141 307 7777
www.linn.co.uk

MEASURED PERFORMANCE

As Linn power amps go – and as modern designs go in fact – the new 2250 came as a surprise. It produces quite a lot of distortion – as much as 0.5% under difficult conditions, an amount that is way above the norm. of around 0.05%. The spectrum remains consistent under all conditions, including load, power and frequency variation – a good sign. Also, the spectral components were lower order and fell away quickly and smoothly, much like a valve amp. I don't think Linn are about to mimick the valve sound, but it does appear that they've decided to trade low distortion figures for something else in this model.

Plenty of power was available into both 8ohms and 4ohms, with figures of 105watts and 196watts respectively. Power nearly doubles into 4ohms so supply regulation is exceptional: there should be plenty of slam to the sound.

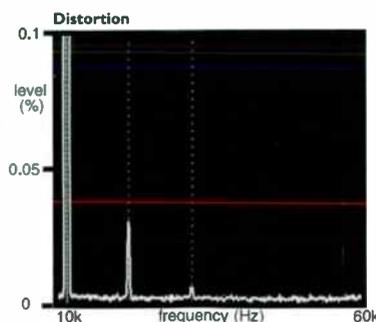
With a slightly curtailed frequency response too I would expect this Linn to sound milder and richer perhaps than those that have gone before it. Distortion at high frequencies may grey the treble a little. **NK**

Power 105watts

CD/tuner/aux.

Frequency response 11Hz-33kHz

Separation	50dB
Noise	-94dB
Distortion	0.02%
Sensitivity	1.2V
dc offset	2/0.9mV



World Verdict

Lovers of the Linn sound will find this a fine buy, but others will crave a more balanced range of strengths and weaknesses.

Visit our website at www.hi-fiworld.co.uk or send your e-mails to letters@hi-fiworld.co.uk Every letter we print wins a superb prize including Precious Metals interconnects and a FREE subscription to **Hi-Fi World** for the letter of the month!!

letters & e-mails

letter of the month

HIGH RESOLUTION JITTERS

Having read your recent articles on DVD Audio, I have to say I've actually tried the format (having had a player for almost two years now) and have found that several of the theoretical benefits you describe are just not being delivered on the actual discs.

For a start, almost none have the "full 24/192 smash" as you describe it. Even dual layer discs are often 24/96 for both stereo and surround, and my listening experiences suggest that 24/96 is only a little better than CD; it's 24/192 that's the real jump.

Secondly, the practice of including only Dolby Digital data-reduced remixes - and no PCM stereo - in the DVD-V compatibility sector, means that playback of DVD-A discs on DVD-V players (especially via stereo mixdown) is probably inferior to the equivalent CD on the same player!

Thirdly, David Price's observation that "DVD -Audio works just like CD - you put the disk into the machine and it plays" is simply NOT TRUE unless the sound format you want happens to be in the default chapter - otherwise it's video menus, button pushing, and sometimes playback of material you don't want if your player doesn't have "current chapter only" set, or you leave the disc in the player at the end and get caught by a programmed "timeout default" autoreplay you don't want.

There is no doubt that those responsible for DVD-A believe, as you suggest, that it will be sold on "surround sound" rather than higher resolution stereo; but as Noel Keywood points out in his column in the same issue, the quality of the kind of surround systems being pushed to ordinary households is "so poor it wouldn't normally be considered hi-fi". What's the point of higher quality software if budget buyers (most people in the real world) will end up playing it through six speakers worse than their old stereo pair, maiming their CD and LP collections in the process.

Finally, there are the surround mixes themselves; no doubt the state of the art will mature and settle down, but at the moment classic albums are being

remastered with every mistake made in the move from mono to stereo plus some. Just listen to the producer of the Eagles' 'Hotel California' DVD-A: "there were four guitars so we put one in each speaker". Since when did The Eagles, or any other band of the period, perform, or even conceive of performing, any way but in on a stage in a line in front of the audience?

I have no objection per se to multichannel, when the artists themselves are aware it can happen and/or supervise the remix, but there are just too many bad decisions being made at every stage of the DVD-A process (almost certainly by marketing people who don't actually use the product they're selling) for it to be anything but a pass for me at this stage...

**Dave Lock
Warwick**

Right now, you're correct to say that most DVD-A releases are 'only' 24/96, but this is obviously not going to be situation in the medium to long term. Senior music industry figures have assured journalists that the intention is to roll out more and more 24/192 discs as studios and remastering labs become thus equipped. In the great scheme of DVD-A, the present situation should be considered an aberration and not the norm. In this respect, the move from mono to stereo LPs is a good parallel.

I'd disagree about 24/192 being the real jump from CD, and not 24/96. The sampling frequency does nothing more than determine the bandwidth, and although the advantages of having an ultra wide frequency response are undeniable (not least because it pushes the PCM digital coding system's 'difficult' upper range way, way out of the range of the audio band), they're not the be all and end all. The bit depth determines the general quality of the sound (detail, dynamics, resolution, distortion, etc.) and this is the key - in my opinion - to DVD-A's enhanced quality. I think as so-called

24bit converters get closer and closer to real 24bit resolution, rather than the 19-20bit resolution which they're often said to possess, this point will become all the more salient.

Point taken about the Dolby Digital track. It's not a wonderful sounding codec - it has a frighteningly low bitrate (not much higher than that of MP3) and isn't famously sweet and natural. That's why it's useful to seek out DVD-A or DVD video discs with DTS mixes - this is agreed by many industry figures (Dolby Labs notwithstanding!) to sound far sweeter. I'd concur. I think the Dolby Digital layer on DVD-A discs was a kind of 'belt and braces' measure; an attempt to sell a high resolution disc to those without the players to play them, in the expectation that the next machine they buy will be able to play them! Essentially, many music industry figures want DVD-A on every DVD player as soon as possible. When it only costs an additional twenty cents per player 'soon' is when it will happen.

I think there's also the issue of copying. This is clobbering the music biz right now and as a result it would far prefer you bought your music on DVD-A rather than CD (hence the new releases are supposed to be priced identically). Obviously, anyone with a half decent PC can spin off a copy of a CD in five minutes these days, but that facility doesn't exist for DVD-A discs - yet!

Regarding the AutoPlay feature - you're right, but only as far as early discs are concerned. All the new ones coming out now are said to be authored in such a way that they play automatically if you open the drawer, insert the disc and hit the 'play' button. The drawer will close and the disc should commence playing from chapter one.

You're also right to ask 'what's the point of DVD-A if it's wasted on most people?' As my recent feature pointed out, it's as much an attempt by the music industry to grab back

sales as any comprehensive, definitive answer to your question. They're hoping that because [a] it's new, [b] it's based on the almighty DVD platform, [c] it's multichannel and [d] it's got lots of nice enhanced features - it will catch on. This remains to be seen. But just because it's not an immaculate conception, doesn't mean it deserves to be damned. I suspect all low-end hi-fi will move to multichannel eventually, leaving two channel stereo for the high-end - perhaps analogue-based.

I also think you're absolutely right about many multichannel mixes. It's early days and we're getting some totally 'bonkers' stuff - the Eagles disc is a case in point. It's a kind of multichannel version of what George Martin was doing with early Beatles stereo mixes! You make some very apposite points - DVD-A is a very mixed bag right now. It is, however much you do it down, better than the kick in the teeth CD turned out to be twenty years ago. Think how much better the newly remastered Byrds and Who CD reissues (to name just two) sound compared to the earlier, 1980s discs. I'm sure the DVD-A release programme will improve as dramatically as this, but here's hoping it doesn't take as long!

DP

not believe (like some other hi-fi magazines) that the best in class changes every month. I would however expect changes at least twice a year. I therefore propose that you set up two meetings for 2003 when you review the World favourites. I think that having an up to date guide may actually increase your sales, too.

Now hopefully a top tip to me: I want better sound but have no clue what to do. My current system consists of Sony CDPXB-930E, Linn Intek, EPOS ES 11, Van den Hul Storm Gold Interconnect (£30), QED Silver Anniversary speaker cable (single wired), Henley Stand design equipment rack, and some various AV components (Yamaha DSP-E800, Toshiba SD220E, Mission 77DS and Tannoy MC Centre speaker).

I am quite happy with the sound of my system and like that it is very detailed and analytical, but I'd like it to have more dynamics and scale as well. It could also be more engaging as I feel that I have to crank up the volume or sit closer/between the speakers to get the sound I want. The system has the right tonal balance and it does not sound too bright but could have a tad more bass - not a lot though since I am not a bass freak. I have however not a clue what to change to get an improvement, especially without losing

to replace my Sony with a new player as I think it is still OK and I would instead like to go for a DVD-A/SACD player within the next 2-3 years. Could you please advise what to do until then and if it would help by changing the amp to something like Roksan Kandy/Cyrus 5 or 6/NAD C370 or a secondhand Naim Nait 3 or 5, or perhaps a Linn Kolektor/LK85? Or should I look at other alternatives?

Also, would it help to upgrade the interconnect to say DNM Reson Bullet or some other interconnect?

Upgradability is also considered as a plus. My budget is not fixed but I would hope to spend between £400 to £600 and I can consider buying secondhand. If I need to change the CD player to get the sound I am interested in, could you please give some second hand alternatives, like for example Marantz 6000 KI Sig.

Best regards
Paul Bjernklo
London, UK

Hi Paul. Point taken, it's something we're aware of and are making plans as I write to have the 'favourites' section well and truly updated.

Now onto your little 'problem'. As far as your source player goes, if you don't want to replace the Sony for a while, then don't. The Sony mechanisms in all the players are built to last and deliver a rhythmically solid (if a tad harsh) sound. There's very little around to match them in this respect and you wouldn't really gain any massive benefits from spending a slice of your already precious £400-£600 on a new but not necessarily better CD player. Instead, you're right to look to the amp and cabling. Presuming you want to get the best possible audiophile sound then don't combine your AV and two channel systems together; keep them totally separate at this level.

As far as amps are concerned there are a few possibilities worth investigating. For grip and excitement look to Exposure's 2010 integrated, which is priced around £600 new. This is deceptively powerful and controlled and whilst perhaps not ultimately refined, then still very exciting yet warm sounding.

For extra refinement and more audiophile traits such as depth of field, imaging and detail with smoothness then scour the classifieds or internet for a secondhand Audio Analogue Puccini SE (pre-'remote version'). This is still very much a classic midprice integrated that



As the number of DVD-A titles increases, so will the quality of them.

SOURCE THE PROBLEM? HI HFV!

First a top tip to Hi-Fi World: The "World favourites" recommendation guide seems to have not been updated since July 2000. Surely some new products that you have tested the last 2.5 years are good enough to be included? I totally support and understand that it should not be updated too often, as I do

the current detailed and analytical sound that is really priority No 1. Of course an improvement in these areas would be highly desirable as well. I listen to music that is normally well produced like Chemical Brothers, Underworld, Depeche Mode and Jesus and Mary Chain...

I bought the Sony two years ago thinking that I would buy a DVD-A/SACD player for around £700 in the future to replace it, but none has tempted me so far due to limited software availability. I would like to wait

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amazes at the price with its high-end traits combined with drive.

Lastly, on the amp front I recommend you get a listen to the new Cyrus 8 integrated. Like the Puccini SE, this is a midpriced amplifier that delivers superb depth of sound and detail found in much higher priced products. As well as its rich sound it has great facilities and complete electronic switching. It's also the best bet for upgradeability: by adding a PSX power supply you take the sound into a different league altogether and you can always add on the upcoming Cyrus power amp(s) using the 8 as a preamp!

Finally, cabling. Look to the very fine DNM Reson or Chord Company Chameleon for interconnects and Reson again, or Chord's top of the range but excellently priced (£17.99 per metre) Odyssey 2 for loudspeaker cable for a relatively affordable but highly effective upgrade. **SP**

YOU ARE THE WEAKEST LINK, GOODBYE!

Before asking my question I would like to thank you for the most varied and entertaining read available on the hi-fi scene.

At present my set-up consists of Linn sources (Karik III and LP12/Lingo2/Ittok/Ortofon MC15 Super) Naim amps (72/HICAP/180) and Belgian SynthSse speakers (very neutral if a little laid back).

I am thinking of changing the 72 which for me is the weakest link. As I also have a projector, big screen and Audiomecca DVD I wonder whether a NAIM AV2 would be capable of doing both DD/DTS duties and making a decent stereo preamp? None of the reviews I have read really comment on stereo performance of the AV2! If I took this particular route I would of course need a phono stage. Given a budget of about £1000 what should I be listening to besides the Linn Linto?

Yours,

Nigel Briggs

Good question Nigel. I reckon the AV2 would not be a dramatic improvement (if at all over your NAC 72). It's a fine preamp, but more of a 'sidegrade' than an obvious step up from what is a perfectly good stereo preamplifier. However, if you're sure you want to move from two channel to multi, then without doubt the AV2 is the way to go. It does DD and DTS brilliantly and fulfils the multichannel role with style.

But if two channel analogue stereo sound is your priority then I think you could do worse than fit a Super-Cap (£2,293) to your 72 in lieu of the Hi-Cap (which you could always sell for a healthy sum). This would bring greater grip, focus, smoothness and low level detail, and really tighten things up at the front. You can, of course, subsequently keep it should you wish to move over to an AV2 at a later date, anyway.

Personally speaking, I'd say your preamp isn't the largest limiting factor. I think your turntable could usefully be upgraded, assuming of course it's your major music source. First, make sure the deck has had the Cirkus mods, then think about a new Linn Ekos or a Naim ARO tonearm. The former is more musical and powerful sounding, the latter amazingly fluid and beguiling. Either arm could then be usefully upgraded by an Ortofon Kontrapunkt B (my current fave mid-price MC) or a Lyra Lydian Beta.

As for phono preamps, the Linto is a class act but I'd also audition the new Trichord Delphini II, which is probably the one to have under £1000 right now. If money's tight then stay with the Tik-Tok but fit Linn's new T.Kable, the new arm lead supplied with Ekoses from last Autumn. Similar to the current Linn Silver Interconnect cables but with different outer sheathing that doesn't upset the suspension, it's rumoured to be well worth the smallish outlay. This, plus a Dynavector DV20X-L, would do the job nicely for under £400. **DP**

CARRY ON UP THE KABERS!

I had some problems driving a pair of Linn Kabers to moderate volume levels. However, I acted upon advice I found in your magazine which led me down a very interesting path (I had a NAD C370/C270 combination, Linn Mimik and of course Kabers, the amps in your opinion being the problem.) And so off I went to a couple of dealers, Kabers in hand, to listen to some Naim options, Musical Fidelity's A308, as per your recommendations, and I also listened to the Primare A30.2 and some Arcam gear. The only amp which did it for me was the A308 which managed to push the Kabers to nice levels without running out of puff.

Before I parted with the two grand required, my dealer suggested that I listen to the Nad Silverline pre/power combo which he unfortunately didn't

have in stock but said he could get for me. This led me to contact NAD's UK offices to try and find somewhere to demo the Silverline pair.

I was lucky enough to find myself talking to one of their sales team who was insistent that the way forward was to bridge my existing amps! He very kindly faxed me diagrams on cabling up the amps and speakers and reminded me that this was worth a try as it was free. Well, blow me down with a feather! I couldn't believe what I was hearing, the soundstage was huge and the power seemed effortless with absolutely pristine clear sound right up to the volumes I like. It also has increased detail somewhat. I then sold on the C370 integrated and have replaced it with a C160 pre and another C270 power which has further enhanced the sound (reduced sibilance and even more detail).

Now I know you may not condone my chosen path but trust me it has worked. What I want to do now is upgrade my Mimik to something a little newer, so once again need some help (I promise to listen...honest!!!) My criteria is as follows...lots of detail, black if possible, up to £1500, second-hand not a problem. What do you think?

Many Thanks

Dave Mayer

Who said we wouldn't condone what you've done - it sounds a superbly ingenious and economically advantageous solution. I'm now kicking myself that it wouldn't automatically occur to me to suggest it! The NAD amps, throughout the range, have power and depth aplenty and bridging the lower cost items, such as you have done, would definitely add more refinement as well as power to the equation. And good on NAD's UK distributors, Lenbrook, for suggesting it!

As far as replacing the Mimik is concerned you have options aplenty. My instant answer would be to give a listen to Meridian's smooth and detailed 507 CD player at £1,200. This is superbly engineered for the money and delivers a sophisticated and highly detailed sound. It's inherent smoothness makes the player not as fast and furious as some rivals but this will balance out your powerful and slightly forward sounding system nicely, in my humble opinion. And when it comes to aesthetic matching you of course only have two choices with Meridian, and that's black or nothing!

Other possible option include

Sony's excellent 555ES SACD/CD player. Available for much less than the original £1,500 if you shop around this has a superb transport and is awesomely well put together, resulting in true high-end build quality for a bargain price. It should last years and survive a nuclear attack, even if you don't! Sound-wise, it's slightly harder at the mid and upper ranges than the Meridian but is finely detailed and rhythmically tight, especially in the bass. Also, you can add a quality DAC at a later date to really make a supreme combination - and remember it also plays SACDs to an amazing standard.

If rhythm is at the top of your list then Naim's CD5 is always a good, reliable bet at £1,150. This is an exciting and dedicated performer with none of the slight 'greyness' of the company's older entry level machines. Not perhaps the final word in ultimate subtlety but a great player nonetheless. **SP**



The Meridian 507 is one of the best CD choices under £1,500.

ANY TIPS FOR A RE-TIP?

I have an LP12, Linn Lingo, Naim ARO with a Troika cartridge that I bought for a jaw dropping sum of £500 the lot. The Troika is worn, which has left me with a dilemma. Do I pay the Cartridge Man £375 for a retip, or can you suggest some alternative cartridge to replace it that will fit straight on and need no modification (like re-drilling the ARO - godforbid)?

Hats off to Naim for a product to die for, but how do I overcome this Naim / Linn conspiracy? Is the Troika worth retipping, even though it is 12 year old technology?

Please help me, the whole set up has been locked in the attic for eighteen months. I still buy vinyl and I can't even play it! My New Year's resolution is to get this up and running.

*regards
Dave Clapp*

Your question of whether a rebuilt Troika will sound better than any new £375 moving coil is a good one. Hmm. . . depends on your point of view. I'd say that on balance, you should go for it. Len Gregory (The Cartridge Man) is reputed to do fine work, although I have not personally tried him out. The Troika was a fine cartridge and fits 'hand in glove' with the ARO. Any additional funds should then be spent on a Cirkus upgrade, which will get your Linn back on the ball - I assume that, at that price, it's a little 'distressed'. So go on - you've got no excuse now! **DP**

PUT A DIFFERENT SPIN ON IT

After many years of faithful service, having been acquired second-hand some 10 years ago, my Meridian Pro MCD CD player has given up the ghost. I now need to get a replacement for that empty spot on the equipment rack. Partnering equipment is an Audio

Innovations S300 amplifier feeding Epos ES11 speakers.

Listening room is on the small side - 11ft x 9ft. Since my last purchase (the speakers) I now have a wife and family home to provide for - so a replacement CD player needs to cost the lesser side of £500. The Epos speakers are very detailed with a revealing midband, while the amplifier - being a valve design - has typical warmth. Therefore, am I right in thinking that I need to avoid a "warm" sounding CD player?

My musical tastes are fairly varied (small scale acoustic jazz to rich late romantic orchestral) but as I really do listen to the music, I appreciate hearing clarity and detail. From equipment reviews I have read in the mags, it seems that much of the competition below £500 tends to be warm and smooth sounding - the likes of Arcam Diva CD72, Marantz CD6000 KI Sig, even the Rega Planet 2000. Is this bad news for me, as they are all "best

buys"?

I suppose that it is too much to hope that the NAD C541i is the answer to my prayers - given it is well below my budget!

Apart from the above mentioned, I would be happy to go the second-hand route if I could acquire a better class player for the money. I do intend to audition, as I prefer to trust my ears, but I would appreciate help with a shortlist to try to hear.

*Kind regards
Neil Maxwell
Ipswich*

Hi Neil. Although the 'competition below £500' as you say has been described as smooth sounding, this is basically smooth sounding as compared to the majority of entry level players, which can often take your fillings out. A nice balance is struck by the best players at the price, such as the Rega Planet, which combines attack and dexterity with an overall smoothness. This doesn't mean that the sound is veiled or overtly rolled off, just that it's free from harshness in the mid and upper frequencies. For an overall 'brighter' sound for your money, the players of Sony have more 'bite' than rivals but this can prove too much in some systems, although they are very fine players and well engineered.

The very fine Marantz CD6000 KI Signature is actually quite a fast customer and not as smooth as some would make out. It has sonic depth and space as well as clout and is a fine all rounder, and well built too. This could actually be your best bet at £500 but you must listen to it in the context of your system. I would urge you to also check out the aforementioned Rega Planet, which is a very 'analogue' sort of sound and may not have the ultimate excitement you require.

One last outsider could be the excellent and often overlooked Rotel RCD-1070 which is a big sounding player with plenty of oomph and manages the great physical combination of having very solid build in an attractive slimline design.

SP

A CLASSICAL EDUCATION?

In the long and distant past (circa 1984), I flaunted my hard-earned spondulas on a state-of-the-art hi-fi system from a specialist Hi-Fi consultancy (now sadly departed) in Lytham St Annes, Lancashire. My

system was - and indeed still is - the following:

Rogers LS3/5A speakers;
Creek 4040 amplifier;
Systemdek II turntable.

That was when vinyl was still the dominant force audio pleasure and CD was a mere whipper-snapper. Over the years, I added a tape player and a CD-player and succumbed (like everyone else) to buying CDs instead of vinyl. However, I am left with about 500 vinyl records, some pretty rare, that I wish to subject my poor, unfortunate teenage daughters to, just to let them know what "real" music should sound like. This includes such classics as Camembert Electrique by Gong, Live at the Budokan by Cheap Trick and the Clapton, Beck & Page compilation of the Yardbirds. I just can't wait any longer to see their little faces light up!

To cut to the chase: my turntable's knackered. Well, actually it's the cartridge and stylus. I have hunted around for replacements in my local "hi-fi" shops but they know nothing about turntables. Basically, I get one of two reactions from them: either they look at me as if I had just stepped out of the Tardis and deny that such things as turntables ever existed; or they claim they know all about them and that replacement cartridges and styli will cost me at least two wives and a VERY large herd of goats.

Please can you help me and recommend a decent cartridge for my neglected Systemdek II turntable with a "shouldn't cost more than this" price? Also, can you let me know how much a stylus costs for the cartridge and where on earth I can get these precious things from? I live in Camberly, Surrey but it might as well be Mars.

Many thanks.

Laurence Smith

Are you sure you want to do this Laurence? I think the joys of Gong maybe lost on today's teenagers, who would probably not recognise Camembert Electrique as music at all. After all, it doesn't have its own TV show with the chance for the audience to phone or text in their favourite at £1 a go, does it? You'll overhear them telling their friends about their "sad Dad" who just got "his record player gram thing" fixed so he can play his "hippie electric cheese record". Ask yourself whether this venture will increase your street cred one jot? A better ruse would be to tell them you went to school with Mark Owen.

Given that 'fools rush in where

angels fear to tread', the Systemdek will need a new needle. As you neglected to mention what it's got fitted currently, and the arm for that matter, I'm assuming it had the classic early eighties combination of Linn LVX+ Basik Plus and Audio Technica AT110E, or similar. To wit, it isn't worth spending too much. I'd recommend a Goldring 1006. It's a fine starter cartridge with a big, punchy sound and has the additional benefit of being upgraded to 1042 spec by the simple expedient of changing the stylus.

Your nearest dealer is not in fact on Mars, but just down the road at Audio T (173-175 London Road, Camberley; tel: 01276 685597, email: camberley@audio-t.co.uk). Drop in and I'm sure they'll sort you out, but best leave the Cheap Trick album at home where it belongs. **DP**

ENOUGH SMACK FOR AN ELAC?

I've been a regular reader of your mag, and have thoroughly enjoy your reviews (which I take seriously). Recently, with spouse approval and some savings, I've decide on setting up a system centred around the the Unico integrated amp which you gave a cracking review. My speaker of choice is the Totem Staff; a very good pair of speakers.

However, after reading your review of the ELAC 510 I've been swayed to consider getting them and the Unico DM power amp (with Unico pre) combination. I have some questions and hope you can help me.

1) Will the combination of 'old world' tube charm of the Unico DM, and new world high-tech sound of the ELAC 510 yield good results? I would hope the Unico DM will impart some warmth, tune, spaciousness and soundstage to the speakers and not ended up sounding bright.

2) Given the ELAC 510 low sensitivity with its 3 ohm dip, can the Unico DM drive them well? I read that it will give higher distortion rate when driving 4 ohm speakers?

3) According to an audiophile friend, the Unico DMs' damping factor of 50 (compared to >100 of full SS design), it may not drive and control 4 ohm woofers like the ELAC 510. Is this true?

I hope you can advise me on my choice, and recommend me some alternatives if the above combo isn't optimum.

Thank you and have a happy new year ahead!

Andrew Rikker
Singapore

This is an interesting combination. The ELAC 510 is a deeply impressive loudspeaker, thanks in no small part to its JET tweeter which is beautifully fast and open and pure. A relatively small standmounting design with a volume of just 24 litres and a small 180mm driver, its relatively tricky load.

However, domestic considerations - plus the fact that the larger the bass unit is, the further away it is from the tweeter and hence the poorer the imaging will be - don't always mean we can get what we want. The 510 is unable to achieve high sensitivity figures, and neither is it an easy load with a nominal impedance of 4ohms and the chance of it dropping to 3.3ohms.

However, the Unico DM is - to use an old, unreconstructed phrase - man enough to take it. "Solid state graunch" is how Alan Sircom described it in his review back in November 2002. It's certainly not short of puff, and should be able to aspirate the ELACs to high volumes without undue strain. A beefy device, it uses an ECC82 double triode valve in the input stage and two pairs of complementary MOSFET solid state devices in the output stage to deliver a claimed 150W per channel into an eight ohm load - something we had no reason to doubt! Tonally they should be a good match, as you point out.

The ELACs are just a tad on the dry and analytical side and the Unico veers subtly towards the warm and sweet. All that you need now is a decent source - which you do not specify. I'd hope it would be at least the calibre of, say Arcam's FMJ CD23T CD player or Michell's GyroDec (depending on what your poison is). If not, get this sorted before upgrading the speakers. **DP**



The Elac 510 is a superb, open sounding bookshelf speaker.

OUT OF

The Avatar OBX-R is the pinnacle of Living Voice's Auditorium range of high sensitivity loudspeakers. Simon Pope finds out if it reaches the peaks of sonic perfection.



Living Voice used to be famous for producing incredibly good, incredibly large and incredibly expensive horn loudspeakers. Actually, they still do but recently the public and press - including us - have been made aware of the more affordable 'entry level' Auditorium Series consisting of the Auditorium, the Avatar and the top range Avatar OBX-R.

The differences between these three exist 'on the inside' except in the case of the OBX-R, where a weighty and spiked external box contains some electronic goodies - more of which later.

In pure cosmetic terms the Avatar OBX-R doesn't look like a £4,000 loudspeaker. Whilst it's by no means ugly or flimsy you have to remember that a third of this price will get you a pair of solid hardwood floorstanders from Italy, or a beautifully finished Castle loudspeaker from Yorkshire.

Style and style alone is not what these 'speakers are about. However, this said, they do use quality hardwood veneers that don't come cheap and look the part. What matters most to Living Voice is what is used to create their sound and you

can't get much more upmarket or specialist than what's found in the OBX-R package. Apart from the cost of the veneers, this is where your money goes.

I'll have to admit here to being a committed fan of the 'ordinary' Avatar, and indeed the company in general. It's headed by Kevin Scott, a one time worker in mental health (he's quoted as saying this held him in good stead for a career in hi-fi!) turned committed music loving manufacturer and retailer. And it's this love of music over hi-fi and electronics that makes these products work on a musical basis. A love of music is very, very important and the best hi-fi (in my view) is often made by those that love what goes in at one end and comes out the other. (You can tell the stuff that isn't immediately, as your fillings fall out and your hair stands on end.)

The standard Avatar is a great example of this. High quality components and drive units are used in a simple and effective way to deliver a well balanced, high sensitivity sound that's coupled with warmth and detail to provide excellent long term enjoyment. However, if you want all this and more, an extra fifteen hundred will

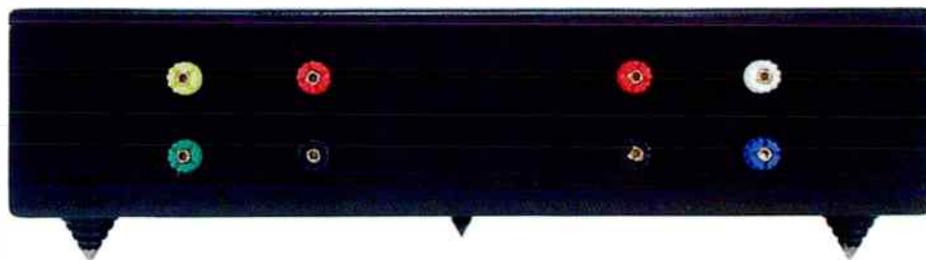


get you the super-charged, tweaked and modded OBX-R version that we have here.

BOX OF TRICKS

And what a lot that extra money gets you. The main difference is that aforementioned external black box that contains the crossover for ultimate isolation. Many audiophiles, including us at HFW, are fully aware of the merits of putting all the electronic components in an outside environment but when the box is stuffed full of goodies such as that found in the OBX-R then you're in for a very special treat indeed. This is a no-compromise mother of all crossovers. The box has the size and build of a midpriced amplifier - spikes and all. The OBX-R components are actually suspended inside the casing and are star earthed throughout. The components are toleranced to two decimal places and top of the parts

THE BOX



list is the highly expensive and revered Hovland film and foil Musicap capacitors hailing from the USA. There are hand wound air core inductors, and Clarostat non-inductive wire wound resistors - more examples of high end componentry.

The drivers are set in the classic D'Appolito arrangement, like the rest of the Series, but in this case the tweeter used is a very fine one indeed, the expensive Scanspeak Revelator D990000. This unit is famed for its incredibly smooth yet highly detailed performance and is used some of the best 'speakers around.

The bass and midrange units are Vifa paper cone designs with a flexible foam surround and are a 'matched four'.

The cabinet is virtually the same as the standard Avatar - a non-MDF construction using dense hardwood particle board with three unevenly spaced frame braces. Except in the OBX the bracing is positioned differently, partly due to necessity because the cut out for the revelator is a different size from the unit used in the Standard version.

Like the rest of the range this loudspeaker sits atop the supplied metal plinths.

Overall, this isn't just a case of a few components chucked in here and there - this is almost an entirely different design from the standard Avatar.

You know they're something different when you first try to hook them up. This isn't as easy as your bog standard bi-wire proposition. You need to run bi-wire cable from the amplifier to each crossover box and then a (preferably) colour coded bi-

wire run from the crossover to the loudspeakers. Definitive Audio can knock up some inexpensive and very good Hitachi cable with the relevant colour coding should you wish to keep confusion to a minimum!

The Avatar OBX-Rs were used for this review with an Audio Analogue Maestro CD player, Sony's 555ES CD/SACD player (with the Maestro doubling as an upsampling DAC) and Quad's 909 solid state and two-forty valve power amps, as well as the World Audio Design 300B 20 watt monoblocks and the WAD 2A3 delivering 8.5 Watts.

Preamps were Creek's OBH-12 passive and our World Audio Design PS2 modular active preamp. Cabling was Chord Company Signature interconnect and the Hitachi 'speaker cable. A Michell Gyrodec with RB300 arm and an Ortofon Kontrapunkt B was also called into use.

SPACE APLENTY

Like their less expensive brethren the OBX-Rs need space to breathe. This is the first thing to note. There's no point in stuffing them right close to the wall and up against a sofa - they'll sound claustrophobic and you won't be able to appreciate the spatial quality that is their trademark. Placed about 6-8 feet apart and toed in slightly will make them sing best. These 'speakers provide a typical high sensitivity 'big' sound - even from the fairly lowly 8.5 watts of the single ended 2A3 valve amp - and it's immediately impressive.

Kicking off with Miles Davis's beautifully 'analogue' sounding 'Sketches Of Spain' on vinyl, I found the OBX-Rs could muster up the kind of depth and breadth of

soundstage that other rivals can only dream of. It's only perhaps when you get to twice or three times this price that you'll get a similar effect. The orchestra had solidity and body and the woodwind instruments and Davis's soulful trumpet floated gracefully amongst the lush orchestration. Percussion worked away effectively at the rear of the sound stage and the three dimensionality of it all was breathtaking.

Moving onto classical CD, in the shape of another spacious audiophile recording, Mahler's *Das Lied von der Erde* conducted by Eije Oue with the Minnesota Orchestra, I found the OBX-Rs really digging in to deliver a superbly detailed yet very 'easy going' sound. No criticism is intended; 'easy listening' here merely means that the sound is never fatiguing or intrusive. This is where the Revelator tweeter comes into its own and it only works when it's used properly - after exhaustive listening tests, no doubt.

The upper frequencies are very sweet and smooth, yet clear as a bell; there's never any sense of an overtly rolled off or covered sound.

Midrange was also very impressive. The OBX-Rs give a highly open account of midrange information and this is married to well integrated, deep bass.

With the Queens of the Stone Age's 'Songs for the Deaf' CD the music showed that the OBX-R version has far weightier and tighter bass than the standard Avatar. There was more extension and cohesion in the lower frequencies. Whilst you won't perhaps get the speed and agility of the bass from a panel speaker, the OBX-Rs certainly go deep and are grin-inducingly effective in this department.

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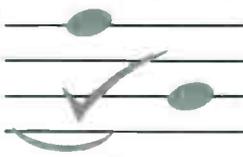
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This CD can sound rough through lesser gear and these kind of complex and heavily processed studio recordings really sort the men from the boys. Because the OBX-Rs are perhaps one of the least compressed sounding 'speakers around they reacted well with this music, giving a full and well detailed performance that also made every layer of the mix lucid and evenly balanced. Drums were solid and powerful, driving the music along well and vocals, both lead and backing, were beautifully clear.

Although smooth and warm the Avatars are by no means lazy or slow. They can rock and roll with the best. Stuff like the sparse drum 'n' bass of Photek also fared brilliantly showing a deep and powerful bass and a tight hold of beats and rhythm.

FINAL STATEMENT

What the extra money for the OBX-R version buys is plentiful. Firstly the detail is much better, with better separation of instruments and more space around them. This makes them an ideal match for low powered single-ended valve amps. Then there's the improved bass extension, which some may say is also slightly coloured - which I suppose it is, but I don't see anything wrong with this at



all. It's not extreme bloom and it's not sterile sounding - it merely makes the music sound enjoyable!

The standard Avatar still remains a firm favourite of mine - it's a superb sounding and somewhat pleasingly simple design. But the OBX-R possesses every trait of the standard version and takes it one big step further. Unfortunately, owners of the standard Avatar can only upgrade by trading in and buying a new pair of OBX-Rs, as the cabinet will not accept the better quality Revelator unit.

These are simply some of the

finest 'speakers on the market regardless of price and along with the entirely different Quad ESL-988 electrostatic are unbeatable for sheer musical enjoyment. Indeed, in my dream world a pair of each would do me for the rest of my audiophile days. The OBX-Rs suit all types of music and most recordings, which is a blessing, and a rarity in the high end.

As another bonus, they work well with any type of amplifier (provided it's of high quality) ranging from a 4 watt single-ended, through to Sugden's class A sound, right up to solid-state power houses. The Avatars won't immediately astound, grab you by the throat or even make the tea for that matter, but they'll gradually fit into your musical world like slipping between cool Irish linen sheets into a king size bed. You won't want to get out, believe me. Whilst perhaps not the perfect 'total' loudspeaker - and it's not cheap - it's all you'd want from a long term music maker - and more.

Living Voice Avatar OBX-R £4,000
(standard finish)

Definitive Audio
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MEASURED PERFORMANCE

Living Voice pursue specific design aims, something that's obvious from measurement. The Avatar OBX-R is very sensitive, producing a massive 92dB from one nominal watt of input. In truth, since the speaker is a 4ohm design it is actually drawing 2watts from 2.8V input, but all the same, for this paltry amount of power the OBX-R goes very, very loud - much louder than most loudspeakers.

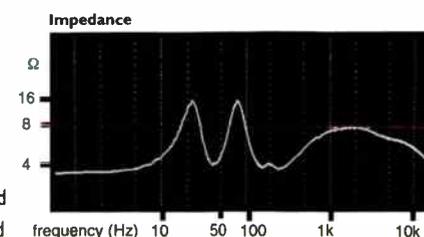
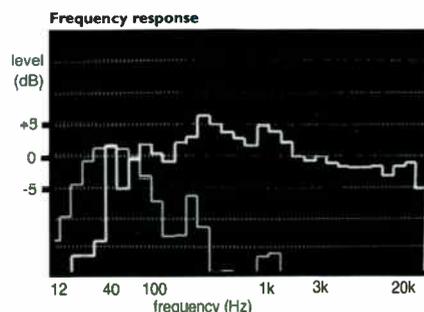
Being a well defined load, as our impedance analysis shows, with little variation in impedance across the audio band - bass resonance excepted - this loudspeaker is easy enough to drive, although it will draw current. It's a great choice for valve amplifiers with a 4ohm tap and it isn't so bad for solid-state, except heavy current draw increases distortion a little from most, if not all, transistor amps.

Another feature of this 'speaker is its tilted frequency response and predictably soft sound. Although treble extends smoothly up to 16kHz, peaks in midrange output at 250Hz and 800Hz lift the midband and, relatively speaking, depress treble, so the LivingVoice is not especially flat, nor accurate. It may also display some colouration from these effects.

Bass extends down to 40Hz from forward cone output, whilst the large port reaches down to 25Hz and lower with ease. There will be no shortage of bass and the impedance plot show it is well damped and controlled.

The Avatar OBX-R should give a fulsome but lucid sound

- and a lively one too. This speaker will offer very easy long term listening, with excellent dynamics, good bass quality and unforced detailing. **NK**



World Verdict

Not cheap, but packed full of quality throughout. The OBX-Rs are supremely well balanced and spacious sounding. Arguably the best all rounder on the market at the price.

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TECNO, POP



Want to play vinyl but can't afford a top turntable? Michell's affordable new TecnoDec could just be the answer. David Price reviews a budget eye-catcher.

Back in the mid nineties, Linn Products discontinued its Axis and Basik turntables, citing the reason as lack of demand. Then Michell's Mycro and Synchro also went the way of the Dodo, with a similar explanation. Analogue, it seemed, had become the province of the high-end, with the likes of the evergreen LP12 and GyroDec being the minimum that vinyl junkies would possibly contemplate spinning their black plastic with.

How times change. Nearly a decade later, there's a perceived need for something affordable but decent for people to play records on. Rather than going back to LP for nostalgic reasons, like the oldsters, lots of younger buyers raised on CDs seem desperate for a 'bit on the side'. The result is that decks from Rega and Pro-ject have stepped into fill the

void, and folk have happily bought them. They now have an alternative.

Michell's new TecnoDec is essentially a latest-spec GyroDec with the expensive bits stripped off. To wit, it has no suspension to speak of, and lacks its bigger brother's beautiful suspended weights, in all their gold-plated splendour. Frankly though, if I was going to strip bits off the Gyro to slash cash, these are precisely what I'd bin. The advent of the new DC motor (its source still a well kept secret!) has made the new TecnoDec even more speed-stable than the old, QC-aspired AC Orbe complete with that massive mass-loaded acrylic platter. In the new DC powered world, weighty platters would appear less essential.

Suspension is of course important, but aside from some natty rubber-tipped aluminium feet, the TecnoDec hasn't got any - so you have to make do. To be fair though,

most of its price rivals are similarly unsuspected. This means you have to be fastidious over how and where you place the deck.

For me, an Audiophile Furniture Base SP01 gave great results, but ideally the likes of Townshend's Seismic Sink should be used. However, spend this much on a support and you might as well pay the extra £250 and buy a GyroDec SE, anyway. The cheap way, readers, is to put a partially inflated bicycle inner tube between two slices of MDF - I kid you not.

So, suitably assembled (like all Michells, the TecnoDec is sold as a kit of parts - Ikea style - which you bolt together with the supplied Allen key) and placed on a level, well isolated surface as far away from the speakers as possible, I set about auditioning this deck.

It was soon obvious that the bearing (inverted, complete with its

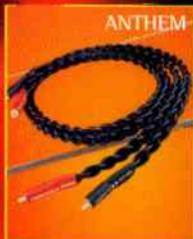
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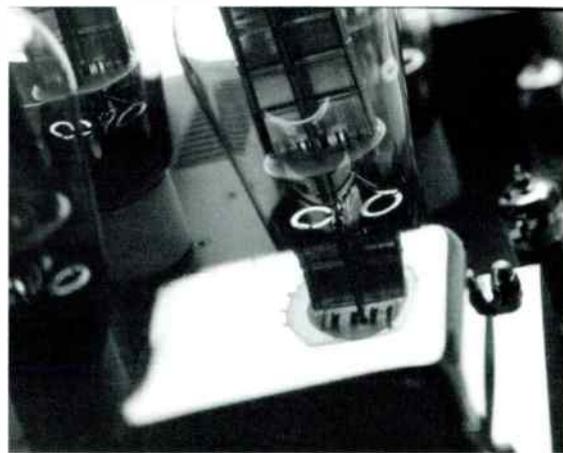
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own little oil pump), platter (minus gold weights), belt, legs and motor come direct from the Gyro. The only bespoke bits are the Acrylic subchassis, feet and arm mounting plate. While it doesn't look a million dollars like its bigger brothers, the quality of the build and finish is superb. Not even on Rega's Planar 25 will you find such beautifully machined and/or polished bits. For £600 it puts its rivals from Project and AudioNote to shame in this respect.

The TecnoDec also comes with the interesting option of a Michell-modded Rega RB300. It boasts a redesigned counterweight, albeit with no changes to the rear end stub (a la Origin Live) and wiring (reputed to be with Cardas cable). The result is a subtly upgraded tonearm which can be sold as a 'package' for those unwilling or unable to get the spanner out and do it themselves. To put the cart before the horses, so to speak, this is a nice option but not - in my opinion - a serious rival to Origin Live's RB250 with 'structural modification'. It sounds appreciably better than the standard Rega arm, but still nowhere near the OL. It's a nice option to have though, so why ever not? Additional goodies available at extra cost include Michell's record clamp (which is superb and well worth having) and the recently launched £44 Uncover.

LISTENING

Hooked up to a Linn Adikt MM cartridge and Origin Live modded Rega RB250, driving a World Audio valve pre-power and my Yamaha NS1000M loudspeakers, the TecnoDec proved an extremely impressive vinyl spinner. Considering that the deck I had on hand to compare it with was my own reference Michell Orbe/OL Illustrious/ Ortofon Kontrapunkt B, it worked wonders. Of course, it's a league or three below the Orbe set-up, but the fact that it still proved an extremely fulfilling listen, immediately after laying ears on its big brother, was a fine sign.

Essentially, the TecnoDec has a very open and neutral sound. So clean and clear is it that it doesn't suffer from any discernible budget turntable nasties at all. To wit, it is speed-stable, rhythmically coherent and secure, dynamically

uncompressed and tonally neutral. As soon as you cue up a track, you find yourself getting into the groove of the music, rather than worrying about curtailed frequency extremes, spongy bass or rocky imaging that plagues turntables at this price.

In the same way that the Rega P3 succeeds by not doing anything obviously wrong, so the TecnoDec offers a clean and unassuming insight into the proceedings without distraction. But it's a whole step up from the Rega, of course.

I kicked off the listening with The Crusaders' 'Street Life'. Hearing Randy Crawford's to-die-for vocals running up and down the scale with unfettered power and poise was a surprise at this price. Rather like the GyroDec, it sets up a wide and tightly defined acoustic, into which every strand of the mix is placed accurately and with conviction. The result is that whatever happened with lead vocals, the backing musicians stayed solidly in place and always clearly distinguishable, even on dynamic peaks.

It is this broad, open, deep, transparent and even midband that defines the TecnoDec's essential character. Of course, switching to a Gyro or Orbe will bring substantial gains in depth perspective and an even more solid, unflappable sound. But that the TecnoDec can get close - by comparison, its price rivals sound wobbly and vague. In a sense, this predisposes the new Michell to the aforementioned 'CD generation', who'll find the looseness of some of its rivals a big turn off.

Moving to The Human League's 'Love Action', and the deck proved tonally faithful too. Its bass is obviously lighter and less extended than the Orbe, but is no less fast - making for a very tight and bouncy sound. It's impressively even and not lumpy in the least, unlike some far more expensive designs such as the Linn Sondek.

Moving up to the midband showcases its brilliant textural resolution. You can really get a feel for the 'grain' and 'patina' of an instrument, be it electronic or acoustic. This is where good vinyl blows similarly priced CD players into the weeds - the digital brigade would be amazed to hear the late 1970s synthesisers on this track

sound so rich, vibrant and full of harmonics (well, they were analogue, I guess!). Phil Oakey's vocals sounded similarly lifelike, whereas CD generally renders them as cold and grey as a wet winter Wednesday afternoon.

The TecnoDec's treble is no less enthralling. Whereas its rivals smear and soften, this player worked wonders on the prog rock histrionics of Rush's 'Subdivisions'. Drummer Neil Peart's propensity for squeezing in twice as many hi-hat cymbal licks as is healthy were no worry for this disc spinner. Brilliantly secure and impressively good at rhythmic nuances, phrasing and accents, it allowed vinyl's superb bandwidth to be heard in its full glory. All the Orbe could offer up was a fraction more definition and upper treble extension; considering the all-too-variable quality of many LPs, this wasn't always a good thing though.

The great thing about the TecnoDec is its open, neutral and forgiving nature. Unlike top dollar decks, it doesn't get too forensic, too analytical, too tongue tied. It doesn't attempt what it can't pull off, preferring rather to give everything it plays a lively, musical and engaging sound. Go up to a super-deck and as often as not the results will be no more enjoyable, as it starts to tell you how bad the disc pressing, studio recording or mastering, or partnering ancillaries are. Properly sited and set up, this product draws a brilliantly judged line in the sand about what and what not to do.

The result is a brilliant argument for analogue - open, warm and musical but with all the grip and analysis the digital generation demands, it delivers a resounding kick in the teeth to similarly priced Compact Disc. Kitted out with an OL RB250 (or Michell's own modded Rega) and Dynavector DV10X4 and you've got a £950 product that will paste all its rivals, digital or analogue - DVD-Audio or not. Can't say fairer than that! Hate to say it (as I'm going to have to repeat myself), but this is another cracker from John Michell.

Michell TecnoDec £599

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World Verdict £ 

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CHIRPY CHIRPY CHEAP CHEAP!



Tannoy's highly regarded external high frequency unit has had a re-launch and a re-fit to bring its price down to more reasonable levels. Simon Pope encounters the ST50 SuperTweeter.

Tannoy's WideBand technology now features right across the the company's loud-speaker range. This includes a new budget range, due soon, and two midpriced ranges, as well as the high-end Dimension Series. All possess the SuperTweeter or a derivative of it. KEF have also developed a super high frequency unit (not available separately as yet) and even audio maverick Max Townshend has a new super-tweeter design on the market. This is due to the emergence of SACD and DVD-A as viable mediums of course, something Tannoy were quick to predict.

It must have been well over two years ago that I first encountered this interesting new toy developed by the boffins at Tannoy. At a press

launch the company demonstrated to the assembled press a pair of ST100 SuperTweeters perched atop a pair of fine old dual concentric Turnberrys. At first, without hearing them, I admit to some scepticism but the more I listened, the more they revealed themselves as a more-than-viable high-end audiophile accessory, if not a necessity. When they were taken away and the Turnberrys run au naturel something was most definitely missing. Although superbly crafted and well put together this extra curricular audiophile treat was priced at £1,100. Not quite exorbitant, but neither Christmas stocking material.

Now the SuperTweeter is available in a slightly different guise - and at half the price of the ST100. Gone is the luxurious solid walnut housing pod, which gave it a flying

saucer like shape. In the ST50 this pod is now a black coated aluminium casting.

Other changes are in the user adjustable settings. The ST50 has the same range of sensitivity and frequency settings (85-93dB and 14-18kHz respectively) except that there are three settings of each with the ST50 whereas the ST100 offers five for more exact customisation. Other than this the 25mm diameter, 25-micron thick titanium dome tweeter is the same (actually, it's the same as that used in all current Wideband 'speakers!) with a 24 karat, vapour deposited gold finish. The diaphragm is stiff, to minimise the effects of dome break-up and extend the frequency range. High quality polypropylene capacitors are used throughout and are chosen for their high frequency capability.

Illustrious - the new "world beater"

HI-FI WORLD FEB 2003



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Setting up the ST50s is a doddle. Simply connect either the matching Tannoy cable or another short speaker cable run from the terminals of the loudspeaker to the heavy binding posts at the rear of the pod. Then place the pod into the sturdy stand (or "Tannoy Performance Platform" as it is so called!) which then goes atop the 'speaker. Move the concentric dials to match the approximate sensitivity of your main 'speakers and choose the roll-off frequency, from which the ST50s will zing up to around 54kHz!

I used the Tannoys with a pair of fine, full frequency Mirage OM-7s and a pair of Quad ESL-988s - even though a delicate balancing act and some Blu-tac was necessary to get the bloomin' things on top of the electrostatics! Sonic results were superb - not only with SACD and DVD-A but with CD and even vinyl as well. The reason for this is that it's not just about high frequency extension alone. In the same way a good sub deepens the soundstage and adds a particular tightness and clarity to the overall sound, so the ST50s add space and transparency, as

well as depth of soundstage. There's even - believe it or not - a tightening of the bass!

Dvorak's 9th symphony conducted by Nikolaus Harnoncourt on a Telarc DVD-A disc had amazing lucidity and a great spatial quality. The orchestra spread fully throughout the room and it appeared that the imaging was also improved. Upper frequency violin notes and percussion veritably sparkled and the

midrange woodwind was superbly clean and coherent. All of the orchestral instruments had oodles of space around them.

This coherence and space was also present in Miles Davis's 'Kind Of Blue' on CD, which had superb realism and detail, with each instrument clean as a whistle yet warm and sweet sounding. Studio based rock music is less revealing with the ST50s but layers of the mix are well separated; these supertweeters have a 'cleaning up' effect on the sound.

One warning though: rough recordings with tinny treble will sound a bit edgy and hard. Despite this you'll still retain the 'opening door' effect when you alternatively enable and disable them.

Tannoy's SuperTweeters are a great upgrade for a top spec system, where they will really shine. They need top quality components to emphasise what they are capable of and won't necessarily match well with super-bright sounding amplifiers or sources. In these circumstances they sound a tad crispy - but still impressive nevertheless.

One certainty about the ST50s is that they are addictive; your music will sparkle and open up before your very ears and if you disconnect them it won't be for long - it simply won't sound the same. If you have a high quality system that you feel needs a little lift and tuck, look no further.

Tannoy ST50 SuperTweeter £600

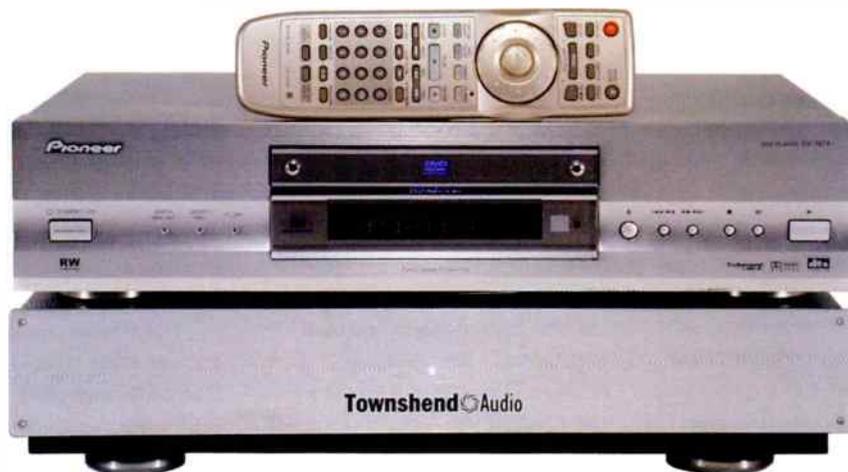
Tannoy
Tel: 01236 420199
www.tannoy.co.uk

World Verdict 
A bit of a luxury but superbly effective in a high end system. The ST50s will open up your hi-fi to great effect.



The ST50 has settings for main speaker sensitivity and treble roll off.

MAX HEADROOM



A full spec, universal DVD-Audio/ SACD spinner from Max Townshend? David Price is impressed by his 'Reference Rebuild' of a popular Pioneer player.

Pioneer's DV-757i, complete with i-Link for use in conjunction with its VSA-AX10 AV amplifier proved just how much better the basic player could be when parted from its internal DACs and analogue output stages.

Enter Max Townshend. He duly started working on a stock Pioneer player, and the result is what you see before you. For the not inconsiderable sum of £2000, Townshend Audio's Reference Rebuild programme will take a cooking DV-747A (predecessor to the new 757i) and mod it. Alternatively you can buy a new one for the princely sum of £3,000, complete with a two year guarantee.

The entire player gets a serious internal makeover, incorporating Townshend's proven 'Seismic Sink' air isolation technology, providing mechanical isolation for both lateral and vertical vibration from 3Hz upward. Then, constrained layer damping is applied to deaden all panel vibration, and adjustable feet incorporated to level the unit if cable

weight unbalances the compliant suspension. Then there's the myriad electronic mods squeezed into its compact 420x270x160mm case.

Discrete amplification and filters are used, utilising audiophile components. Clock circuitry is modified for low jitter, and the power supply has an audiophile-grade transformer.

SOUND QUALITY

As I've said, the boggo DV-747A is not a bad player. Its CD playing ability isn't far off a £250 Marantz CD6000, its DVD video spinning talents par for the £500 course. The Townshend Audio Reference player punches the machine's audio performance way out of this league, into the world of high-end Marantz and mid-range Meridians.

Suddenly, you stop having to add those 'great - for a budget player' type caveats. Spin up a CD of Nirvana's 'Come As You Are' and you're greeted with a serious bassline underpinning a vastly enlarged soundstage. Rather than skimming the surface of the sound as cheap CD does, this player

penetrates into the cracks, digs into the recesses of the mix, allowing you to listen right in. The result is radically improved focus and detailing, a far more rhythmically beguiling and dynamically accurate sound plus - and this is my favourite bit - real tonal colour. Suddenly the wall of greyness is banished and you can get a sense of the tonal quality of the instruments, the grain of the voice, the sound of the recording.

This holds true with DVD-Audio discs, too. REM's 'Reveal' brings a subtly smoother, calmer tonality (more like SACD in fact) with less brightness to the picture. However, the contrast is enhanced noticeably, meaning you can hear into the studio, get the feel of those Rickenbacker guitars and hear the plaintive stylings of Mike Stipe's voice - whereas the cooking DV-747A would merely sound 'hi-fi'. Dynamics are vastly improved, but it's those tiny inflections and subtle nuances that see the benefit rather than any vast increase in punch. Simply put, you feel closer to the musicians, like they're in the room there with you.

To my ears, SACD is

transformed. Where the original Pioneer sounded a little vague and fluffy with questionable soundstaging and image location, Max's model has an almost architectural precision. Framing instruments and vocals far more positively in the mix, now that sacred out-of-the-box sound is routinely possible. The player can really drive the room with tremendous confidence and grip - the standard Pioneer's soft, sweet SACD bass becomes altogether crisper, more tuneful and rhythmically coherent. Along with a clearer, more incisive treble and midband, it makes the Rolling Stones' recently remastered 'Brown Sugar' sound more like music and less like hi-fi.

You're still aware of the imperfections of the original studio recording, whereas before you obsessed on them.

This player is serious - although I've heard the original Marantz SA-1 and MF Tri-Vista do better with SACD, it's probably the only other machine that really makes this format's capabilities obvious right now. Such is its confidence, poise and even-handedness that you're able to lose yourself in the music just like you can with analogue. It's also able to squeeze so much more from DVD-Audio than I'd thought possible

Downsides? Well, the Reference Rebuild hardly exudes a feeling of being 'hewn from solid'. Essentially

you're buying a tweaked, aftermarket mod and not a factory original, so you'll not get Japanese standards of build quality. The base unit that houses the power supply and bicycle inner tube (sorry, 'seismic sink') is a long, long way from the standards of build and finish set by the Pioneer player itself. If you can live with this, then your two gees will buy you a seriously good sound on both new 'high resolution' digital formats.

Townshend Audio Reference Rebuild
£2,000 plus player
Townshend Audio Reference
DV-747A £3,000

www.townshendaudio.com

MEASURED PERFORMANCE

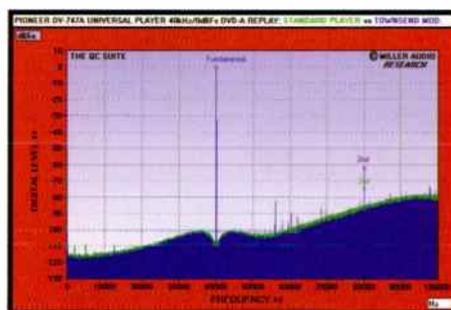
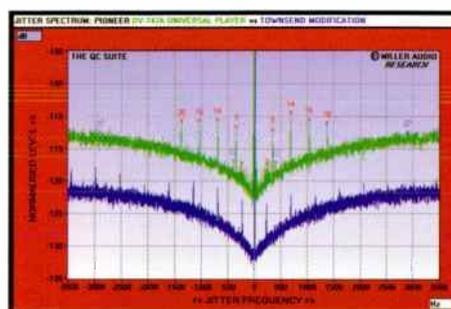
Reduced ripple, better regulation and isolation benefit the DV-747A in terms of analogue noise on the right hand channel of our demonstration sample which enjoys a wide 112dB S/N ratio, up some 2-3dB on Pioneer's standard DV-747A. Sadly, the left hand channel has dropped to just 102.5dB, suggesting Townshend's QC is not up to Pioneer's own standards....

There is no significant alteration to either the player's distortion or frequency response with CD, SACD or DVD-A software. Midrange distortion remains impressively low at just 0.0005% regardless of format, while THD at lower levels does improve with higher resolution software. For example, CD yields 0.055%, SACD gives 0.02% and DVD-A an impressive 0.009%, all at -60dBFs. Similarity, while CD's low-level resolution peters out below -100dBFs, both DVD-A and SACD succeed in coding extremely low-level information to about -120dBFs.

The benefit derived from lower noise (including noise-like jitter) is revealed by the three graphs. Jitter is clearly reduced from ~640psec (green trace) to just ~270psec (dark blue trace) on the preferred right hand channel of our sample. At very high frequencies there's an 'increase' in distortion with the Townshend player, although from 0.018% to 0.08% at 40kHz is hardly of great subjective significance (see Graph 2). Graph (3) shows the additional

ultrasonic output produced by SACD, which submerges any high frequency harmonics, but it also reveals the improved S/N ratio available across the audio range (dark blue trace).

Whether the benefit of lower noise and jitter is enough to match the superior performance of Pioneer's cheaper, second generation players like the DV-656 and DV-757 is another matter altogether. **PM**



Frequency Response

CD	20Hz - 20kHz	-60dBFs	0.18%	0.06%	
	(0.0/ - 0.05dB)	-90dBFs	3.5%	2.1%	
SACD	20Hz - 100kHz	(0.0/ - 9.1dB)			
		Separation			
192kHz DVDA	20Hz - 80kHz	1kHz	103dB	104dB	
	(0.0/ - 2.3dB)	20kHz	100dB	99dB	
Distortion	Left	Right	Noise (IEC A)	102.5dB	110.1dB
	-6dBFs	0.0006%	0.0005%		
	-30dBFs	0.005%	0.004%	Output	2.14V

World Verdict

Transforms an already fine universal player into something very special - its grip, musicality and tonality are superb. Poor build quality, however.



DEMONSTRATION ROOM AT 12A SPRING GARDENS, NEWPORT PAGNELL, MILTON KEYNES, BUCKS MK16 0EE BY APPOINTMENT ONLY - CALL FOR DETAILS ON 01908 218836

KECL82 VALVE AMPLIFIER KIT

The Kecl82 is our latest introduction for the true beginner and designed by Andy Grove. A simple and elegant design based on the classic ECL82 valve, a triode and power pentode sharing the same glass envelope. The amplifier consists of two ECL82s per channel, the triode sections work as the input/phase splitter and the pentode sections work in push-pull for the output stage. The amplifier offers 8 watts into an 8 ohm load, the hum level is extremely low, comparison to solid state standards. The chassis is constructed of 1.6mm mild steel with a black powder coat finish, there is only one signal input pair controlled at the front by a volume control for that simple touch. The speaker connects are the standard 4mm banana type, positioned at the rear, as are the mains input which is received through an IEC lead, mains switch and earth post. We have made the construction as simple as is humanly possible with comprehensive instructions. The circuitry is based on a single printed circuit board. Ultimately this kit is for the guy who has always fancied a go at building a kit, but never dared. Simon Pope says, "It's a great introduction to the valve sound. For it's humble price it delivers a full and rich sound with great detail and good depth." Kecl82 weighs 9kg. External dimensions are 30cm(w)x23.5cm(d)x11cm(h)

NEW KIT

£195



KIT6550 VALVE INTEGRATED AMPLIFIER KIT & KAT6550 VALVE POWER AMPLIFIER KIT

£595



**Kit6550
upgrade kit now
available £130**

£580



**KaT6550
upgrade kit now
available £120**

These are our new 6550 series amplifiers. A pure class A design providing 40 watts into a 8 ohm load.(available in a 4 ohm version if required) A truly high end design by Andy Grove, using Svetlana 6550Cs in push-pull (any 6550 or KT88 tube can be used with this amp). It features valve rectification (5U4) a choke pi filter power supply and is hard wired. Weighs 19kg with dimensions 390mm(w) x

330mm(d) x 190mm(h) with valves or 220mm(h) with cage. Simon Pope says - "If you favour attack and rhythmic grip, together with a smoothness of sound that's incredibly easy to live with, the Kit6550 could well be the kit amp for you. The 6550 is one for those who like a valve sound married to the attack and clout of a good quality solid state design".

Kel84 VALVE INTEGRATED AMPLIFIER KIT

The Kel84 features a pair of EL84 valves per channel in push-pull configuration. They give 15 watts into an 8 ohm load. The output transformers are Ultra Linear. Up front the ECF80 input/phase splitter valve has an extremely smooth sound. The Kel84 has very low hum, for simplicity the kit is built on a printed circuit board. A strong steel chassis is fronted by a 3mm anodised front panel and attractive chromed custom made knobs. There are five line level inputs, plus one monitor input, with a tape output included, all controlled from the front panel. At the rear is a mains switch/IEC power input, earth post, phonos, and 4mm banana sockets. Simon Pope says, "The quality that can be gleaned from this amp is a fine introduction to the joys of the valve sound. The Kel84 will highlight all the intricacies and depth of detail in your favourite recordings whilst retaining a warmth and fullness that is almost exclusive to pure valve amps and is rare at this price point." Kel84 weighs 10kg. External dimensions with valves are 300mm(w) x 270mm(d) x 150mm(h).

£278



2A3 PSE INTEGRATED AMPLIFIER KIT

The 2A3 PSE integrated amplifier offers a seriously hi-end sound, but without the cost usually associated with single-ended amplifiers. The stereo chassis houses, on the output, 2 x 2A3 in parallel single ended configuration and a single 6SN7 as the driver tube per channel. The valve rectified power supply consists of a 5U4 and a 10h choke. This feedbackless design provides 8.5watts into an 8 ohm load, so a good sensitivity speaker is required above 90dB. It can accept 6 line-level inputs fully controllable from the front panel. We provide the excellent Alps Blue potentiometer as standard. The amplifier is hard wired so plenty of scope for tweaking in the future. Simon Pope says, "The 2A3 PSE is extremely impressive piece of kit, good imaging, wide sound stage, nicely extended on the high frequency and tremendous bass thump. Weight - 20kg, external dimensions with valves fitted - 390mm(w) x 360mm(d) x 220mm(h)

£550



ALL NEW SERIES II MODULAR PRE-AMP KIT

The PRE-II is a valve pre-amplifier with six inputs, tape monitor and two sets of output sockets. It utilises a high quality line driver transformer and x5 gain. The PHONO-II is a dedicated valve phono stage that incorporates a step-up transformer for MC users. Finally, PSU-II is a power supply unit that feeds both the PRE-II and PHONO-II.

Power Supply Unit (PSU-II)	£195.00
Pre-amplifier (PRE-II)	£195.00
Phono Stage (PHONO-II)	£110.00
Moving coil step-up transformer	£77.00
Passive pre-amplifier (PAS-II)	£215.00



KAT34 VALVE POWER AMPLIFIER KIT & KIT34 VALVE INTEGRATED AMPLIFIER KIT

£480



**KAT34
upgrade kit now
available £120**

KAT34 is a 32 watt stereo valve integrated amplifier, featuring a pair of EL34s, in push-pull mode, per channel, plus an ECF80 pentode/triode as input/phase splitter. The power supply is valve rectified (2 x 5U4), using a heavy duty choke to achieve exceptional smoothing. The output transformers are 14% Ultra Linear tapped to keep distortion down to its lowest level and the kit is totally hard wired utilising three tag boards. It has five line level inputs, plus a tape-in and tape out, all

£495



**KIT34
upgrade kit now
available £130**

controllable from the front. Simon Pope says, "This integrated bring together the best sonic virtues of our Kit88, kel34 and top of the range 300B PSE in an affordable package. The highlights of the sound are a deep and taut bass response, together with an open and highly detailed mid and high frequency response that only the best valve designs can achieve... a true valve classic." Weight 22kg, External dimensions with valves fitted - 390mm(w) x 360mm(d) x 210mm(h)

300B PSU MONOBLOC KIT

Our Parallel Single Ended amplifiers offer ultimate sound quality. Each monobloc has two of the beautifully linear 300B directly heated triode in its output stage, producing 20 watts into an 8 ohm load. At the front we have a 6AU6 pentode and an ECC82 as the driver valve. This design utilises a 5U4 rectifier valve in the power supply, in combination with a 10H choke, giving an extremely quiet supply. Both mains and output transformers we E/I pattern.

For purists, feedback is switchable and the kit is totally hard-wired. For those that require valves we provide the superb Tesla 300Bs, Russian 5U4s and European 6AU6s & ECC82. Simon Pope says, "Not to put too fine a point on it, the sound these monoblocs create is among the finest that can be encountered in hi-fi." Our 300B PSE kit bears an affordable price of £875.00 (UK price) excluding valves. Each monobloc weighs 23kgs., external dimensions with valves: 25cm(w) x 38cm(d) x 22cm(h) per monobloc.

**300B PSU
upgrade kit now
available £150**

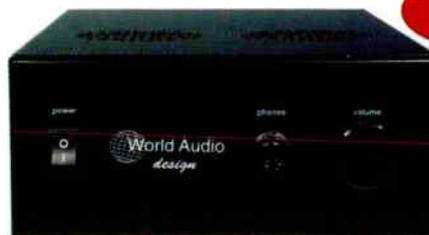
**£875
A pair**



HD83 VALVE HEADPHONE AMPLIFIER KIT

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

£195



**NEW DEMONSTRATION ROOM NOW OPEN AT 12A SPRING GARDENS, NEWPORT PAGNELL,
MILTON KEYNES, BUCKS MK16 0EE - CALL FOR DETAILS ON 01908 218836**

Kel84 Upgrade kit
1 x 100K Alps blue Potentiometer
2 x 1000uF, 16V Black Gate
4 x 100uF, 50V Black Gate
4 x 0.22uF, 400V Jensen paper in oil **£100**

KiT6550 Upgrade kit
1 x 100K Alps blue Potentiometer
2 x 2200uF, 16V Black Gate
4 x 100uF, 100V Black Gate
4 x 0.22uF, 630V Jensen paper in oil **£130**

KaT6550 Upgrade kit
2 x 2200uF, 16V Black Gate
4 x 100uF, 100V Black Gate
4 x 0.22uF, 630V Jensen paper in oil **£120**

KIT34 Upgrade kit
1 x 100K Alps blue Potentiometer
2 x 1000uF, 16V Black Gate
4 x 100uF, 50V Black Gate
4 x 0.22uF, 630V Jensen paper in oil **£130**

KaT34 Upgrade kit
2 x 1000uF, 16V Black Gate
4 x 100uF, 50V Black Gate
4 x 0.22uF, 630V Jensen paper in oil **£120**

300B PSE Upgrade kit
2 x 470uF, 16V Black Gate
4 x 100uF, 100V Black Gate
2 x 0.22uF, 630V Jensen paper in oil
2 x 0.47uF, 630V Jensen paper in oil
4 x 35A Bridge Rectifier KBPC3502
4 x 4700uF, 16V **£150**



"KIT34 Upgrade Kit"

BARGAIN BASEMENT

2A3 PSE chassis and base plate (without face plate), slight flaw on paint work, can hold 1 x 120 lam, 2 x 78 lam E/I transformer, 3 x octals and 4 x UX4s, hardwired. **Price - £50.00**

Kel84 chassis and base plate (Without face plate), slight flaw on paint work, can hold 1 x 78 lam, 2 x 29 lam E/I transformers and 6 x B9A. **Price - £40.00**

Audax drive unit, HMI 30Z0, aerogel, 5 inch mid/base unit **UK price £35.00 each**

5687 valves, double triode **UK price £7.00 each**

Kit34 chassis - **UK price £50.00 each**

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Mains transformers & Chokes

KIT6550/KAT6550 mains transformers
2 inch stack, 130mm(h)x120mm(w)x135mm(l) drop through fitting with zinc cap. Secondaries: 0V-240V 300mA, 3.15V-0V-3.15V, 0V-3.15V, 9A. Suitable for 120V & 240Vac operation

KEL84 mains transformer
1.5 inch stack, 90mm(h)x 80mm(w)x 95mm(d) drop through fitting with zinc cap. Secondaries: 0V-240V 300mA, 3.15V-0V-3.15V, 5.5A, suitable for 120/240V operation

KIT88/KAT88 mains toroidal transformer
120mm dia. x 60mm(h). Secondaries: 195V-0V-95V, 450mA/0V-27V, 100mA/3.15V-0V-3.15V, 9A, suitable for 120/240V operation

KIT34/KAT34/KIT6550/KAT6550 choke
1.25 inch stack, 65mm(h)x105mm(w) with fitting holes x 60mm(d), clamp fitting, 2.5 H, 350mA

300B PSE mains E/I transformer
130mm(h) x 95mm(w) x 115mm(d). drop through fitting with zinc cap. Secondaries: 380V-0V-380V, 180mA/150V-0V-150V, 25mA/0V-5V, 1.2A/0V-5V, 1.2A/0V-5V, 3A/3.15V-0V-3.15V, 0.4A suitable for 120/240V operation

KEL80 mains toroidal transformer (encapsulated)
130mm dia. x 65mm(h). Secondaries: 195V-0V-95V, 390mA/0V-27V, 100mA/3.15V-0V-3.15V, 7.5A, suitable for 120/240V operation

HD83 mains toroidal transformer
80mm dia. x 35mm(h). Secondaries: 0V-165V, 75mA/3.15V-0V-3.15V, 1A, suitable for 120/240V operation

PSU-II mains toroidal transformer
80mm dia. x 35mm(h). Secondaries: 0V-270V, 60mA/0V-10V, 2A, suitable for 120/240V operation

TRANSI mains toroidal transformer
95mm dia. x 50mm(h). Secondaries: 0V-370V, 150mA/0V-6.3V, 3.5A 300B E/I choke 65mm(h) x 70mm(d) x 80mm(w) open frame fitting, 10H, 180mA.

KEL84 E/I choke
0.5 inch stack, 40mm(h)x 35mm(d)x 70mm(w) clamp fitting, 1H, 250mA

PSU-II E/I
40mm(h) x 35mm(d) x 70mm (w) clamp fitting, 15H, 20mA

KIT34/KAT34 mains transformer
2.5 inch stack, 120mm(h)x115mm(w)x95mm(d), drop through fitting with zinc cap. Secondaries 365V - 0V - 365V, 300mA/0V - 5V, 6A/3.15V - 0V - 3.15V, 7.5A. Suitable for 120/240V operation.

Output transformers

KIT6550/KAT6550 E/I 16% TAPPED UL push-pull output transformer
2 inch stack, 80mm(w) x 95mm(l) x 100mm(h), drop through fitting with zinc cap. Primary-secondary 4.5K, 16% UL tapped. Secondary 4 Ohm, pls specify on order. max output 45 watts, max current 180mA, valves, KT88, 6550 etc

KEL84 E/I Ultra Linear push-pull output transformer
1.25 inch stack, 76mm(h)x 65mm(w)x 76mm(d) Primary - secondary 8K with 12.5% UL tap - 8ohms, max o/p-15watts, max current 150mA valves EL84 etc

KIT88/KAT88 E/I push-pull output transformer
80mm(w)x95mm(l)x100mm(h). Primary-secondary 10K - 8ohms, max o/p-40watts, max current-160mA valves-KT88, 6550, EL34

KIT34/KAT34 E/I 14% tapped Ultra Linear push-pull output transformer
2 inch stack, 80mm(w)x95mm(l)x100mm(h), drop through fitting with zinc cap. Primary-secondary 6.4K, 14% UL taps. Secondary 8ohm, max output 34watts, max current 150mA, valves EL34, 6L6, 6CA7

HD83 E/I single ended output transformer
40mm(w)x50mm(l) x55mm(h). Primary-secondary 4K - 4 x 64ohms windings, max o/p-1watts, max current-25mA valves-ECL83 etc

Pre-II E/I driver transformer
80mm(w)x60mm(l) x65mm(h) 6:1 step down transformer, max current-10mA valves-6922 etc pre-amp stage
300B PSE E/I parallel single ended output transformer
130mm(h) x 95mm(w) x 115mm(d). drop through fitting with zinc cap. Primary 1K5 Secondary 8R, output .

Printed circuit boards

- Kel84 Printed Circuit Board 280mm(w) x 135mm(l) x 1.6mm(d).
- KIT88/KAT88 Printed Circuit Board 140mm(w) x 310mm(l) x 2.4mm(d).
- Kel34 Printed Circuit Board 140mm(w) x 310mm(l) x 2.4mm(d).
- Kel80 Printed Circuit Board (a pair) 120mm(w) x 215mm(l) x 2.4mm(d).
- HD83 Printed Circuit Board 140mm(w) x 160mm(l) x 1.6mm(d).
- PSU-II Printed Circuit Board 105mm(w) x 130mm(l) x 1.6mm(d).
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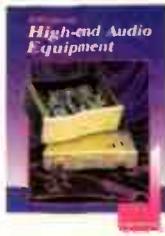


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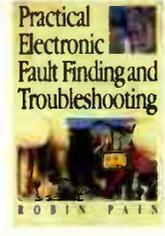
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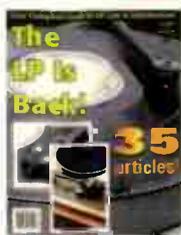
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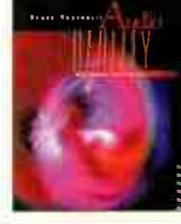
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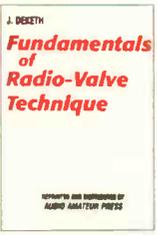
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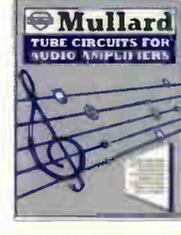
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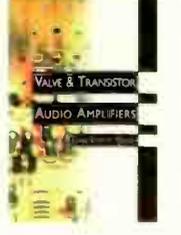
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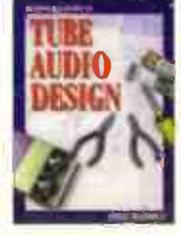
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classic cuts

Andy Giles offers a sumptuous double serving of Sibelius, served with relish by a distinctly British connection.

Clichés such as 'mind-numbingly beautiful' and 'raises goose pimples' are all so often liberally distributed when one is referring respectively to the opening bars of the Sibelius Violin Concerto in D minor and final pages of his Symphony No.5 in E flat. The two works, each lasting around 30 minutes apiece, are amongst the finest of their genre and of the composer's entire canon. Both these gems came together in an early digital (although, surprisingly, none the worse for that) 1987 EMI recording with the City of Birmingham Symphony Orchestra, under conductor Simon Rattle, with Nigel Kennedy as solo violin. It's a classic cut and the fact that it was undertaken by two relatively young and - in Rattle's case - then non-ennobled, British performers.

The Violin Concerto, originally composed in 1903 and revised, shortened and finalised in 1905 is one of the most frequently performed works of its type and apparently boasts over 60 recordings. Few pundits amongst the toffee-nosed classical music cognoscenti willingly praise Kennedy for almost anything – and make no exception with his creditable, enthusiastic and passionate playing on the concerto. I've met Kennedy, interviewed him and spent enough time with him to know that despite perceived idiosyncrasies his fervour for both his

instrument and music is utterly honest and commendable. He was the first English soloist to have tackled this work for many years and did so with accomplishment. There is much to respect here, with Kennedy achieving a wonderfully

ethereal sound at the very opening, which as has been said, is achingly gorgeous. Throughout, Kennedy's intonation is spot on, and he takes the considerable technical hurdles of this concerto easily in his stride. It makes for an exhilarating and lovely work, three movements of lush music, which will involve you totally. Try it when driving. Seriously.

Not the Fifth Symphony, though. That's for home alone situations, relaxed and ready to listen. It's a stunning work, grandiose, majestic and hauntingly attractive. The first two movements are building to the final third – one of the most truly magnificent dénouements in any music, complete with a literally striking 'false' final bar structure (you'll have to listen to it to fathom all that out).

With Simon Rattle, we have a conductor with a real understanding of this symphony. His account is very refined indeed, taut and intense with a powerful atmosphere and serene sense of space. It is said that Sibelius referred to themes in the Fifth as being identified with migrating swans around his country home. Certainly, of all Sibelius's symphonies, none are more 'Finnish' - in the sense that they evoke the stark beauty of its landscapes. But it's no simple picture-postcard. Composed in 1915, it also suggests the troubles of World War I, and of Sibelius's inner struggles: he began writing it while caught up in depression. His diaries contain references to "wrestling with God" and in the manner of insecure people everywhere he vacillated wildly between scathing self-criticism and ecstatic moments of confidence in his own ability. By comparison with the expressionism and dark, harsh orchestral colours of Symphony No. 4, Symphony No. 5 is sunny, imbued with the spirit of nature, and turned outward. Despite some chromaticism, the composer returned to tonality. Behind the Fifth Symphony's classic façade, however,

hides some of the progressive elements of the Fourth Symphony. At the same time as he was working on the Fifth Symphony, Sibelius was also working on Symphonies No. 6 and 7. In a letter from the year 1918, he wrote: "It seems as though I am presenting myself with all three symphonies at once. As always, the sculptural element is ever more conspicuous in my music." Sibelius revised the Fifth extensively, telescoping the first two movements into one in the final version. That is one among several unusual characteristics of this subtle symphony, whose aforementioned dramatic ending - prodding chords separated by long silences - is unique in orchestral literature. Ultimately the message of the Fifth proved triumphant, with majestic pedal points in the noble home tonality of E-flat asserting a positive psychological destination. The final brooding gathering of themes is beyond criticism and brilliantly read by Rattle. Sibelius offers plenty of strife and conflict during the journey, but there does seem hope - for us all.

This is a quite superb coupling and tremendously invigorating listening. As I say, both pieces need separate digestion, the Violin Concerto being the easier meal – although hardly a snack. The Symphony is a monumental banquet and deserves fine wine of the highest calibre. Both Kennedy and Rattle excel at their crafts and the playing of the Birmingham Symphony Orchestra is excellent throughout as, for that matter, is the EMI recording. An early digital masterpiece amongst a welter of dross! I cannot adequately stress the impact the final ten minutes or so of the symphony will have on you – provided you have a soul within you.

The Sibelius Violin Concerto and Fifth Symphony coupling can be found on an EMI CD (CDC 7 49717 2).



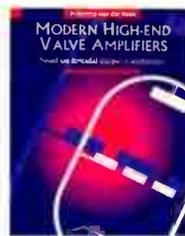
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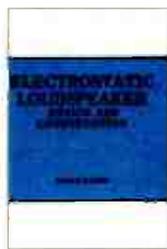


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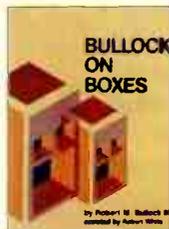
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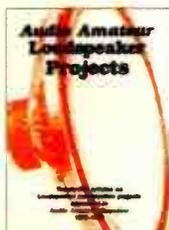


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classic cuts

Andy Giles offers a sumptuous double serving of Sibelius, served with relish by a distinctly British connection.

Clichés such as 'mind-numbingly beautiful' and 'raises goose pimples' are all so often liberally distributed when one is referring respectively to the opening bars of the Sibelius Violin Concerto in D minor and final pages of his Symphony No.5 in E flat. The two works, each lasting around 30 minutes apiece, are amongst the finest of their genre and of the composer's entire canon. Both these gems came together in an early digital (although, surprisingly, none the worse for that) 1987 EMI recording with the City of Birmingham Symphony Orchestra, under conductor Simon Rattle, with Nigel Kennedy as solo violin. It's a classic cut and the fact that it was undertaken by two relatively young and - in Rattle's case - then non-ennobled, British performers.

The Violin Concerto, originally composed in 1903 and revised, shortened and finalised in 1905 is one of the most frequently performed works of its type and apparently boasts over 60 recordings. Few pundits amongst the toffee-nosed classical music cognoscenti willingly praise Kennedy for almost anything - and make no exception with his creditable, enthusiastic and passionate playing on the concerto. I've met Kennedy, interviewed him and spent enough time with him to know that despite perceived idiosyncrasies his fervour for both his

instrument and music is utterly honest and commendable. He was the first English soloist to have tackled this work for many years and did so with accomplishment. There is much to respect here, with Kennedy achieving a wonderfully

ethereal sound at the very opening, which as has been said, is achingly gorgeous. Throughout, Kennedy's intonation is spot on, and he takes the considerable technical hurdles of this concerto easily in his stride. It makes for an exhilarating and lovely work, three movements of lush music, which will involve you totally. Try it when driving. Seriously.

Not the Fifth Symphony, though. That's for home alone situations, relaxed and ready to listen. It's a stunning work, grandiose, majestic and hauntingly attractive. The first two movements are building to the final third - one of the most truly magnificent dénouements in any music, complete with a literally striking 'false' final bar structure (you'll have to listen to it to fathom all that out).

With Simon Rattle, we have a conductor with a real understanding of this symphony. His account is very refined indeed, taut and intense with a powerful atmosphere and serene sense of space. It is said that Sibelius referred to themes in the Fifth as being identified with migrating swans around his country home. Certainly, of all Sibelius's symphonies, none are more 'Finnish' - in the sense that they evoke the stark beauty of its landscapes. But it's no simple picture-postcard. Composed in 1915, it also suggests the troubles of World War I, and of Sibelius's inner struggles: he began writing it while caught up in depression. His diaries contain references to "wrestling with God" and in the manner of insecure people everywhere he vacillated wildly between scathing self-criticism and ecstatic moments of confidence in his own ability. By comparison with the expressionism and dark, harsh orchestral colours of Symphony No. 4, Symphony No. 5 is sunny, imbued with the spirit of nature, and turned outward. Despite some chromaticism, the composer returned to tonality. Behind the Fifth Symphony's classic façade, however,

hides some of the progressive elements of the Fourth Symphony. At the same time as he was working on the Fifth Symphony, Sibelius was also working on Symphonies No. 6 and 7. In a letter from the year 1918, he wrote: "It seems as though I am presenting myself with all three symphonies at once. As always, the sculptural element is ever more conspicuous in my music." Sibelius revised the Fifth extensively, telescoping the first two movements into one in the final version. That is one among several unusual characteristics of this subtle symphony, whose aforementioned dramatic ending - prodding chords separated by long silences - is unique in orchestral literature. Ultimately the message of the Fifth proved triumphant, with majestic pedal points in the noble home tonality of E-flat asserting a positive psychological destination. The final brooding gathering of themes is beyond criticism and brilliantly read by Rattle. Sibelius offers plenty of strife and conflict during the journey, but there does seem hope - for us all.

This is a quite superb coupling and tremendously invigorating listening. As I say, both pieces need separate digestion, the Violin Concerto being the easier meal - although hardly a snack. The Symphony is a monumental banquet and deserves fine wine of the highest calibre. Both Kennedy and Rattle excel at their crafts and the playing of the Birmingham Symphony Orchestra is excellent throughout as, for that matter, is the EMI recording. An early digital masterpiece amongst a welter of dross! I cannot adequately stress the impact the final ten minutes or so of the symphony will have on you - provided you have a soul within you.

The Sibelius Violin Concerto and Fifth Symphony coupling can be found on an EMI CD (CDC 7 47177 2)

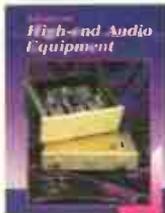


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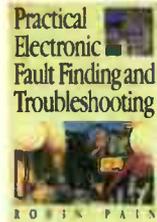
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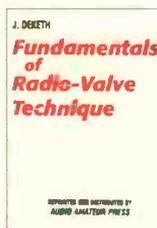
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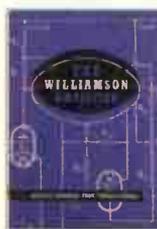
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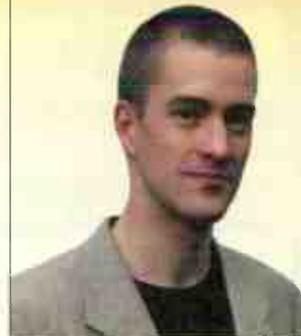


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There are few retailers who'd disagree that this season was dominated by DVD and Plasma screen technology.

What's more, the former will be given a real boost this year from falling recorder prices, whilst the latter is only just beginning to build momentum. In this column, however, I thought I'd look beyond the obvious and not focus upon either of them, or even the tepid market for DAB, but instead, take a look to see just how the recording formats are faring these days.

I don't suppose it would come as a surprise to many, to hear that sales of cassette decks have now just about reached the floor. There are very few manufacturers left and, unlike vinyl, there are no small cottage industries building cassette decks, and nor will there be, since they need mass production. Production has contracted to Sony, Teac, Yamaha and Denon. Even these manufacturers have restricted model ranges and they are likely to decline further. I wouldn't be surprised to see one or two of these multinational companies pull out of the format entirely this year. Yet, however much reduced, there is still a demand for cassette. This leaves manufacturers and retailers in a possibly fortunate position. If you're expecting bargains, think again. Fewer rivals simply means less competition and, with a captive market, prices could well rise.

The same is true of the humble blank cassette. It's becoming less of a commodity product these days, so customers are less likely to check out who is the cheapest, neither will retailers lose too much sleep if they are being undercut on the price of TDK SA90's. Therefore, don't be too surprised to find your local hi-fi emporium isn't that competitive on tape prices anymore.

That having been said, some take the opposite view and, as they aren't making much money on blank tape media anymore, will simply sell tapes as a loss leader for peanuts.

CD-R remained reasonably steady over the season, although it has never really fired the public's imagination quite as much as many thought. Blank discs now sell in

„ sales of cassette decks have now just about reached the floor.

higher numbers than cassette, and have finally fallen below the 50p a disc barrier, although this is still far higher than similar computer data discs. Machines were priced from about £150 for most of 2002, and the cost of the technology produced at, comparatively low rates (at least compared with DVD), means that prices are unlikely to fall much further.

For the first time in ten years the unstoppable machine that is MiniDisc, appears to be finally on the wane. Sony had kept the format fresh with constant upgrades such as Long Play and then NetMD, which allowed for fast downloading off a computer. Despite this, I became aware of a reduced interest in portable players this season. Sales of full size machines plummeted several years ago, but portable sales remained strong until this Christmas. We haven't seen a huge tail off in sales, but there definitely isn't quite the interest there was a year ago.

The reason for this is obvious for those with a passing interest in computers. Although MP3 hard disc players, and stick/SD type memory portable players have been around for some time, it's only been recently that they have really gained sales.

Although I haven't seen the sales figures, I would imagine that Apple's I-Pod proved a great success over Christmas, and was probably responsible for stealing a good number of portable MiniDisc player sales, in it's own right. Furthermore, it's not just Apple making some impressive recorders. It's now possible to get 128MB of memory for less than £100, fitted to a personal machine. The idea of no discs, which will eventually wear out, should hold great appeal to many. Just the sort of customer who'd originally rallied behind MiniDisc in fact.

Of course, the format used for storing such information is often low quality MP3. Sadly, many don't appear too concerned by fidelity, as the success of MiniDisc proved. Ironically though, C.D - at least in terms of the personal units - has been given a huge boost from MP3. Sales of the portable units remain strong simply because the new generation of personal players will often play MP3's recorded onto a disc via a computer.

Then there are hard disk recorders. This has been the first season with such a product for many retailers, and the Yamaha CDRHD1300 has provided a toe dipping exercise for them. So far there hasn't really been much enthusiasm for the new format, and some retailers think it could be sometime before recording onto a hard-disc really takes off - if at all.

Perhaps the most telling aspect for the forthcoming year is whether those in the business of selling hi-fi will even bother to sell stereo recording formats in the future. Many would argue that recording music in the future - and perhaps video too - will become the domain of the computer. Time will tell, of course, but it will be interesting to see just how close or far apart the two have become in another year's time. ●

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List No 81 April 2003

New, Ex-dem and Previously Cherished Hi-Fi

All prices are 10-20% below market value for rapid turnover
All used equipment guaranteed for six months; new and ex-dem adds manufacturer guarantee.
New (factory) sealed boxes indicated (New), Ex-dem (Ex-D) or Used (s/h)
Goods mostly shipped next day delivery by TNT. UPS premium service costs £9 per box UK next day.

DIGITAL

Burmester 970 DAC		Eu22,900	POA
<i>TAS Class 1 product (Ex-D)</i>			
Gryphon Adagio CD Player (Ex-D)		£4,300	£2,995
<i>2nd level upsampling redefines CD! One only!</i>			
Naim 3.5 CD Player		£1,300	£ 695
HiCap PSU (also for pre-amps)		£ 750	£ 375

AMPLIFIERS

Audio Innovations Series 500 (s/h) as new			£ 595
<i>Integrated valve amp with phono input</i>			
Audio Research's classic SP9 III		£2,850	£1,350
<i>Rare and exquisite; silver, mint (s/h)</i>			
Ayre Acoustics K1 Pre-amp with phono stage		£8,000	£3,250
<i>World class, bal/ s-e, silver (Ex-Dem, 5 yrs old)</i>			
Ayre Acoustics V-3 Power Amp		£3,750	£1,750
<i>Ex-Dem, hard to believe it's solid-state</i>			
Bow Wazoo XL		£2,495	£1,495
<i>Integrated Amplifier 75 wpc, (Ex-Dem)</i>			
"The Wand" silver remote controller (New)		£329	£249
Gryphon Sonata/ Allegro/ Legato		£10,600	£6,900
<i>State of Heart pre-amp with phono stage</i>			
<i>Dual monaural, ultimate construction (Ex-D)</i>			
Manley Labs 240/100 Monoblocks (pair)		£8,450	£3,500
<i>Pentode/ triode switchable, amazing pro gear</i>			
<i>Current list is for a revised "Neo" model (Ex-D)</i>			

Mark Levinson Power Amplifiers

No 335 (250 wpc) (s/h, mint)		£8,495	£5,495
No 335 (250 wpc) (New, sealed box)		£8,495	£6,495
No 436 (350 wpc into 8 ohms, doubling) (Ex-D)		£12,495	£8,495
PassLabs X-150 Power amp (s/h)		£4,550	£1,750
<i>S/h mint condition</i>			
PassLabs Aleph-5 (s/h)		£3,350	£1,750
<i>60 wpc, s/e RCA and Balanced</i>			
PM Components 211SE monoblocks		£2,800	£1,295
<i>Near Offer Considered; additional set of GE NOS valves</i>			
<i>Schematic included; very impressive</i>			
Selection of unused GE NOS tubes for above		£ 370	£ 200
Sugden MasterClass Pre-amp (s/h)		£2,300	£1,250
<i>Bal and s/e; remote; slimline; Class A</i>			
Tenor Audio 75 Wp (OTL tube monoblocks)		\$20,900	POA
<i>Winner TAS Golden Ear 2002</i>			

LOUDSPEAKERS

Audio Physic Virgo (New!)		£3,990	£1,990
<i>Unused but slight dent (Luxury Cherry)</i>			
Kharmia Ceramique 1.2 Reference Monitors		£14,995	£8,495
<i>Focal tweeter, piano black, crated, as new</i>			
ProAc Studio 125 (Rosewood)		£1,099	£ 499
<i>New (sealed cartons) changed order</i>			
ProAc Future Two (Birds Eye Maple)		£11,450	£5,995
<i>Glorious state-of-the art. (New)</i>			
ProAc Future Point Five (Cherry)		£3,500	£2,495
<i>Just run in, mint, boxed (Ex-D)</i>			
Revel Performa F30 Three-way monitors		£2,995	£ 1,695
<i>(Cherrywood) Slight dents (Ex-D)</i>			
Revel Performa F-50 Ceramic		£6,500	£3,250
<i>Latest spec (Cherrywood) (s/h)</i>			
Wilson Audio 6.1		£20,000	£10,995
<i>Crated, 18 months old, piano black</i>			
<i>Final Price Reduction</i>			

For updated and comprehensive list of equipment and audio cables, please visit www.audiosalon.co.uk.

audio Source

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Way back when hi-fi was valve-powered by necessity rather than

choice, an amplifier's appearance was a function of its engineering. Power tubes protruded from the metalwork because they had to, simply to keep cool. Likewise, output and power transformers may have been unwitting works of art, symbols of the simplicity and purposefulness of tubular design, but they sat atop the amplifier base simply because there was nowhere underneath cool enough for them to go. Form was dictated by function: a product's aesthetics were a product of the physics of its engineering and its technology.

Nowadays, things couldn't be more different. Fitting an entire amplifier on one integrated circuit is routine, with only a tiny power supply and some kind of interface with the outside world necessary for it to function. Ironically, in such a climate, designing hi-fi (by which I mean the whole product - audio circuitry, casing, fascia, controls, sockets) has in some ways become harder.

How so? Well, all the traditional clues to tell the designer where to put things have now gone. Of course, the basics still apply: a few minutes with a CAD package and he'll have the basic circuit topology mapped out, complete with short signal paths, the maximum distance between low level circuitry and power supplies, rear positioned pots and switches fed by long stalk fascia controls (to minimise sound degrading internal wiring), etc. But after that, what to do?

Almost every new bit of kit that comes onto the market these days seems like just another 'me too' design - the audio equivalent of

parking your car in a supermarket car park and not being able to find it when you get back.

Still, if you look closely, from time to time you'll find little patches of resistance spring up, places where products are so well conceived that they practically style themselves. As mass market hi-fi continues with its tired old design conventions (silver

“ Almost every new bit of kit that comes onto the market these days seems like just another 'me too' design.

boxes with brushed aluminium fascias and light gauge pressed steel casings), there are still some avenues where aesthetic and ergonomic expression are very much alive, such as turntables and loudspeakers.

As John Michell's new TecnoDec (this month's cover star) shows, hi-fi's oldest surviving format still has room for novel design. Although not a particularly striking shape, this deck succeeds by the sheer simplicity of form (which slavishly follows function) and the supreme quality and finish of the materials used (Perspex, aluminium, rubber). Then there's the brilliant detailing, such as the tips on the end of the aluminium feet, made from a special type of rubber that's moulded into miniature

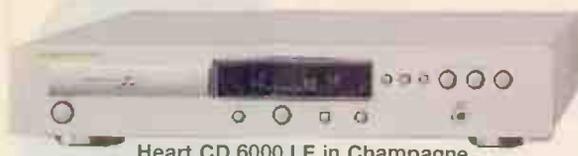
cylinders, which in turn act as a form of simple suspension!

In loudspeakers, computer audio has proved a powerful driver for new and challenging designs. TDK's brilliant S80 multimedia monitors are a fascinating example of technology permitting innovative packaging, which in turn makes superb sound possible. While it's hard to get a pair of standmounting speakers to image well in an average listening room, squeezing serious imaging from two tiny flat panel speakers (which in theory shouldn't work, according to some) is nigh on impossible. Yet the TDKs succeed, offering walk-around soundstaging thanks to their pencil-thin profile, in turn made possible by their use of the latest generation NXT panels.

Although it's hardly a deluge, we can take heart from the increasing number of interesting, off-the-wall designs coming through to market, spurred on in no small part by developments in technology and manufacturing processes. The new generation of designers - particularly in the loudspeaker field - seems less content to reheat old ideas. From the lavish Italian rosewoods adorning Unison Research valve amplification and diecast extrusions of Cyrus separates to the Perspex sleeving of Apple's iPod and carbon-fibre tubing of Wilson Benesch tonearms - the times they are changing. And not a second too soon, at that!



Things are not always what they appear to be.



Heart CD 6000 LE in Champagne



Heart CD 6000 LE in Black



Building a hand-calibrated machine from select and discrete critical components is what defines true high-end and justifies the price. At digital signal source stage, attention to detail is critical. The smallest errors are amplified by the time they reach your loudspeakers. Now, at £699, there is an affordable alternative to High Street CD players.

Heart Audio have supplied valves and made transformers in the Netherlands for three generations spanning 80 years. For the CD 6000 LE they start with a value-engineered product and add critical components from the mains lead to the damped transport and case through to the all important analogue output stage. Everything after the D/A converters has been removed and replaced with a circuit consisting of two long-life, cool-running valves and four transformers. So we have **no OpAmps after the DACs!**

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GOLD TOP

The CD73 is the cream of Marantz's first generation CD players, and as such is assured classic status, says David Price.

By now you should have read all about Marantz's brand new DH9300 audio server - one of this year's most interesting and innovative products. Well, warp back twenty years and the company was doing the very same sort of creative thinking with another (then) new technology, Compact Disc. As the CD-73 shows so strikingly, Marantz has never been scared of running with a novel idea.

The top model in the company's very first generation of CD players, it shares (as was the tradition with Marantz until very recently) much of its genetic make-up with a Philips machine - the CD303. To wit, its line up of component parts reads like a wish list from any eighties digiphile. The jewel in the crown is its CDM-1 Pro mechanism complete with glass crystal lens. Mounted in a massive, sliding tray assembly (as per late eighties Meridians), when you press the open/close button the entire transport assembly slides out!

Downstream of arguably the best CD transport ever designed lies something that's still controversial today - Philips TDA 1540 14bit, 4x oversampling chipset and digital filter. That's right, ten whole bits less than a new £200 Toshiba DVD-A player! The result is not as bad as you'd expect though - quite the reverse in

fact.

The fascia panel - in Marantz's trademark champagne gold of course - is a riot. The display consists of fifteen green LEDs set behind a chunky Perspex strip, under which another fifteen are mounted. The green ones light up to show you which tracks are due to be played, while a single red one underneath shines to tell you the number of the track playing. Bonkers! Couldn't they afford a numeric LED display? Upon reflection, considering that it would have been designed in 1981, the answer was probably no!

Continuing the theme, the CD73 gets a range of additional LEDs. Inside the disc transport recess - which is thoughtfully exposed by a top-mounted Perspex inspection hatch(!) - you find a bank of three green LEDs either side to cast light on the disc you're spinning. Was that homage to the world's most advanced turntable, the Technics' SL10 of five years back, one wonders? In the frontal disc transport window are three more - one for 'Laser', another for 'Standby' and another for 'Pause' - just to let you know what's going on in the new digital age. And then there's the power LED, and finally the bright blue backlit 'Compact Disc Digital Audio' logo!

It's all great fun - and an object lesson in how to sass up the process of playing silver discs, but to portray the CD73 simply as the digital equivalent of the Blackpool illuminations would be to miss the point. Once you've worked out how to use the counter-intuitive transport controls (play/next), cancel (stop), track scan and f.f./rewind (can one actually 'rewind' a disc?), inserted a CD (and watched the disc transport thunk so fast back into the main case



that the whole shebang jumps an inch backwards!), it's time to enjoy the action.

The CD-73 sounds warm and involving. It's an old cliché that the first generation Philips-based machines sound closer to analogue than anything digital subsequently produced - but it's true. You get a soft and beguiling sound that really suits gentle, acoustic music beautifully - in fact, it flatters it. This machine is rich and sweet in the sense that 1970s Linn LP12s were - it pulls you in and envelops you rather than trying to assault your senses with the nth degree of detail resolution and dynamics. Happier with the strains of Glen Campbell's 'Wichita Lineman' than Goldie's 'Timeless', it makes the best of certain types of music and renders others dull and undynamic.

Marantz's CD73 is a paradox. It has one of the smoothest, most comforting and unchallenging sonic footprints, yet is an immensely charismatic machine. Unlike so, so many modern digital disc spinners, you really know where you are with this bit of kit and have to learn to love it - you can't just expect it to accommodate you. These days, it's getting rare. After all, it originally cost over £500 in 1983 (about a third more than a Linn LP12 at the time), so would never have exactly been a volume seller. Still, you can find them for £250 or less if you look. You must try before you buy however, ensuring that you check the transport tracks the disc properly. A good example should play anything - including modern 80 minute CD-Rs!



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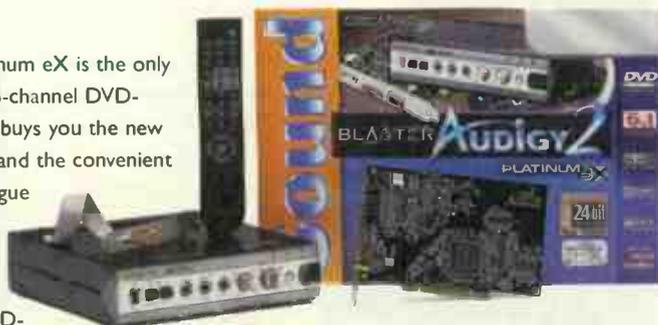
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DOLBY HITS THE PC

Dolby Laboratories has announced its certification of C-Media Electronics' software-based implementation of the real-time Dolby Digital encoder for the CMI9739 6CH AC97 chipset. This means that PC users with Intel or AMD-based PCs equipped with C-Media chipsets can get true Dolby Digital surround-sound.

Eric Cheng, president and CEO of C-Media, is quoted as saying, "With this software implementation of the real-time Dolby Digital encoder technology, existing and future customers who are using C-Media's PCI or AC97 audio chips can obtain high-quality Dolby Digital audio from the S/PDIF output much more easily, and from more sound sources, than ever before.

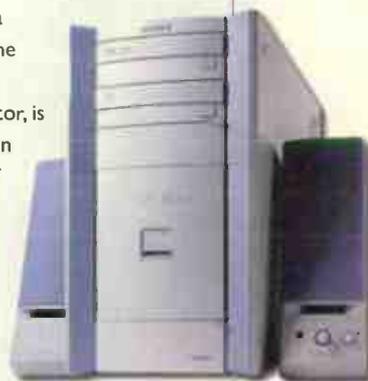
Not only is the digital signal free from the usual problems present in traditional analogue outputs, but it also reduces the number of wires needed between the PC and a home cinema system. With the real-time Dolby Digital encoder technology, data is digitally transmitted from the PC to the home theatre system via a single cable, instead of the three pairs of cables used with previous multichannel analogue outputs." Click on www.dolbylabs.com for more information.

SONY'S MEDIA PC

Sony is calling its new VAIO PCV-RXG408 a 'media PC' - a computer that doubles up as a personal video recorder (PVR). The £1,600 machine, which requires additional expenditure on a monitor, is a rival to a forthcoming generation of new products from the likes of HP and Microsoft, running the Media Center edition of Windows XP.

It also chimes with the words of Sony's President and CEO Kunitake Ando, who recently predicted that television and home computing would merge into 'home entertainment networks'.

The new VAIO uses Sony's Gigapocket software, which creates a framework that lets it interact with other multimedia devices such as networked televisions. It records MPEG video from sources including an analogue television tuner card, S-Video and composite inputs. Point your browsers at www.sony.com.



VITAL STATISTICS

The latest data from US-based Forrester Research actually suggests that music downloads are good for the music business. Contrary to the 'received wisdom' put out by the recording industry, its survey of one thousand music customers concludes that MP3 downloads actually increase sales.

Forrester attributes the 15% slump in music sales to the economic downturn, more competition from games and DVDs (the latter saw a rise of 80% in sales) and - intriguingly - the "limited playlists" rotated by commercial US radio stations. The survey says that 31% of consumers download music and burn CDs often, and these frequent digital music users buy 36% of all CDs.

THE NEW MINI

Erstwhile bosom buddies Intel and Microsoft have come together again on a brand new design project to develop a portable media player (PMP) to work with the new Microsoft Media2Go software platform. Samsung and ViewSonic have also joined Intel on the project, which aims to give easy access to video and audio media files on the move.

The player is designed to be small enough to fit in a coat pocket, making it possible to use in-car, on public transport and in aeroplanes. High-quality video playback is promised, thanks to Intel's new Xscale technology-based processor. A high speed USB 2.0 connection takes care of data transfer duties from a PC or PVR (Personal Video Recorder). For more on this, click on www.intel.com.

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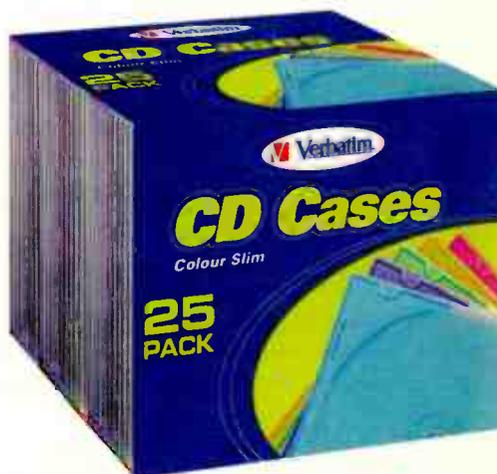
MEDIA STUDIES

Verbatim, a subsidiary of Mitsubishi Chemical Media, is the first manufacturer to offer 4x DVD+R media for data and video applications, thus reducing recording time by nearly fifty percent.

Its parent company has developed a proprietary recording dye technology based on its Metal AZO dye, which enables recording at 2.4x speeds.

Called Advanced AZO, it is used to produce a recording layer with an improved power margin and greater sensitivity that ensures stability at faster recording speeds. It can also sustain 1x and 2.4x recording, making it backward compatible with earlier drives. The discs are available in packs of five or ten, with the option of a fully printable surface.

Verbatim has also announced a range of neat new media storage accessories, including CD Sleeves and Slim Line Empty Cases. The former allow users to distribute data, safe in the knowledge that it will be dirt and damage-free. Made from strong, lightweight paper, they have plastic windows for easy viewing of what is on the disc. Price is £4.99 for a pack of fifty. The Empty Cases are just 5.2mm in thickness, but are strong and well finished. Coming in packs of five, with different coloured cases for easy identification, they cost £5.99. Finally, there's a new pack of rather natty 8cm coloured CD-R blanks - ideal for storing MP3 music files - at £9.99 a go. Check out www.verbatim-europe.com for more info.



BROADBAND BRITAIN

The news that broadband is proving a massive success in the UK, since BT decided to slash its prices, should come as no great surprise.

Following the announcement that 100,000 more broadband users connected to its network in January, the telecoms giant now has over 500,000 in total and is on course for its one million target by the middle of the summer.

Pierre Danon, chief executive of BT's retail operation has said that getting to one million users should be relatively easy compared to attaining its long-term goal of having five million homes on the service by 2006. He also added that there will be a new portable 'internet radio' on sale within months, which can play music downloaded from the net.

BT sells wholesale broadband access to its own Internet service provider, Openworld, as well as other Internet Service Providers. It has also started selling a budget 'no frills' package for £27 per month. Check out www.bt.com.

CREATIVE THINKING

The people who brought us the world's first hard disk-based MP3 portable, in the shape of the DAP Jukebox, have announced its latest and greatest incarnation.

The new Jukebox Zen digital audio player comes with USB 2.0 support for ultra fast file transfers - approximately ten times faster than USB 1.1. The new Zen also claims improved battery life, now up to fourteen hours.

It retains the original's 20GB hard disk, capable of storing up to 8,000 tracks in either MP3 or WMA formats, plus its diminutive dimensions. Creative Labs says it fits into a shirt pocket with ease. On sale from the end of February, it costs £329.99. For more information, click on www.europe.creative.com.



TUNER IN THE NET

Just in case you hadn't noticed, internet radio is here. Onkyo's brand new TX-NR900 receiver is one its most complete exponents to date, reckons David Price.



Five years ago, MP3 was the preserve of spotty geeks with long hair and an unhealthy expansive collection of 'Dr Who' and 'Blake's Seven' videos. If ever there was a geek audio format, this was it. What ensued however, was a remarkable transformation which saw this compressed computer audio format sprout legs, then get up and crawl off PC hard drives towards the mass music market. A wealth of 'digital audio portables' were launched, and then hard disk-based music players, streamed internet audio in MP3, WMA and Real Audio formats began to flourish. Microsoft's Windows Media Player 7 – among others – recognised this trend by providing a neat net radio tuner built in. Suddenly your listening options weren't limited to the usual BBC radio channels and a couple of local independents.

To be frank, the sound quality of streamed radio broadcasts over the net is such that you're unlikely to cast your specially tweaked Graham Tricker Signature Leak Troughline, complete with gold plated, motorised, twenty-five element FM aerial, aside. Despite the advent of broadband, which has made higher bitrates and less interruption to the audiostream a more practical proposition, the risible sound won't exactly push your system to its limits (by comparison, an 80kbps TalkSPORT mono DAB transmission sounds like a ten grand Meridian multichannel system.) But this is missing the point – it's a case of quantity not quality as far as net

radio is concerned.

The beauty of the new TX-NR900 is the way it integrates computer audio with home hi-fi so seamlessly. In addition to functioning as a well specified multichannel receiver, with all the latest THX, Dolby and DTS decoding goodies, it sports an Ethernet interface which is able to contact your PC via a local network. Running Onkyo's bundled Windows-based Net-Tune Central software, this gives you instant access to internet radio, MP3, WMA and WAV files via the receiver's remote control – it's even possible to allocate up to 30 presets to your favourite net radio stations. The receiver's crisp orange dot-matrix display even shows all the source information such as song title, artist, album, genre and playlist.

As you'd expect from an Onkyo receiver, it's large (435x175x459mm), beautifully finished and thoroughly engineered machine hitting the scales at an orthopaedically challenging 18.2kg. Inside you'll find the latest dual 32bit DSP chips and 24/192 resolution DACs with Digital Upsampling (claiming better sound from 16bit, 44kHz CD playback). It has to be noted however that it doesn't decode 24/192 digital datastreams, despite having the theoretical ability so to do – DVD video-grade 24/96 is your lot. 'Reduced Negative FeedBack' power amplifier sections and all-discrete transistor output stages also feature.

The Onkyo is relatively straightforward to use (as much as a monstrosity like this reasonably can be). The software installs automatically, just like all Windows XP

applications, and is invoked via the front panel source selector button marked NET AUDIO. Pressing this switches to your PC which the Onkyo talks to via the Ethernet interface. It all works very smoothly – the sight of online radio station names, 'tuned' by your PC via the net, on the Onkyo's main display is very impressive. The only caveat is that due to the exigencies of online audio streaming, it isn't always possible to receive stations displayed by the software. As previously mentioned, the sound isn't any great shakes – expect 50kbps from most BBC stations if you're lucky.

As a multi channel amplifier, the Onkyo is good but not brilliant. Frankly it's unfair to compare a £1500 AV amp with all these bells and whistles with a classy two-channel combo such as Cyrus's 8/PSX-R – so no prizes for guessing which is better! But suffice to say that if you're looking for a good heart for a half-decent AV system (keeping your hi-fi for the other room), you could do far worse. It has a generally sweet and smooth sound with oodles of easy power (a claimed 7x110W RMS) and good, strong surround soundstaging and image articulation. It's a bit less incisive (and, frankly, less tiring too) than most other Japanese rivals, which gets my vote without hesitation. A brave and interesting product, and well worth auditioning.

Onkyo TX-NR900 £1599

Tel: +44 (0)1788 573 100
www.onkyo-emea.net/uk/

WINDOWS, 5.1

Even PCs are getting in on the multichannel act. Philips has got the market surrounded with its new range of 5.1 channel soundcards. David Price experiences the new PSC605 Sonic Edge.



It's not new of course. A number of soundcards from various manufacturers - not least Creative Labs - have been doing surround soundcards for several years now. But when Europe's largest consumer electronics giant gets in on the act, it really means something.

To wit, enter the Sonic Edge, part of a new range of PC soundcards featuring Philips' Thunderbird Avenger audio accelerator (don't you just love marketing men?). It's the cheapest in the range of 5.1 products, under the - wait for it - Seismic Edge and Acoustic Edge. The Dynamic Edge, in case you're wondering, is a mere 4.1 and thus doesn't get to play with the big boys. They all have the capability to, as Philips puts it, "transform all conventional 2-channel stereo sources on the PC platform into stunning multichannel surround sounds."

What's special about this card is its automatic surround sound processing. Working in a way somewhat akin to Dolby Pro Logic II, Philips' QMSS (Qsound Multi Speaker System) technology takes any 2.0 stereo feed and spatialises it into 5.1. It works with any sound source the computer encounters, from CD-ROM, DVD and hard disk audio to streamed media from the internet and even external sources fed in via the analogue or digital inputs. There's also QSurround for those using just two speakers, but

want something of the surround sound experience.

The card itself has a wealth of connections - two S/PDIF digital inputs and two 3.5mm analogue inputs (CD and Aux), plus more minijacks for Line In, Mic In, Front speaker output, Surround speaker outputs, S/PDIF digital out (or Centre LFE channel) and the usual MIDI/joystick interface.

One useful feature is the hardware's automatic digital level adjustment, which adjusts the card's input gain to the level of the digital input being received. The S/PDIF output can send Dolby AC3, PCM or DTS to an external decoder. No onboard conversion for these is provided, and the card's DSP is full duplex, but only works at 16bit, 48kHz resolution maximum.

The package includes the PCI soundcard itself, a Quick Start Guide, a CD audio cable and a software installation CD. It also comes bundled with MusicMatch Jukebox, Sonic Foundry's AcidXpress, Qsound Audiopix, along with a powerful Philips application called Sound Agent which constantly monitors input signals and displays user settings - an elaborate control panel, if you like. Installation is the usual matter of punching out a blanking plate at the back (if necessary), plugging it into the motherboard, connecting the internal leads up, switching on and letting Windows do the driver auto-install.

Given its £40 retail price, the Sonic Edge sounds very good. This is not, you understand, up there with the £200 24/96 soundcards. However, it runs the likes of Creative Labs' Audigy II - DVD-A or no DVD-A surprisingly close. It has a clean and confident sound that lacks any conspicuous nasties. In 2-channel mode, its onboard DACs compare fairly well to my reference Cambridge Audio DACmagic 2. The latter is smoother and sweeter, with a slightly more fulsome bass. However, given that this DAC usually whips cards at this price point by a massive margin, it's proof that this is a decent, well designed product.

The main failing of the Sonic Edge is indeed in its two-channel soundstaging, but I guess this is missing the point. As soon as you plug in a rear set of speakers, it senses the change and starts doing its 5.1 channel stuff. Give it a decent set of baby multimedia speakers, such as ELAC's Cinema One, and you get a surprisingly expansive and enjoyable performance. It's a brilliant upgrade for bundled computer soundcards, but personally I'd spend the extra £50 on an Audigy and get all that extra functionality, switching and software. If you're on a strict budget however, you could do much worse.

Philips PSC605 £40

www.philips.com

LOW VOLTAGE

The new RioVolt SP150 is SONICblue's answer to the rapidly growing CD-based MP3 portables market. David Price is neither shocked nor stunned.

Funny how the world's first commonly available digital audio portable, the Diamond Multimedia Rio PMP300, cost the best part of £200 when launched some four years ago. Nowadays, prices have tumbled to well below the £100 mark, and the lower end of the newer wave of CD-based MP3 portables will set you back less than half this. Why then is SONICblue launching a new £150 machine this late in the day? They must think the luxurious RioVolt SP150 is just a bit special.

CD-based MP3 players actually make a lot of sense. If you can live with their bulk - they can, by definition, only be as small as a 12cm Compact Disc after all - then you get an awful lot of functionality for not very much cash. As well as playing standard audio CDs, the RioVolt SP150 spins data CDs with MP3 and WMA files. Disappointingly, there's still no AAC or MP3 Pro support however, meaning you can fit over twenty hours of your favourite tunes onto a single disc. As virtually every computer now comes with a CD burner and authoring software as standard, it really is very easy to make MP3 CDs. And because memory isn't at such a premium, you can burn the files at high bitrates (192-320kbps) so you'll get more than half-decent sound, too.

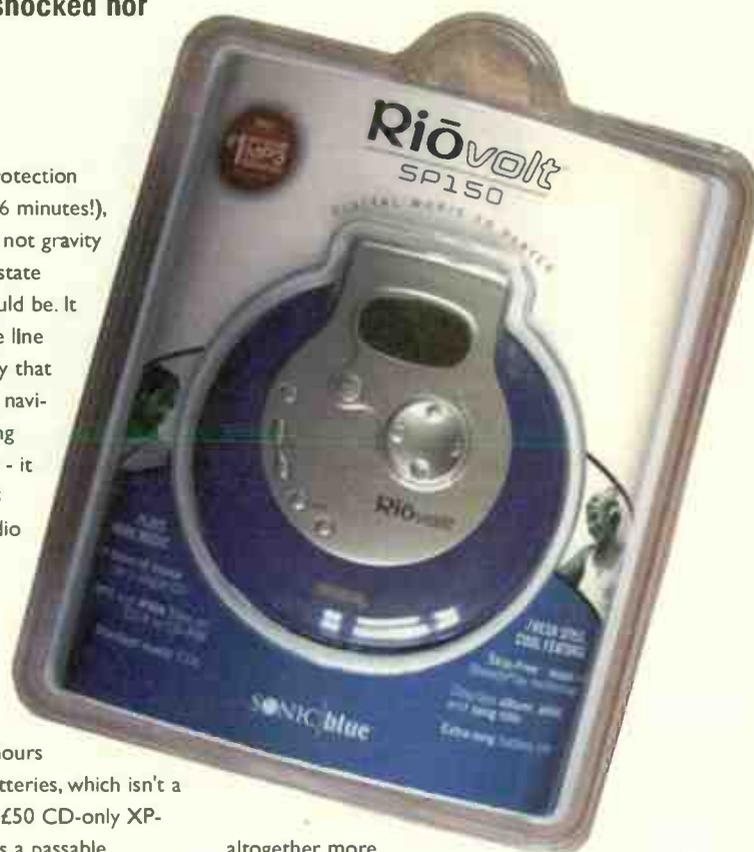
Frankly, it's not the sexiest looking audio portable on the block - that accolade probably goes to the top Sony D-EJ1000 Discman. Nor does it feel a million dollars, being very much from the 'plastic fantastic' mould. Still, neither is it terminally flimsy and certainly doesn't feel as cheap as some. To circumvent the most common problem with CD portables, the SP150 has some pretty

serious shock protection (running up to 16 minutes!), although it's still not gravity proof as a solid-state based player would be. It has a large, three line backlit LC display that makes it easy to navigate through song titles and menus - it even shows MP3 ID3 tags and audio CD text too.

In other respects, it's pretty standard fare. You get a battery life of around twenty hours from two AA batteries, which isn't a patch on Aiwa's £50 CD-only XP-V731 which does a passable impersonation of an eternal flame. It sports a crisp control layout, and offers the usual adjustable EQ, Repeat and Shuffle play modes. The programmable playlist facility is nice, letting you tee up an entire day's listening before you leave the front door - should you be so inclined.

The RioVolt comes supplied with a middling set of in-ear phones (as usual, get a pair of £20 Sennheiser MX500s), and has the option of a car cassette adapter and wired remote control.

The RioVolt SP90 doesn't sound bad, but I can't stop thinking about Philips old eXpanium EXP401 which sounded so much better. Spinning 320kbps MP3 CDs, this player is relatively innocuous with a soft, smooth and rather unenergetic bass, a relatively dull and lifeless midband and a perfunctory treble that doesn't really get inside the recording. Dynamics are pretty flat and there's no real sense of musical involvement. By contrast the Philips was an



altogether more lucid and involving performer. It was warm but very engaging.

Move to standard audio CDs and things to get better. The RioVolt assumes a strong sense of rhythm and grip. Bass gets tighter and tauter, with a good deal more energy. Midband is on the analytical side - clinical even - but there's a wealth of detail, a reasonably crisp (and much better extended) treble. Stereo imaging is well defined, and the images project out into space better. Overall then, not a bad result but I can't help thinking that the RioVolt SP150 is just a little too 'digital' sounding compared to the warm, lush, big hearted character of the aforementioned Philips. And if you don't require MP3 playback, you could save yourself a goodly sum and go for Aiwa's perfectly good XP-V731.

SONICblue RioVolt SP150 £149

www.riohome.com

LOGICAL CHOICE?

VideoLogic's new ZXR-200 promises great things at the budget end of the multimedia speaker market – David Price tries them out.

The best value loudspeakers you can buy to use with your PC have been – in my humble opinion – TDK's S80. No other rival has matched its brilliant NXT technology, superb style and fine design – all for only £90. However, if there is one company that could severely dent the S80's glistening halo, then it is VideoLogic, a company with a serious engineering department full of capable audio engineers willing to design stuff that sounds as good as it looks.

No, this isn't me reading from their press release – rather, it's based on my experience with the Sirocco some three years back. Here was a 2.1 sat/sub system that knocked my socks off, thanks in no small part to the high quality Audax drive units and sound engineering practices used. Despite its diminutive dimensions, it was good enough to use as hi-fi. In fact, I know someone who for quite some time used a Linn LP12/Aro/Karma and Michell ISO to drive one, with brilliant results!

VideoLogic's new ZXR-200 is not a Sirocco replacement – at just £50 it's an altogether cheaper product. It comprises two smallish (85x112x98mm) satellites, employing 80mm drivers. Captive speaker cables terminated with phono connectors run from either satellite via 3m leads to the subwoofer. This is a sturdy wood cabinet affair that measures 165x250x340mm, and has front and side mounted bass ports. Inside is a 130mm woofer and an amplifier pushing out 25W RMS. Front panel controls for front, rear, centre and subwoofer are provided, along with a rear mounted power switch. Round the back, six phono inputs and five phono outputs are provided. Considering its low, low price then the ZXR-600 is incredibly sturdy – the total package weighs no less than 10.6kg!

The package includes everything



needed to get up and running quickly, with connecting cables, satellite speaker stands and a clear, concise user guide. The clearly labelled connectors and wires mean it's breeze to set up – I got best results with the sub under the table and the satellites blu-tacked onto my desk top, all nice and rigid! Leaving the system on all the time also considerably helps the sound – along with a good run in period. For the purposes of the test, I hooked them up to VideoLogic's own SonicExplosion soundcard, running in 2 channel mode.

First, I have to say how impressed I was with their general build – at full volume and with the bass control turned right up, they steadfastly refused to distort. Moreover, they managed to go far louder than their size or price would suggest. For the money, the ZXR-600 threw out a mightily impressive sound. The sub could be adjusted not to boom, and the treble control gave a useful extra zing to their rather rolled off high frequencies. Suitably tweaked, I found them most amenable. Clean, open and smooth with – importantly – none of the nasties associated with cheapo speakers, they proved a good listen.

Bass was warm, and displayed no signs of 'port puffing' which budget boxes are often wont to do. Midband integrated quite nicely with the bass – there was little sense of listening

to two entirely separate speakers – and there was a decent degree of detail.

Treble was the biggest disappointment, sounding just a little too curtailed for my liking, but at least it wasn't coarse, and at the price it really is churlish to complain.

Imaging was excellent, this combo throwing out sounds into space with more confidence and precision than a lot of 'proper' hi-fi designs. A very pleasant listen then – it was only when I switched on the TDK S80s (costing nearly twice as much) that I realised that for a relatively low outlay I could get dramatically better results.

And therein lies the problem with the ZXR-600s – at their price I'd say they're unbeatable. Their sheer 'couthness' and civility – along with a lack of any obvious sonic failings – is a fantastic achievement considering their £50 selling price will also buy you a pair of plastic Sony speakers that are about as nice to listen to as a dentist's drill. Only the fact that an extra £40 spent on the TDKs detracts from the brilliance of this VideoLogic package. But then again, if you can't spend the extra, you'll not be disappointed with these. Recommended.

VideoLogic ZXR-200 £49.99

www.videologic.co.uk

welcome to world favourites

Here's a list of products that are a good buy. We've tried to cater for a range of tastes, identifying strong products in every area. We're agnostic so you'll find a wide range of products, from valve pre-amps through to MiniDisc players. Products marked * are recently out of production but make a good second-hand buy.

Prices shown are those at the time of the review



Sonic Frontiers Transport Cutting edge design and technology.

COMPACT DISC

ARCAM FMJ CD23 £1100
This British-built player is extremely versatile. Controlled and detailed with a musical insight that few match. (Jul 2000)

CAMBRIDGE CD4SE* £200
A touch soft in the treble but outstanding in every other respect. (Feb 98)

KENWOOD DP-3080/II* £180
Has great clarity and presence for the price. Not as naturally expressive as the CD4SE though. (Feb 98)

LINN KARIK III* £1775
Under rated and overlooked, the final Karik was a gem. Superb transport gives a brilliantly tight, grippy dynamic sound, albeit tonally rather dry.

MARANTZ CD-17 KI-S £1100
The Marantz excels in all areas. Without doubt this is one of the most involving CD players on the planet. Build quality is also exemplary. (Sep 97)

MARANTZ CD-63 MKII KI-S* £400
Similar to the CD-63SE but more powerful bass and an all-round smoother sound. The famous KI tweaks pay off again. Whether or not it is still pre-eminent against the vastly improved competition is a matter of opinion.

MERIDIAN 506 20-BIT* £1100
Very detailed and revealing player. More cerebral than visceral sounding, however. (May 95)

MUSICAL FIDELITY X-RAY £800
Commonsense sturdy CD player of exceptional ability. Clear and detailed with high quality internal processing system. The X-Ray is inclined to show up poor recordings, but it's only doing its job! (Feb 99)

NAD S500 £1000
This dynamic top of the range Silverline spinner delights with any type of music. Exciting, sophisticated sounding and highly recommended. (Jun 2000)

ROKSAN CASPIAN £895
The Caspian has a smooth, slightly bright sound with some of the clearest treble in the business. Very engaging, dynamic character. (Aug 97)

ROTEL RCD 951 £300
HDCD capability at a midrange price. Plain Jane looks but solid construction. There is some higher than average measured distortion which may take the edge off this otherwise tempting product. (Aug 99)

COMPACT DISC TRANSPORTS

SONIC FRONTIERS TRANSPORT £6999
Cutting-edge design and technology combine to make this one very desirable product. The only problem is the fantasy hi-fi price. (Sep 98)

TEAC P-30 £2500
Cheap it isn't, but then it sounds like a million digital dollars. Nothing short of superb. (Jun 97)

TEAC VRDS-T1 £600
Excellent mid-price silver disc spinner with a powerful, expansive and warm sound. Easily beats most sub-£1000 designs. A good choice for the budget conscious who want the best. (Feb 95)

DACs

CAMBRIDGE AUDIO DACMAGIC 3* £99
Superb value for money with extensive facilities and solid, detailed sonics. Upgrades any sub-£300 player.

DCS ELGAR £8500
Future-proof convertor which will handle 24/96 and 24/192. Extremely open and natural performer. (Nov 97)

DPA LITTLE BIT 3* £299
A taste of the high end on a budget. Rich, clean, punchy sound transforms budget CD players.

MIDIMAN FLYING COW £299
Excellent as a DAC and doubles as an ADC for archiving to CDR. (Jun 98) Great value, as is junior version Flying Calf at £109. (Feb 99)

MUSICAL FIDELITY X-DAC* £300
A bargain for normal CDs and even better with HDCDs. (Nov 97)

SONIC FRONTIERS PROCESSOR 3 £6999
Quality never comes cheap! This DAC oozes class and when matched with the Transport 3 is certainly up with the best. (Sep 98)

TURNTABLES

LINN SONDEK LP12 BASIK £1100
Off the pace these days in many respects but still an extremely sweet and engaging listen with a quintessentially analogue sound.

MICHELL GYRODEC SE £775
Exquisitely built, infinitely upgradeable deck that gives true high end sound at mid-fi prices.

MICHELL ORBE £2000
Fantastically capable all rounder with commanding, powerful, detailed sound that gets the best from almost any arm and cartridge. Supreme build, brilliant value. (Apr 95)

ORIGIN LIVE STANDARD (KIT) £145
Good in standard form with AC motor; frighteningly good with a DC motor and battery PSU.

PINK TRIANGLE TARANTELLA £680
Not only does the Tarantella have more style than a catwalk full of models, it also combines PT's usual clarity with real authority. (Oct 97)

PRO-JECT DEBUT £110
Straight out of the box and onto the shelf! Nothing short of a bargain. Vinyl's never had it so good, so cheaply!

REGA PLANAR 2 £214
Brilliant starter deck with extremely polished manner. Better built £274 Planar 3 is a great all-in-one package that eats mid-price CD players for breakfast.

ROKSAN XERXES X £1295
DSU or XPS 3.5 power supply £150/170 extra. Excellent pitch stability from a new Swiss motor and outboard power supply. Very tight bass, fine dynamics and revealing clarity. (Jan 97)

SYSTEMDEK IIX900*/RB250 £330
A fine all-rounder and easy to upgrade too. More depth and breadth than Rega Planar 3. (Sep 94)

VESTAX BDT-2000 £225
A stylish looking deck with infinitely variable speed 16-90 rpm, DC belt drive and built-in MM phono stage. Good value, with plenty of chassis room for alternative arms, if required. (Sep 99)

TONEARMS

HADCOCK 242 SE £649
Latest of a long line of unipivot arms. Added mass makes the 242 suitable for both low compliance MCs and straw-in-the-wind high compliance types. Revised geometry and chromium plating completes a first-class job. (Jun 2000)

NAIM ARO* £975
Truly endearing and charismatic performer - wonderfully engaging mid-band makes up for softened frequency extremes

REGA RB300 £180
Some may prefer the simpler RB250 at £130. Detailed, tight, rhythmic sound but tonally rather grey and cold-sounding. Still excellent value, though.

Prices shown are those at the time of the review



Project Phono Box. Provides an inexpensive introduction to all that vinyl has to offer.

SME 3009SII £309
Once state of the art, but no longer. Weak at frequency extremes and detail, but its legendary serviceability makes it a cult in Japan. Can be picked up for peanuts second-hand. (Jan 93)

SME 309 £689
A down-market version of the IV and V with aluminium armtube and detachable headshell. Tight, neutral sound with good tonality, but lacks the IV's pace and precision. Like the older SME 3009 series, this arm is also available in 10" and 12" versions. (Jan 93)

CARTRIDGES

AUDIO TECHNICA AT-110E £30
Great starter cartridge that's refined, detailed and musical beyond its price. Best value MM under £50

GOLDRING 1012GX £74
An accomplished MM with a solid bass, slightly forward midband and clean transients. Very reasonable price for such an able performer. (Jul 93)

DNM MICA £185
Better than Goldring's 1042 and costs only £135 on trade-in. An assured and transparent MM. (Feb 98)

DYNAVECTOR DV20X-H £299
The best modern budget MC combines deliciously sweet sound with fantastic get-up-and-go. High output version works a treat with valve phono stages too.

MUSIC MAKER £575
When mated with a good quality arm, this hand finished high-output pick-up gives an ear-boggling account of itself. Very high compliance ensures maximum information retrieval. An absolute (grain orientated) gem. (Feb 99)

ORTOFON MC 7500 £2000
Conclusive proof that there's hope for the world. It's a long time ago now but this high-priced favourite still earns its niche - CD lovers would die if they heard it. (May 94)

ORTOFON MC 15 SUPER II £140
Not quite as good as the dearer Supremes but the Super II is a splendid introduction to the joys of moving-coil cartridges.

GOLDRING 1042 £130
One of the best Moving Magnet cartridges going, with beautiful treble and muscular bass. New low price makes it a bargain.

ORTOFON ROHMANN £1000
In a way it's MC 2000 meets MC 7500 with great tonal strengths and a dynamo sound. (Apr 96)

INTEGRATED AMPLIFIERS

AUDIO ANALOGUE PUCCINI SE £595
This superbly-built Italian integrated has a lucidity and control which leaves others nowhere. Sound stage a wow. (Dec 97)

AUDIOLAB 8000a * £495
Well rounded integrated with smooth and detailed sound plus a huge feature count. Great build makes later versions a top used buy.

DENON PMA-250SE £160
It might not have bags of grunt but the Denon can sound exceedingly natural and open. (Feb 97)

McINTOSH MA6800* £3735
The MA6800 not so much plays music as takes control of it, with effortless bass drive. (Sep 95)

MISSION CYRUS 2 * £299
Classic eighties minimalism combines arresting styling with clean, open, lively sound. Further upgradable with PSX power supply.

MUSICAL FIDELITY X-CANS2 £160
Warm, sumptuous, sweet sound h/phone amp. gives startling results with a decent set of headphones.

NAIM NAIT 3 * £575
Superb rhythms and dynamics make for great music making, but tonally monochromatic. Super optional phono stage makes it ideal for vinyl junkies.

ROKSAN CASPIAN £695
Smooth, warm integrated with remote control that works happily into most 'speakers. (Dec 97)

SONNETEER ALABASTER £995
Builds on the strengths of the Campion with ample control, colour and drive. (Oct 97)

PHONO STAGES

CREEK OBH-8 SE £180
Punchy, rhythmic character with oodles of detail makes this a great budget audiophile product.

LFD MISTRAL PHONO STAGE * £300
The Mistral has a warmth and involvement that make many pricier stages sound overpriced.

MICHELL DELPHINI MONOBLOCS £1995
Analogue tour-de-force gives supremely clean, detailed and finely resolved sound with breathtaking dynamics. Great value, even at this price.

MUSICAL FIDELITY X-LP £125
One of the famous MF X series. Full marks throughout for clarity and detail. Switchable between MM and MC. Indestructible build! (May 99)

PROJECT PHONO BOX £39
Not the last word in many respects but a thoroughly honest piece of work. Inexpensive introduction to all that vinyl has to offer. MM and MC provision plus choice of two impedances.

ROKSAN ARTAXERXES X £950
With the Atessa PSU the Artaxerxes X MM/MC stage still shines. Great stage depth, neutrality and tonal colour. (Oct 97)

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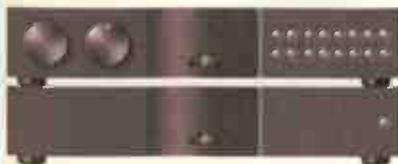
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The New Naim Range, on demonstration now.

Building on the strengths of previous designs, the new Naim series combines elegant new styling with a new level of technical and musical performance including re-designed circuitry, improved power supplies and new user features.

The AV8 Preamp Processor offers Dolby Digital, THX-EX, Pro Logic II & DTS decoding with THX Ultra II certification, it is a true audiophile powerhouse and the 7 channel P7 Power Amplifier delivers over a kilowatt of power from seven channels.



The Arcam FMJ AV8/P7 Cinema Powerhouse

SONNETER SEDLEY £399
Combines transparency and fine dynamics with excellent rhythmic ability. (May 98)

PRE-AMPLIFIERS

AMC 1100 £150
Suffers from un-defeatable tone controls but an extremely good value piece of kit. Partners the similarly budget level AMC 2200 power amplifier, also at £150. Comfortable beginners' choice. (Mar 99)

AUDIO ANALOGUE BELLINI £475
Showcases AA's characteristic mix of clarity and musicality and blasts the competition. (Apr 98)

CHORD CPA1800 £1800
Clarity, insight and control are second to none - an addictive mixture. (Mar 98)

CROFT VITALE £350
A modestly priced valve pre-amp with exceptionally transparent performance. MM phono stage plus three line stages are standard. Volume controls are separate for each channel, thus giving balance adjustment. A remarkable item in all respects. (Feb 2000)

XTC PRE-1 * £1000
Almost valve-like in its smoothness, the line-level Pre-1 is warm and seductively clear. (Nov 96)

POWER AMPLIFIERS

ARCAM 9 * £400
With 70W on tap, the 9P will drive most loudspeakers with a spacious and detailed sound. Good bass welly too. (Dec 96)

CHORD SPM400 £1400
There's a sense of effortless power to the Chord that gives music real scale and presence. (Mar 98)

MARANTZ MODEL 9 * £8000
Authentic reproduction monoblocs still more than cut the sonic mustard. Highly expensive and highly sought after. (Mar 97)

MICHELL ALECTO £1989
Crisp, clean and beautifully controlled with gorgeous styling. Partnered with the £1650 Orca this is a superb winning combo. (Oct 98)

MUSICAL FIDELITY X-A200£1000/pair
200W of high-end monobloc power in a grooved tube. (Aug 98)

NAIM NAPI80 £1060
Partnered with a NAC82, this has classic Naim control, and a superbly rhythmic presentation.

TUNERS

CAMBRIDGE T500 £180
An extremely engaging tuner with a performance at odds with its low price. Not exactly a Troughline, but you may not notice... (Feb 99)

CREEK T43 £399
Excellent detail, separation and dynamics. A great little tuner and unbeatable at this price. (May 98)

MARANTZ ST17 £600
A positive dreadnought of a tuner. Sweet and refined but with a heavy punch when needed. A tuner of this quality demands a decent aerial. (Jul 99)

MISSION CYRUS FM7* £300
Clear and lucid sound puts it up with the best. Superb build too. (Apr 94)

NAIM NAT03 £595
The NAT03's warm, atmospheric sound is further proof of Naim's proficiency with tuners. (Sep 93)

SONY ST-SA3ES* £250
Beguiling RDS tuner for the sonically discerning. Good ergonomics and sensitive too. (Apr 97)

CASSETTE DECKS

AIWA AD-S750* £200
Sonically a very decent machine at the price. Comes fitted with Dolby B, C and the dead handy Dolby S. (Apr 96)

AIWA AD-S950* £300
A stable transport, superb head and Dolby S make the AD-S950 an excellent all-rounder. (Feb 95)

KENWOOD KX-3080* £160
A simple deck, but excellent-quality head and transport give top quality sound. (Oct 96)

PIONEER CTS740S £430
A great piece of engineering from Pioneer, with first-rate sound. (Jun 96)

YAMAHA KX-580SE* £250
The 'SE' tag is more than a marketing gimmick. Sound is solid and clear with Dolby S. (Sep 97)

LOUDSPEAKERS



Kef Cresta I loudspeakers
A very musical sound

CASTLE EDEN £469
Impressively vice-free 'speakers that offer great transparency and involvement. One of a select band that simply makes music regardless. (Mar 97)

EPOS ES12 * £495
Strong, punchy bass is allied to finely detailed, articulate midrange and sparkling treble. (Oct 96)

KEF CRESTA I £100
Delightfully sophisticated presentation for the price. Won't blow the roof off, but will deliver a very musical sound. (April 2000)

KLIPSCH HERESY II £1100
An outstanding high sensitivity loudspeaker with midrange and treble horns coupled with infinite baffle 12" bass driver. Effortless, fast and accurate. (May 99)

MISSION 752 * £495
Cracking mid-price mini towers combined HDA drive units and metal dome tweeters with surprisingly warm results. Benign load characteristics makes them great for valves.

MISSION 771 £170
Characteristically fast, punchy Mission sound from the Aerogel mid/bass and silk-dome tweeter. (Jul 98)



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QUAD ESL 63 * £3450
A reference against which all other loudspeakers are judged, the '63s have superb imaging and genuine transparency.

TANNOY AMS8 * £2700
Bold sounding pro active monitor with solid bass, clear midrange and delicious treble. (Aug 96)

TANNOY MERCURY m2 * £140
A true audiophile bargain which embarrasses many more expensive boxes. Never mind the price, let your ears decide. (May 97)

MINIDISC PLAYERS

KENWOOD DM-9090 £500
One of the best MD players yet. ATRAC 4.5 gives clean and very musical recordings from this Kenwood. (Jan 98)

SONY MDS-JB930Q £250
Great mid-price machine that adds better build and facilities to the '530's already excellent sonics.

SONY MDS-JA50ES * £1300
This Sony can put the wind up Nakamichi cassette decks when used with better blank MDs. (Apr 98)

SONY MDS-JE55ES MiniDisc recorder £520
The best sounding MD deck made so far, thanks to awesome build and heroic ATRAC-DSP Type R coding.

SONY MDS-JE510 £300
An impressive sound and unmatched convenience make this MiniDisc player an excellent buy.



Pioneer DVD-717. A well built and solid performer.

DIGITAL RECORDERS

ALESIS MASTERDISK £1400
A groundbreaking hard disc recorder with a built-in CD drive. An amazing bit of kit, and a glimpse of the future. (July 2000)

KENWOOD DMF-9020 £500
An excellent tool for home recording, combines convenience, superb sound and a fair price. (Aug 99)

MARANTZ DR-17 £1100
Probably the best sounding CD recorder on the market. Built like a brick out house with a true audiophile sound. HDCD compatible. (July 2000)

PHILIPS CDR-765 £360
One of the first twin deck recorders/players that boasts high speed dub facility. Playback could be warmer, but still a bargain. (Oct 99)

PIONEER PDR-555RW £480
Excellent mid-priced CD recorder that both plays and records with equal panache. (Oct 99)

SONY TCD-8 DATMAN * £599
Super clean and detailed sound makes this an amazing portable. Not as robust as it should be though.

DVD PLAYERS

DENON DVD-5000 £1600
Monster build, as you'd expect at this price. Facilities and gadgets galore and drop-dead high end looks. A very smooth and sophisticated sound, although not as good as similarly-priced CD players. (Mar 99)

PIONEER DV-717 £700
Well built and a solid performer, with a 'true' 24/96 digital output. Facilities in abundance and a controlled, exciting way with CD replay. Shame it lacks a Dolby Digital decoder! (Sep 99)

SONY DVP-S725 £490
One of the best buys in the DVD market. Available in a dodgy white case, but the facilities and performance more than make up for this. Excellent with both music and visuals, and a whole host of up to the minute facilities to keep you occupied. (Mar 2000)

HEADPHONES

JECKLIN FLOAT MODEL TWO £99
Wonderful panel-like and open sound from these esoteric-looking headclamps. Do not wear in public unless you like being made a fool of!

SENNHEISSER HD-490 £50
Good value cans with an exciting and bassy sound. Everything one should look for in headphones at a sensible price.

INTERCONNECTS



Nordost Blue Heaven
A simple and effective upgrade

CHORD COMPANY CHAMELEON 2 £90/m
One of our favourite favourites, the Chameleons are musical performers with a smooth yet open sound.

DNM RESON £40/m
Neutral and transparent, and a steal at forty quid!

NORDOST BLUE HEAVEN £150/m
Some of the fastest and most transparent cable around. A simple and effective upgrade.

VAN DEN HUL ULTIMATE THE FIRST £260/0.6m
Carbon interconnects that help you forget the electronics and concentrate on the music. Miraculous transparency.

LOUDSPEAKER CABLE

CHORD COMPANY RUMOUR £9.95/m
The Rumour is our reference at the price. Tight and tuneful bass mixed with air and space results in a cracking cable for the money.

DNM RESON £6.95/m
This cable has a transparency of sound that's rarely heard at the price. Excellent value for money.

NORDOST BLUE HEAVEN £375/3m pair
This isn't cheap, but it sounds absolutely fab. An open and spacious sound that simply carries music.

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Arcam FMJ A22 Dave Amplifier (1Yr G/tee) . . .(1849.00)	£999.00	Naim CDS/2 Player (2Yr G/tee)(6256.00)	£4595.00
Arcam FMJ P25 3 Ch P/Amp (1Yr G/tee)(999.00)	£599.00	Naim 102 Preamplifier (2Yr/Gtee)(1210.00)	£859.00
B&W 802 Nautilus Speakers-Cherry (2Yr G/tee)(6000.00)	£4190.00	Naim 72 Preamplifier (2Yr G/tee)(767.00)	£399.00
B&W 803 Nautilus Spkrs-Rosenut (2Yr G/tee) .(3500.00)	£2590.00	Naim 82 Preamplifier S/H (1Yr G/tee)(2500.00)	£1695.00
B&W 805 Nautilus Spkrs-Cherry (2Yr G/tee) . .(1400.00)	£845.00	Naim 52 Preamplifier S/H (1Yr G/tee)(3000.00)	£1595.00
Linn Classik K CD system (2Yr G/tee)(999.00)	£749.00	Naim Supercap S/H (1Yr G/tee)(2450.00)	£1249.00
Linn Classik Movie System (2Yr G/tee)(1995.00)	£1649.00	Naim 52 Preamplifier (2Yr G/tee)(3850.00)	£2895.00
Linn Kaim Line Preamp (1Yr G/tee) 50%(1400.00)	£799.00	Naim Supercap (2Yr G/tee)(2450.00)	£1825.00
Linn LP12/Lingo/Akito S/H (1Yr G/tee)(2250.00)	£1095.00	Naim NAP 180 Power Amp S/H(1Yr G/tee) (1220.00)	£829.00
Linn Keilidh Blk S/H (1Yr G/tee)(775.00)	£385.00	Naim NAP 250 Power Amp S/H (1Yr G/tee) (1805.00)	£895.00
Linn Sizmik Sub Woofer (2Yr G/tee)(995.00)	£749.00	Naim NAP500 Power Amp (2Yr G/tee) . . .(10995.00)	£7895.00
Linn Keltik Speakers Wal (2Yr G/tee) 50%(6000.00)	£2595.00	Naim SBL Spkrs-Black S/H (1Yr G/tee) . . .(2362.00)	£1195.00

welcome to world classics

CASSETTE

NAKAMICHI DR-2

A great machine with Nakamichi's legendary heads. The lowest cost 'true' Nakamichi at the time, retailing for £600.

NAKAMICHI CR-7

The last of the great ones, and definitely the best Nakamichi ever (yes, better than a Dragon)

YAMAHA TC-800G

Early classic in serious cassette. Its ski-slope looks got it a cult following once it had ceased to be simply ugly.

CD PLAYERS

MERIDIAN 207

Beautifully-built two-box with pre-amp stage. Very musical although not as refined as modern Bitstream gear. No digital output.

PIONEER PD-91

Built-to-last player with easy upgrade routes for modifiers. Not knockout as it stands but get one cheap and have a go!

CAMBRIDGE CDI

The first two box player with weighted mechanics and even an optional Dropout/error counter. Radical and effective at the time - a classic.

AMPLIFIERS

LEAK POINT ONE, TL12 & TL10

Ancestors of hi-fi, consequently expensive nowadays. As with all vintage valve stuff, overhauling is de rigueur before use, using original parts if possible.

LEAK PRE-AMPS

Line of 'good for their time' pre-amps. Use of EF86 pentode valve for high gain rules out ultra performance. Not the highest-fi.

LEAK STEREO 20

Excellent workaday classic valve amp. In good order the 20 will not disgrace itself. Various upgrades are available from specialist repairers.

LEAK TL12+

Plentiful monobloc equivalent of Stereo 20. Reasonably inexpensive and a tweakers' dream. Genuine valve hi-fi on a budget.

NAD 3020

You can't argue with success! NAD's budget transistor integrated gave thousands their first taste of hi-fi and remains great value.

QUAD 33/303 PRE/POWER

Great style and construction, also bullet proof. Warm and wooly sound, but easy going. A good introduction to early transistor audio classics.



Garrard 401
A legendary turntable.

QUAD 22/II PRE/POWER

One of the all-time classic valve amplifiers. Unusual circuit but it works beautifully. 22 pre-amp not up to today's standards.

SUGDEN A21

Seventies transistor integrated has an eminently likeable smoothness and musicality. Limited inputs via DIN sockets.

TECHNICS SE-A5 Mk2

Nice transformer and electronics, shame about the casework. With tweaking, this 150watter can sound sweet.

LOUDSPEAKERS

KLIPSCHORN

Not exactly plentiful or cheap but a splendid beast. For efficiency they have seldom been equalled. Space hungry!

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AERIAL ACOUSTICS (see pictures below)

Model 5: Bookshelf Monitors-Pair (Maple) Ex.Demo/Mint £2900 £1495

Including Special Stands

AVM - Purchase the Pre and Power together for £1450 - see pictures right

V2: # Remote PreAmplifier (Black) Ex.Demo/Mint £1175 £ 595

M2: # Mono Bloc Power Amplifiers - Pair (Black) Ex.Demo/Mint £1975 £995pr

CAIRN / EZO

NANDA Face Nord: # Preamplifier, 2 Analog Chan. Ex.Demo/Mint £1000 £ 499

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CHORD (see pictures below of some of the Products available)

DAC64: D to A Converter (Silver/Gold Badge) Ex.Demo/Mint £1980 £1350

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MODEL 5

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CLASSE (see picture below - CAV-150)

CAV-150: ## Multi-Channel Amplifier (6 x 150W)

SSP-30 #: 6.1 Processor (Silver/Black)

EAD RF DEMODULATOR # (Black)

RETAIL SALE

Ex.Demo/Mint £3799 £2295

Ex.Demo/Mint £2899 £1795

Ex.Demo/Mint £ 600 £ 199

CLASSE CAV-150



AVM V2



AVM M2



MIRAGE - see pictures above of FRX Series

FRX-9: # Flagship Loudspeakers (Cherry)

M1si: ## Reference Bipolar Loudspeakers (Piano Blk)

M3si: ## Bipolar Floorstand Speakers (Piano Black)

M-1295si: # Semi-Active Bipolar Loudspeakers (Piano Blk)

BPS-400 ## Active Bipolar Subwoofer (Piano Black)

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S/Hand/Mint £6000 £1995

S/Hand/Mint £3400 £1395

Unused/As New £1800 £ 899

Ex.Demo/Mint £1300 £ 695

Ex.Demo/Mint £6000 £4650

SIM2 HT200 DM-F



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LEAK SANDWICH

Rather warm sounding big infinite baffle but cheap with it. With a reasonably powerful amp can sound quite satisfying.

LOWTHER PM6A

High quality full-range driver; still manufactured. High sensitivity, as fitted to many classic horn designs.

MAGNEPLANAR SMGa

Touch dry in the bass but a technological loudspeaker with genuinely musical abilities.

MISSION 770

Father of the 77 range which continues to this day. Well mannered with a warm sound and a kind load to amplifiers.

QUAD ESL57

Unrivalled. Properly serviced there is nothing like them. Their natural presentation may make them caviar to the general.

YAMAHA NS1000M

Hi-tech favourites of the Japanese and Americans. Viewed more warily in the UK but can give excellent results.

TANNOY GRF & AUTOGRAPH

Folded horn monsters which certainly sound good if you have the space. For Tannoy vintage see HFV November 1998.

WHARFEDALE SUPER 8 RS DD

Ideal experimenters' driver. High sensitivity ~14,000 Gauss magnet and extended frequency range. Inexpensive too!

TANNOY YORK, LANCASTER

Many similar models of infinite baffle or reflex design. Not the last word in tautness but the drivers work well in modern cabinets.

VINYL

ACOS LUSTRE

Very honest piece of kit, well made and easily adjusted. Vinyl beginners could do very much worse.

ALPHASON HRI005

First class arm, up to present-day standards. Buy carefully, though, as there's no service available now.

ARISTON RD11

A one-time king of turntables very similar to the Linn LP12. Now deposed but worth a look at the right price.

LINN AXIS

Uncomplicated, lower-price version of the famous Sondek. Less expensive than some of its stablemates.

GARRARD 301 & 401

Legendary turntables, once fairly plentiful. Excellent back-up available; many different custom plinths available. High quality.

GOLDRING Lenco 88 & 99

Great deck for the kitchen table enthusiast. Garrard fans won't look at 'em but cheap and capable. Servicing available.

HADCOCK 228

Recently out-classed by Hadcock's updated 228 Special Edition but a proper hi-fi arm for all that. Makers still service.

MICHELL FOCUS ONE

20 years and still going strong. Early runner in the 'modern' turntable cycle with a first class arm. Factory servicing available.

SHURE M75

Recent line-contact improvements have left the M75 behind but the wide range of needles make it a handy tool

SME 3009 IIS

Everlasting classic tone-arm. Spares permanently available from SME. No longer the last word but peanuts second-hand.

THORENSTD124

Best classic deck ever? Judging by the prices they fetch it's possible - 78rpm too!

THORENSTD150

Mid-price deck with a keen following. No real difficulty with servicing - novices may find the suspension system unnerving.

TRIO L-07D

Knockout heavyweight from 1980 with stainless bearing and 11lb platter! Not a give-away and beware! - spares scarce.

LEAK TROUGHLINE (ORIGINAL)

Interesting ornament but no longer hi-fi. Limited coverage of 88MHz to 100MHz only.

LEAK TROUGHLINE II & III MONO

Arguably the best-sounding tuners ever. Adaptation for stereo easy via phono multiplex socket.

LEAK TROUGHLINE III STEREO

Excellent tuner with indifferent stereo decoding circuit. Best when adapted to use modern outboard decoder.

MARANTZ ST-8

Possibly the ultimate Tardis console, including an oscilloscope for checking the strength of signal. Expensive even now.



Leak Troughline II Mono
Arguably the best sounding tuner ever

beyer dynamic

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1322 GX	£95	£76 GEX £67
1322 GX	£124	£100 GEX £86
1242	£143	£114 GEX £100
Erica LX/H	£133	£109 GEX
Elite	£232	£190 GEX
GEX - Exchange price for a Goldring Any make/model of cartridge accepted		
Audio Technica		
AT 95 E	£23	£15
AT 110 E	£28	£16
AT OC 9 ML	£330	£280 EX
Denon		
DL 110	£79	
DL 160	£95	
Grado		
Prestige Black	£40	£27
Prestige Gold	£110	£73
Ortofon		
510 Mk II	£34	£22
MC 15 Super II	£130	£110 EX
MC 25 FL	£227	£193 EX
MC 10 Supreme	£304	£258 EX
MC 20 Supreme	£382	£323 EX
MC 30 Supreme	£452	£385 EX
Kontrapunkt B	£643	£548 EX
Rohmann	£837	£742 EX
Shure		
M 97 YE	£98	£58
V 15 V XMR	£304	£204
Goldring		
Point Special	£265	£237 EX
EX - Exchange price for MC from above companies		

HEADPHONE SELECTION

GRADO

Prestige Series	SR-60	£15
	SR-80	£104
	SR-125	£157
	SR-225	£199
	SR-325	£294
Reference Series	RS-1	£641
	RS-2 (new)	£495

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Trichord
Trilogy
Van den Hul
VPI
Wilson Audio
Wilson Research
YBA

H I - F I HOME CINEMA MULTIROOM INSTALL BUY / SELL

Quarterly Sale items

Table with 2 columns: Item name and Price. Items include Kenwood LI1000C pre/ LI1000M Power Amp, Exposure VII pre + XII psu, Harmon Kardon AVPI, Magnum Dynalab P 200 Pre, Trilogy 901 Pre, dpa Enlightenment DAC.

New this month

Table with 2 columns: Item name and Price. Items include POWER AMPLIFIERS: Chord SPM 1203 (3 Channel), Cary 805 C Monoblocks, YBA Passion Monos, E.S. Lab DX-58, Plinius SA50, Mark Levinson 334, Trilogy 958 Monoblocks.

Table with 2 columns: Item name and Price. Items include PRE AMPLIFIERS: Tube Technology Phrophet pre, Tom Evans The Vibe Pre, Krell KRC, Graff I3.5 Pre.

Table with 2 columns: Item name and Price. Items include LOUDSPEAKERS: ClaraVox Magnifica, Martin Logan Request, JM Lab Micro Utopia + Stand, Wilson 5.1, Revel Ultima Studio.

Table with 2 columns: Item name and Price. Items include CD PLAYERS & DACS: Meridian 500 Transport, DCS Delius, Audio Synthesis DAX, Krell KPS 20i, Linn Karik Numerik, Helios Stargate, Mark Levinson 39.

Table with 2 columns: Item name and Price. Items include TURNTABLES, ANALOGUE, VARIOUS: Wilson Benesch Act 2 arm, Michel Gyro SE/SME 309, Ortofon Kontrapunkt a, Earmax Pro.

Power amplifiers

Table with 2 columns: Item name and Price. Items include Plinius 8200P, Krell FPB 200, Roksan M1.5 Monoblocks, Chord SPM 1200E (Integra), Krell FPB 600, Meridian 558 (5-channel), Plinius SA 102, Audio Research CD200, Musical Fidelity P180, Musical Fidelity CRPS, Vincent T.A.C SV 236 Integrated, Bryston 4 BSS, Michaelson Audio Odysseus, Jadis Dely 7 mk III, Mark Levinson No 27, Linn Bass Active Card, Audio Research VT150se Monoblocks, Cello Duette 350, Trilogy 94R, Gamut D200, Musical Fidelity F15, Audio Innovations S1000 mk III monos, Krell Kav 500i, Krell FPB250M, Krell MDA 300, Cary SLA 70 mk II Silver, Boulder 500 AE, Krell FPB 300, Linn Klassik CD Amp silver, Boulder 1060 Power, Primare 30.1 mk II Integrated, YBA Passion Stereo, Sunfire 300 Power Amp, Plinius 250 mk IV.

AV components

Table with 2 columns: Item name and Price. Items include AV COMPONENTS: Lexicon DC2, SIM 2 HT 300, Primare P30 Processor, Linn Klassik DVD, Audio Refinement Pre 5, Linn MC1, Lexicon MC12 / MC12B.

Table with 2 columns: Item name and Price. Items include TELEVISIONS & DVD PLAYERS BY LOEWE: Loewe Xenix DVD, Loewe Aconda, Loewe Planus + Std, Loewe Xelos + Std, Loewe L2A Active Speakers.

Table with 2 columns: Item name and Price. Items include PLASMAS/LCD/PROJECTORS: From NEC/ Panasonic/Pioneer/Sharp, Electrograph Delphi/Seleco/Sony/Sanyo, Panasonic TH-42 PVWDS.

Pre amplifiers

Table with 2 columns: Item name and Price. Items include Roksan 2.5 Pre + 1.5 psu, Chord DSC 1500E (dac/pre), Arcam Delta 110 pre amp.

Table with 2 columns: Item name and Price. Items include Audio Research SPI4, Audio Research LS7, Audio Research LS1, McCormak Line Drive, Audio Synthesis Passion 8m bal/ remote, Audio Research LS3, Musical Fidelity F22, Audible Illusions P3Amc, Audiolab 8000 Q Pre, AVI S2000 MP remote pre, Krell KSL 2 Pre, Cary SLP98L Remote Pre x-dem, Boulder 1012 (pre amp/ 24.96 dac/ Phono), Krell KSL + Phono, YBA I Alpha Pre mm/mc + psu, YBA Passion Pre (inc Phono), Boulder 2010 Pre, Plinius 16L, C.A.T. ultimate reference Pre Amp Inc/Phono, Audible Illusions P3A Pre MM/MC mk II, Naim 42.5.

Quality speakers

Table with 2 columns: Item name and Price. Items include Reference 3A, Audio Physic Spark, Talon Kite Centre & Bracket, Soundlab Quantum, Ensemble PA1, Audio Physic Caldera, Aerial Acoustic SW12 Sub Woofer, Maple/remote, Mirage M3 si, Linn Kabers (Active), Rel Q 200 E, Rel Q 150 E, Audio Physic Luna Sub (wood), Audio Physic Yara, Vienna Acoustics Mahler, Vienna Acoustics Mozart, Vienna Acoustics 5.1, Cabasse io 5.1, JM Lab Sib & Cub (5.1 spk sys), Blue Room Minipod (White), Blue Room Minipod + Sub (Blue), Blue Room Minipod Sub, SD Acoustics SD1, JM Lab Cobalt 826, B+W DM 602 S2, ATC SCM 20A, Audio Physic Avanti III X-dem, Genelec 205 Active Monitors, Audio Physic Virgo III, Audio Plan Contrast 3, Avalon Ascents, Audio Physic Tempo III, Naim SBL's, Rogers LS55, ATC SCM 10 +stds.

CD players DACS

Table with 2 columns: Item name and Price. Items include Meridian 596 DVD, Meridian 568.2 Processor, Pink Triangle Da Capo 24 bit, Marantz 17 Ki Sig (Black & Gold), Myrrad MDV 200 DVD, Arcam Delta 170 Transport, Audio Research CD2, YBA CD 3 Delta, Audiomeca Damnation CD Transport, Vincent T.A.C CD S3, Primare V20 DVD/CD, Audio Aero 32/192 Capitole CD (Ver. 4), Primare V25 CD/DVD, Thule Spirit CD, Theta Pro Geny, YBA CD 1 Delta, Audio Lab 8000 DAX, YBA CD Speciale, Boulder 2020 dac, Krell KPS 25sc 24/96, Theta Data II Transport AT + link, YBA CD Integre.

Turntables & analogue

Table with 2 columns: Item name and Price. Items include Benz Micro LP, Lorrircraft record cleaning machine, Van den Hul - cables & interconnects, Harmonix interconnects, SME 309 arm, Revox B160 Tuner, Decca London Gold (original Garrott Brothers), Linn Linto Phono, SME 30/2 A, Moth Record Cleaning m/c, Project RPPM4/ Ortofon 510, Project RPPM9/ arm, Ortofon Rohmann, Pierre Lurme J1/ SLS, Ortofon Kontrapunkt a/b.

Table with 2 columns: Item name and Price. Items include Michell Gyro SE/ RB300, Michell Orbe/QC, Audio Synthesis Phono Eq mm/mc, Gryphon Phono Pre-Amp (dual mono) Head Amp, Parasound TQ1600 (remote tuner), SME Series V Arm, Pink Triangle PT Ext psu, Plinius I4 Phono, Nackamichi DR 3, Tom Evans - The Groove, Clear Audio Reference Mc phono stage X-demo, Rega Planer 3 + Hi Fi News Out Board Power Supply, Clear Audio Symphono phono stage X-demo MM/MC, Lavardin Reference Phono.

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Distributed by

Comag Magazine Marketing,
Tavistock Road, West Drayton,
Middlesex UB7 7QE
Tel: +44 (0) 1895 444 055

Printed by

Southern Print, Dorset
Tel: +44 (0) 1202 628 300

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DIY supplement contents



- DIY NEWS** 97
All the latest from the weird and wonderful world of DIY hi-fi.
- A WARM GLOW** 98
Ray Paice puts together a low powered, single-ended kit amp of the purest type.
- BOOK REVIEW** 103
Audio Measurements - by Norman Crowhurst.
- A CLEAR REFLEXION** 105
Nick Lucas builds the Reflex interconnect kit from Audio-Links.

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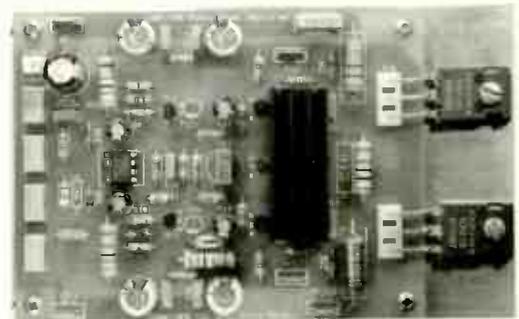
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diy news

HONG KONG PHOOEY?

Here's a site from a Hong Kong based company that offers a range of kits, accessories and parts. DIY Hi-Fi Supply offers a US\$399 Cole tube preamp kit that has an mm/mc transformer built in which is 5x and 10x switchable, along with two 12AX7 tubes, an EZ80 tube rectifier and a choke filtered power supply. Also in the kit amp catalogue is a passive preamp that bears the name Django. This is a design which uses a Seiden selector switch and attenuator and



has both balanced and unbalanced outputs, plus one balanced and three RCA inputs. It also features pure silver hook up wire. The Django is priced at US\$649 in kit form.

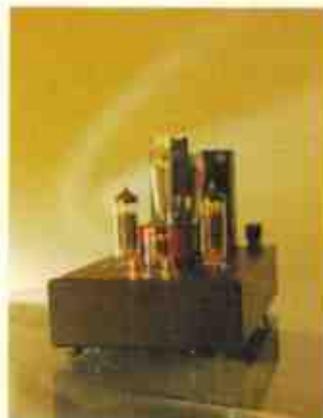
www.diyhifisupply.com

WHAT'S ALL THIS ZEN?

The American tube amp/speaker company Decware have two kit versions of their single ended Zen Triode amp. There is the SE84C basic version (\$399) and the upgraded and tweaked SE84C-S Select version (\$575). The amps can also come with a smart hardwood base for an extra \$119.

The design uses two Svetlana SV84 tubes (any EL84s can be used too) and delivers 2.5 watts, but can be bridged to knock out 5 watts into 8ohms. There is a 5U4G tube rectifier and a 6N1P tube for the signal. In the Select version there are resistors by Dale and Vishay and German WIMA signal capacitors. The site has all the building instructions with pictures and diagrams and the schematics are downloadable in PDF form.

www.decware.com



HELP AT HAND

We've discovered a DIY site with lots of varied information, forums and topics for all solder iron wielding enthusiasts. Here you'll find parts suppliers, sample projects (including car audio), advice and information on basic electronics and components, and plenty of circuit and box designs. There are also over 1000 manufacturer links.

<http://larena.com/audio/?diy=yes>

HORN OF PLENTY

Here's a site run by a certain Thomas Dunker in the States that deals with just about everything the horn fanatic should crave. The idea of the site is to "provide information and inspiration" to DIYers who build their own domestic horn speakers and systems. There is a range of articles and a history of the horn loudspeaker and a great selection of various wacko home made and commercial designs in the classic horn mould.



<http://www.hi-fi.com/~thomdunk/forums.html>

A WARM GLOW



Ray Paice puts together a low powered single-ended kit amp of the purest type.

A couple of years ago I had my first experience of a low power amplifier driving high efficiency speakers. The situation was the World Audio Design room at the Bristol Hi-Fi show. I came away with an impression that there was something fundamentally right about the approach. High efficiency speakers have light cones, which, because of their low inertia, stop and start quickly, which means a more accurate translation of the electrical signal into a movement of air. Things must get even better if you get a single driver to cover the whole fre-

quency range, getting rid of dreadful crossovers! The high efficiency also means that you only need a handful of watts to drive them, allowing the use of affordable single-ended triode amplifiers. These amplifiers generally have few components to corrupt your precious signal, and the views about their benign harmonic distortion are well known.

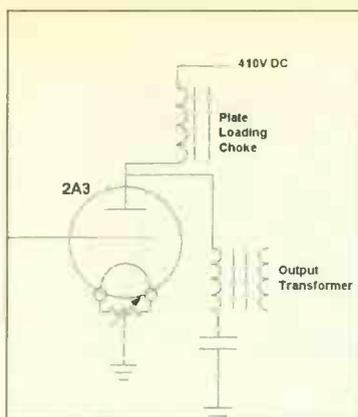
I was a believer in the high efficiency/low power creed, but what did I do about it? Well, the answer was absolutely nothing. My Hart/Linsley-Hood amplifier and Hi-Fi News DC1 speakers continued to give good service. I did nothing, that is, until earlier this year when I heard

some amazing sounds from a pair of Lowther horns driven by a 3 watts Single-Ended Triode (SET) amplifier.

One thing was certain: DIY was essential to make my dreams affordable, so the quest began for suitable designs. I settled on All-Fun horns, courtesy of the Norwegian Lowther club website. The amplifier is the subject of the rest of this article.

CHOOSING AN AMPLIFIER

To a large extent DIY Hi-Fi is a gamble as you are seldom able to hear designs. You need to seek advice you can trust, decide on your own technical criteria and be prepared to



Parallel fed schematic diagram.

experiment. I wanted a handful of watts, a SET design and a very simple signal path.

I spent quite a lot of time reading and browsing the web and finally decided upon the Paraglow from the Bottlehead Corporation, based in the USA. The Paraglow is a zero feedback design and produces 2.5 watts using 2A3 output valves. The driver stage is one half of a 5965 direct coupled to the output valve for a very simple signal path. There are plenty of positive views about this amplifier's capabilities on the web.

The Paraglow has some interesting design features. Firstly it doesn't slavishly follow the line that all silicon is bad; it uses diodes to

rectify the power supply, but more interestingly has a transistor based high-voltage constant current source as an active load for the driver valve.

Even more fundamentally, it seeks to address some of the compromises built into the output transformers of most similar amplifiers. The name Paraglow is derived from Parallel Feed, a technique used to separate the DC plate loading requirements and AC signal handling requirements that co-exist in most output transformers. Figure 1 shows the concept of parallel feed and a fuller description is available on the Bottlehead website.

THE KIT BAG

The Paraglow kit costs about \$1150, (about £750), plus carriage, (and a further slice for those nice Customs and Excise people when it arrives). The price includes NOS 5965s and Chinese Valve Art 2A3s. The transformers, from Magnequest, are wound to order and delivery took around 6 weeks. The kit included everything except hook up wire and mains cables. Bottlehead recommend their own transformer wire for the ground bus and Jena cable for hook-up, which I duly ordered. It arrived well packaged and everything was

present and correct. All of the components were of good quality. Figure 2 shows the contents of the kit as supplied (except that the chassis plates have already been painted). The kit includes an excellent instruction manual with lots of safety guidance – there are over 400volts DC present in the design.

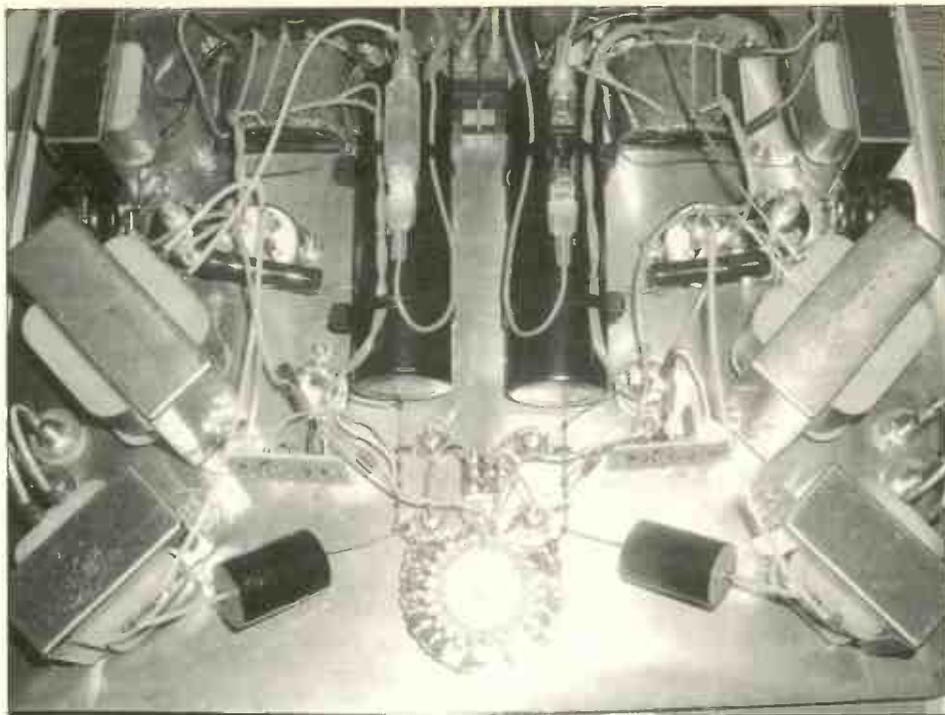
CUSTOM AND EXERCISE

One of the great benefits of DIY is you can change things around to suit your individual needs. As supplied the Paraglow builds up as monoblocks, with several of the, somewhat utilitarian looking, transformers exposed to the world. I decided to hide the transformers away inside the chassis. I also wanted to use a passive attenuator and to keep signal paths as short as possible. Also, I wanted to do away with the tag strips supplied with the kit and do as much point-to-point hook-up as possible. Finally, some Black Gates were substituted for the power supply electrolytic capacitors provided.

I decided to build the kit as a 'stereo integrated' in the same vein as several of the WAD kits. This kept all the interconnections around the WAD attenuator very short and dispensed with a few phono plug



The contents of the Paraglow kit laid out.



Internal view of amplifier kit.

interfaces in the process. Retaining the orientation of the various transformers relative to one another I drew up a new chassis plate and laid out the components to facilitate the point-to-point connection. I then had a new chassis plate made in brushed stainless steel (it cost me around £55).

Also, on further reflection following some excellent results with silver interconnect cables, I decided

to use solid silver wire for all signal routes. This, along with Teflon sleeving was sourced from Audiocom. I re-used the transformer wire supplied by Bottlehead for the valve heater wiring, again sleeved with Teflon (for safety reasons).

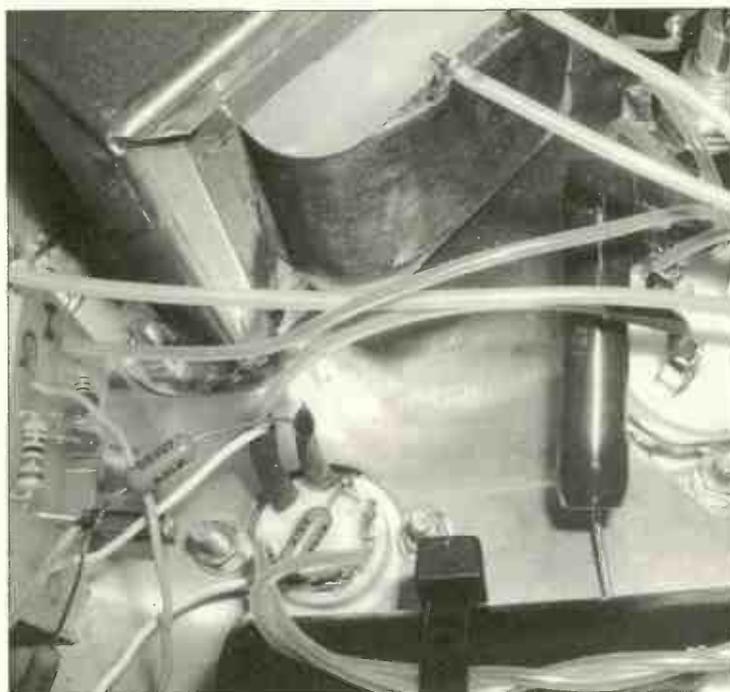
Regarding the silver interconnects, you may have seen a Trade Ad from 'bob@skydivers.co.uk' for 'Amazing Interconnects' and for around £100 per metre pair I rate

them as the cable bargain of the decade.

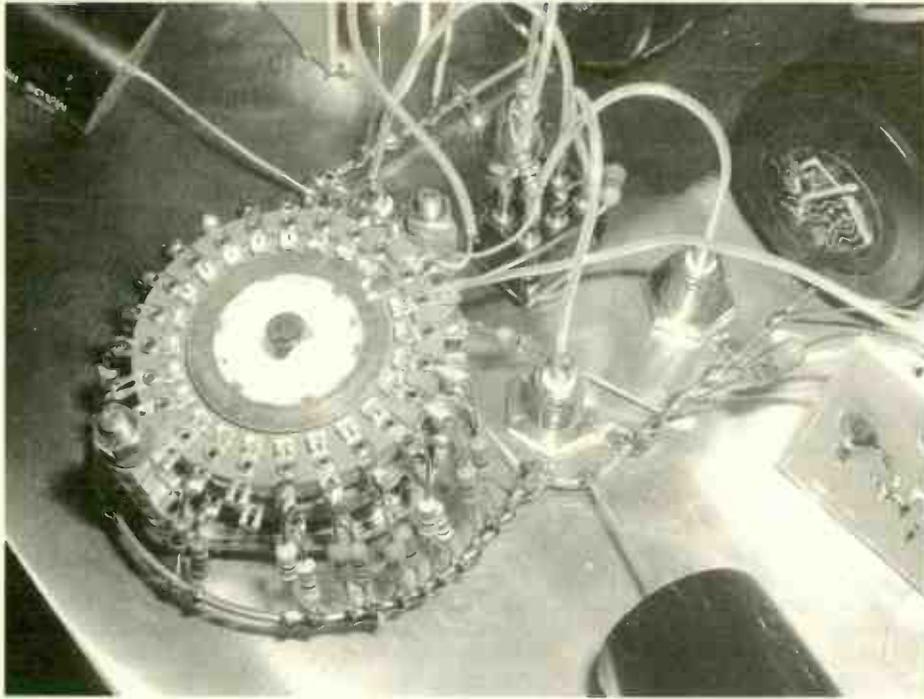
SCHOOL ASSEMBLY

Although I decided not to build the Paraglow as standard I still followed the instruction manual as far as possible. First, all the transformers, sockets etc. are assembled onto the chassis, then the various wires and components. WBT solder was employed. Everything went together easily and the estimated assembly time was about 10hrs all in (having assembled kits before). I follow the 'check twice, solder once' rule and try to keep everything as neat as possible.

Next came more checking - the instructions list points at which to measure resistance values. When you get this far with assembling a kit it can be tempting to cut corners - don't! Still following the manual, the time came to plug in and switch on followed by more checks - again the manual lists various points at which to check voltages. Nothing went pop so I started carefully measuring the voltages. However, there was clearly something wrong: the transformers on one channel got very hot very quickly. Applying some logic and checking out resistances again I tracked the problem down to the capacitor between the output



This pictures shows point to point wiring.



Blore Edwards stepped attenuator.

transformer and ground, which had gone short circuit – I suspect this type of event must be very rare. All was well once the capacitor was changed.

The only other problem was some hum that was tracked down to dirty pins on one of the driver valves. Figures 3, 4, 5 and 6 illustrate the internal assembly.

The chassis was fixed to a wooden plinth (actually a pine storage box from Homebase!), my DCI speakers were connected and my Trichord modified Musical Fidelity CD player plugged in.

RESULTS

The sonic rewards are stunning! The sound is so incisive, yet without any edge to it. The music just flows and all the different strands are untangled so that everything seems to be in its own space. Bass is very articulate. And the detail – I hear so much that I haven't been aware of before. Everything just seems fundamentally right. The results were a quantum advance on my old amplifier, which I had always considered to be very good. I believe I would need to spend a number of thousands of pounds to get this performance from a commercial product. By the way, the

2.5watts is actually quite enough to achieve a good listening volume from the 87dB efficient DCI speakers!

FURTHER ON

As far as more tweaks go, the first thing to do is complete a decent wooden plinth for the amplifier. This will be hewn from maple with box joints similar to those in the current plinth. I have already followed up on two upgrades that I found via the internet, for which feedback, from others who have already been down the road, is very positive.

I have on order a Paraglow Mk2 upgrade kit, which makes significant changes to the driver stage, including an upgrade to the constant current source.

Also, Magnequest have some upgraded output transformers available, using cobalt laminations, and these should arrive soon. Hopefully I will be able to report back in due course – editor permitting!

Further down the line I will look at experimenting with alternative components, including the output tubes. I hear good reports of the TJ meshplate 300Bs, which are available with 2.5V heaters as replacements for 2A3s.

END PIECE

The Paraglow is an example of what is best about DIY audio, an innovative design, excellent quality components, an amazing sound quality per pound ratio, easily upgradeable/customisable to suit your own requirements and loads of freely available help and advice.

It should not be beyond most people's abilities to build Paraglows, with the reward of an amplifier possessing exquisite musical qualities.

Paraglow SET amplifier \$1150

Bottlehead Corporation
www.bottleheads.com

ACKNOWLEDGEMENTS

Doc and Eileen at the Bottlehead Corporation for an excellent product and unending patience. Contact Pat at Powerdex, Bridgewater, Somerset for a fantastic job on the stainless steel chassis and powder coating various parts. (They're happy to take on small jobs and charge very reasonable rates.) Anyone else that has offered advice and encouragement – thanks!

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book review

**AUDIO MEASUREMENTS BY NORMAN CROWHURST
REVIEWED BY NEAL GIBBONS**

Audio Measurements was first published in 1958, written by the renowned and prolific author Norman H. Crowhurst, this reprint edition sees the book republished in its original form. The book is a compendium of measurement and test techniques for audio equipment of the time with the focus primarily on valve amplifiers and pre-amplifiers. The 224-page book covers topics and methods used in audio measurement of the period which, in many cases, will still be applicable today but I suspect that some, if not all, of the test equipment pictured and described are going to be a little hard to find!

Chapter One starts with the basics and covers measurement techniques, limitations of test equipment, equipment accuracy and absolute Vs comparative measurement. Chapter Two takes the reader through a tour of the test equipment used at the time, Oscillators, Vacuum-tube Voltmeters, Square Wave Generators, Oscilloscopes, Distortion Meters and Wave Analyzers, with discussion and description on their use. There are some real museum pieces here! Chapter Three moves on to basic measurements and instrument calibration, laying down base-line criteria for Phase, Resistance, Impedance, Voltage and Current measurement. There is a brief discussion about LP groove velocity, LP material compliance and tape magnetization.

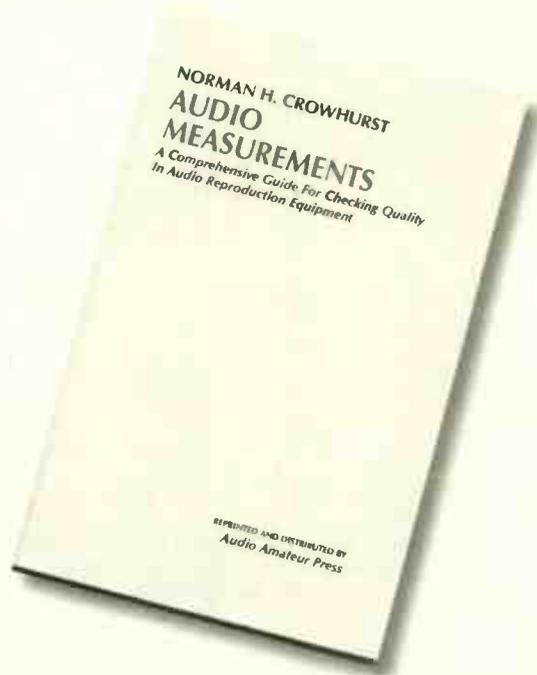
Chapter Four - Basic Amplifiers is where the real action starts and is arguably the most interesting. Detailed descriptions are given for measuring the Frequency Response, Gain, Power Output/Response, Harmonic Distortion, Intermodulation Distortion, Input and Output Impedance etc. Square

wave testing is covered in detail with clear illustrations as is steady tone and impulse tone-tests, each aspect is discussed in detail with suggestions on how the tests can be performed and what sort of results can be expected.

Chapter Five covers Output Transformer measurement and looks at their importance in an amplifier, their high and low frequency performance, leakage inductance and efficiency. Chapter Six moves on to preamplifiers and focuses on the different test requirements between pre-amplifiers and power amplifiers. Gain and Frequency responses are looked at again along with Distortion, Noise and Cross Talk. Tone and loudness controls are also covered.

Chapter Seven changes tack and looks at pickups and arms and how to measure sensitivity, impedance, compliance and dynamic mass. Chapter Eight continues this theme looking at the Turntable covering speed stability, rumble and wow. Next, in chapter Nine, the book takes a look at open real-to-real tape. Among the topics covered are High Frequency Bias, Azimuth adjustments, Frequency response and Dynamic range. Chapter Ten wraps things up with a detailed look at microphone testing, which is an intricate and largely irrelevant (to hi-fi at least) subject.

Naturally, being written in 1958, Music cassette, Compact Disc, Mini disc etc. are not covered. This does not detract in anyway from the enjoyment of the book. The book is not just about testing and measurement, the author gives detailed background information on each subject covering how things work and operate whilst also



discussing what criteria is required from the various components under test. The book is clearly written with no confusing 'jargon' and the text is very easy to follow. There is very little math - the copy is littered with easy to follow illustrations, at the end of each chapter there is a useful 'recommended reading' list which seems to be a compilation of Norman's other literal works!

Although the book is not a step by step guide on how to measure audio equipment but more of a general overview of what is required, it contains just enough information to get you started. All in all a very good read with lots of practical information on audio equipment testing for the dedicated DIY'er. A must for all Valve heads!

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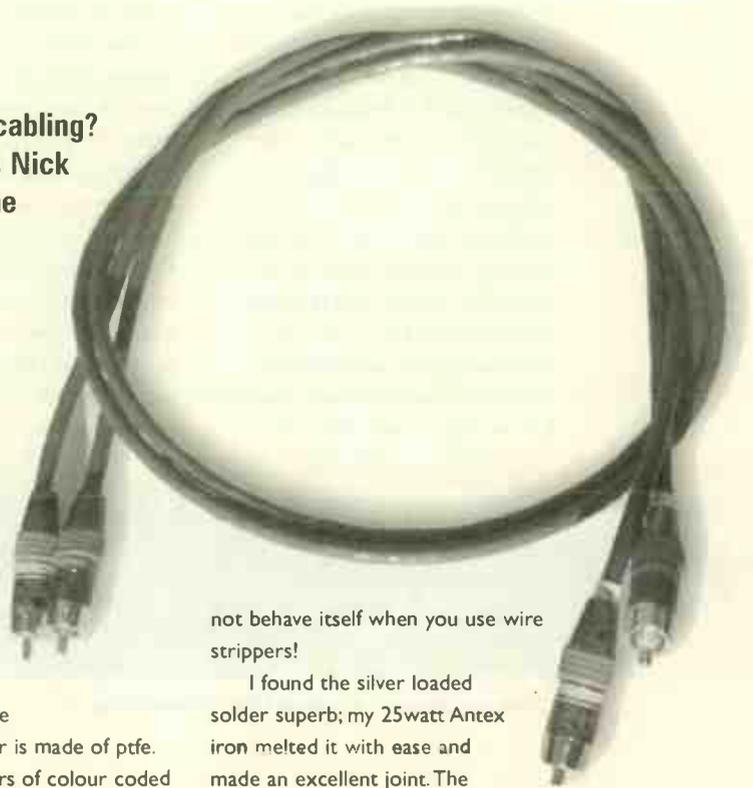
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A CLEAR REFLEXION

Are you astounded at the prices of audio cabling? Well, there is an affordable alternative, as Nick Lucas demonstrates when constructing the Reflex interconnect kit from Audio-Links.



There are numerous manufactured interconnect cables on the market, with some companies selling cables at totally ridiculous second-mortgage prices. Amongst all this it's good to know that there is an alternative, as long as you can wield a soldering iron.

Audio-Links are based in Lincolnshire and have been trading for eight years. They are a hi-fi upgrade company that also sell a large range of audiograde components. As part of their cable kits range, that also includes digital interconnects, loudspeaker cable, mains cable and scart leads, they sell the Reflex interconnect kit. This, I felt, needed a closer look, so I gave them a call and they promptly sent one my way for my appraisal.

IN THE KIT

The kit provides 2m of Reflex cable, which is 5.5mm diameter and low capacitance - great for passive pre-amps. and screened balanced interconnect. The cable itself is composed of two sets of silver plated ofc (oxygen free copper)

stranded conductors, insulated in ptfe (polytetrafluoroethylene). The screen section is made up of silver-plated ofc closely weaved. The brown outer cover is made of ptfe. There are two pairs of colour coded marbled phono plugs, made of gold plated copper alloy with ptfe insulation. Also provided are 1m of silver loaded solder and two earth markers.

The parts are of very good quality, the cable being well constructed and very tightly wound. The phono plugs are heavy duty and make good contact when inserted into a phono socket. The one page instruction sheet was easy to follow - lets face it, out of all the kits available, making interconnects is relatively straight forward, though sometimes a bit fiddly. These took about 45 minutes to construct and the one tool I found useful was a Stanley knife blade, used with little force., which was excellent at removing PTFE sleeving - PTFE does

not behave itself when you use wire strippers!

I found the silver loaded solder superb; my 25watt Antex iron melted it with ease and made an excellent joint. The problem with some silver solder is that the high silver content means you need a high temperature iron to create a good join - no such problem here. During assembly you mark off the end that has the screen braids attached to the phono plugs with the earth markers. These have the earth mark on a small section of white heat-shrink tubing. It is advisable to keep the "earth" end at the amplifier end of the system.

The Reflex interconnects are described as being pseudo-balanced which does require some explanation. In normal interconnects (un-balanced) you have the signal wire that carries the signal section and then you have the "common" screen portion that effectively connects the shield, ground or



Close up of phono socket.

instrument chassis of the two components together. With balanced interconnect you have a third element that is a dedicated, ground conductor, that accompanies the signal. This provides a reduction in noise and distortion. You have to use equipment that caters for balanced input and balanced output though. The Reflex interconnect is termed pseudo-balanced because it uses three conductors, but the screen braid is not connected at one end, so it is half way to being balanced.

much, much more.

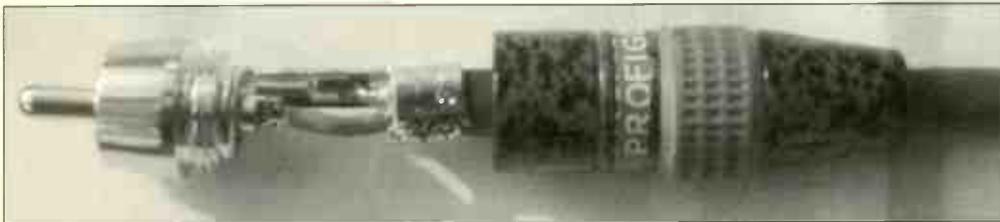
Essentially it's in the upper bracket (e.g. Black Rhodium and Nordost cables) mould, in as much as it concentrates on gleaning as much detail as possible from any recording. And that includes less obvious intricacies as well as the more essential information. Mahler's *Das Lied von der Erde* on a superbly clean Reference Recordings HDCD played by the Minnesota Orchestra under Eije Oue had superb transparency and the type of instru-

mental lucidity that brought me straight into the middle of the recording session. The air and space inherent in this recording was emphasised by the Reflex and created a big and spacious soundstage for the large orchestra to sparkle in.

A quick flick of the remote saw a change over to Paul Weller's Stanley Road which sounded fast and tight, with a good, hard pounding kick drum and super clean vocals and guitar lines in the track *Out Of The Sinking*. Bass was very firm and speedy and the treble, whilst detailed, wasn't over sibilant or splashy. Compare these cables with any 'ready made' rival at the same price and it will be a case of night and day, believe me. Very much a bargain.

The Reflex interconnect kit is priced at £56.40 + postage in the UK this amounts to £3.00 and is available from Audio-Links. A catalogue of all parts sold by Audio-Links is available upon request by post or by an e-mail attachment.

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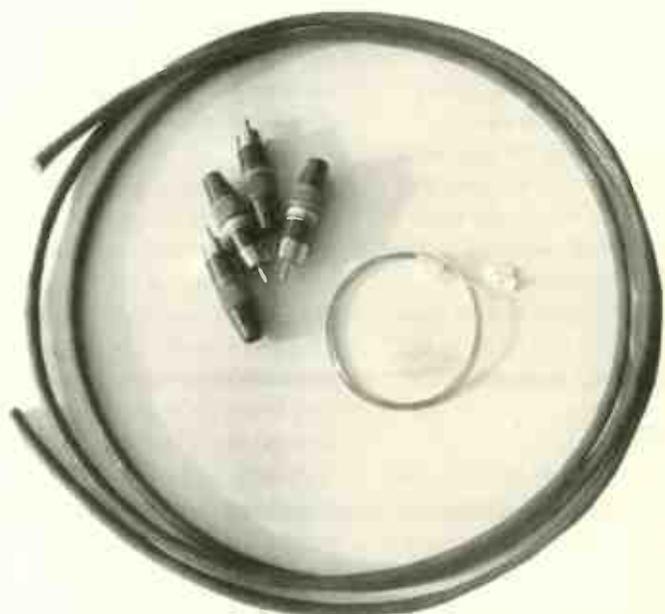
Close up of cable soldered into phono plug.

Incidentally, Audio-Links have sonically analysed all the different ways to wire-up these interconnects and came to the conclusion that for un-balanced systems this pseudo-balanced configuration came out the best. For those that do have balanced systems you would obviously wire up the screen at both ends. The recommended burn in time is 20hrs.

SOUND QUALITY

by Simon Pope

I was very impressed by the Reflex interconnect. It has a very fast and immediate sound with an especially detailed and open midband and treble which puts it up amongst some cable I've heard that cost



The complete kit

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KRELL KPS28 CD Player EX-DEM	£8998	£6746
LINN Karik CD	£1850	£1098
MARK LEVINSON 31.5 Ref transport	£10500	£6500
MARK LEVINSON 360S DAC	£7500	£4875
MICINTOSH MCD751 CD Trans EX-DEM	£2549	£1596
MICINTOSH MVP842 DVD Player EX-DEM	£3390	£1996
MERIDIAN 203 DAC	£499	£228
MERIDIAN 563 DAC	£705	£398
MERIDIAN 500 Trans	£1400	£798
MERIDIAN 596 DVD Player EX-DEM	£2549	£1996
MICROMEGA DAC 1	£750	£320
MONRIO Asty CD Plyr NEW IN BOX	£750	£495
MONRIO 1882 DAC EX-DEM	£600	£295
NAIM CD3		£595

NAIM CDS/XPS Mk2 EX-DEM	£6265	£4994
NAIM CDX Ex-dem	£2470	£1974
NVA Emotive Statement (Must be seen!)	£2200	£998
ORELLE DA10T Trans	£900	£450
PIERRE LURNE Elixir DAC	£500	£348
PIERRE LURNE Audio Merca Kreatura Trans	£950	£598
PRIMARE V20 DVD Plyr EX-DEM AS NEW	£998	£848
RADFORD WS1 CD Player	£999	£358
REGA Planet	£500	£350
REGA Jupiter Ex-dem	£1000	£658
REVOX B225	£1000	£348
TAG CDT20R (Trans)	£2200	£1100
TEAC VRDS 10 (CD Player)		£450
THETA Gen Pro IV	£4500	£2400
THETA DATA Basic	£2400	£1100
THETA Pro Time II	£2000	£995
THORENS TDC2000(Trans) + TDA2000(DAC)	£2000	£1198
THORENS TDA2000 Integrated CD Player	£995	£796
TRICHORD Pulsar 1 DAC + PSU	£1800	£1298
WADIA 8 Tran+DDE12 DAC	£7500	£3600

AMPLIFIERS • TRANS

AUDIO ANALOGUE Maestro EX-DEM AS NEW	£2600	£1796
AUDIOLAB 8000A Integrated	£700	£300
AUDIOLAB 8000Q Pre	£1200	£596
AUDIOLAB 8000M X 2 Power amps	£1600	£796
BAT VK40	£4950	£2600
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CYRUS Power	£700	£358
CYRUS III	£600	£358
CYRUS PSXR	£498	£228
CYRUS Monoblocks	£1800	£700
DENON AVP-A1D Digital Pre-amp	£2500	£1299
DENON ADV 700 Ex-demo	£750	£644
DEVA 250 Integrated + Matching Power	£1000	£450
ELECTROCOMPANIE EC3 MC	£2200	£1188
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KRELL KAV300i EX-DEM AS NEW	£3965	£3168
KRELL FPB300 EX-DEM AS NEW	£9998	£6946
KRELL KCT Pre-amp EX-DEM	£9998	£6998

KRELL KAV250P Pre	£2995	£1850
KRELL KAV250A Pwr (Choice of two from £2350)	£3698	£2350
KRELL FPB650 Mono's. 5 available, price each	£14,000	£8000
LFD LS1 Pre-amp	£1900	£500
LFD LS2 Pre-amp	£950	£250
LINN LK1	£450	£194
LINN LK2	£550	£299
LINN Kairn Pre	£1700	£1098
MARK LEVINSON 32 Pre inc phono	£17500	£11380
MARK LEVINSON 33H Power amps	£20000	£13000
MARK LEVINSON 27.5 Power	£6000	£3998
MICINTOSH MX 132 Pre/Processor Ex-dem	£7990	£4676
MICINTOSH MC7108 B Channel Ex-dem	£2549	£1996
MICINTOSH MC122 EX-DEM AS NEW	£1249	£946
MICINTOSH MC350 EX-DEM AS NEW	£5750	£3746
MICINTOSH MC7108 B Channel power Amplifier EX-DEM AS NEW	£2549	£1998
MICINTOSH MX132 AV contr EX-DEM AS NEW	£7990	£5498
MERIDIAN 201 Pre	£760	£329
MERIDIAN 563 Ex-dem	£700	£446
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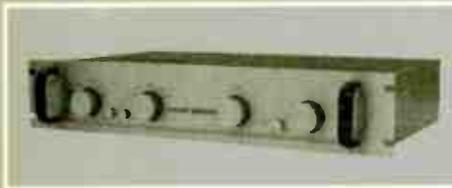
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AUDIO RESEARCH LS15 Pre	£2995	£1996
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AUDIO RESEARCH LS16 Pre-amp EX-DEM	£2999	£2398
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UNISON RESEARCH Feather 1 EX-DEM	£795	£495
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B&W DM801 (Rosewood)	£1500	£749
B&W THX System EX-DEM	£4975	£2498
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CASTLE Howard S2	£1400	£848
DALI 400	£800	£400
DYNAUDIO SDA 2.4	£650	£340
ENSEMBLE Primadonna VERY RARE	£10,000	£4,000
EPOS ES14 Inc stands	£950	£394
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KEF Ref 4.2 (Rosewood)	£3650	£2300
LINN Kaber (Black)	£2000	£780
LINN Kaber (Rosewood) ACTIVE	£2500	£1350
M&K VX100 Sub EX-DEM	£754	£634
M&K VX7 Mk2 Sub EX-DEM	£474	£384
MAGNA PLANAR 1a Imp	£1400	£850
MAGNA PLANAR MG111A	£3500	£1195
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MARTIN LOGAN SL3	£3399	£1995
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McINTOSH LS320 EX-DEM	£1790	£1196
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MISSION 783 (Beech) EX-DEM AS NEW	£999	£794
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REGA Naos (Cherry) EX-DEM AS NEW	£998	£794
REGA ARA (Cherry) EX-DEM AS NEW	£255	£214
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WILSON BENESCH Act-1 EX-DEM AS NEW	£6999	£4499
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SONY ST770ES	£440	£250
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Heed Audio Quazar 2 Box Phono Stage New and Boxed	599	399
Lehmann Audio Black Cube SE New& Boxed	650	399
McCormack Phono Stage New and Boxed	650	399
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Preamplifiers

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CAT SL1MKII Reference Phono Pre amplifier S/H	6500	3799
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Einstein "The Tube" Preamplifier x-Demo	6000	3999
Krell KAV-S Processor/Preamplifier DTS/AC3/Pro Logic S/H	14989	3750
Roksan L2 preamplifier S/H	1295	499

Amplifiers

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Bryston 4BST Stereo Power Amplifier S/H	2400	1399
Bryston B60R Amplifier S/H	1550	1099
DNM PA3S Stereo Power Amplifier S/H	2900	1699
Electrocompaniet ECI-3 Integrated x-demo	1249	799
Graaf GM20 OTL Stereo Valve Amplifier S/H	3295	1895
Lavardin IT x-demo	3200	2250
Parasound 1205 multichannel amplifier x-demo	1695	1199
Pass X150 Stereo Poweramplifier S/H	4750	1999
Roksan Rok S1.5 Power Amplifier S/H	1499	945
Union Research S6 Valve integrated S/H	1600	1199

Loudspeakers

BKS 107 MKII Supreme Ribbon Hybrids x-demo	2199	1599
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Indigo Model Two Centre Channel Cherry S/H	199	129
Jm Lab Micro Utopia Dark Cherry New and Boxed	4500	3799
JM Lab SW900 Subwoofer S/H	1079	699
Opera Operetta Mahogany x-demo	795	575
Wilson Benesch Orators Cherry S/H	2800	1599

Cables & Accessories

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Roksan HAO1 1M Interconnect S/H	99	49
Roksan HAO1D 0.5m Digital Interconnect S/H	49	25
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Target R2 Stands S/H	329	199
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Ecosse Ref I/Connects MS2 £135.00	vdH The Wind Speaker Cable 3m Pair £ 125.00
Electrocompaniet EC 4.6 Pre £ 795.00	vdH Royal Jade 3m pair £ 30.00
Electrocompaniet AW250R Power . . £2800.00	Wadia 6i £1600.00
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ARCAM T61 Silver Tuner	NEW £250	£180
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LINN LP12 Turntable	EX/DEMO £1,075	£700
MARANTZ ECLIPSE 70 DVD Combi System	EX/DEMO £1,500	£900
MERIDIAN 568 Digital processor	EX/DEMO £3,885	£3,250
MERIDIAN DSP33 DSP Active Speaker	EX/DEMO £2,595	£2,200
MERIDIAN DSP5000 Cherry Speakers	EX/DEMO £3,885	£3,100
MERIDIAN DSP5000C Black Centre Speaker	EX/DEMO £1,995	£1,600
MERIDIAN DSP5500HC Centre Speaker	EX/DEMO £3,750	£3,200
MISSION 782 Speakers	EX/DEMO £600	£550
MISSION 78C Centre Speaker	EX/DEMO £300	£250
MISSION 78DS Speakers	EX/DEMO £300	£250
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MUSICAL FIDELITY CDPRE CD Player/PRE Amp	EX/DEMO £2,000	£1,600
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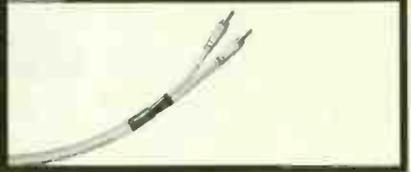
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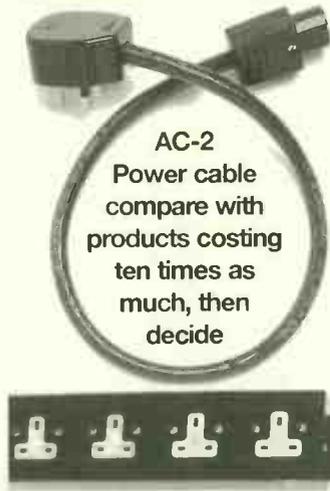
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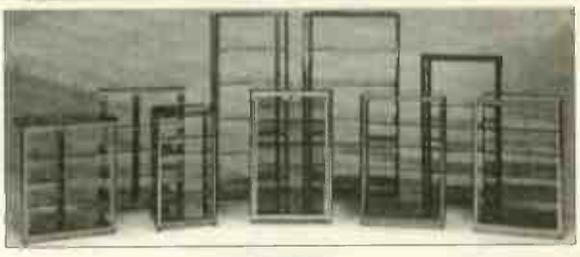
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The CD Damping Feet are made from the same material as the Standard Damping Feet. If the sound of your CD/DVD player is sensitive to vibrations, the CD Feet will be the way to go. The sensitivity to shock and the accompanying mlstracking will be reduced with the use of the CD feet. They can also be used with any other audio product that you would like to isolate from vibrations. The set contains four small and one large foot. The large foot is used if the centre of gravity is off-centre or for those CD/DVD players that have five feet. **CD Feet cost just £9.99 per set.**

There are two types available for Loudspeakers:

Audiophile Damping Feet provide the best possible isolation and damping but it is important that the feet are optimised to the weight of your loudspeakers. Both the stiffness and size of the feet are selected to achieve this. Speakers within the range 5 to 200 kg can be optimised. Let us know the mass of your loudspeakers and we can advise you the correct set to purchase.

Audiophile Damping Feet are available for most high-end loudspeakers from 5kg upto 200kg. Price per set of eight feet: £60.00.

The **Standard Loudspeaker Damping Feet** have a large overload margin, and are lower priced than the Audiophile version. The resonance frequency is a few Hertz higher. The colour is nut brown, except for the stiffest feet which are grey. The standard feet are produced in four different weight classes and do not need to be fine tuned to specific loudspeaker models.

Standard Damping Feet are available in four sizes: upto 12kg, 12-28kg, 28-50kg, 50-100kg. Price per set of eight feet: £19.99.

These feet will give a substantial decrease in loudspeaker cabinet movement. This is apparent when you put place one finger softly against the top of the front baffle, as it will vibrate much less after damping. The transmission of vibrations from the cabinet will also be reduced. The music will be cleaner, with a "less coloured" sound quality.

BEFORE >>:
(top) 125 Hz sine signal to the speaker, (lower) floor movement, using spikes



<< AFTER:
(top) 125Hz Sine signal to the speaker, (lower) floor movement, using soft feet (note floor signal magnified x2)

Visit our website at www.sonicdesign.co.uk to see more details or to read *satisfied customer feedback*.

Sonic Design Damping Feet are available from Hi-Fi Care, Custom Cable and all good specialist hi-fi & accessory retailers. (trade enquiries are welcome - email: tradesales@sonicdesign.co.uk)
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TEAC WFD10 cd player excellent	800
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TECHNICS SUPST50 asc player quite with	
WADIA 64.4 DAC	

VALVE AMPS

AUDISON STIMULUS phono stage	700
AUDISON PREMIER one box pre with phono	1500
BEARD BB8100 line integrated, serviced, 50 watts per channel good buyer collect	1500
BEARD P50 power amp excellent sound, very large and heavy	
CONRAD JOHNSON P18 preamp. With phono board	2000
CONRAD JOHNSON PREMIER 2 pre amp with phono, very wide rich sound	3000
CONRAD JOHNSON PREMIER 2 mc step up with nuvoson	
CROFT SERIES 195 power amp	
CROFT EPOCH DELUXE pre mahogany front with phono stage and paper in oil coupling caps, boxed	1000
CROFT APPARITION OTL power amp, mahogany front, boxed	1200
EDISON HFA 12 power amp, 12 watts per channel 8B4s, great little amp	700
LEAK STEREO 201 great vintage low powered amp if you care about a bit but want to try valves start here	
LUMLEY LV1 valve preamp line level chrome, very bad BACK SOUND	2000
LUDHAM amp much modified, carbon fibre chassis, low noise resistor, fancy caps etc. 6550 output	2000+
QUAD 185 excellent re sprayed set with knob VALVES	
TALOGY 901 preamp with phono	995
UNISON RESEARCH UNICO with phono stage 1 month old, mint boxed	1000
UNISON RESEARCH SIMPLY FOUR great midrange Italian style with wooden bits boxed	1895
UNISON RESEARCH FEATHER ONE/POWER 35 pre/power, lye wood on these too! boxed	1250

LOUDSPEAKERS

AAD SOLISTICE, piano black with custom sk stands, open baffle design, easy drive superb	3000
AACAYONS speakers rosewood boxed, neat little floorstanders, lively friendly	3500
AUDIO PHYSICS TEMPO orig version, black, with Essex digital correction unit that fits between transport and	
dac and gives impressive bass, new bass drivers fitted	2500

COST PRICE	CASTLE HAMLECHS, neat floorstanders with top firing mid range, like howard but smaller	900	500	EC AUDIO FINESTRA, preamp, TOM EVANS designed excellent sound	1300	550
	HEYBACON SEXTETS mk1 upgraded with mk2 spec bass unit, ribbon tweeters, boxed	1250	500	ELECTROCOMPANET 4.5 pre, pre balanced and remote, boxed	1300	650
	IMPULSE H7 little horn loaded floor standers REDUCED		300	HAFNER DH110/200 pre-POWER with tone controls, 200 WATTS		300
	LINN KAESER cherry board	175	300	HARMON KARDON CITATION 111 pre/12 DELUXE power amp, with wooden sleeves, from the glory days		300
	LINN KABERS black passive with ku-stone stands	140	800	KELVIN LABS 2 box pre with phono		700
	LUMLEY 3.5 floorstanders, nice and efficient, used to be recommended by croft, boxed	150	550	KENWOOD M2 200watt power amp (with volume control)		275
	MERIDIAN M3 active speakers mkc	325	300	KENWOOD RAFT 1030 integrated amp, usual		80
	MISSION 754 freedom, boxed premium prima vera(psk) finish, last version boxed	1500	600	LFD L51 line preamp		1000
	MARANTZ 700		780	LFD PAR		800
	MARANTZ 700		740	LFD PA0		350
	MARANTZ 700		740	LFD L5100		300
	MARANTZ 700		740	LINX VEGA 75 watts per channel power amp		200
	MARANTZ 700		740	LUDMAN L 80-V integrated amp		150
	MARANTZ 700		740	LUDMAN L120 power amp silver framed 120 watts per channel		250
	MARANTZ 700		740	MERIDIAN 20 pre		300
	MARANTZ 700		740	METARAS CHARISMA PREAMP		1525
	MARANTZ 700		740	MICHEL ARGO Hifi line pre with Hera		1350
	MARANTZ 700		740	MOTU 100 WATT MONOBLOCKS		300
	MARANTZ 700		740	MUSICAL FIDELITY A1 special edition 200 ONLY MADE		350
	MARANTZ 700		740	MUSICAL FIDELITY P173 pre, decent phono stage and tone controls		250
	MARANTZ 700		740	MUSICAL FIDELITY THE PREAMP/DR THOMAS		350
	MARANTZ 700		740	NAM mag90 new style boxed		200
	MARANTZ 700		740	NAM NAP903 slim style		200
	MARANTZ 700		740	NAM 327/40 old style		900
	MARANTZ 700		740	NAM 42 pre with mc phono stage		90
	MARANTZ 700		740	NAM photo boards 323 mc available 20 pounds/pair		
	MARANTZ 700		740	NAM 140 new style		400
	MARANTZ 700		740	NAM mag 32 & mag 250 very old style with screws at top, with pau		750
	MARANTZ 700		740	ORVILLE PH400 monoblocks 200 watts per channel		1500
	MARANTZ 700		740	QUAD 33/503 good condition		150
	MARANTZ 700		740	QUAD 405 MK1 1000 watts of power		175
	MARANTZ 700		740	ROTEL RC995 pre with phono board		700
	MARANTZ 700		740	ROTEL MKH1 MK10 passive pre, scratch on front panel boxed		350
	MARANTZ 700		740	SONY ESPRIT TAN 88 preamp, mint boxed lovely		300
	MARANTZ 700		740	TALK ELECTRONICS HURRICANE 3P/TORNADO 3P pre/power, boxed with remote		2000
	MARANTZ 700		740	THRESHOLD CAS 2 100 watt per channel model power amp		2000
	MARANTZ 700		740	YAMAHA F7200 professional series power amp 200 watts per channel big and heavy		
	MARANTZ 700		740	with grab handles and nu meters		350

TUNERS, CASSETTE DECKS, REEL-TO-REEL

AKAI GS52 cassette deck, 2 available	300
AUDIO REFINEMENTS complete tuner silver	400
LEAK THROUGHLINE Hi STEREO legendary tuner checked over by ourselves	300
MARANTZ spectrum analyser/graphic	200
MARANTZ S872 scratch noise suppressor, poor cosmetic condition	700
NAMAMICHI BX125 cassette deck	
NAMAMICHI BX2 cassette deck, just serviced	
NAMAMICHI DX600 cassette deck just serviced	
NAMAMICHI TRITRACER 1000 serious base service with service manual	
PANASONIC ST 2700L silver analogue tuner lum/um	
PIONEER F-4451 black ribz tuner	160
PIONEER F301 A25 tuner	60
PIONEER DYNAMIC PROCESSOR (expander) RGP	20
SONY EL CASSETTE 5 with 10 tapes	
TEAC Y5000 cassette deck, 3 heads, dual capstan	400
TECHNICS EL CASSETTE 7500 rare collectors item with 10 cassettes	
TECHNICS RB8545 cassette deck, good budget deck recommended	200
TECHNICS ST SIL silver analogue tuner LW/MW/WH	20

TRANSISTOR AMPS

ARCAM ALPHA 10 integrated amp, remote, boxed	1000
ARCAM ALPHA 9 integrated	1000
ARCAM ALPHA 9 preamp	350
AUDIO ANALOGUE BELLINI/ROMIZETTI pre amp, NOT REMOTE, boxed	
AUDISON platinum hybrid, valve input stage, modest output, remote controlled integrated amp, pos 1500	
BARATOLUOME s1140 Italian power amp, very clean and punchy recommended	1500
BGW 202 pre amp and mc stage	
BRISTON Q3 preamp, about halfway through the usual 20 year guarantee	
CRONSON 620 stereo power amp	
CYRUS ONE scruffy, boxed	
DHM preamp, metal case but with series 3 boards line only	
DPA DSP1005/P pre AND POWER amp, neat little detailed sounding	

TURNABLES, ARMS, CARTRIDGES

LINN LP12 black with YALHALLA bakak arm	400
MICHEL 150 mc phono stage	225
MOTU (mega drive) it with old r2000 arm and at cartridge	90
PIKE THROUGHLINE LPT/16 300/ata/c5 no lid	300
PROJECT 6 current/arm	200
Rego arm WITH INCOGNITO REWIRE	225
ROCKMAN KEENES with spa 2, and rewired alphasen arm, black ash	500
ROTEL PHONO STAGE	130
TECHNICS SL1300 turntable, direct drive, pitch control etc	125

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A Integrated Amp with Phono Stage	£595
Audiolab 8000 SX	£425
Audiolab 8000C pc amp	£150
Audiolab 8000P	£395
Audiolab 8000D Remote Pre amp	£495
Audiolab 8000SE Remote Int Amp	£395
Audionote M1 Valve Pre Amp with Phono Stage	£2,300
Audio Research VT100 MkII	£2,300
Cary SLP94 Valve Preamp with Phono Stage	£750
Copland CSA8 Integrated Amp as new	£595
Croft Super Micro II with GT Audio Upgrade	£295
Cyrus I Integrated Amp (Last Version of this Model)	£95
DPA Renaissance Class A Int Amp	£295
EAR 834P Valve Phono Amp	£235
EAR 834L Valve Line Stage	£275
Krell 300i Integrated Amp (Final Version)	£1,595
Linn Klout Power Amp	£995
Linn Preamp and Digital Processor (New £4500)	£1,495
Marantz PM 66 K1 Sig Int Amp	£245
Meridian 505M Monoblocks ...Mint	£1,195
Meridian 557 Stereo Power Amp	£1,095
Meridian S41 Preamp (£1000 new)	£399
Musical Fidelity P180 Power Amp	£495
NAD Silverline Power Amp	£995
Pioneer A400 Integrated Amp	£175
Pioneer A400X Int Amp	£195
Quad 303 Power Amp	£195
Quad 77 Pre and Power Amp	£195
Quad 44 pre - old style	£595
Rega EX5 Power Amp	£295
Rotel 6 Channel Power Amp	£195
Sony TA/FB930R Integrated Amp with remote	£195
Sugen A48 Integrated Amp	£95
Tube Technology Genesis Monoblocks 100Watts ...	£1,350
Turntables	
Dias Turntable ...Polished Steel	£550
Dunlop Systemdeck (round chassis model)	£350
Fischl CQ30 with Mission 774 tonearm 78rpm faculty	£250
Melch Gyrodeck - mint boxed	£595
Pink Triangle LPT with Tabriz Z1 Arm	£495
SME V Tonearm boxed	£995
System Deck 10X turntable ..UPGRADE	
YOUR REGA from	£150
Thorens TD125	£195
Various Thorens TD150s ...from	£50
Speakers	
Audiomaster Studio Monitors	£195
B&W CDM2 SE Speakers	£250
Elac Jet 310i with Stands, Boxed	£550
JBL T1 2k boxed unopened new £1600	£995
KEF RDM One Monitor Series Bookshelf Speakers	£395
Linn Index Speakers	£195
Linn Isobarik Loudspeakers (Mint Condition)	£595
Linn Kan Speakers - boxed, stands	£250
Mission 780 Speakers	£695
Mission 751 Bookshelf Speakers	£695
Mission 700 Bookshelf Speakers	£175
Musical Fidelity MC2 Bookshelf Speakers	£195
Neat Critique rosewood finish speakers	£350
QLN Splitfield Signatures	£895
Rogers LS33 with AB 33 new £600	£275
Solstice Advanced Acoustic Design open baffle design speakers with OVB Covers and stands	£495
Snell Type K Speakers - Kimber Silver Wire (Boxed Mint)	£295
Spondor BC1 Speakers	£250
Tannoy D100 Bookshelf Speakers	£395
Tannoy Chievo Speakers 12" Dual Concentric	£595
CD Players, DACs	
Audiolab 8000 CD Player	£550
Audio Research CD2 CD Player	£1,600
Audio Research CDT1 Transport (new £3000)	£1,095
Marantz CD63 top loading CD Player	£95
Linn Karik 3 CD Player	£795
Linn Mimik CD Player	£450
Micromega CD Player Stage 3	£295
Pink Triangle De Capo DAC with 1307 Filter	£595
Quad 77 CD Player	£395
Rotel RCD 965EX CD Player (Fitted with Black Gate Caps as standard)	£175
Rotel RCD 991 (Heavy Weight CD Player) -£900 new	£475
Teac VRDS10	£450
Tuners, Reel to Reel, Cassette Deck, misc	
Quad FM3 Tuner (Boxed Mint)	£145
Rotel RT930 AX Tuner	£95
Revox G36 Open Reel Mint	£395
Tascam 22/2 Open Reel	£395
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Due In	
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Quad II Monoblocks	
Quad 33 Preamp	
Gate 401 Spkrs	

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PS Ear 869 single ended triode integrated amplifier improved version of the classic 659 with revised output transformers modified input stage with the addition of a extra signal valve which has allowed an increase to 15watt of single ended power, also the 869 can be used as a power amp. Don't be fooled by its modest power output this amp drives real world speakers. price £2298.00



PS Ultimate Ear Phono Stage This is the ultimate esoteric Phono Stage as used in the world wide acclaimed Ear 312 Control Centre - Pre Amp. This has to be the ultimate Vinyl Replay purchase. price £1895

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PS There are now four models in the EAR lineup: The classic 834P uses the same circuit architecture as its more expensive brothers, and shares the same high quality sound through MM type cartridges, it is enclosed in a tough, rigid metal case and is fully 'CE' type approved, price £395.00
 The signature builds on the Classic 834P specification by adding a superb moving coil (MC) input stage, as well as the no-extra-price option of a high quality volume control, price £550.00

Top to the range, the Deluxe 834P comes in stunning chrome and gold cabinet, and has extra attention and quality control. With different moving coil input options, this unit will fit the most demanding audiophile systems. For the true vinyl enthusiast, price £800.00

MC3-1 The ultimate stage for MC matching with 3 fixed transformer taps to cover all types of moving coil cartridges, and separate lettrignd grounding. MC3 In used in the new £10,000 312 pre, price £630.00

Selected products from: ATC, Audio Physic, EAR Yoshino, Nottingham Analogue, Dynavector.

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- dnm
- goldring
- lyra
- urlofun
- sumiko

cables

- chord company
- dnm
- lfd
- nordost
- qed
- trichord
- van den hul

headphones

- beyer
- engo
- grado
- sennheiser
- stax

stands

- frameworks
- sound org'n
- something solid
- soundstyle
- stands unique

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- creek
- densen demagic
- goldring
- kontak
- michell
- milty
- moth
- nordost
- pixall
- qed
- rms
- shure
- trichord
- zerostat

hardware

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- audio physic
- densen
- epos
- harbeth
- in-focus
- lexicon
- michell
- naim
- nordost
- primare
- red rose
- sme
- sugden
- trichord

Second hand & ex dem deals



ATC A7 Tower loudspeakers. "Rosenut" veneer, S/H, boxed. Originally £1200. Since last advertised they have acquired some minor shipping damage . . . £325 to clear



Harbeth Compact Seven ES loudspeakers in Eucalyptus veneer. Perfect condition. Complete with Something Solid XF stands (as pictured). The speakers are boxed. S/H (£1665) £950



Jamo Concert Eight loudspeakers. American cherry veneer. Unmarked, boxed. S/H £1400) £795

Densen B200 preamplifier. Black anodised aluminium case with chrome controls. Remote controllable with Densen "Gizmo" handset. S/H, boxed, unmarked (£1000) . . . £650

Densen B300 power amplifier. Black anodised aluminium. 100 WPC, S/H, boxed, unmarked (£895) . . . £580

used cables

Nordost		
1x2m pair Red Dawn (rev1) spkr cables (£530)		£318
1x2m as above but bi-wire. (£569)		£335
1 x 2m pair SPM loudspeaker cables bi-amp (£2300)		£1350
1 x 3m pair SPM cables bi-wire (boxed) (£2970)		£1775
1 x 1m pair Valhalla phono interconnect (£2195)		£1600
1x 1m pair Valhalla balanced interconnect (£2225)		£1620

Other		
1 x 0.5m pair Chord Chorus (£154) boxed, as new . . .		£110
2 x 1m pair QED Connect 4 (£50)		£20 per set
1 x 1m pair van den hul The First. Unused (£240) . . .		£145
2 x 0.8m pair vdH C5, "The Bay"		£30 per set



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Common	Electric Circus	£17.90
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Hell Is For Heroes	Neon Handshake	£13.90
Kid Loco	Another Late Night	£16.90
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Pram	Dark Island	£13.90
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Santana	The Shamen	£14.90
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Solomon Burke	Don't Give Up On Me	£TBC
Teenage Fanclub	4760 Seconds...The Best Of	£17.90
The Faint	Danse Macabre	£10.90
Tiga	DJ Kicks	£14.90
Tosca	Delhi 9	£TBC

REISSUE OF THE MONTH:

Pink Floyd "Dark Side Of The Moon"
 30th Anniversary Edition
 Limited LP and SACD with 5.1 surround mix
 - released 03/03

OTHER REISSUES NOW IN STOCK

Aretha Franklin	Spirit In The Dark	£15.90
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Bulldog Breed	Made In England	£16.90
Butterfield Blues Band	In My Own Dream/Resurrection	£15.90
Charles Lloyd	Love In	£15.90
Gram Parsons	GP	£13.90
Herbie Hancock	Blow Up (Soundtrack)	£15.90
Jackson C Frank	Blues Ran The Game	£14.90
Jeff Buckley	Songs To No One (with Gary Lucas)	£14.90
Jimi Hendrix	Blues 2LP (Classic Records)	£41.90
John Mayall	Blues From Laurel Canyon	£16.90
New Colony Six	Breakthrough	£15.90
Sun Ra	Hours After/Reflections In Blue	£12.90
Tim Buckley	Blue Afternoon	£14.90

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AUDUSA - OOM Silverlink Mono Crystal balanced speaker cable - conductor of 3mm diameter (approx 8 gauge), stranded silver on OFHC, plus three strands of Mono Crystal Copper for improved bass performance. Mylar infill and with designed in protection against RF and EMI. Cable OD 14.72 mm Priced at £12.95 per metre



AUDUSA EUPEN CSA 2.5 MAINS CABLE - HI FI CHOICE SEPT 2001 BEST BUY

GNLM 05/04 and GNLM 05/2.5 (CSA 2.5) Cable with FERRITE TECHNOLOGY - A polymer material mixed with a considerable quantity of homogeneously fine high quality ferrite powder is extruded around the copper conductors. As a ferromagnetic material, it will go through hysteresis loops whenever it is under influence of an alternating magnetic field. Consecutively magnetizing and demagnetizing the material will cause considerable losses of high frequency energy. This energy is absorbed in the ferrite grains and converted into heat. This effect is more or less proportional to the field frequency; high frequencies will be strongly attenuated, because their energy will be absorbed by the ferrite powder. The GNLM cables which in addition to the above described ferrite technology is further protected with a foil shield and a drain wire and specifically manufactured for High End audio use. **Said by some to be the most neutral sounding mains cable on the market**



AUDUSA - Eupen GNLM 05/2.5 (CSA 2.5) shown with Maringo IEC 320

Fitted with IEC (Martin Kayser) and MK Tough Cable can be supplied fitted to our all steel 4, 6 and 8 way distribution blocks. We can rewire the distribution blocks with Eupen cable as an extra cost option. Refer to our web site for details.



AUDUSA EUPEN GNLM 05/04

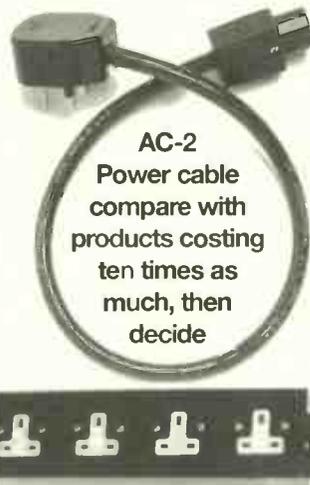
GNLM 05/2.5 (CSA2.5) £48 for 1.0m, £58 for 1.5m, £68 for 2.0m, Off the reel £30 for 1st meter, £20 per m thereafter. GNLM 05/04 £58 for 1m, £68 for 1.5m, £78 for 2.0m Also off the reel. Both GNLM cables available for export

AUDUSA Eupen and LAT AC 2 mains cable available with 16 amp IEC (for certain models of amps by Krell, MF Levinson etc) Maringo 320 IEC, Figure of eight, Bulgin, USA Hubble, European Schuko, Australian, Swiss, Danish, and Neutrik plugs.

SILVER SILVER SILVER - Upgrade the cable with silver plated contacts on IEC and and MK plug for an extra £6. IEC's and MK plugs with silver plated contacts available seperately at £6, £8 and £9 Why Silver plated contacts? Simple, silver is THE BEST conductor of electricity.

LAT AC-2 HI-FI CHOICE - SEPT 2001 - RECOMMENDED MAINS CABLE

We have developed a cabling (weaving) pattern along with an unusual shielding/filtering system that gets rid of the garbage that contaminates your components. The difference you hear with our cord is astounding. Our power cord takes advantage of silver in its design through use of our proprietary Silverfuse conductors. The conductors are 10 gauge and with PTFE; the best insulation available. Fitted as standard with IEC / MK Toughplug. . 60cm £62, 90cm £75, 1.2m £88, 1.5m £101, 1.8m £112 etc Other lengths available and off the reel. **4,6 and 8 way all steel mains distribution blocks fitted with UK, Schuko or USA sockets. CE tested & approved mains distribution units manufactured of heavy gauge steel, finished in black and fitted with high quality 13amp sockets. It has no filters, circuit breakers, surge protection, transformers, resistors, capacitors, LED's, on/off switches, chokes, regulators, just fitted with 1m of AC-2 mains cable. From £166 for 4 way, £198 for 6 way, £229 for 8 way.**



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products costing
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SILVERFUSE is a near alloy of silver and copper. IT IS NOT SILVER PLATED OR SILVER CLAD. Plating (or clad, which is the same thing as plating) causes a dioding effect when signal is passed through resulting in brightness and distortion. The Silverfuse process starts with seven nines OFHC copper wire with a diameter that is slightly larger than the required size. It is then pulled through a trough of molten silver. The wire with a silver deposit, is then forced through a compacting die where it is subject to tremendous pressure. The silver and the high purity copper are fused together into a near alloy. The compacting fusion also reduces the wire diameter to the desired size. No dioding subsequently occurs with this process. The result provides for the benefits of silver; which are excellent definition and clarity, with the high purity copper benefits of warmth and mellowness.

LAT INTERNATIONAL - Analogue, Digital and Video interconnects and Speaker cable- better than most others at double the price Refer to www.audusa.com for further details or ask for reviews



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New for 2002 Sunfire True Sub Woofer MKIV - 11 inch cube. Signature True Sub-Woofer 13 inch cube and Junior Sub Woofer 9 inch cube -all with two drivers, to as low as 16hz, 116 SPL and 360 cu ins of air movement, 1200 or 2700 watt patented amp technology. Classic Tube Pre-amp, Solid state power amps 2 channel (300 x 2 or 600 x 2) and 5 channel (220 x 5 or 430 x 5 - yes total of 2150 watts into 8 ohms or 4300 watts into 4 ohms) patented amp technology (no heat sinks) and Theatre Grand II processor pre-amp.



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BARGAIN BULBS



If you've always thought of valve amps as temperamental and expensive beasts, think again. World Audio Design's latest kit is designed with the budget conscious beginner in mind.

The Keci82 was created from a brief that demanded simplicity, ease of build and a super low cost. In order to achieve a reasonable power output we went for a push-pull amplifier.

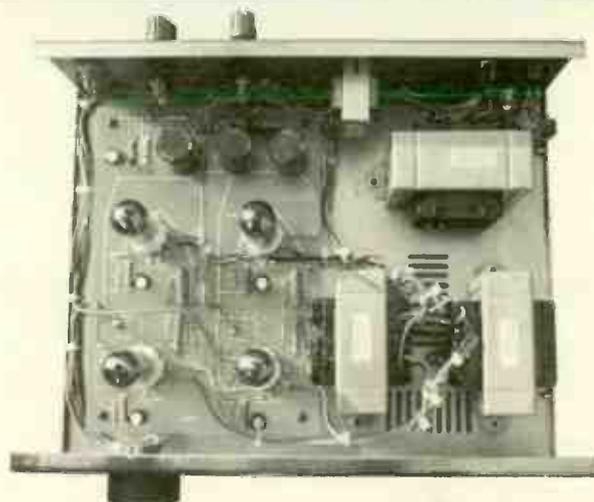
We chose the ECL82, a triode/output pentode. This tube is readily available and has a good sound. In push-pull mode it delivers 8Watts. Realistically you need a speaker of around 89dB or above. This is possible at a budget price - try the smaller Triangle models, or a Tannoy mX3 or even one of the older Missions like the 773e, or if you like building your own speakers, try the Adire Audio HE10.1, as reviewed in HFW October 2002 issue.

You will see that the front has only a volume control, and it is fed by one pair of phono sockets. A selector and tape/source switch were not used in this amplifier as they are tricky to wire up, and the aim was to make it easy to build. In fact, in many ways the Keci82 would be great powering a second system, using a CD player as a source, and will definitely give you a taster of what valves can offer. Measuring 30cm wide, 23.5cm deep and 11cm height with feet, it is entirely self-enclosed. The valves are visible through the four upper circular vent holes (one directly above each valve). We have kept the look simple with the minimalist front panel holding the volume potentiometer. The two-part chassis is constructed from 1.6mm mild steel with a durable black powder-coat finish. The whole unit is very sturdy, weighing in at 9kgs.

The signal input is in the form of a pair of gold plated RCA phono sockets that sit at the rear of the chassis. The speaker sockets accept 4mm banana plugs as well as bare wire. The mains switch is positioned at the rear of the amplifier, on the right hand corner for easy access. Mains power is received via an IEC lead. The Keci82 is based on a printed circuit board (PCB). The PCB is easy to follow with all component names, locations and orientations shown clearly. The amplifier requires no set up, you just turn it on. The kit will come with comprehensive instructions taking you through the build step-b-step.

SOUND QUALITY BY SIMON POPE

Purity is the key to this amplifier's design and sound. Because there's very little to get in the way of the signal what you get is an exceptionally sweet and simple sound that also has a superbly wholesome roundness to it. A high quality recording of Mahler's Das Lied Von Der Erde on Reference Recordings showed that the Keci82 faithfully reproduced all the depth and space of a full symphonic orchestra without any problems. Violins were smooth and sweet, as was percussion (which virtually sparkled) and the woodwind section was especially impressive, with a spacious and airy sound.



A run through Miles Davis's Kind Of Blue saw the little integrated delivering a detailed and precise sound that highlighted the warmth of Coltrane's tenor sax and the rich, deep sound of the upright bass. Rock and Pop records such as Radiohead's 'Lucky' demonstrated that the valves inside the amp, whilst small, are quite robust sounding, with commendable clout and bass depth for a humble budget 8W valve amp. This is a great introduction to the sonic art of the valve amp and a big upgrade for anybody with a mid-price solid-state amp that wishes to swap over to something more musically engaging, for a price that's virtually as cheap as chips!

MEASURED PERFORMANCE

Frequency response	+/-3dB 15Hz - 75kHz
power output	8 watts into an 8 ohm load
sensitivity	850mV (suitable for CD)
hum	0.5mV

**The Keci82 amplifier kit is available from World Audio Design
Tel/fax: 00 44 (0) 1908 218836 or order on-line at
www.worldaudiodesign.co.uk**

**Keci82 amplifier kit (UK price) £195.00
(inc. vat & carriage)**

**Keci02 amplifier kit (EU price) £195.00
(inc. vat, exc. carriage)**

**Keci82 amplifier kit (Overseas price) £170.00
(exc. carriage)**

HEATHCOTE AUDIO

TEL: 01992 653999 MOBILE: 07860 511111 E-MAIL ADDRESS: HeathcoteAudio@aol.com

VALVE AMPS

UNISON RESEARCH SMART 845 MONOBLOCS
GAMMA AEON 211 MONOBLOCS (NEW VALVES LATE PAIR WERE £7000)
ART AUDIO QUINTET POWER AMP
COUNTERPOINT SA-20
AUDIONOTE KIT 1 SIGNATURE (BLACK GATES HOVLAND MUSICAPS ETC)
NESTAROVICH LABS 150 WATT MONOBLOCS (VERY RARE/FANTASTIC)
LUMLEY REFERENCE LR-120 MONOBLOCS (TRIODE SWITCHABLE) REVALVED
UNISON RESEARCH MYSTERY ONE PRE AMP
AUDIO RESEARCH LS 22 REMOTE PRE BALANCED/SE RE-VALVED
CONRAD JOHNSON PREMIER 14 REMOTE CONTROL PRE AMP
AUDIO RESEARCH LS-2 PRE AMP
LUMLEY REFERENCE PP-40 PRE & ST-40 POWER AMPS (CHROME)

MINT/BOXED £2350
MINT £2250
MINT £1150
EXCLT £1150
AS NEW £1450
MINT/BOXED £2495
MINT/BOXED £1650
MINT/BOXED £995
MINT/BOXED £2950
EXCLT. £1995
MINT/BOXED £1295
MINT/BOXED £995

SOLID STATE

PINK TRIANGLE INTEGRAL (1 MONTHS USE NEW PRICE £3995)
PIONEER A91-D HUGE INTEGRATED DIGITAL & ANALOGUE INPUTS (RARE)
COPLAND CSA-28 INTEGRATED VALVE HYBRID (VERY GOOD)
COUNTERPOINT SA-20 (200 WATTS STEREO 600WATTS MONO)
AUDIOGRAM P-1 W02 ITALIAN POWER AMP (2X 45 WATTS)
SUGDEN AU-51 POWER AMP
CAIRN/EZO K-2 100 WATT MONOBLOCS PHONO & XLR (1 MONTHS USE)
EXPOSURE XXI REMOTE PRE-AMP
EXPOSURE IV POWER AMP
DNM 6 PRE AMP & PSU (SMOKED ACRYLIC CASES)
GAMUT C2 PRE AMP BALANCED/SINGLE ENDED
ECA VISTA PRE AMP(SUPERB)
REGA CURA REMOTE PRE AMP

AS NEW/BOXED £2995
MINT/BOXED £650
MINT £795
EXCLT £1150
NEW/BOXED £250
AS NEW £895
AS NEW/BOXED £795
MINT £695
MINT/BOXED £595
MINT £895
MINT/BOXED £795
AS NEW/BOXED £495
AS NEW/BOXED £295

CD

KRELL DSP MK11 TOPLOADER HEAVY PERSPEX LID (NEW LASER MECH)
PIONEER PD 93 INCREDIBLY RARE FLAGSHIP MODEL
COPLAND CDA-266
THETA PEARL TRANSPORT/DS PRO BASIC-11 DAC.
PINK TRIANGLE CARDINAL/ORDINAL 22 BIT/RECKLOCKING CABLES ETC.
THETA PEARL TRANSPORT
THETA DS PRO GEN III (AT&T, COAX.ETC.)
AUDIONOTE DAC 1X SIGNATURE
SONY CDP R-1 TRANSPORT/DAS R-1 DAC GOLD & WALNUT SIDE CHEEKED CLASSIC

MINT/BOXED £1795
MINT/BOXED £895
MINT £750
MINT/BOXED £2250
MINT/BOXED £1175
MINT/BOXED £850
MINT/BOXED £2395
AS NEW/BOXED £650
MINT £2250

VINYL

ROKSAN XERXES/REGA RB300/LINN K-9
MICHELL MICRO/REGA RB300
LEHMAN BLACK CUBE SE
AUDIO ALCHEMY VAC IN THE BOX MM/MC PHONO STAGE
PAUL HAYNES VALVE PHONO STAGE & PSU (£1500 NEW)
SELECTION OF LINN ARMBOARDS (LINN/SME/REGA/ETC)
REGA RB300 TONEARM

MINT £650
MINT/BOXED £295
BRAND NEW/BOXED £450
MINT/BOXED £195
MINT £650
EACH £20
BRAND NEW £125

LOUDSPEAKERS

WILSON SYSTEM 5.1 PIANO BLACK
SOUNDLAB MILLENNIUM-3 (RETAIL 9K)
B&W 801 MATRIX LOUDSPEAKERS SOUND ANCHOR STANDS / EQ BOXES (COST £7000)
WHARFDALE OPTION 1 HUGE ACTIVE ONLY 4 PAIRS MADE (WERE £8000NEW)
DYNAUDIO AUDIENCE 80 (CHERRYWOOD FINISH)
ROKSAN OJAN 3X & OJAN 3S SUBWOOFER SYSTEM (ROSEWOOD) RARE/SUPERB
IMF PROFESSIONAL MONITOR VII
AMPHION XENON EX DIS.
AMPHION XENON (CHERRYWOOD FINISH) EX DEM.
AMPHION NEON
AMPHION HELIUM 1
UKD OPERA CALLAS GOLD
CELESTION A-3 FABULOUS FLOORSTANDERS SUPERB VALUE
CELESTION A-2 HUGELY CAPABLE (ROSEWOOD VENEER)
AUDIONOTE ANE/SP
AUDIONOTE ANK/SPX
TANNOY ARUNDEL 15"3839 HIGH POWER DRIVERS 95 DB SENSITIVE VERY RARE
SD OBS FLOORSTANDERS(OPEN BAFFLE) SMALLER BROTHER TO SD1

MINT/CRATED £7500
MINT £5950
£2750
£1750
MINT £1000
MINT/BOXED £1450
RING RING
AS NEW/BOXED £1450
BOXED £1450
EX.DEM/BOXED £695
EX.OEM/BOXED £350
AS NEW/BOXED £750
BRAND NEW/BOXED £1695
BRAND NEW/BOXED £1250
MINT £1095
MINT/BOXED £675
MINT £1500
BOXED £495

PROAC TABLETTE 2000 SIGNATURE (BIRDS EYE MAPLE)
PROAC RESPONSE -2 (WERE £1700 NEW)
CASTLE HOWARD-2 PREMIUM BEECH FINISH
CASTLE AVON FLOORSTANDERS

NEW/BOXED £750
MINT £695
MINT £895
MINT £450

TUNERS /TAPE/DAT/MINIDISC/MISC

ONIX BWD-1 AUDIOPHILE TUNER & SEP.PSU.
SONY TCD-D3 PORTABLE DAT RECORDER/WALKMAN
DPA 'THE POWER' MAINS FILTER (3 OFF)
SONY JA-30ES MINIDISC (CHAMPAYNE GOLD)

MINT £295
MINT/BOXED £295
(EACH) £75
MINT £375

RACKS/STANDS

SOUNDSTYLE XS 105 5 SHELF BLACK OR SILVER (£320)
SOUNDSTYLE XS 310 A/V TABLE BLACK OR SILVER (£320)
SOUNDSTYLE XS 100 4 SHELF BLACK OR SILVER
ATTACAMA R724/ATTABITE (FEW WEEKS OLD WAS £250)
MISSION LOUDSPEAKER STANDS SILVER
TARGET R-1
TOWNSEND MODEL 1-3D SEISMIC SINK

EX DIS £195
EX.DIS £195
EX.DIS £185
MINT £175
MINT £75
MINT/BOXED £200
£150

CABLES

LOUDSPEAKER CABLE

MIT MH-750 12 FT PAIR
MIT MH-750 8 FT. PAIR
NIRVANA AUDIO SL-SERIES 3 METRE PAIR EX DEM. (FACTORY TERMINATED)
TRANSPARENT MUSICWAVE PLUS 2 METRE PAIR (FACTORY TERMINATED)
CARDAS HEXLINK 2 METRE PAIR (FACTORY TERMINATED)
AUDIONOTE AN-L 5 METRE PAIR
AUDIONOTE AN-L 2 METRE BI-WIRE PAIR
VAN DEN HUL 'THE TEATRACK' HYBRID BI-WIRE 5 METRE PAIR
VANDEN HUL MC CS 122 2 X 3 METRE PAIR
AUDIOQUEST INOIGO 3 METRE PAIR

£850
£650
£575
£375
£275
£225
£175
£150
(EACH) £90
£50

INTERCONNECT

LINDSAY AUDIOPHILE SATIN GRAY 2 METRE (AMERICAN NEW/PACKED WAS £480)
LINDSAY AUDIOPHILE GRAY 2 METRE (NEW/PACKAGED)
AUDIONOTE AN-V SILVER INTERCONNECT 6.2 METRE PAIR
DPA BLACK SLINK 5 METRE BALANCED PAIR
DPA BLACK SLINK 0.5 METRE PAIR (BALANCED)
DPA BLACK SLINK 0.5 METRE (PHONO)
KIMBER HERO 1 METRE
CLEARAUDIO TRIOENT 1 METRE INTERCONNECT
SUPRA EFF-ISL 2.5 FT PAIR NEW/PACKAGED
AUDIOQUEST LAPIS 5 METRE PAIR
AUDIOQUEST EMERALD 1 METRE PAIR
AUDIOQUEST TOPAZ 1 METRE PAIR
AUDIOQUEST TURQUOISE 2 X 2 METRE PAIRS
AUDIOQUEST JADE 2 X 2 METRE PAIRS
AUDIOQUEST RUBY 2 X 1 METRE PAIRS
AUDIOQUEST RUBY 2 X 0.5 METRE PAIRS
AUDIOQUEST DIAMOND 2 X 2 METRE PAIRS
OED QUNEX-1 1METRE PAIR X 2 (NEW PACKAGED)
YFERA 1.5 METRE PAIR (M8NT)
PRECIOUS METALS COPPERTECH BETA 2.5 METRE (AS NEW PACKAGED)
CABLE TALK MONITOR-3 4 X 1 METRE PAIRS (AS NEW PACKED)

£200
£175
£995
£550
£125
£110
£75
£65
£50
£650
£195
(MINT) £35 EACH
(MINT) £25 EACH
(MINT) £65 EACH
(MINT) £50 EACH
(MINT) £550 EACH
£20 EACH
£60
£40
£150 THE LOT

DIGITAL

CHORD CO.PRODAC SILVER PLUS (BNC)
CABLE TALK DIGITAL -3 (NEW PACKAGED)
REGA DIGITAL INTERCONNECT 1 METRE (NEUTRIK PHONO S)
VAN DEN HUL AES/EBU
KIMBER ILLUMINATI AES EBU 1.5 METRE
AUDIOQUEST VSD-4 SOLID PSS SILVER (WAS £265)
NIRVANA DIGITAL COAX LEAD 4 FT.
AUDIOQUEST OPTILINK X TOSLINK
BELDEN-M DATATWISTER AES/EBU 1 METRE

£60
£50
£30
£40
£150
£150
£200
£50
£65

MOST EQUIPMENT STOCKED IS ONE OWNER MINT/BOXED, SIMILAR QUALITY VINTAGE AND MODERN EQUIPMENT REQUIRED FOR IMMEDIATE CASH PURCHASE. THIS IS A SELECTION OF STOCK FOR A FULL CURRENT LIST PLEASE PHONE/E-MAIL GEORGE. MAIL ORDER A SPECIALITY

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Special Internet offer see page 130 for details

CYRUS PRE £300 Cyrus power £250. Micromega Stage 6 CD £400. All 1996 mint boxed. Jamo Concert 8 cherry new £1300 now £550. Tel: 07890 655752 (Apr/I)

AUDIO INNOVATIONS 2nd Audio monoblocks Golden Dragon 2A3 valves excellent condition (£3000) will accept £950. Rehdeko RK25 speakers, two drivers, super sensitive and incredibly detailed including cradle stands £600. Tel: 01208 872316 (Apr/I)

LINN KLIMAX twin stereo power amplifier mint boxed £4500 ono. Tel: Barrie 01323 487781 Mobile: 07767 458374 (Apr/I)

KEF 105.4 speakers, need driving, good with valves, moderate use, good condition. Tel: 01556 680 314 (Dumfries area) (Apr/I)

WANTED. A.D.C. Graphic Equaliser models. Soundshaper 2 IC hi-fi size or Soundshaper 3 19" rack mount. Any condition working or not working. Black or silver. Please contact Sat on 07947 469747, anytime or 020 8539 8513 after 7pm. (Apr/I)

ARC PH3 Phono amp, mint condition, £1100. Arc Classic 60 amp (Tungsol NOS tubes) £1300. MIT Terminator 3 digital interconnect £65. Z-Man Audio Signal Enhancer £70. Tel: 01865 558 075 or Email: cyril888@aol.com (Apr/I)

SONUS FABER Elacta Amator 2 speakers, stone wood stands. boxed: £1900 ono. Plinius M16 Pre amp with phono and phase invert switch, silver, c/w remote £1850 ono. All as new. Tel: 01527 401954 (S.Birmingham) (Apr/I)

KRELL KMA 200 Monoblocks. Excellent condition, few in the UK. Massive heavy amps, difficult to lift one. Very clear and transparent without being clinical. Drive any load, £1995. Tel: 01803 214 200 (May/I)

THIEL CS2.3 cherry with latest co-axial driver, excellent performer, USA best buy, RRP £3500, looking for £2225 P/X possible. Tel: 01245 251 235 (Apr/I)

SONY JA30ES MiniDisc recorder, black, mint, £185. Tel: 01752 773 369 (Apr/I)

MUSICAL FIDELITY XA-1 amplifier £295 ono. Cyrus III amplifier £275 ono. Both mint with boxes, genuine reason for sale. Tel: Nick 01733 896 581 after 6.30pm (Peterborough) (Apr/I)

VDH FIRST Ultimate 1m sealed, new £150. VdH Integration balanced digital 1.5m £80. Mana soundstages £130. PS Audio Lambda transport £750. TacT 2.0 £2000 (manufacturers guarantee, as new). Tel: 0131 225 9002 or Email: S.Hussain@ed.sac.ac.uk (Apr/I)

EPOS ES15 light cherry, superb condition, boxed £340. Triangle Zays, beech, easy to drive, vibrant sound £1350 new, accept £490. Tel: 01489 796 147 (Apr/I)

QUAD QC24 II Forty valve pre/power amplifier, exquisite sound and styling, rave reviews, owned from new, in mint condition £4000 new, £2750 ono. Tel: Julian 07973 468 141 days or Email: jmusg10408@aol.com (Apr/I)

INFINITY KAPPA 5 Reference speakers £320. Castle Warwick speakers £80. A&R Cambridge A60 amplifier £95. Rotel 965BX CD player £120. Trio DP750 CD player, early model £75. SME 3009 S2/MP £100. Tel: 01224 646 473 (Apr/I)

B+W 805 Matrix £495. Alegos Argo-Hera £1495. DNM pre £525. Sugden AU51 £850. Ion mono's £495. Syncho £375. Audion Golden/Nights £1495. Audio/Syn Dax2 £795. Teac VRDS25 £750. Michi preamp £525. Tel: 07966 267 404 (Apr/I)

TOTEM MODEL Ones, high end bookshelf speakers, mint, mahogany, £595. Target Reference Four stands, boxed £240. Naim 72 preamp, 140 poweramp, green facias, mint £795. May split. Tel: Tony 023 809 05264 (Apr/I)

QUAD 989 loudspeakers, mint condition, very little use, boxes and feet etc., £3000 Tel: 01302 360939 (Doncaster) (May/I)

LOWTHER ACADEMY: Horn loudspeakers. Piano black 2PM7 per side, one owner, six years old, mint condition, undriven costs £2400, £1200 negotiable. Tel: 020 8743 0580 after 8pm or 07905 470 018 anytime (Apr/I)

AVONDALE AUDIO
Monoblocks £1150 STD 305M Hadcock GH228 £350.
Garrard 301 mint, collectors item £350. Musical Fidelity 3A £110. Harman Kardon HK 1400 TU911 tuner £160. Tel: 01977 732 087 (Apr/I)

WANTED: I wish to contact someone with Quad 989 loudspeakers to compare results in Sussex, Surrey. Will bring I/D. Tel: 01323 737 850 answerphone. (Apr)

CROFT 3R OTL power amplifier £795. Audio Synthesis Passion 8M (passive) remote controlled full sized pre amplifier balanced/RCA connections £795. Nordost SPM/REF 1 metre pair interconnects £395. All very good condition. Tel: 01992 581 576 (Apr/I)

UNISON RESEARCH Simply 4P integrated valve amplifier. Superb condition, boxed with manual. Complete new set of Unison Research valves fitted recently by UKD. 12 months old £650. Tel: 01384 397290 (Apr/I)

ALCHEMIST FORSETI
APD20A MkII Signature (new £2000) £1100, Classe DAC1 (new £4000) £1400. AVI 52000MP preamp (new £900) £350. Van Den Hul Revelation speaker cable with WBT spade (new £560) £280. All boxed. Tel: 020 7928 3788 (Apr/I)

SPEAKERS FOR SALE. KEF Q35 £100 ono and Tannoy 631 SE £60 ono with free cable. Tel: 01438 221477 (Stevenage) (Apr/I)

QUAD ESL 63 electrostatics plus stands, serviced by One Thing Audio £1000. Linn Kolector pre-amp £300. Leak Troughline tuner serviced by One Thing Audio superb condition £150. Tel: Tony 02476 460729 or 07788 642632 (Apr/I)

FOR SALE: two Naim black 135's excellent condition serviced by Naim mid 1990's boxed £1500. Tel: 07751 620741 (London address) (Apr/I)

MAGNEPLANAR MG1C speakers. Transparent and musical, vgc, boxed, £400. Tel: 01223 527 003 or Email: robber_button@hotmail.com (Cambs) (Apr/I)

REGA P3 turntable black. Goldring 1042 MM cartridge. 18 months old. Hardly used as new condition £240 ono. Tel: Richards 01639 641043 (Apr)

COPLAND CSA28 integrated amp (valve hybrid) will drive anything. Remote, phono stage mint boxed, £900 ono. Kimber 2m Powerkord hi-current W/Wattgate 350 £175. MF 2.5m Nu-Vista silver interconnects £80. Tel: Chris 020 8543 5531 (eves) (Apr/I)

MUSICAL FIDELITY A300CR power amplifier, 225w mint condition, six months old, still under warranty, MF NuVista M3 circuit boxed was £2200 now £1350 ono. Tel: Tony on 07974 269044 (Kent, SE) (May/I)

NAIM NAP 500 power amp, Naim 52 pre-amp Supercap power supply, Linn LPI2, Lingo, Ittok, van den Hul, two Ruark Equinox speakers, Mana Acoustics Reference wall shelf. Tel: 0790 353 0451 (Apr/I)

AUDIONOTE DAC 1 Signature valve DAC superb warm dynamic sound £375. REL Stata III subwoofer £375. Musical Fidelity XLP-S phono stage new boxed £100. Tel: 01536 398369 or Email: normanholly@aol.com (Apr/I)

MANA REFERENCE turntable/equipment, table. Two tier, no room in new house! £125 or nearest Tel: 01746 766236 (Shropshire) (Apr/I)

BLACK DIAMOND racing cones Mk3. Three sets of 3. Mk4 eight sets of three £40 per set. Tel: 01249 821288 (Apr/I)

Upgrade Your Turntable



"It's value is nothing short of tremendous"

Listener Magazine

"The single most important upgrade you can ever make to any record deck concerns the motor drive....Nothing can compare you for the shock of going DC, in a word, Gobsmacking"

Common Ground Magazine

"...if you are thinking of upgrading your system....the Origin Live DC-motor kit should be high on your list for consideration" TNT Audio

Whatever your current turntable, the results in upgrading to the Origin Live DC motor and power supply are simply astounding. Designed as a drop in replacement for almost all turntables, the Origin Live upgrade kit offers vast improvements to all versions of Linn turntables, as well as Ariston, Rega, Systemdeck, Roksan, Rock, Oracle, Thorens, Well Tempered etc. With only a 12 Volt power supply and a full set of illustrated instructions our upgrade is both easy and safe to install. The upgrade is also offered with a full money back guarantee if you are not satisfied. The kit consisting of a high grade dc motor, soldered regulator board and power supply is only £262. This provides an extremely cost effective route to truly high end audio and is significantly superior in performance to other power supply upgrades costing 4 times the price. A larger purpose built transformer is also available as an optional extra at £175.

Turbocharging your Rega arm

"Nothing less than total dynamite" Hi-Fi World



If you are the proud owner of any Rega tonearm, you are now in the enviable position to transform its performance into the league of super arms with modifications offered by Origin Live - the Origin live structural modification at £75 will enable your Rega to perform at a level exceeding that of arms costing over £1200. High performance rewiring with high grade litz cable is also offered at an additional £70 and external rewiring is £70 this further increases the performance.

"I have to say the Rega modifications turn this humble arm into a real Giant killer. Gone is the rather grey, sterile sound of the cooking Rega. Instead, tonal colour is fresh, dynamics have great speed and impact, and the sound stage is huge."

Hi-Fi World, Nov 97 (structural modification on RB250)

What Hi-Fi? gave this modification 5/5

Structural Modification - £75

Internal Rewiring - £70

External Rewiring - £70

For arm modifications we normally return your arm in 2 - 3 days.

Origin Live Ultra Turntables Build & setup in an hour



Modern



Classic

"...this Vinyl front end had my jaw heading towards the floor with the solidity and transparency of the music it was making....with all these goodies in place the Standard would give turntables at the £1200 -1400 mark a hard time..."

"...Overall a deeply impressive deck....brilliant value for money ...component quality is superb and the build process is a doddle."

Hi-Fi World

"the best sounding deck here (group comparison test of 8 leading turntables)...sounds fantastic."

What Hi-Fi?

"One of the most enjoyable and musically involving turntables I have ever heard ...Regardless of make or reputation"

Audiophile

Now you can own a professionally built, high performance turntable at a fraction of the normal cost. Origin Live turntable kits are supplied in 3 different specifications:

1. A standard kit of parts to enable you to build your own plinth at £282
2. The complete standard kit offered with a non-suspended pre-drilled & finished plinth at £349
3. The complete ultra kit comes in two options. The Ultra Kit Classic offering a truly high end suspended sub-chassis turntable with beautifully finished solid wood plinth. The Ultra Kit modern offers the performance of the Ultra Kit Classic combined with the modern day skeletal styling of our sensational resolution turntable. Both options available at £538.00

All kits are supplied with well illustrated instructions and are easier to assemble than many of today's pre-built turntables.

FOR MORE INFORMATION SEE WEBSITE OR CONTACT

Origin Live, Unit 5, 362b Spring Road, Sholing, Southampton, SO19 2PB, U.K.
Tel: 023 80578877 / 80363249 Fax: 02380 578877 e-mail: originlive@originlive.com

<http://www.originlive.com>

LUMLEY ST70 power amp (£2250) £750. Two 4ft Kimber 8TC mains leads £90 each. Kimber Orchid digital balanced interconnect 1/2 metre £170. Wanted: Kimber silver reference mains. Tel: 01772 314151 or Mobile: 07751 475062 (Apr 1)

NAIM 135 monoblocks £1750 (£3500). KEF 105/3 Reference Series £1800 (£3500) all boxed. Tel: 01827 830358 or Email: davidhothi@lycos.co.uk (Apr 1)

SEDUCTIVE STYLE and Sonics combined in top of range Micromega Drive 2 + DAC two box CD player with XLO balanced digital interconnect, remote, boxed, manuals. £1750 new: £700. Tel: 07778 591188 (Hungerford 5mins J14 M4) (Apr 1)

SYSTEMDEK IIX record deck with SME 3009 Series II improved pick-up arm unboxed excellent condition £200 ono. Buyer collects. Tel: 020 8679 4180 evening (London) (Apr 1)

MONITOR AUDIO 14 gold floorstanders; black, Deflex, sand: £250. Audiolab 8000A black: £200. Arcam Delta 150 Nicam TV tuner; remote: £100. All boxed with manuals Tel: 07778 591188 (Hungerford J14 M4) (Apr 1)

LINN NEXUS LS250 speakers, complete with top-end integral stands. Superb sound plus Creek Audio CAS 5050 amplifier, 50watts per channel, MM/MC cartridges plus six other inputs. Brilliant clean analogue sound. Offers. Tel: 01722 322 422 (Apr 1)

LENTEK INTEGRATED amp £350. Lentek S5 speakers sound fabulous with amp £135. Snell Type E Mk3 speakers stunning 89dB floorstanders £695 (£2200) Tom Evans modified Pioneer Precision CD player mint £275. Gale 301's and stands £125. Tel: 01923 224404 or 07930 524246 (Apr 1)

HOVLAND BALANCED interconnects two pairs 0.8 metre £300, sell £125. 3.0 metre £700 sell £250 ono's. Silver Sound three metre speaker cable £150, Copulare two tier stand £950 Selling £350. Tel: 07929 063676 (Apr 1)

NEW LINN Amps Kairn with Klout/2250 for sale as new in sealed box. Genuine reason for sale. Please call 01733 252 219 for further details. Call for pricing (Apr 1)

J.M. LAB Elektra 926 floor standing speakers as new 6 months old cherry cheeks grey grill genuine reason for sale cost £2100 sell at £1300 Tel: 01634 268071 (Apr 1)

LOWTHER DELPHIC loudspeakers fitted with latest specification EX4 drive units finished in American walnut and excellent order. A rare opportunity to purchase these fine loudspeakers £2000 Tel: Mike 01758 741026 (Apr 1)

E.A.R. 864 audiophile valve preamplifier balanced in/out (£1530) £1100. Roksan power amplifier 4 x 90w or 2 x 140w suitable biamping or cinema (£1000) £775 both items very new boxed with handbooks Tel: 01243 863371 (W.Sussex) (Apr 1)

SONY SCD 555ES gold mint condition £750. Tannoy Revolution 2 cherry £200. Jamo Concert II and Jamo Concert centre both cherry £1350. Tel: 07713 258836 (Apr 1)

LINN ISOBARIK black late model £750. Naim Nac 82 pre £950. Naim Nap 250 power £550. Naim Hi-cap £450. Naim 42-110 pre power £350. Linn LP12 Lingo Ekos Troika £1250. Cosmic 7 tier rack £350. Rega Planet CD player £300. Various Tripod stands Tel: 07729 805575 (Apr 1)

LUXMAN WL717 FM/tuner with wooden sleeve mint condition £50. Exposure loudspeaker cable 4 x 3 metres biwire/ bi amp usage £25. van den Hul CS122 loudspeaker cable 4 x 7.5 feet lengths £70. Tel: 01509 215230 ask for Mike (May 1)

KLIPSCH HERESY £550. Audio Analogue PucInI SE £250. Arcaydis Baby 2 floorstanders £150. Thorens 160 £100. Sound Organisation Z560 5 shelf stand £100. Tjoeb valve CD £200. Tel: 01827 261082 (Tamworth) (Apr 1)

CASTLE HOWARD S2 speakers in cherry. Bi wireable. Cost £1150 new accept £450 ono. Tel: 01661 834378 (N. East) (Apr 1)

WANTED JVC QL-Y5F QL-Y3F stereo turntables, must be in good condition. Tel: 02392 341883 evenings ask for Keith when calling (Portsmouth) (Apr)

SUGDENS CLASS A A21 amplifier and matching FM tuner £250. Armstrong 623 AM/FM tuner £25. Heybrook HBI speakers £60. Phillips double beam oscilloscope with probe and manual £50. Tel: 07798 841346 or Email: mdpackham@bopenworld.com (Apr 1)

WOODSIDE (RADFORD) integrated valve amp 30/wpc new valves excellent condition £1100 (1995) swap for Audiolab 8000T tuner Tel: John 07901 802649 or 01268 745416 anytime (Apr 1)

MUSICAL FIDELITY E100 integrated amp (or pre or power) £250 (£750 new), boxed, mint. Epos ESII speakers, target stands £250. Tel: Neil 01547 520475 (Apr 1)

RECORD DECK, Pear Audio well tempered classic, gloss black (£4000) only £1350 ono. Loudspeakers, Ruark Accolades, cherry/mahogany polished cabinets (£1500) only £500 ono. Kimber XLR-XLR interconnect (£175) £75 ono. Tel: Allan 01179 521341 (Bristol) (Apr 1)

TECHNICS AMPLIFIER SU-VX820, Disc player SL-PS620A, Cassette deck RS-BX828, Equalizer SH-GE70, Videologic Dab-tuner, Wharfedale speakers, cabinet stands £550 ono. Tel: 01708 762876 after 7pm. (Apr 1)

ECOSSE MAESTRO SE interconnect 0.8 metre, phono to phono boxed as new only one month old, cost £159, will accept £85. Tel: 02828 277129 or Mobile: 07713 882489 (Apr 1)

REGA PLANAR 3 RB300 with full Origin Live counterweight and wiring mods. Manticore megabearing. Linn Valhalla P/S £300 complete. Michell ISO M/M phono stage £125. Tel: 01372 222270 (days) 01737 771570 (eves) (Apr 1)

BEARD PSO moded valve amp, Ear B34P, Systemdek, Tabriz, expander, wallstand, leads, spare valves £600 the lot. Xiod, £50 all good working order may split. Tel: 01753 643890 after 6pm (Apr 1)

AUDIOLAB CDM 8000 transport 8000 DAC £680. Musical Fidelity A1001 £895. B&W CDM7NT cherry seven months old still under warranty £700. Tel: Steve Petch 01429 268218 or Email: stephen.petch@ntlworld.com (Hartlepool, Teeside) (Apr 1)

TUBE TECHNOLOGY valve amps TT Prophet pre amp £675 (cost £2000) TT Unysis Signature power amp £675 (cost £2000) matching Vibe stand £195. Tel: 01491 628075 or 07736 808828 (Apr 1)

WANTED: NAIM NAC82, NAP250 Hi-Cap, must be in mint condition. Tel: 01246 232 085 (Apr)

PRIMARE D30-2 CD player latest model with Sony transport cost £1500 new sell £800. Hadcock GH 228 tonearm in original box £80. Tel: 353 754 5011 Mobile: 353 86 393 8486 (Ireland) (Apr 1)

ATC SCM50A active loudspeakers £3000, ATC SCM2 pre-amp £2000, Pink Triangle Da-Capo with 1307 filter £600. All vgc. Tel: 01531 640280 or Email: enquiries@countryparks.com (Herefordshire) (Apr 1)

LINN IKEMI boxed £1300. Bryston 7BST mono blocks £2200. Dynaudio 3 way floorstanders white ash £450. Denon 715 CD player £60. Tel: 01635 299244 (Berks) (Apr 1)

AUDIOLAB 8000m monoblocks pair £800. Mission 753 speakers £400. Musical Fidelity XLP and PSU £150 pair, all boxed as new with manuals. Tel: 01663 765980 evenings or 07881 587130 or leave message (Apr 1)

YAMAHA NS1000M, mint, custom made stands, boxed £745. Musical Fidelity T1 analogue tuner, visual match to A1 amplifier, professional off board power supply, mint, £175. MAF Audio classic four pillar speaker stands £50. Tel: 07967 646 089 (Apr 1)

VALVE HI-FI For sale: Several Quad pre/power amps. Leak, Armstrong, Rogers, Luxman receiver. Tannoys, Linn LP12 fancy arm and cartridge. Suitcases of valves. Tel: 01494 763 042 (Bucks) (Apr 1)

XTC POW I mint condition, boxed £1250. EAR 'The Head' MC transformer, mint £300. Meridian DAC, boxed, £100. Sugden AU51C mint condition £380. Rotel RCD870BX CD player £140. Tel: 01942 707 751 or 07979 300 421 (Apr 1)

LINN KARIK CD Player, mint, boxed £720 ono. Musical Fidelity P180 power amplifier and CRPS power supply, 80 watts, perfect working order boxed £600. Carriage can be arranged economically. Tel: 01691 659 604 (Apr 1)

MONITOR AUDIO Silver 8 (new Series) natural oak, like new (20 hours listening time); Nordost Blue Heaven and Red Dawn cables for interconnect. Offers invited. Tel: Marco 020 7472 5610 or 020 7403 4214 (Apr 1)

EPOS ESII Speakers £200. Krell KPS20i CD player £4500. Sansui T-80 tuner £75. Tel: 01636 830 944 or 07979 536 753 (Apr 1)

CD players DACs & Transports

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Audio Synthesis Decade HDCD DAC S/H	2800	1599
Theta Data Basic Transport S/H	2398	699

Turntables Tonearms & Cartridges

Basis 2000/RB300 Turntable x-Demo	1999	1299
Basis 2001 Turntable x-Demo	2999	2299
Basis 2004 Turntable x-Demo	4500	2799
Heed Audio Quazar 2 Box Phono Stage New and Boxed	599	399
Lehmann Audio Black Cube SE New& Boxed	650	399
McCormack Phono Stage New and Boxed	650	399
Origin Live 250 Silver Tonearm S/H	600	499
Roksan Xerxes Rosewood Linn Cut S/H	N/A	279
Systemdeck /Rega RB300 S/H	N/A	299

Preamplifiers

Advantage S2 Balanced Silver S/H	2750	1399
Bel Canto Pre1 Remote controlled Balanced x-demo	2500	1799
Bryston 25P Remote Controlled Balanced S/H	1700	1099
CAT SL1MKII Reference Phono Pre amplifier S/H	6500	3799
EAR 802 Valve Preamp S/H	1599	499
Einstein "The Tube" Preamplifier x-Demo	6000	3999
Krell KAV-S Processor/Preamplifier DTS/AC3/Pro Logic S/H	14989	3750
Roksan L2 preamplifier S/H	1295	499

Amplifiers

Audio Analogue Maestro Integrated x-demo	2700	1899
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Bryston 4BST Stereo Power Amplifier S/H	2400	1399
Bryston B60R Amplifier S/H	1550	1099
DNM PA3S Stereo Power Amplifier S/H	2900	1699
Electrocompaniet ECI-3 Integrated x-demo	1249	799
Graaf GM20 OTL Stereo Valve Amplifier S/H	3295	1895
Lavardin IT x-demo	3200	2250
Parasound 1205 multichannel amplifier x-demo	1695	1199
Pass X150 Stereo Poweramplifier S/H	4750	1999
Roksan Rok S1.5 Power Amplifier S/H	1499	945
Union Research S6 Valve integrated S/H	1600	1199

Loudspeakers

BKS 107 MKII Supreme Ribbon Hybrids x-demo	2199	1599
Celestion A1 Cherry S/H	899	249
Indigo Model Two Centre Channel Cherry S/H	199	129
Jm Lab Micro Utopia Dark Cherry New and Boxed	4500	3799
JM Lab SW900 Subwoofer S/H	1079	699
Opera Operetta Mahogany x-demo	795	575
Wilson Benesch Orators Cherry S/H	2800	1599

Cables & Accessories

Air Pod size 1 x3 S/H	210	99
Cogan Hall EM-D 0.6m S/H	199	99
Finite Elemente Pagode E55/04 4 Tier Maple Stand x-demo	849	599
Opera Lux 3 Tier Table Clear/Stainless x-Demo	950	499
Roksan HAO1 1M Interconnect S/H	99	49
Roksan HAO1D 0.5m Digital Interconnect S/H	49	25
Target HR60 Silver Stands S/H	199	109
Target R2 Stands S/H	329	199
Transparent Music Link Ultra Balanced 7.26m S/H	2349	1499
Transparent PL20XL Power cord S/H	1260	799
Transparent The Wave 2X7m S/H	599	199

Tuners & Tape Decks, Power Supplies

AKG C1000 Condenser Mic S/H	241	120
Magnum Dynalab FT-R Remote Switcher for FT101A/Etude (New&Boxed)	450	299
Rega RadioR Silver x-demo	498	299
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Buy-Sell-Exchange. Vintage wireless and classical audio. Repairs, spares, restoration, modification to all valve equipment. Quad II, Leaks etc, shipped worldwide, best prices, call us at 17 Bell Street, London, NW1 5BY. Tel: 020 7258 3448 Fax 020 7258 3449 Email: vwirelesslondon@aol.com (Oct/I)

WORTHING AUDIO True Sound Series Crossoverless monitors 96dB efficiency, single 8" driver, perfect for low powered tube (S.E.T.) and solid state. Audionote Anvx silver interconnect .75mtr £500. Amphion Argon loudspeakers £599. Musica Collins loudspeakers by Bernard Thiel & Partners (German) £1000. Audionote AN-ESEC lacquered finish + stands £5000. (RRP £13,600). Tel: Worthing Audio 01903 212 133 or 07900 918 882 (Apr/I)

KORA VALVE Amplifiers on permanent dem. Also Silver Arrow 4N-Pure flat silver foil air interconnects and speaker cables with Bucchino phono plugs. H-CAT P12 Zero distortion pre amplifier from America on permanent dem. Tel: Worthing Audio 01903 212 133 or 07900 918 882 (Apr/I)

WOODSIDE ELECTRONICS offer a repair service for Radford, Woodside and Quad II valve amplification. Transformers manufactured to original specification for these products as well as bespoke designs. Tel: 01758 741 026 or Email: m.davis@virgin.net Web: <http://freespace.virgin.net/m.davis> (Jul/I)

GARRARD? THORENS? Answer Aphelion! Solid hardwood or laminated MDF plinth's. Three models for all motor units. From £200. Also our vinyl storage system format. Prices from £26. All on permanent demonstration. Call 01604 409 300 (Apr/I)

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AUDIO RESEARCH Classic 150 Mono Blocks, black, excellent condition, new valves, boxed, (£12000) £3600. Audiolab Transport and DAC, Mint condition C/W manual and box £1000. AudioTechnica OC9 cartridge brand new £270. Tel: Jules on 01792 280061, Email: info@sounddrjuleshifi.co.uk Web: www.sounddrjuleshifi.co.uk (Apr/I)

PROAC RESPONSE ONE SC, cherry wood, 14 mths old, mint, c/w four pillar Target R4 speaker stands, £875 Theta Da'vid acclaimed CD/DVD multi region transport, 2 years old, mint, inc transformer. (£4,600) £2200. Tel: Jules 01792 280061, Email: info@sounddrjuleshifi.co.uk Web: www.sounddrjuleshifi.co.uk (Apr/I)

MERIDIAN 500 transport, immaculate, 2 years old, boxed, manual, as new, (£1400) £750. Infinity Renaissance 80 floorstander's, oak, £550. Quad ESL63's, black, c/w Quadropod stands, immaculate. (£4000) £1500 ono. Tel: Jules on 01792 280061, Email: sales@sounddrjuleshifi.co.uk Web: www.sounddrjuleshifi.co.uk (Apr/I)

NAIM NAC 32.5 pre, with phono stage, mint condition £275. Linn Mimick £450. Rotel RT 830 AL tuner £60. Tel: Jules on 01792 280061, Email: info@sounddrjuleshifi.co.uk Web: www.sounddrjuleshifi.co.uk (Apr/I)

AMAZING CABLES! Unlock your system's full potential. Handbuilt silver interconnects from £85, solid silver speaker cables from £220, £5 p & p. Fantastic performance, money back guarantee. Details: 0115 982 5772 after 7pm or Email: bob@skydivers.co.uk (Sep/I)

SME MODEL 30A turntable complete with Series V gold plated arm, factory refurbished, crated, effectively brand new unused, an engineering marvel. Serious turntable POA. van den Hul MC SILVER 1m interconnect, cost £1000, £400. Tel: 020 8452 4840 or 0795 629 5103 (Apr/I)

SME MODEL 20A turntable, factory refurbished with Series V gold print arm, never used £3400. Wadia 861 single box CD player, the best. sealed box POA. Tel: 020 8452 4840 or 0795 629 5103 (Apr/I)

JEFF ROWLAND Model 2 power-amp battery supply with Synergy Mk2 preamp, boxed, £14000 new, £5400. Pink Triangle Anniversary turntable £900. Tel: 020 8452 4840 or 0795 629 5103 (Apr/I)

SME Series V as new mint £975, SME Series V gold plate silver wired, as new, POA. Audio Synthesis Passion phono stage, Black Gate version £795. Nakamichi CR7E tape machine, remote, serviced £950. Tel: 020 8452 4840 or 0795 629 5103 (Apr/I)

NAKAMICHI DRAGON, last to be imported, 30 hour use maximum, boxed, £1250. Nakamichi 1000XZL original box, manuals £1500. Audio Innovations Second Audio poweramps, 2A3 Series 1000 pre new valves, boxed, £1295. Tel: 020 8452 4840 or 0795 629 5103 (Apr/I)

JADIS JPP200 Valve head amp POA. Air-Tangent IC tonearm, the best, not to be confused with old 1B & 2B models, latest pump, immaculate, £5000 new, £2600. Marantz ST8 Oscilloscope tuner, very rare only few around, the best of the rest, £1350. Tel: 020 8452 4840 or 0795 629 5103 (Apr/I)

KRELL KSA150 £1500. Krell 7B preamp with phono stage, separate power supply £795. Accuphase clean mains power supply PSA1200, boxed, £6000 new, £3995 the best. Lots more cables, tables, cartridges and other equipment available. Phone for details, genuine enquiries only. Tel: 020 8452 4840 or 0795 629 5103 (Apr/I)

NAIM CDX £1595, NAC92/90 £595, NAC112 £495, NAPI80 £695, Credos (beech) £795. Nait5 £595, SNAX03/6 £400, AV2/175, all ex-dem or p/x, stock changing daily. Tel: Adventures in Hifi 01942 234 802 (Apr/I)

REGA/CYRUS EX-DEM to clear: Rega Mira £295. Alya £275, Ara £170 (oak loudspeakers), P3 £250, P25 £500, Jupiter CD £775, Cyrus 5/7 amplifiers £275/£495, CD7Q £795. All immaculate with warranty. Tel: Adventures in Hifi 01942 234 802 (Apr/I)

WANTED: YOUR Old hi-fi for cash. Quad, Linn, Arcam, Alchemist, Musical Fidelity, Meridian, Audiolab and other quality brands. For fast payment call Adrian on 01782 267 233 or 07799 415 123 (Apr/I)

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ADVERTISERS INDEX

Affordable Valve	46
Apex Acoustics	111
Audio Illusions	92
Audio Salon	74
Audio Venue	54
Audusa	113
AV Lounge	52
Beauhorn	22
Billy Vee	89,90,91
Campaign Audio Design	54
Central Audio	114
Choice Hi-Fi	94
Classique Sounds	119
Connoisseur Audio	112
Custom Cable	115
Cyrus	14
Definitive Audio (Brighton)	56
Definitive Audio (Nottingham)	54
Diverse Vinyl	121
Emporium (The)	120
Heathcote Audio	124
Heatherdale	115
Henley Designs	8,93
Herts. Record Fair	107
Hi-Fi Trading Company	108,109
Ian Harrison	112
Jem Distribution	115
KJ West One	20
Leema	46
Mana	118
Mantra Audio	93
Matrix	118
Meridian	1FC
Midland Audio Exchange	110
Mission	BC
Mordaunt Short	24
Musical Fidelity	58
Musical Images	111
Origin Live	60, 126
Oxford Audio Consultants	114
Real Hi-Fi	76
Replay	112
Retro Reproduction	120
Ringmat Developments	22
Sevenoaks	27,28,29,30,31,32,33
Signals	121
Sonic Design	117
Sound of Music (Crewe)	119
Soundcraft	115
Sounds Expensive	124
Sounds Perfection	52
Soundstage	118
Supra Direct	117
The Chord Company	56
The Listening Rooms	117
The Right Note	52
Tube Shop	76
UKD	1BC
V Audio	107
Walrus Systems	60
Williams Hart	111
X-Electrical	119

DIY SUPPLEMENT No.72

Audio Xpress	96
Chelmer Valve	96
Falcon Acoustics	96
Kit & Components	102
Langrex Supplies	104
Watford Valves	104
White Noise	96

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The new Unico integrated amplifier from Unison Research has an impeccable pedigree. Triode valves give natural purity of sound and effortless listening pleasure. With styling of understated elegance and 80 watts of power, Unico offers an unbeatable package. As top reviewer Ken Kessler put it (Hi Fi News, July 2002): "No integrated I've used in recent memory delivers so much at this price". Unico has the look, build quality and sound of pure luxury – at a real world price. Supplied complete with radiowave remote control. The matching Unico CD-Player is now available, with 24-bit/192k upsampling, valve output stage and a sound which will convince you that CD replay has finally come of age.

*Unico Remote (line) £775. (line + phono) £825. Unico CD-player £1095

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PATHOS ACOUSTICS *The Unorthodox Approach*



After almost two years of design and perfection, the stunning new Logos integrated amplifier is finally here. For the lucky few who will own one, it has been worth the wait. Logos is an object of rare *bellezza* - a swan in a world of ugly ducklings. A future classic. Hi Fi News were deeply impressed and summed up their review thus: "If you're considering an integrated amp up to £4000, listen to the Logos after everything else. Then spend the £1500 you saved on a decent wristwatch worthy of a Logos owner".

*Pathos Acoustics Logos, 110 Watts/channel. £2495

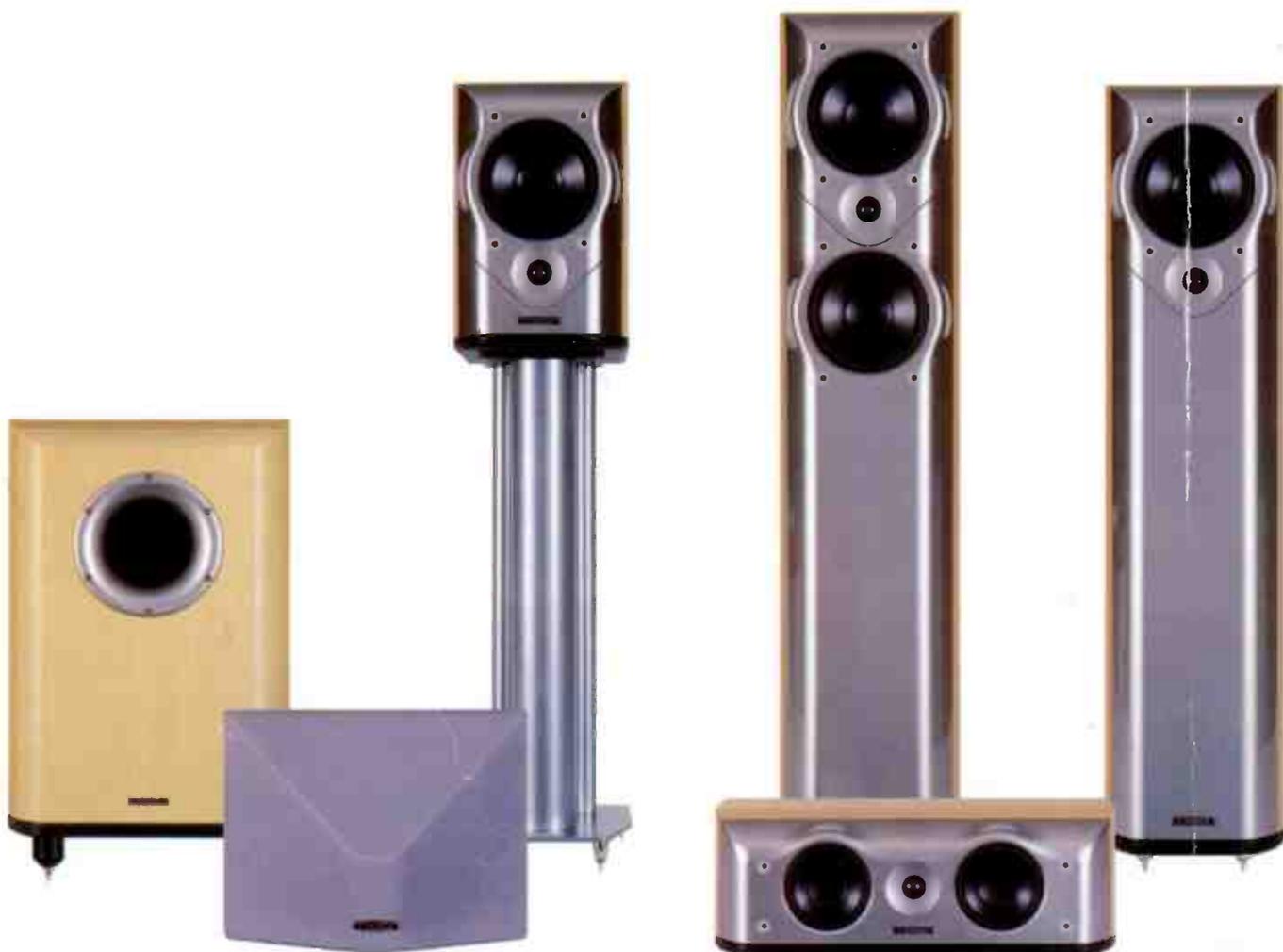
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