A SAD FAILURE!
SONY'S ELCASET
FUTURE SUCCESS?
SONY'S SBM DAT
RECORER

TECHNICS' SB-M300
LOUDSPEAKER
- A REAL ROCKER

SUPPLEMENT NO. 18
(overseas - inside)
free with this issue.

MISSION'S
GREAT NEW
731LE 'SPEAKER

QUAD'S NEW
77 CD PLAYER

SIX PAGES
OF BARGAIN
USED HI-FI

COMPETITION - WIN ONE OF 15 PAIRS
OF WHARFEDALE VALDUS 'SPEAKERS
Trust your instincts.
Japanese loudspeakers are a joke! Not any more. At last, they have successfully got to grips with the peculiar problem of national tastes in sound. For years, this barrier has spared Britain’s loudspeaker manufacturers competition from Japan. Looks like all that’s about to change. Read our Technics SB-M300 review on p57.

National taste has a lot to do with the success of Linn’s Tukan loudspeakers. Developed from the infamous Kan, a loudspeaker that in its early days was idiosyncratic yet often adored, the Tukan retains its fast, punchy character. Britons are as likely to love the Tukan as much as the Kan. See p26.

Sony’s Elcaset appeared in the late Seventies, only to sink quietly from view a few years later. What went wrong? We look at the format and its faults, finding it a metaphor for later failures. Elcaset led the way in many respects, not all wanted! See p36.

Quad have just released a partner for their recently introduced 77 amplifier: the 77 CD player. Separates are moving away from being separate these days, which solves matching problems. Does this remove the magic too? Read our view on p13.

... and don’t forget THE SCOTTISH HI-FI EXHIBITION at the ROYAL SCOT HOTEL, EDINBURGH, NOV. 3rd, 4th, AND 5th. CONTACT HI-FI CORNER ON 0131 556 7901

Latest BPI figures show Britain’s music business is doing better than ever. They’ve just sold an all-time record of 177 million albums at home and have earned more than the car industry in exports. So we’ve got a great music biz and, perhaps not unsurprisingly, we love music too.

But wait. If hi-fi is about getting enjoyment from music, in a market like this there should be no problem selling a hi-fi magazine. So why do the latest ABC figures show that, now, all circulations except ours have gone into decline? They should be rising.

My view is that readers have had enough of being baffled and confused. They’re turning away, instead buying a no hassle mido-system. I started Hi-Fi World because I was fed up with the mags too. I wasn’t alone! My heartfelt thanks to all our readers.

Noel Keywood, Editor
**THIS MONTH'S REVIEWS**

**VINYL**

**VIRTUAL REALITY Reson rs1**
Dominic Todd gets the black stuff out to audition Virtual Reality's extensively reworked Systemdek and tweaked Goldring 1042.

**COMPACT DISC**

**QUAD 77 CD PLAYER**
It was only a matter of time before Quad did the decent thing and produced another silver disc player. Eric Braithwaite connects up.

**DIGITAL AUDIO TAPE**

**SONY TC-D7**
Douglas Floyd-Douglass is impressed by Sony's amazing DAT sound sweetener - an outboard SBM coder for their miniature TC-D7 recorder. Here's a mini-studio!

**TUNER**

**PIONEER F-504RDS**
Pioneer's mid-price tuner may be all singing and all dancing with RDS EON, but how does it sound? Noel Keywood listens in.

**LOUDSPEAKERS**

**KEF REFERENCE SERIES 3**
Dominic Baker enjoys KEF's latest behemoth, the very big, very heavy and very good Reference Series 3.

**MISSION 731LE**
David Price listens to the superb new LE version of Mission's popular 731 standmounters.

**TECHNICS SB-M300**
Douglas Floyd-Douglass discovers that beauty is more than skin deep in this complex four-driver 'speaker from Technics.

**AMPLIFIERS**

**GALACTRON PRE/POWER**
Dominic Baker goes back to the Seventies with Galactron's retro styled high-end pre/power combination.

**DPA LITTLE BIT III**
David Price is well impressed with DPA Digital's new £300 convertor, the Little Bit III. A Marantz rival at last!

**ORELLE CD100**
Dominic Todd auditions Orelle's latest digital confection, the attractively priced CD100 CD player.

**PROS AUDIO**
Beautifully made with looks to kill, how does Pros Audio's new convertor stack up against the opposition? Eric Braithwaite finds out.

**GLL ICT100**
Dominic Baker finds innovation at Goodmans, in the shape of their interesting new budget 'speaker, the ICT100.

**WORLD VERDICT**

- **OUTSTANDING** - Superb sound, something we'd use ourselves.
- **GOOD** - Has strong merit. Well worth an audition.
- **ADEQUATE** - Mediocre in vital areas. May be worth auditioning.

NOVEMBER 1995

*HI-FI WORLD*
NEWS
A wealth of new products appears as the next model year ushers forth.

LETTERS
The postbag quivers as the postman shivers...

QUERIES
In-depth trouble-shooting service for sonically-challenged readers.

COLUMNS 63, 69, 71, 72
Noel, David and two Dominics attack their Apple Macs to bring you November's musings.

NEXT ISSUE
Kate Bush was obviously referring to next month's Hi-Fi World when she once said "December will be magic".

COMPETITION
Penury no longer need be a problem when you can win your way to audio nirvana.

SUBSCRIPTIONS
As one Taoist monk said to the other, "the only thing better than heaven is heaven delivered to your door, grasshopper."

SPECIALIST HI-FI DEALERS
These real hi-fi dealers give expert advice and service.

MEET YOUR MAKER
Who makes what and how to get in touch.

WORLD AUDIO DESIGN 82
High performance kits for those of a solder-and-AVO meter persuasion.

DIAL-A-DEALER 89
Who sells what, and how to get in touch.

HI-FI WORLD LIBRARY 99
It's growing so fast that the British Library will soon pale by comparison!

MEASURED PERFORMANCE SECTION 113
The test bench treatise.

READERS' CLASSIFIEDS 134
The place with all the hi-fi you ever wanted, and some you didn't.

ADVERTISERS INDEX 146

MUSIC
Some excellent new releases for your perusal.

ROCK RECORD OF THE MONTH:
Black Grape: It's Great When You're Straight Yeah

CLASSICAL RECORD OF THE MONTH:
Sergei Rachmaninov: The Liturgy of St John Chrysostom Op31

ROCK AND POP 73
JAZZ 86
CLASSICAL 93

COMPARISON
Win one of fifteen pairs of Wharfedale Valdus loudspeakers worth over £2000 in total.

DIY SUPPLEMENT
In this month's FREE DIY Supplement you'll find a unique design for a 35watt integrated amplifier, a feature on headphone amplifiers and we'll show you how to finish your DIY loudspeaker cabinets.
In the early 1970's, KEF founder, Raymond Cooke, and his team devised an entirely new way of designing, evaluating and manufacturing loudspeakers. He couldn't have known it at the time, but he'd begun to build legends and in the process became one, himself. Using digital computer techniques to evaluate performance, together with radical improvements in design and technology, Raymond Cooke started a process that set the Reference standard for KEF and along the way became the standard for an industry - the Reference by which all others would be judged.

Now, in celebration of those achievements, we are proud to offer the discerning audiophile three of the most acclaimed speakers from the KEF Reference Series. Everything about the KEF Model LS3/5a, Model 104/2 and Model 107/2 proclaims "classic Hi-Fi" experience, from their impressive technical heritage to their luxuriously finished cabinets - and the ultimate finishing touch, a gold plated limited edition plaque engraved with the signature of KEF's founder, Raymond Cooke.

The name of these very special loudspeakers? There was only one possible choice.

Raymond Cooke Series.
NEW AND IMPROVED AMPLIFIERS FROM ARCAM...

Arcam is billing its new family of integrated amplifiers as their "best ever". The Alpha 5 Plus and 6 Plus replace the two year old 5 and 6 models, but by using the same casework, Arcam have been able to concentrate on the electronics inside. Improvements include revised toroidal mains transformers with extra screening and higher quality coupling capacitors. The Alpha 5 Plus cost retails at £239.90 and the Alpha 6 Plus £349.90.

AND AN ALL NEW CD PLAYER

Extending their range of CD players, Arcam have introduced the new Alpha 6. It uses Philips' CDM9 transport and an NPC 20-bit digital filter with a PWM DAC. The DAC has balanced outputs, and the first stages of the analogue filter are also balanced, which improves noise rejection. The audio outputs are direct coupled for a simple and clean signal path.

Owners of Alpha 5 and 5 Plus CD players can take heart though, because Arcam are continuing their upgrade policy with the new 6. By taking your Alpha 5 or 5 Plus player to an Arcam authorised dealer, you can upgrade to the Alpha 6 for £150 or £120 respectively.

A & R Cambridge Ltd, Pembroke Avenue, Denny Industrial Centre, Waterbeach, Cambridge, CBS 9PR 01223 861550

NEW CASSETTE DECKS FROM NAD

NAD have announced the launch of two new cassette decks. The £229.95 613 features an electronic tape counter, Dolby HX pro, Dolby B & C noise reduction, a variable bias control and can be linked to other NAD equipment for use in a fully remote control system. In true NAD style it is a simple, no frills deck.

A first for NAD, the £319.95 616 is a double transport deck with normal and high speed dubbing. Both transports are auto reverse and can play sequentially to give up to three hours of uninterrupted music.

Both decks feature NAD's Play Trim system, which can be used to brighten up dull recordings.

Audio Club, 401-405 Nether Street, London, N3 1QG 0181 343 3240

UPGRADED MORDAUNT-SHORT LOUDSPEAKERS GET THE MIDAS TOUCH

Mordaunt-Short have upgraded their Music Series range of loudspeakers. The new models carry the suffix 'i' - apparently standing for injection. The key boost to their performance comes from a new gold-anodised aluminium dome tweeter, a rare feature on loudspeakers at this price. Other improvements include an improved cone surround on the bass drivers, more rigidly braced cabinets and hardwired crossovers. Recommended retail prices are £140, £200 and £275 for the MS10i, MS20i and MS30i respectively.

Mordaunt-Short Ltd, 3 Ridgway, Havant, Hampshire. PO9 1JS 01705 407722
Reverend Brown trembled with anticipation as dark cellos entered the room.
B&W LAUNCH ENTIRE NEW LOUDSPEAKER RANGE
There are seven models in B&W’s new 600 series line up, ranging in price from £199 to £999. One of the most significant changes is the use of Kevlar drivers throughout the range, normally only seen in their premium models. Matched with this unit B&W are using a gold-anodised, aluminium dome tweeter and all of the range feature bi-wire terminals.

The £199 DM601s use a 6.5” bass unit and are a small, two-way standmounter. The £279 DM602s, again a two way standmounter, use the same Kevlar driver that B&W employ in their Silver Signature series, with a high claimed sensitivity of 90dB. Above this there are two floorstanders, the 603 a two-way reflex design priced at £499, and the £999 604 which has a dedicated midrange driver and two Cobex bass drivers for a powerful sound. B&W also supply foam plugs so that the damping of the reflex ports can be tuned for best results by the end user, something we feel is essential to get best results in your own listening room and system.

There is also a new active subwoofer, the £499 AS6. You can expect powerful lows from the 12” driver and 100W MOSFET amplifier. The crossover point can be tuned to match your existing loudspeakers.

B&W UK, Marlborough Road, Lancing, West Sussex.
BN5 1SR  01903 750750

A WORLD FIRST FOR GLL: ICT LOUDSPEAKERS
After several years of research, Goodmans Loudspeakers Limited have produced the first ever range of domestic hi-fi loudspeakers to use ICT (Inductive Coupling Technology). The IMAGIO Series is a range of four models - a bookshelf/standmounting model and three floorstanders. The aim of these products is to bring enhanced stereo imaging, robustness and greater reliability to hi-fi.

All of the models feature a single 165mm toughened polymer cone bass/mid unit which incorporates a 25mm time aligned ICT coupled, aluminium dome tweeter. They are bass reflex designs, featuring front firing ports, and the cabinets are fully braced internally. The IC100 retails at £169.95 and the floorstanders range from £299.95 to £529.95.

Goodmans Loudspeakers Ltd, 3 Ridgway, Havant, Hampshire.
PO9 1J5  01705 492777

DIGITAL DELIGHT FROM MERIDIAN
Meridian’s new 518 Digital Audio Processor is a consumer product based directly on the technology employed by their professional 618 mastering processor. The hardware provides digital input selection, advanced de-jittering with crystal-controlled twin phase-lock-loop, and a DSP engine. The supplied user programs make the 518 effectively three products in one: a preamplifier, a de-jittering resolution enhancement box for cleaning up the signal between CD transport and DAC, and a mastering processor. It retails at £895.00, an attractive price considering the range of features offered.

Meridian Audio Ltd, Stonehill, Stukeley Meadow, Huntingdon, Cambridgeshire. PE18 6ED  01480 52144

MORE CARBON FROM VAN DEN HUL
Specialist cable manufacturer van den Hul have announced that their popular D102 and Thunderline interconnect cables are both to adopt their hybrid metal/carbon construction. The D102III is a balanced twisted pair with a triple shield. Linear Structured Carbon (LSC) is held as a matrix in a conductive polymer and appears as a layer over the centre conductors and as the centre layer of the triple shield. Price is £90.40 for a 0.8m stereo pair.

Thunderline is similar in construction to the new D102III, but uses a composite of LSC and 19 strands of 0.24mm silver plated copper. Price is £109.99 for a 0.8m stereo set.

Van den Hul UK, Unit 12, Imex House, 6 Wadsworth Road, Perivale, Middlesex. UB6 7JJ  0181 959 6827

ALL ACTION FROM EPOS
Epos have just announced the launch of a new loudspeaker called the ES22. Slotting in below the flagship ES25 at £1185, it features many of the same design features in a slimmer floorstanding package suited to smaller rooms. In true Epos tradition it is a minimalist design, using high quality drivers and a simple crossover.

Epos Acoustics, 3, Ridgway, Havant, Hampshire, PO9 1JS  01705 407722
The TEAC VRDS Range

The One System You Can't Beat!

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

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

VRDS T-1 CD TRANSPORT

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

D-T1 D/A CONVERTER

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

V-8030S Cassette Deck

The latest example of TEAC's expertise in tape engineering features a 3-Head Dual-Capstan drive transport, Dolby S Noise Reduction and separate Bias and Level controls - proof indeed that the cassette is still a viable source. Also available is the V-6030S.

A-BX10 INTEGRATED AMPLIFIER

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

*Bitstream Conversion is a trademark of the Philips Corporation.
GOLD MEDAL PERFORMANCE FROM JBL

Drawing on technology developed on their professional side, JBL's S2600 loudspeaker is the winner of Japan's prestigious Golden Awards prize for "Excellent Audio Products", the first ever given to a loudspeaker. It uses variable coverage horn loading with a professional compression driver to deliver equal sound pressure level along a horizontal listening line, rather than an arc. JBL claim the two speakers have the same loudness as each other regardless of their positions, helping them to create a consistent stereo image. The custom designed 12" bass driver has a massive magnet, 3" voice coil and heat dissipation properties which provide a linear response. Combined with the compression tweeter, sensitivity is claimed 92dB. It retails at £3500.

Harman Audio, Harman International Industries Ltd, Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood, Herts. WD6 5PZ 0181 207 5050

NEW XTC RANGE FROM ORELLE

Orelle Hi-Fi has announced the launch of a new high-end range called XTC. The new range, scheduled to be available in Autumn, includes a transport, CD convertor, remote controlled preamplifier and 4-channel 150W power amplifier. The XTC CDT-1 LE transport retails at £1250, the DAC-1 LE convertor for £1000, the PRE-1 preamplifier cost £800 and the POW-1 power amplifier is priced at £2000.

Orelle Hi-Fi, Unit 11, I-MEX House, 6 Wadsworth Road, Perivale, Middx. UB6 7JD 081 810 9388

HARMAN EXPAND THEIR RANGE

Harman/Kardon have introduced several new models to their range of hi-fi components. There are two new CD players, HD 710 and 730, both using discrete output stages, an RDS equipped tuner, the TU 950 RDS, and a remote controlled, 65watt, 30 memory receiver, the HK 3250. All are expected to be available in late Autumn.

Harman Audio, Harman International Industries Ltd, Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood, Herts. WD6 5PZ 0181 207 5050

DEALER NEWS AND OTHER STUFF

Overture Hi-Fi are holding two free musical evenings in Banbury. Tickets are available through phoning 01295 272158. Also at Overture Hi-Fi, on the 24th October, Naim Audio are previewing their new CD2 compact disc player, remote controlled preamplifier and the 92 preamplifier at 19.30. Quad will be staging a demonstration of their 77 system on Tuesday 3rd October at 19.30.

CZECH TOP AUDIO HI-FI SHOW

The Top Audio Praha show is to be staged at the Prague Hotel, Olsanka, between the 16th and 18th of November '95. The exhibition focuses on high end audio equipment, with the emphasis on demonstrating the current state-of-the-art equipment and latest technology.

Hotel Olsanka, Taboritska 23, 130 87 Praha 3, Czech Republic. 0424 267092641

RECORD SALES NEWS

The BPI (British Phonographic Industry) have reported record sales revenue increases of 13% for the period April-June '95. Singles sales are strong, with annual growth currently running at almost 15%, and album sales rose 17% in the second quarter of '95. This was helped by many new releases, including those from Take That, Michael Jackson and Pink Floyd. But the leading album of the quarter was 'Now 30', the latest in a compilation series which began in 1983 - all of which apart from 'Now 4' have reached No.1 in the album charts.

Classical music sales are also on the up, with an increase in sales revenue of 8.5% between April-June. However, increase in unit sales was just 2.7%, indicating that full price albums took a larger proportion of sales during these three months. The most popular titles included Canto Gregoriano, The Three Tenors in Concert 1994, 100% Classics and The Piano.
NINE MINI-SEPARATES...

"...a superbly built package that has system convenience, gorgeous looks, and a separates style performance. And in keeping with the separates theme, each system component is individually powered and can be bought separately."

...MAKES YOUR OWN TAILOR MADE SYSTEM

Matched styling and more importantly, a super-slick jaw-dropping sound that adds another feather in Onkyo's cap."

ONKYO UK LIMITED • 401-405 NETHER STREET • LONDON N3 1QG • TELEPHONE 0181-343-3240

CUT THE COUPON TODAY OR TELEPHONE FOR MORE INFORMATION ON THIS, OR OTHER A/V AND AUDIO PRODUCTS FROM ONKYO

Name
Address

World Radio History
Quad's new 77 CD player caused a fair bit of head scratching. It had nothing to do with the sound quality. The question was what it sounded like by itself. The point is that this 77CD is a Siamese twin: the model designed to be operated entirely on the 'Quadlink' system via the 77 amplifier. Power comes through a ribbon cable from the amplifier; the signal returns the same way to be controlled via Quad's responsive 'self-teaching' remote control. In this form it costs £595.

There are no analogue output sockets; these will be on the £850 'separate' mains-powered version, due October, for those with other amplifiers.

Impressive as this Delta Sigma 18-bit equipped CD player sounded through the amplifier it is linked to, it was hard
to be sure the amplifier wasn't due half the credit. A partial solution came with using the Quad 77 as a pre-amplifier along with a very revealing Muse One Hundred power amplifier.

And very revealing it all was. Let's start with Dr John asking 'Why don't we watch more television?' in 'Television'. In the first few bars there was a nasty bit of pan-potting as some fool engineer moved the trumpet sharply to the left. Dr John is nothing without beat and rhythm, and the new Quad had a good measure of it.

Classical music depends more on accurate reproduction of rhythm than some people think. It was the Quad's excellence here that equalled more expensive players in making me sit up in a Mozart clarinet quintet, when I realised how close to Kurt Weill's 'Television'. In the first few bars there was a nasty bit of pan-potting as some fool engineer moved the trumpet sharply to the left. Dr John is nothing without beat and rhythm, and the new Quad had a good measure of it.

Whether it is the lack of phono interconnects, or, as a fellow listener remarked, because, especially through the 77 amplifier, the 77CD sounded sometimes a little dry, a slight discontinuity in the timing of the bass as opposed to that of the midrange is now cured. Not that the bass will entirely convince House music players; it is not poorly defined, it is even quite strong, but it does have a softish aura. It could have more weight underpinning it, perhaps, but the 77 shares this attribute with a £1000+ D/A converter using the same chip I had recently.

Vocals are projected just a bit forward; it helps to give the 77CD a distinct crispness which was attractive in the 67, without exaggeration into an 'in your face' attitude. When this trait crosses over into music, it had the blazing brass at the beginning of the last movement of Bruckner's Sixth powering forth with amazing crispness and lifelike 'bigness'. Spot on with musical timing, here, too; if Klemperer had heard his recording through the Quad, his notoriously vague beat would have tightened up no end. It had me conducting like a dervish.

There is a touch of 'slimmness' about the sound of violins, again common to the aforementioned converter. It tends to be noticeable particularly alongside the richer, darker tones of woodwind, which were wonderful. There is nothing like hearing the true rasp of a sax or the ebony woodiness of a clarinet done so well.

No problems over imaging, either, which has always been a Quad strongpoint. The choir in Victoria's Missa da Requiem was very articulate, if not quite so much as the Meridian 500/563, which is exceptional. Boy trebles did not soar quite as freely, admittedly, with that range sounding a trifle constricted. There was, too, a slight underlying haze across the voices which obscured the ambience. In the Bruckner recording, although the orchestral perspective was good, the Kingsway Hall ambience was reduced. Having had the 77 amplifier for some time, however, that is probably more to do with the pre-out than the CD player itself.

Scalps may itch a bit over the Nintendo look-alike remote. Only ten per cent of the over-40s, it is said, can cope with computer-like menus. Youngsters, however, will take to the control like Mario took to plumbing. One 14-year-old, fresh from Sonic the Hedgehog, grabbed it and did: point proved!

It does take a little thought to switch to a menu that allows all the programming facilities (including the ability for the really obsessive to programme the same track over and over to play for up to 99 minutes) but I had it sorted in a few minutes after reading the instructions. These may look a bit daunting, but they work. The only snag is that it takes the remote a second or two between 'asking' for track timing information and being told it by the player. If you are one of those people who simply must check that something is exactly 2m 11s into track 5, you will have to watch the player's display after all.

Quad's new 77 series is fascinating, not only in its innovative system control concept (which coped without any glitches), but in its expandability. In a way, it's a 'lifestyle' product, but it fully maintains Quad's fifty-year reputation for real hi-fi sound along with a sensible pricing policy. Winter music won't be dull with this Quad indoors; but we'll have enough aubergine and grey on the outside without it being inside on the hi-fi as well. Bring back the yellow bronze and brown colours of the old 44 or original 34, Quad, that's what I say.

Quad 77 CD
£595

Quad Electrocoustics Ltd.,
St. Peters Road,
Huntingdon,
Cambs. PE18 7DB
Tel. 01480 52561

**WORLD VERDICT**

Competent, musical sound with neat styling and innovative remote control.

**Measured Performance**

See p113-121
TRUE MUSICAL
quality hi fi products with style and value for

**cyrus**

**PRE & PWR**

With the introduction of their long awaited PRE and POWER amplifiers, Cyrus are able to offer a sophisticated ancillary combination. From the exterior the CYRUS PRE looks like the CYRUS III integrated amplifier, complete with the familiar shoe box casing, microprocessor source selection and volume control. Both can be adjusted by the new Cyrus system controller. The CYRUS POWER offers outstanding performance, driving most loudspeaker’s with ease. It can also be connected to the PSX-R power supply, improving performance further as it becomes isolated from the mains, reducing the chances of extraneous noises and low level signals. This ensures that all music, from Classical to Rock is delivered with a close attention to detail. For more information on the CYRUS PRE & PWR, PSX-R, CYRUS III, DAD7 CD Player, FM7 Digital Tuner, and DISCMASTER & DACMASTER CD transport and DAC, contact your local Sevenoaks Hi Fi - Cyrus stockist.

**meridian**

All Meridian components are designed to be operated by the touch of a single button on the MRS remote control. The 508 CD Player is no exception. It provides the levels of performance you expect from every model within the superb Meridian range. Utilising a high mass drawer mechanism and a steel chassis means that CD transportation is exceptional. With a recently upgraded 20 bit Delta Sigma conversion stage ensuring realistic reproduction of all music, the 508 is a very fine CD Player indeed. However, the real benefits of the 508 are only realised when it is used with other Meridian components, like the SS1 integrated amplifier and 504 digital tuner. Creating an advanced and flexible remote control system.

**ruark**

The TEMPLAR’s unique visual appeal and refined musical presentation is the result of years of experience and dedication to design. Ruark are manufacturers that insist all of their products fall firmly into the category of excellence. As a member of the Guild of Master Craftsman they refuse to accept compromise. The TEMPLAR are a two way, unobtrusive, compact floorstanding loudspeaker. A carefully matched Vifa tweeter and Seas bass/mid range driver combine to demonstrate superb control with a wide variety of musical styles. This ensures that Ruark’s aim, to enhance music lovers enjoyment for years to come, is fulfilled. To audition the Ruark range, including the TALISMAN II, PALADIN, CRUSADER II and the new ICON, contact your local Sevenoaks Hi Fi branch.

**TEMPLE**

**arcan**

**ALPHA 6 CD**

Arcam’s reputation has long been established for class leading performance with the remarkable ALPHA 1 and ALPHA 5+ CD Players. The new ALPHA 6 carries on from these. The secret is Arcam’s new 20 bit digital audio board, which delivers a musical presentation with more detail, clarity and depth than ever before. The ALPHA 6 offers simline styling and minimalist layout, ensuring ease of operation as well as making it an ideal aesthetic match for Arcam’s Alpha series of amplifiers, especially the new ALPHA 6+. These two models combine to provide the convenience of remote control operation, as well as outstanding sound quality. However, the astounding sonic performance of the ALPHA 6 means that it will also complement more expensive ancillary products like the superb Delta series from Arcam. At Sevenoaks Hi Fi you will discover the new Alpha and Delta series.

**audiolab**

**8000A**

When the original 8000A was launched in October 1983, it took the Hi-Fi world by storm. It quickly earned a reputation for exceptional sound quality, elegant design and the ability to complement all types of modern loudspeaker’s. Over the years Audiolab have continued to develop the 8000A, introducing new component materials and improving engineering techniques. Today it is still one of the finest and most flexible integrated amplifiers available. The present 8000A incorporates many of these developments. A new power supply and transformer configuration provides higher current delivery, enabling it to drive more loudspeaker’s, with greater control. Audiolab also offer a logical upgrade path to increase the 8000A’s performance. Simply, use the pre-amp output to add an 8000P power amplifier. This ability ensures the 8000A will continue to perform for many years. For more details on the Audiolab range contact your local Sevenoaks Hi Fi branch.

**teac**

**VRDST1/DT1**

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**meridian**

70 percent

**TEMPLE**

**arcan**

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**audiolab**

**8000A**

When the original 8000A was launched in October 1983, it took the Hi-Fi world by storm. It quickly earned a reputation for exceptional sound quality, elegant design and the ability to complement all types of modern loudspeaker’s. Over the years Audiolab have continued to develop the 8000A, introducing new component materials and improving engineering techniques. Today it is still one of the finest and most flexible integrated amplifiers available. The present 8000A incorporates many of these developments. A new power supply and transformer configuration provides higher current delivery, enabling it to drive more loudspeaker’s, with greater control. Audiolab also offer a logical upgrade path to increase the 8000A’s performance. Simply, use the pre-amp output to add an 8000P power amplifier. This ability ensures the 8000A will continue to perform for many years. For more details on the Audiolab range contact your local Sevenoaks Hi Fi branch.

**teac**

**VRDST1/DT1**

Sevenoaks Hi Fi have been at the forefront of Hi Fi retail in the UK for over 23 years. We sell quality products to discerning customers and we firmly believe in a meaningful demonstration and helpful unbiased advice.

All the products we sell are brand new, fully guaranteed and maintained by our own service department. We also offer Peace of Mind with our own ‘No Quibble’ extended warranty. We are able to install the products you purchase, ensuring their optimum performance.
At the heart of the VRDST1 CD Transport, is Teac’s world famous Vibration Free Rigid Disc Clamping system. The VRDS mechanism provides precise transportation of the CD, allowing accurate tracking and retrieval of the digital information stored.

When connected to the DT1 DAC, via the digital or optical outputs, the two combine to offer outstanding performance and unparalleled build quality.

For more details on the outstanding Teac VRDS series of products contact your local Sevenoaks Hi Fi branch.

The new 77 integrated amplifier embodies all of the hallmarks of quality you associate with Quad. Innovative styling and outstanding build quality are characteristics common to all of their products. These are the reasons why Quad have become such a well respected and successful manufacturer over the last fifty years.

Compared with many other integrated amplifiers, the 77 is revolutionary. With the addition of their new intelligent remote control, it has almost limitless expansion capabilities. Now that the 77CD Player is available, and that a 77 TUNER will shortly follow, this exciting family of components continues to represent the rare breed of performance and tradition that can only be found with Quad. Marantz are one of the dedicated manufacturers that enjoy making recorded sound as realistic as is possible. This development of pure hi fidelity has led the Hi-Fi Press to bestow numerous Best Buys and Recommendations upon models within their range. The CD63SE offers the kind of sparkling performance you associate with more expensive CD Players. With a high mass drawer mechanism and copper screening ensuring unrestricted CD Transportation and air flow, music is always reproduced faithfully.

The CD63SE also offers an easy upgrade path, via coaxial and digital outputs. With this pedigree, the CD63SE represents exceptional value for money.

Monarch Audio

STUDIO 2

The compact Studio 2 loudspeakers from Monitor Audio offer a no compromise approach to design and construction. This is obvious the very first moment that you see them. Whether they are finished in a standard satin veneer or a luscious grand piano lacquer, the Studio 2’s are stunning.

All of the models within the new Studio series offer a combination of a gold anodised tweeter and an aluminium alloy bass/mid range driver. This means that when the remarkable Studio 2’s are partnered with suitable amplification and placed on high mass stands, they deliver staggering bass and the necessary focus to reproduce complex passages of music with glorious accuracy to reference standards.

To experience the Monitor Audio Studio series of loudspeakers, including the breathtaking Studio 12 and renowned Studio 205E, just visit our branches in Sevenoaks, Chelsea, Croydon, Guildford, Watford and Witham (Essex).

RCD970BX

Designed and developed in the UK, like all of their products, the new RCD970BX offers the same solid build quality and traditionally uncluttered look of all Rotel equipment. Thus, making it an ideal partner for all Rotel components. For further details of the Rotel range visit your local Sevenoaks Hi Fi branch.
KEF's new Reference series Model 3 loudspeaker delivers an exemplary performance in large rooms, finds Dominic Baker.
KEF's Reference Model 3s use the same Uni-Q driver found in the Model 1s and 2s we reviewed earlier in the year. This driver incorporates a 5" midrange cone with a centrally located 25mm fabric dome tweeter, placing their acoustic centres together. It means that midrange and treble sounds both emanate from the same point in space, giving a more succinct and stable image. Combine this with good phase alignment and a flat frequency response, and you have what appears to be a near ideal transducer, capable of pin-point imaging and wide stereo separation.

The good news is that all this theory actually translates into practice to give the Reference 3s the kind of solid and precise imaging that few loudspeakers ever achieve. The two forward firing drivers are smoothly integrated into the plastic baffle moulding, which itself has smoothly rounded off edges, factors which help reduce surface reflections and aid dispersion.

P. J. Harvey's vocals in 'Teclo' came over as fulsome and smooth, and were positioned solidly between the 'speakers, lending a sense of realism to this track. Even more convincing was 'Down By The Water' where her vocals, now a couple of paces to the left, were joined by Polly's lyrics. These effects may well be electronically produced in the studio, but the 3s are so ordered in their position each part, as intended by the producer.

Based mainly around frantic percussion, the Sugarcubes' 'Stick Around For Joy' (Bjork's band before her solo career lifted off) gave the KEFs a chance to display their agility. 'I'm Hungry' had deep, firm bass lines, fine projection of keyboards and vocals and a brightly lit edge to cymbals that helped give a real sense of precision and insight to this track. The intricate drumming was fast and dry, with crisp leading edges and soft decay; the Reference 3s demonstrate great poise and composure, remaining unflustered by anything thrown at them.

Joining the Uni-Q midrange/treble driver on the front baffle is a second conventional 5" driver, with the sole duty of smoothly filling in between upper midrange and low bass. Where the Model 1s and 2s could become a little too mellifluous, warming in the upper bass with the emphasis biased towards the lower octaves, this extra driver gives the 3s greater attack and speed with dynamic bass lines.

But it's not just with rock material that this extra driver makes itself known. Girolano Frescobaldi's Recercar dopo il Credo, a 17th century religious piece written for organ and performed at St. Pietro, Rome, came over powerfully. Every note was clear, every instrument full bodied, bringing to this piece the clarity and scale it deserves. The Church's ambience was beautifully captured on this fône recording and the organ has a refreshingly light timbre, giving it the openness and clarity to project out into the wide, cool acoustic of the venue.

Coupled cavity bass loading is used in the Reference 3s to give a powerful, extended bottom end. This system comprises two 8" drivers firing into a reflex loaded chamber. The two drivers each have powerful magnets, to convey fast and precise bass. Because two are used there's plenty of cone area available to deliver power in the lowest octaves.

This translates into extremely taut and clean bass, but only in the right room. What you have to remember here is that the Reference 3s are a large floorstander, standing 113cm tall, 38cm deep and 27cm wide. They can produce a lot of bass energy and really need a large room and plenty of free space. I used them 4ft away from boundaries in a room 24ft by 16ft, with a tall ceiling. They gave articulate and controlled bass along with a super sound staging. But on bass heavy tracks, they could still sound a bit much, and would welcome even more space to sound better balanced at low frequencies.

With good grip from the DPA power amplifier I used for the majority of my listening, the headache inducing subsonics on Senser's 'Peace' had a tighter, cleaner edge. The extra definition in the bass of the KEFs gave back to individual notes their identity, providing more of a tune than the normal grumble many floorstanders produce. And the explosive kick drum and bass guitar combo. on the long introduction to 'States of Mind' was enough to have my neighbours running for cover.

With very similar upper midrange and treble characteristics to the smaller Model 1s and 2s, the Reference 3s are a fine performer. They retain the superb resolution of detail and accurate imaging of their smaller brothers, but add extra kick to bass lines and generate deeper, more powerful lows to drive larger rooms. The Reference 3s are not cheap, but if you are lucky enough to own a room large enough to justify them, they will deliver a fine performance.

KEF Reference Model 3
(Black Ash)
£1999

KEF Audio Ltd.,
Tovil, Maidstone,
Kent. ME15 6QP
01622 672261

WORLD VERDICT

For superb reproduction within large rooms, the 3s are a force to be reckoned with.

Measured Performance
see p113-121
Reson d’être?

Simple! A lean but vibrant sound from L.P., says Dominic Todd, achieved by DNM’s Reson rs1 turntable.

For those who really know their hi-fi, the name Virtual Reality means more than silly helmets and zapping computer images. They’re a UK company responsible for the distribution of Crimson, Rehdeko, DNM and Thule. It’s Virtual Reality we’ve got to thank for the excellent Ringmat product, amongst others. But until now, if you’ve wanted a turntable from them you’d have to have forked out the best part of three grand for a DNM Reson Rota I.

It was therefore with a great deal of interest that I sampled the company’s new entry level Reson rs1 turntable at a far more obtainable £600. It comes from familiar ingredients, all spiced up, to produce something that’s hopefully more than the sum of its parts.

First, take one Systemdek I turntable and fit with a hand-built Swiss motor and separate power supply. Then add a Reson felt mat (a Ringmat could also be added). Next add a Rega RB250 arm - with an isolated base and weight. The first of these features allows the user to tweak the sound by loosening or tightening the arm. It apparently sounds best loose. Finally, add what used to be...
a Roksan Chorus Black cartridge, made by Goldring, fitted with a Gyger diamond stylus. Other DNM Moving Coil cartridges are also available. With the completed ingredients, hand over to DNM and Virtual Reality and stand back!

Michelle Shocked’s ‘Captain Swing’ was the first disc to hit the felt. The rs I immediately struck a chord. The punchy, fleet-of-foot sound leapt from the speakers with the alacrity this involving album requires. The Reson also proved extremely revealing. This did mean it could sound a little shrill at times. I could see some systems being rather phased by the alto saxophones which could sound simply overwhelming. But then again, the alto sax is a boisterous instrument that’s supposed to penetrate, so the rs I is merely reflecting this.

At other times the revealing, analytical nature of the deck was quite beguiling. During an untitled track at the end of the album there’s a duo of electric and acoustic guitar. Most turntables would clearly separate these instruments, but the Reson actually made me aware of the severe contrasts between the wailing, sheering electric guitar and the acoustic version whose melodic strings glide through the air. Whilst all this was going on, there were the well projected, accurately portrayed vocals vying for my attention. Like the alto saxophone though, vocals could prove a little raucous at times, with a slight edginess.

Paul Weller’s ‘Stanley Road’ offered a complete change of mood, which the Reson readily adapted to. Although the pace was taken down a peg or two compared with Shocked, the rs I still produced excellent rhythmic integrity that held the track together. It’s a lean yet vibrant sound quality that really draws the listener in. The only shortcoming of such incisiveness was that the Reson seemed to lose out on the deepest bass notes. The lowest notes could be heard, but they were in the background, rather than underpinning the track. This didn’t really get in the way of my enjoyment of the deck though, as the rest of the frequency range was so seamless that I rarely thought about the subjective merits of the bass, mid-range and treble performance.

An adaptation of Duke Ellington’s ‘Come Sunday’ by Alec Dankworth and Nigel Kennedy, on double bass and violin respectively, changed the pace of things yet again. With just two instruments it’s a rather sparse piece, but one full of intricate detail nonetheless. The rs I had no trouble depicting this. It captured every breath, every stroke, and really gave the listener the impression of being there. The double bass was produced with quite sufficient body and weight, and violin had a wonderful natural resonance and woody timbre. Problems? With it being so revealing it did pick up a little more surface noise than usual, and anyone used to the latest crop of near-silent CD players could be put off by this.

That the Reson rs I is an impressive turntable is without doubt. Be warned, though, the rs I won’t be to everyone’s taste. If it works with your system, you’ll enjoy first class transparency, seamless integration, a natural acoustic and excellent timing, whatever the style of music. If your system is forward you could find the rs I wearing in the long term, especially with female vocalists. That said, refinement did improve as the arm was tightened, but this was to the detriment of the Reson’s sheer impact; a DNM MC cartridge would probably help out. It’s probably also not the best deck for real bass freaks, although a suitable amplifier and speakers will help alleviate this.

Needless to say, if you’re looking for a turntable at this price point then do make sure you at least manage to get a listen to the rs I. If it’s too expensive, then think of the summer we’ve just had and cancel next year’s trip abroad!

Virtual Reality rs I

Virtual Reality Audio Systems, PO Box 383, Brentwood, Essex. CM14 4GB 01277 227355

WORLD VERDICT

With fine detail resolution, transparency and a neutral balance the Reson rs I represents super value.

Measured Performance

see p113-121

HI-FI WORLD NOVEMBER 1995
Music is about emotion. From rave to Ravel and symphony to soul, music fails if it does not stir your emotions and succeeds when it is capable of tearing your senses apart.

Wharfedale's Modus Music range of speakers has a powerful modern sound. The bass is explosive while the treble is precise. The elevated tweeter unit will rotate 120° for optimum performance. The moulded baffle provides excellent damping for acoustic deadness and the sculptured design gives Modus Music speakers a classic appearance. The moment you listen to them you will feel the difference.

Modus Music is one of Wharfedale's many speaker ranges. These also include innovative new Modus Acoustix subwoofer system.

Modus Music from £159.95 - £439.95

Wharfedale International Limited, Crossgates, Leeds, LS15 8AL Tel: 0113 260 1222 Fax: 0113 260 0267
Gone are the days of manual tuning. Pioneer's F-504RDS tuner is happier letting its brain take the strain, finds Noel Keywood.

It's not like the enormous silver TX-9500 I once used, more's the shame. However, some of Pioneer's skill is still alive in their new F-504RDS synthesiser tuner, fitted with the Radio Data System (RDS). Otherwise, uniformity has come to Japanese tuners, like so much else, making the F-504RDS similar in style and facilities to its rivals from Denon, Sony, Technics, et al.

Never mind though, it's still a good tuner.

My old Pioneer TX-9500 had a giant spin-wheel for tuning, and a pointer that fairly zipped along its scale. But manual...
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tuning is a thing of the past; the knob of the '504 initiates auto-tuning instead. You can sort of manually tune, but curiously this tuner stays mute until it has been put onto a station precisely. Seeing its signal strength meter resolutely stuck at zero, whilst I twiddled the knob energetically in manual-tune mode, I thought my aerial had blown down. Then I discovered that noise muting is slow to open, so manual tuning has to be slow and deliberate. This means that manual station searching isn’t easy, although auto-tune stops at everything if noise muting is switched off by selecting Mono. Better to let the Pioneer find stations and then store them in a memory for push-button selection. This also avoids locking onto distant transmitters by mistake, which happened to me with Radio 1, 2 and 3, because of the large aerial we use. The impatient (that’s me!) can punch in station frequency direct, horizontally beneath the tuning display window.

Two wavebands are provided: VHF/FM and Medium Wave, covering the usual frequency band of 87.5-108MHz and 531-1602kHz respectively. I was pleased to see that on hitting the upper or lower limit the '504 would not just stop, but ‘rotate’ to the other end of the scale; this can save time.

Memory Scan recalls memorised stations, playing each for a few seconds so a choice can be made. Of course, RDS helps in all this by giving station information if this information is being transmitted that is.

Pioneer fit two aerial inputs (cable & terrestrial) with switching between them and an RF attenuator (for cable). There’s a Narrow band IF selector, which our tests showed worked well. However, selectivity was so high that it would only be needed in extreme circumstances.

I suspect most users will never fully get to grips with the acronym-laden RDS system, where we are faced with obscurities like an Enhanced Other Network. To you or I, that translates into giving priority to Traffic Info. This gibberish isn’t Pioneer’s invention though; they merely implement the full system on the F-504. However, their handbook is no more enlightening than most - which is to say not much.

The F-504RDS was built and finished much like its rivals, its thin steel sleeve sounding a bit clanky. Nevertheless, all controls felt smooth enough. I was disappointed though that an effective 7-segment signal strength meter that reads right up to 2mV and is therefore able to give a good indication of aerial performance, had been relegated to a small corner of the display window and was so small as to barely decipherable. The handbook barely bothers to mention it either, yet an indicator like this can be invaluable in assessing aerial performance and therefore potential reception quality. On all the major stations our aerial lit six (0.8mV) or seven segments (2mV), showing we were getting optimum results.

Kiss FM came through loud and clear all right. Great to be told it’s Kiss by RDS even if it was pretty obvious from the music. Kiss FM came through loud and clear all right. Great to be told it’s Kiss by RDS through the big, blue matrix display, even if it was pretty obvious from the music. No problems here though, except a little leanness in the bass and some obvious sheen in the treble, which emphasised detail. Otherwise, the Pioneer sounded clear, clean and concise. I noticed that at the weekend, reggae indies came over as a bit restrained in the bass and changing over to our resident Troughline emphasised the fact that whilst the '504 goes low and has dry, tight bass, it isn’t as fulsome sounding as it should be. This is where NAD’s great 402 tuner scores of course.

Studio discussions on Radio 3 and News Radio can be the sort of thing to raise awkward questions about a tuner, but the F-504RDS showed just how quiet and hiss free it was on such material. Some muting of studio ‘thum’ - room acoustic - and ambience again made for dryness in the tuner’s presentation, but it was crisp and insightful. Image positioning was good laterally, but depth perspectives were muted.

Strings on Radio 3 sounded pure and free of harshness or screech. Yet the F-504RDS still mimicked so many of its rivals by sounding overly bright and detailed, perhaps in an attempt to impress in a ‘hi-fi’ way. Cymbals, maracas, violins, or any instrument with a plentiful high frequency content was projected forward with enthusiasm, becoming a little obvious. So the 504 projects detail well and this gives it an insightful presentation, but it doesn’t rasp or sound ‘grey’ in the process. But rockers might well object that their favourites station lacks balls; this is the trade-off.

The F-504RDS is a neatly engineered tuner, with bags of performance. It is however, much like its rivals, most of which I have tested and used. I was hoping for a little more of the individuality and appeal that my old TX-9500 possessed, but it is not to be found in the new Pioneer. It’s well engineered for sure, but there’s little to distinguish this model from others.

**Pioneer F-504RDS £349.95**

**Pioneer Hi-Fidelity (GB) Ltd., Pioneer House, Hollybush Hill, Stock Poges, Slough, Berks. SL2 4PQ T 01753 789789**

**Measured Performance**

**WORLD VERDICT**

Well engineered and competent tuner, but a little uninspiring.

See p113-121
Dominic Baker listens to Goodmans' new point-source IC100 loudspeaker, with Inductively Coupled tweeter.

Just as we were harping on about lack of innovation in the UK loudspeaker industry, Goodmans Loudspeakers Ltd launch their Imagio Series using British developed ICT technology. So keen were they to show us this that a pair of £170 IC100s were personally delivered by their loudspeaker engineer, Geoff Hill, just in time to squeeze into this issue.

So what is ICT and how will it benefit loudspeakers? ICT stands for Inductive Coupling Technology, and can be used to produce a single, full range drive unit that closely mimics a point source - good news for precise imaging. In the IC100s a 165mm polymer bass/midrange driver is used, in the centre of which is a metal skirted dome for treble, but it isn’t electrically connected to the amplifier. This dome collects treble energy through inductive coupling, in a manner similar to a transformer.

Goodmans’ ICT driver combines a few other interesting features. The 165mm cone has a build ring, the green ring at the centre of the cone in our picture, which joins the voice coil to the cone to give a very smooth profile. The cone’s profile, in combination with the centrally mounted phase plug, forms a horn that improves the sensitivity of the tweeter to match that of the bass/mid driver. Also aiding sensitivity, the voice coil of the main driver is wound from copper plated aluminium to keep weight down.

Entry into the Imagio Series of ICT loudspeakers starts with the £170 IC100s. They’re small standmounters, reflex loaded and using single 165mm ICT drivers. It’s recommended that IC100s are used within half a metre of a rear wall, angled in so their paths cross a metre in front of your listening position.
With a weighty, powerful sound and fine stage width, the IC100s are instantly impressive. Their direct, engaging nature pulls you into the music from the first few bars of a track. A slight forwardness in the upper midrange gives them plenty of insight and a sharply defined edge to transients. A dry, neutral midrange quality gave The The’s ‘Slow Emotion Replay’, with its soaring harmonica and forward strings, real drive and attack. Highlighted by ‘Helpline Operator’ and its deep and dynamic bass line, the IC100s had a tendency to blur low frequencies, even when pulled away from the wall. Although solid and with good weight, bass was overly full and a touch slow, the precise, fast midrange and treble easily outstripping it.

Eerie and moody, the rhythmic integrity of Portishead’s ‘Numb’ was held together well by the IC100s. Beth Gibbons’ vocals were clear, floating out in front of the mix; vocal projection was good. The background Hammond organ played a haunting melody behind her and the electronically processed percussion was held in a tightly defined space, as if captured in a bubble. Cymbals would occasionally explode outwards before dissipating, as if the bubble had burst. GLL’s IC100s made a fine stab at this track. Although revealing the strongly electronic production for what it is, they gave a musical and rewarding experience.

With solo violin, the IC100s had a neutral tone, a touch plasticky but not too rich or thick. Sustained upper notes did show a little early decay; upper harmonics didn’t extend fully, but this is a criticism that can be levelled at many dome tweeters.

ICT certainly looks like something to keep a close eye on in future. It possesses some interesting qualities, namely a cohesive sound with precise and ordered imaging, and with the IC100s you get all this for five pence under £170. I felt the bass was a little obvious in character, not really melding with the tight and fast midrange and treble. But in free space positioning it was as good as that from many boxes this size. And remember that it can always be tightened up with the addition of a couple of foam bungs!

Here is a piece of innovation worth listening to •

IC100 £169.95

Goodmans Loudspeakers Ltd,
3 Ridgway,
Havant,
Hampshire PO9 1JS.
Tel 01705 492777

WORLD VERDICT

For the size and price GLL’s IC100s offer some super qualities, especially stable imaging.

Measured Performance see p113-121
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CD convertors have always been a popular way to instantly upgrade the performance of your budget CD player. Offering higher grade convertor chips and components, they can lift the standard of your £150 bargain basement player closer to top-end audiophile status. But recently the market for add-on convertor upgrades seems to have gone a little cold, doubtless due to the increasing number of affordable players offering high spec audiophile components and up-market convertor chipsets, like the Marantz CD-63SE.

David Price finds DPA's new Little Bit III has grown up into a fine sounding budget DAC.

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Indeed this particular machine has become the bane of many mid-price convertors, with an internal DAC the equal of most offboard units selling for the same money, or more. So it was a pleasant surprise to find that for once the Marantz was thoroughly outclassed, the honours going to DPA's new £300 Little Bit.

It's easier than you'd think to design an off-board DAC - in fact it's possible to buy most of the circuitry off the shelf complete with application notes from the chip manufacturer. So it's not unsurprising that many companies take this route, concentrating on tweaking or fine tuning an existing chip set. But DPA are different. The Little Bit III uses their own discrete digital filter and 1-bit convertor, first seen in a more sophisticated form on their top end convertors.

The Little Bit III, as its name cunningly suggests, is DPA's third budget convertor. In addition to its discrete digital filter, it gains a new full-size case that makes it look good value from the word go. It's well finished, if not substantially built, looking purposeful with its switchable inputs for one optical and two coaxial digital sources.

Offboard DACs should be heard and not seen, and that's where it really comes into its own. The Little Bit III really comes into its own. The new DPA's sound quality addresses all my reservations with the CD-63SE. Make no mistake, the Marantz is a formidable performer, but compared to some more expensive designs it's a touch fluffy around the edges, with a silvery-smooth treble that lacks incisiveness, and rather over-polite bass. Add a general lack of dynamics and you've got the only reasons why the '63 isn't as good as the best thousand pound players - but now things are different.

**SOUND QUALITY**

On the end of a CD-63SE's coaxial output, first impressions were that DPA have engineered a phantom loudness button into the new Little Bit, as bass took a turn for the deeper and treble gained some much-needed bite. But further into Linton Kwesi Johnson's In Dub it was clear the DPA didn't just add weight to the frequency extremes, it actually had a lot more grip too. Sequenced bass on Opus 3's 'It's a Fine Day' started and stopped more tightly, while cymbals and percussion detailing sounded brighter and more finely etched.

Ride's 'Twisterella' underlined the DPA's superiority. In its scale, the recorded acoustic was bigger and more dramatic, with better space between Mark Gardner's vocals and the frenetic backing guitars. Drums cut through the mix better with the Little Bit, pushing the song along just as they're supposed to. By comparison, the CD-63SE sounded airbrushed. A NAXOS recording of Beethoven's Eroica sealed the Marantz's fate - the DPA thoroughly outclassed it with a more dramatic, airy, open feel. Imaging, both left to right and fore and aft was better defined, while cellos had more body and drama to them. Despite the worrying distortion figures however, this convertor showed not a jot of grain with violins, confounding all apocalyptic predictions in this department. Indeed the only criticisms I could make, which seem rather churlish at the price, are over its slightly dry sound and lack of tonal colour. Then again, I have heard worse from DACs far more expensive than this.

For £300, I can think of no other DAC I'd rather have. There's nothing around at the price to beat it. Only when you start spending twice the money do the likes of Audio Alchemy's DDE1.1/PS3 begin to give it something to think about. Once again, DPA have done themselves proud.

<table>
<thead>
<tr>
<th>DPA</th>
<th>Little Bit III</th>
<th>£300</th>
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<tr>
<td>DPA Digital Ltd., Units 7 &amp; 8, Willowbrook Lab Units Crickenhowell Road, St. Melons.</td>
<td>Cardiff CF3 0EF</td>
<td>T 01222 79562</td>
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**WORLD VERDICT**

Don't be misled by the name - it's the budget CD convertor to have. Impossible to criticise for the money.

**Measured Performance**

see p113-121

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HI-FI WORLD

World Radio History

NOVEMBER 1995
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Over the last few months something about the hi-fi scene has felt wrong. I couldn't pin it down at first, but the arrival of this pair of baby loudspeakers suddenly made me realise - for the first time in a very long time, Mission were no longer the undisputed kings of budget loudspeakers. Much to their chagrin, the new KEF Coda 7 marched in and duly started walking away with sales. You could almost hear the gnashing of teeth from Huntingdon as discerning loudspeaker buyers rejected their baby 731s, turning instead to arch rivals KEF with their custom.

But Mission aren't the sort of company to relinquish sales success so easily. Enter the 731 LE, a turbo-charged supermini sporting a doped-paper bass/mid-driver (rather than the...
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standard model's polypropylene) with a larger magnet, a bi-wirable crossover with improved components and high quality OFC internal wiring. The cabinet gets a novel, patented redesign with the front baffle screwed to the rear by internal 'legs', effectively sandwiching the cabinet's four other sides to keep them rigid. Furthermore, the new beefier bass driver gets mounted on the rear moulding, rather than its conventional front baffle location with the tweeter. A tasteful ebony vinyl covering atop slightly thicker wood is the final improvement, resulting in a 'speaker that seems heavy for its size (the cooking 731 doesn't), and extremely rigid.

So, unlike Mission's SE upgrades of yesteryear, often little more than a bi-wirable crossover and a badge, the LE is an extensive reworking of their entry-level speaker, with some very original thinking. The £150 retail price, just £20 more than the original, is an unequivocal sign that Mission want blood spilled on dealer floors nationwide - to call the pricing 'competitive' is an understatement.

But most importantly, they sound great. Where the starter 731s were dynamically a little flat and prone to flapp their polyprop cones at the slightest hint of volume, the LEs hold on tight, imparting transients in their full, uncompressed glory. Where the originals emitted a coarse grating noise on anything but the smoothest of programs, the LEs show not a trace of grain. Where the originals had a tendency to 'one note bass' thanks to Forte's polyprop cones at the slightest movement, the LEs have an abundance of coloration in the midband or bloom.
David Price looks at one of Sony’s heroically doomed attempts to give the public what they (should have) wanted, the Elcaset.

In Japan, Sony are regarded as one of the country’s great innovating companies, and often dubbed the “guinea pig” of the electronics industry. Co-founder Akio Morita once pointed out that if Sony didn’t invent a technology, they’d at least be the ones to translate it into something consumers would buy in droves. From the first transistor TV to the first domestic video recorder from the original Walkman to the first DATman, from the CD to the MiniDisc, Sony have been there from the word “Go”. But with Elcaset, they caught a cold.

As any marketing department will tell you, engineering excellence doesn’t guarantee commercial success. People won’t buy consumer electronics items just because they’re new and innovative, they will only invest if they can see how the new technology can improve their everyday lives. This lack of understanding was one prime reason for the failure of Elcaset.

At the beginning of the 1970s, a group of Sony engineers decided what the world needed was a new cassette system. In awe of the enormous success their great European rival Philips was enjoying with Compact Cassette, yet thoroughly unimpressed - and rightly so - by its poor technical performance, they hatched a plan. What if they could take the serious home recordist’s medium - open reel tape - and enclose it in a convenient cassette?

Sony duly came up with Elcaset. It was launched on April 12, 1976 and with a range comprising the EL-5 and EL-7 hi-fi separates and the EL-D8 portable. The EL-5 retailed at £370.00 and the EL-7 at £564.00, compared to Sony’s stereo cassette decks which at the time ranged from £265.00 to £469.00. So Elcaset carried a price premium, albeit a small one. Doubtless Sony hoped to rob Philips of their dominant position in the immensely valuable global cassette market, so it had to be competitive against the cassette.

It was a format considerably larger than conventional cassettes, but far easier to use than open reel. The tape ran at 3 3/4 ips, twice that of cassette, and was the same width (6.3mm) as standard quarter track open-reel. This contrasted with the narrow 3.8mm cassette.

Running more tape at higher speed past the head gave Elcaset a great potential performance advantage over cassette, even if cost and bulk were the price to pay. With Elcaset, Sony placed performance above all else.

When used with Sony’s own dual-layer Ferrichrome tape, Elcaset boasted superb performance. Sony claimed the top EL-7 deck attained a 20-27,000Hz
(NAB) frequency response - no mean feat when their best cassette deck, the TC-229SD, could barely crawl past 16,000Hz!

The only machines ever built were the EL-5 and EL-7, over-engineered monsters using extremely high quality components throughout. Although not as big as open reel machines, they dwarf today’s black boxes in size and weight - 13kgs of brushed aluminium, diecast transports, big ferrite heads and discrete components - and are not to be sneezed at.

The two machines differ mainly in transport and head layout. The EL-5 is a two motor, two head machine, while the EL-7 has three heads and a closed-loop, dual-capstan transport for greater speed stability. This said, even the cooking EL-5 boasted a 0.06% WRMS wow and flutter, a figure that puts many expensive modern cassette decks to shame. High tape speed was the key to this performance.

**MARKETING DISASTER**

In an advertisement of the time the Elcaset was billed as the product "for those who expect big things from cassette". Considering how good aspects of Elcaset’s performance are even today, it must have sounded awesome in the mid-seventies, so why did it fail? The sorry saga of Elcaset looks strangely familiar. All the failed formats through the years show an alarming pattern - they’ve been fine engineering solutions to technological problems, but ill-conceived for commercial success. They’ve all been top-down, engineering-driven products ‘let loose’ on an unsuspecting public, rather than responses to genuine consumer demands.

As Sony supremo Akio Morita confessed in his book “Made in Japan”, his company used to concentrate on technology for its own sake, and think about little details like marketing and consumer needs later.

Elcaset failed for many reasons. Hi-fi purists associated closed cassettes with lo-fi; they were not persuaded to give up open-reel machines, which could be run at 7 1/2 ips for best quality, in favour of this new single-speed medium.

Sound quality was not a key issue in the minds of Compact Cassette users, so much as small size and portability. Elcaset satisfied neither criteria as adequately as existing formats. It would have been impossible to adapt to a Walkman format, as the ELD8 portable, launched in 1978, demonstrated. It was a bulky ‘professional’ machine with shoulder strap. The format was overly large for cars too - problems also suffered by the US tape cartridge which similarly fell to the cassette.

And finally, a blindness born from insularity caused Japanese Sony to entirely overlook the rising demand.

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**MEDIA HITS AND MISSES**

<table>
<thead>
<tr>
<th>HITS</th>
<th>MISSSES</th>
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<tbody>
<tr>
<td><strong>COMPACT CASSETTE Philips, 1963</strong></td>
<td><strong>ELCASET Sony, 1976</strong></td>
</tr>
<tr>
<td>A dictation medium that became everybody’s favourite format in the seventies and eighties. Pre-recorded cassette sales rose to outsell both LP and CD in 1989. Now its days look numbered.</td>
<td>Sony’s first, but not last attempt at capturing the tape market. A naive piece of audio purism that failed after four dismal years. Possibly the only time Sony have introduced a format larger than its competitors, contributory to its failure.</td>
</tr>
<tr>
<td><strong>VHS Japanese Victor Co., 1979</strong></td>
<td><strong>BETAMAX Sony, 1979</strong></td>
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<tr>
<td>Heavy marketing ensured superior pre-recorded software availability, while hardware manufacture was licensed to the world and his wife, making it prevail over Sony’s technically superior Betamax format.</td>
<td>Sony couldn’t hide their consternation when their compact, high performance video format died so ingloriously, mainly due to early software availability problems. In Japan it is supported to this day.</td>
</tr>
<tr>
<td><strong>CD Philips/Sony, 1983</strong></td>
<td><strong>V2000 Philips, 1980</strong></td>
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<td>Got off to a slow start. CD only began to succeed when player prices came down. Ruthless marketing and retailing practices, such as withdrawing less profitable alternatives like LP, underwrote its success.</td>
<td>Philips format for the millennium. They thought people would forgive its physical bulk for a long playing time, but got it wrong. Lacked the initial push that the Japanese manufacturers gave their formats; got squeezed out by VHS and Betamax.</td>
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The £370 ELS model.
STILL STRUGGLING

DCC Philips, 1991
A curious commercial decision from Philips, replacing an old format with a digital clone. The resultant compromise has made for the worst of both worlds; it’s has 1963 access speed and looks. DCC is now impressive in sound quality but so was Elcaset.

MINIDISC Sony, 1991
Modestly successful in its Japanese home market where prerecorded cassettes in any form have never really caught on. Has failed to make it in Europe, but survives in the States. Sony are far from giving up.

CD-R Philips, 1992
The first ever recordable CD. Trouble is, it is hideously expensive and a CDR disc can be recorded only once, not being erasable. Meant for professional use in compiling special CDs, masters, etc., although it is available for domestic use to those with deep pockets.

DAT Sony, 1986
The Serial Copy Management System (SCMS) fiasco at the time of its introduction, coupled with lack of pre-recorded software meant DAT was almost still-born. Like cassette, it’s now found a use different to its intended one - it’s de rigueur for mastering and small use in compiling special CDs, masters, etc., although it is available for domestic use to those with deep pockets.

In use, Elcaset are pretty foolproof, running smoothly and quietly. For a mid-seventies product, ergonomics are excellent, always a Sony forte. The only inconvenience is the manual setting of bias and equalisation, which is usually done automatically these days. With the deck still remarkably well aligned after all these years, there was little guesswork involved in recording, the only major unknown being the accuracy of the EL-5’s quaint mechanical VU meters.

But how did it sound? Fuzzy? Foggy? Muddy? Blurred? No, not at all. Instead of the seventies mush I’d anticipated, recording from CD with Ferrichrome tape gave a bright, clear, confident sound with none of the nasties you associate with anything lower down the cassette evolutionary scale than a Nakamichi. Even the single capstan EL-5’s pitch stability was excellent, with no cracking piano notes or wobbly violins. From vinyl the Sony obliged with that hard-to-define ‘out of the speakers’ quality that was so appealing about open-reel. Harmonics were remarkably well preserved, with an ease and natural quality that has always given cassette a hard time, and treble had real sparkle.

Indeed, it was all rather hard to believe from a deck designed when the Morris Marina was Britain’s best selling car and Slade looked like the future of pop music. But there was a downside, bass wasn’t the tightest I’ve heard, and was definitely outclassed by a Sony open-reel machine of a similar vintage running at the same speed. Ironically, I suspect much of this wasn’t down to the Elcaset transport, but the deck’s audio electronics. The record and replay amps introduced a touch of grain and hardness to the sound through the tape monitor circuit which didn’t quite give the sumptuous analogue sound I hoped for. Still, to my ears, Elcaset proved itself in no uncertain terms.

ELCASET AFTER ALL THESE YEARS

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BUYING ELCASET TAPES

Elcaset owners will be delighted to learn that Hi-Fi World has unearthed some brand new blank Elcaset, the last 10,000 remaining in the world! Sony sold their stock to a tape warehouse in Manchester, where they’ve stayed undiscovered for twenty years. It’s like finding Drake’s treasure!

So if you’ve got an original machine, and we know many people still have, all is not lost. Both normal and ferrichrome types are available. SLH 60s cost £1 each, with 90s at £1.50. FeCr 60s are £1.50 and 90s £2.99. The minimum order quantity is a box of 12, for which postage and packing is £4. Phone distributors Shadoos to confirm availability before ordering.

Shadoos
Unit 15, Ifco Centre,
24 Wilmslow Road, Rusholme.
Manchester M14 5TQ.
0161 224 4215.
Fax 0161 257 3530.

SPARES AND SERVICING

Some Elcaset spares are still available. Sony make key parts like pinch rollers and belts. For information write to:

Richard Webster,
Services Communications Officer,
Sony Consumer Products
Company UK, Piper’s Way,
Thatcham, Newbury, Berkshire
RG13 4LZ
Also, regional Sony Service centres can help. Contact Sony on 01932 816000.
THE END OF A LONG SEARCH
About 3 years ago I wrote to yourselves regarding upgrading my system. In your reply you commented that "you are obviously out to scare the cat with this system". This set me thinking about what I really wanted to achieve and subsequently many more months than intended listening to various bits of kit.

Many of my problems in choosing to upgrade my Meridian 206B with a DAC were due entirely to lack-lustre demonstrations of "very well regarded" products and looking back further I realise I experienced the same difficulties when looking to replace my Cambridge P40 with another integrated amp. On so many occasions in many different dealers, with often wildly varying partnering equipment. I left the ex-dem feeling totally underwhelmed by what I had heard. I think over the last 10 years I can count on the fingers of one hand the number of times I have heard systems at dealers that have actually moved me and conveyed the emotion of music in a satisfactory manner. After all, is that not what a good hi-fi system should do, regardless of playback medium?

I learned at school, when chosen to read a text in a competition, that half of the message is contained in the words, the other half in the manner in which the message is conveyed. The emotions conveyed by the speaker to the audience and the style of presentation is what initially captures the listener and I believe it to be the same with music.

Recently fortune has smiled upon me in my search for a dedicated transport to replace the 206B. Despite having similar experiences to those of past years I eventually walked into Radlett Audio in St Albans with my Da Capo (the DAC I eventually settled on) tucked under my arm, where it was suggested I take to Audio Alchemy’s Digital Drive System III. Partnered by Audiolab’s pre/power combination driving Ruark Talisman 2s it provided one of the most musical performances I have ever heard. Four days later I took home a DDS III of my own, plugged it in and went down the pub for a couple of hours whilst it warmed up a bit.

Over the last three days I have been rewarded with a sound that is so gloriously open and entrancing I have forgotten all thoughts of changing my Tannoy DC2000s. The sound just hangs in the air apparently free from any constraints imposed by boxes. I realise that the DC2000s are coloured and not the most accurate speakers around, but for me they have always been musically involving and

TWO TRIBES
Having only recently discovered the magic of valves, I’m amazed at the vast gulf between the two technologies, and the obvious superiority of valves over solid-state amplification. It manifests itself in many ways, all of which have been aired on your pages, but the most crucial difference is only obvious on extended listening - the total absence of listener fatigue with good valve amplification. I have found that the listening experience actually improves with each record during the evening. This is the exact opposite of all the solid-state amps I’ve owned. I’m aware listener fatigue is a well-known phenomenon, but it’s surely one of many important issues for today’s industry - possibly because it manifests itself after the sale has been made. I believe listeners are often unaware they are being aggravated by solid-state electronics.

Since I bought my Copland CTA10/CTA15 amps I can only say “thank God” I didn’t go back to the hi-fi shop for another well-reviewed budget wonder with a pair of half-pint mini monitors with metal dome tweeters (more fatigue) and no bass.

This all leads me to the conclusion that technological development over the last few decades has made no significant improvement to listening pleasure or overall sonic excellence - I’m listening to fifties amplifier technology through ten year old speakers and a belt-driven LP12. Today’s industry can make the latest violent movie sound even more brutal on TV and produce finger-tip controllable sounds in every room, but there it talents end. It has singly failed to significantly improve music reproduction except at the very limits of affordability. Hi-fi that most people can afford is a poor thing with an inherently low fatigue threshold which requires that its users be desensitised to poor sound quality. Even at its best it fails to inspire.

Technology based on convenience (of use, manufacture and marketing) is ultimately a blind alley for an industry that aspires to interpret art and present it to listeners. It is one which will lead to an even more divided industry - mainstream convenience and high end - an unrewarding situation for everybody as it keeps lower cost equipment unlistenable and high quality equipment unaffordable to all but an elite.

R. C. Edwards
London.

Send your letters to Hi-Fi World Letter Page,
never have I heard them (or my system as a whole) sound quite so good as they do now. Whether I listen to blues, soul, 70's rock or female vocalists, I am now enjoying the music more than at any time during the last 10 years.

Thank you Audio Alchemy, Patrick at Radlett Audio and Hi-Fi World for the best bit of unintended advice ever! Yours currently being entertained by Jethro Tull.

Nick Davis
South Ockendon, Essex.

P.S. A tweak for people who (like me) wear glasses. Take them off when you listen to music! (It works for me and is reversible! Maybe it is something to do with the weight pushing down on the ears) Hey, I'm being serious here - maybe Dominic Todd can confirm this?

Thank you for your letter which helps underline something we always try to stress at Hi-Fi World - a proper audition at a good hi-fi dealer is worth its weight in gold. Even though it sounds as if it has taken you considerable time to find this service, your comments suggest that the wait was more than worth it, and you have been rewarded with exactly the sound you were after. DB

A VISIT TO FRANKFURT
It was very interesting and funny reading your story about "A visit to Frankfurt". One of the advantages of your magazine is that there is always a little bit of British humour inside, which makes it much more pleasant to read than a typical (boring) German Hi-Fi magazine. At first I must say that the three shops you visited are, for the German Hi-Fi scene, about as typical as a meal in a Chinese restaurant compared with fish and chips.

During the re-birth of tube hi-fi in the eighties several manufactures of high quality (and expensive) tube equipment established in Germany: Klimo, Kebschul, Raphael Audio Workshop and Orange Audio for example. There is also a small market for vintage equipment, but the problem is not the availability, it is the price. For someone who only wants to enjoy the music it might not be useful to spend DM 2000 - (about £830) for an old Leak amplifier with four EL34s that looks like it's still suffering on weak electrolytics and/or carbon resistors of very bad quality.

Another problem is that most vintage equipment of

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review

BASS-IC INSTINCT

Douglas Floyd: Douglas auditioned Technics' new SA-PM650 receivers; a clone with real muscle.

Chime will begin at 16kHz-1kHz per decade-
then the budget gets the new $6.500/Stereo. Bought from
Dobbs' Best stock toward the British in
dual performance. But it is a two-way
system.

Technics' SA-PM650 receivers are
the best. They deliver a full,
musical sound with impressive
dynamic range and the clarity
that is so often
lacking in
British and
American
product.

All of its budget style appearance
is deceiving. Whistles to be an
immediate two-way bookshelf.
At B&W we’ve just scored another major success. Our CDM1 has now won European Speaker of the Year, which was judged by the Editors-in-Chief of leading photo, video and audio magazines from thirteen countries. High praise indeed. But with a winning team of engineers coming up with a hat trick of technological innovations: outside tweeter mounting, kevlar drive unit and contoured edges for reduced sound diffraction, it’s not an entirely unexpected result. For more information call B&W UK on 01903 750750. And see that the best European players don’t have to start at £8.5m.
Japanese manufacturers have produced either. The midrange and tweeter forgotten about the higher regions complex technique is to squeeze more wave radiation area of a 25cm woofer achieve the combined effective sound warmed to them immediately, sending diaphragms, a material which has drivers have high performance mica bass from a small cabinet. The aim of this conventional limitations of small cabinets and drivers. The SB-M300s have been designed with the interesting drivers and design, they would be regarded as tonal 'clarity' to high standards of music reproduction would be in a free-standing environment. Having found a suitable position, bass improved dramatically. Low strings were warm and resonant, and full choirs sounded large and powerful. The lead tenor however, sounded unfortunately thin, and on occasions the midrange, particularly in full accompaniment, would verge on harsh. The female alto in 'Ego sum Abbas' was controlled and beautifully presented, while the soprano in the finale, really showed what the mica drivers were capable of, with no evidence of strain or break up at all. Timpani, tuba and double-bass in particular were allowed to shine with measured ease, and this alone deserves commendation.

The SB-M300s have been designed with the interesting drivers and design, they need a reasonably powerful amplifier for best results. Simply Red's New Flame sounded really good, once a bit of Wellington wattage had been thrown at it. Bass and drums were tight and attack was fast. Drum sound in general was solid and well placed in the stereo stage. Mick Hucknall's vocals were consistently clear, although at times his presence was more than I'd been accustomed to. 'If You Don't Know Me' demonstrates in the first few notes what the 300s can achieve on fretless bass. Definition between lead and backing vocals was notably good, as was the ability of the 300s to convey emotion.

Technics deserve considerable success with the SB-M300s. Any 'speaker combining thunderous deep bass with a clear, detailed midrange and treble deserves to succeed. But despite the interesting drivers and design, they still need 'musclesome' transistor amplifiers to give their best. If Technics can invent an acronym for that - and then successfully engineer it - the UK audio industry will have to start worrying.

Technics SB-M300 £350
Panasonic UK Ltd.,
Panasonic House,
Willoughby Road,
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Tel 01344 862444

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Hi-Fi, Luton TEL 01452-846977
Phase III Hi-Fi, Worthing, West Sussex TEL 01903-507007
Sevenoaks Hi-Fi, Tunbridge Wells, Kent TEL 01892-531543
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The K5881 kit uses a simple, but very well engineered circuit, along with superb transformers in-house designed and optimised using state of the art equipment, and comes supplied with quality audio grade components. There are many things we could do to improve its performance, but they would all increase the price. As it is, we believe it to be one of the most reliable (the original is still running with the same valve set) and finest sounding amplifiers anywhere near the price.

Some of the points you make about K5881 are, however, open to argument. Because we use high grade electrolytic capacitors, by-passing each one would only make a small difference to sound quality and the design is kept simple and easy to build. In the kit K5881, the capacitors C12-15 of the original published circuit are replaced by a dual 50+50µF high grade LCR electrolytic with solder terminals (much better than screw terminals which leave bare wire open to oxidation), I believe the same one used by Marshall because of its excellent performance and longevity. The types you suggest would raise price significantly, and price is a very significant factor. Most requests we receive are for cheaper designs, not more expensive ones.

Our 300B amplifier shows that the best approach is to design a simple yet fundamentally linear amplifier, rather than one which needs feedback to correct its problems. K5881 follows our high voltage/high working impedance philosophy, which gives unusually linear behaviour. High quality output transformers capitalise upon this. It does not need and would not benefit from more feedback in our view, from wherever it is taken. Out of interest, our original prototype had ‘ultra-linear’ feedback taps, but we abandoned them as unnecessary.

Of course, we are the last to discourage tweaking. K5881 is an excellent basic design offering fine sound quality to DIYers that would normally be out of the reach of their pockets. It is also an excellent base for those more experienced audiophiles wanting to experiment with different components and circuit arrangements. DB

KRAKEN LIVES
You seem to imply in the piece that the Axiom is a replacement for the Kraken Integrated. Not so. The Kraken is a very different (read quirky) product. It’s also Class A and costs more, at £549.

We wouldn’t want your readers to think that the Kraken is no longer available.

Andy Light
Alchemist, London.

FRENCH PASSION
Being a convinced “analogue” electronics engineer I have always been strongly attracted to audio, so much so that it has become my only aim in electronics as a hobby. I design, conceive and build preamps, amplifiers, speakers just for the pleasure of creating and finding new ideas, or experimenting with new techniques. This appetite is, however, limited by the space of the flat that I share with an understanding British wife who appreciates the sound quality of my prototypes, and two young sons who like good music when they are quiet enough to really listen to it.

My personal opinion, in terms of measured behaviour and reproduction of performances, is that the simplest circuit designs often are the best. Also, there is not one excellent active device, but they all have good and bad sides. The secret of getting close to a very good amp is to use different devices in their best operating domain.

Practice proved this to be quite true when I built mono-blocks based on a valve input driving a circuit with mosfets for the power stage. I demonstrated them to a “hard to convince” friend who is a hi-fi enthusiast too and whose system is based on 300B single-ended mono-blocks driving Ljowther TPI speakers (folded horn with PM2C drive). After several listening and comparative tests, he told me they sounded just as good as his 300B mono-blocks, I had my reward for these hours spent in, what is called by my family, ‘Papa’s room’.

Sharing this passion of audio design with a British friend, (my father in law), our meetings always are filled with exchanges of ideas, tricks, circuit designs and listening tests from our respective experiments, although we do not have quite the same taste in speakers (he thinks Lowther and Tannoy are just good enough for public address! ).

Another fact is that, depending on the type of circuit, Class A is not always the royal way of amplification; I have found that it seems to only make a real difference with bipolar transistor amplifiers.

If you would like a personal hint, I suggest you include the following to your CD testings:

"Pictures at an Mussorgsky-Exhibition", transcribed and

...continued from page 40

...continued on page 47...
PERFECTION IS A PASSION

"...PASSION took over the reference position... substantially ahead of the best active line pre-amps. PASSION's switched, discrete attenuator is clearly more accurate, more dynamic and transparent than the pot alternative. When audio products are as good as this, there is little more to say, save to endorse them with a firm recommendation... Now better still in all Vishay mode with a record score of 37". Review of PASSION - Martin Colloms HiFi News April '93 and November '94

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... continued from page 45

performed by Jean Guillou at the Great Organ of the Tonhalle, Zurich. Dorian Recordings.
*Sonatas for violoncello and basso continuo*, Vivaldi & Geminiani, Roel Dieltens, Richte Van Der Meer, Anthony Woodrow, Robert Kohmen Accent.
Listening especially to track 1 of the first, track 9 of the second and track 1 of the third disc will show the weaknesses of a system.

For testing voice reproduction Handel's 'Messiah' by Christopher Hogwood and The Academy Of Ancient Music is most revealing, especially "For unto us a child is born"; Henry Purcell's 'Hail Bright Cecilia' by John Elliott Gardiner is also a good vocal response test.

Of course, it all depends on what we consider as the "closest to true" reference. I believe that even if the listening room cannot compare with a church nave, the organ should sound life like and not muffled or boxed-in. I have heard this before on very expensive speakers that I would not want even if they were given to me; the first CD mentioned above is merciless on this point.

The second CD reveals the ability of a system to reproduce musical details as well as making you feel the instrument is being played next to you, and the speakers will show their weak points and so will the amplifiers. The third CD makes a good overall test since it combines various instruments and different players.

I find modern fabrics, (Kevlar, carbon fibre, fibre-glass) widely used for cones nowadays deceiving; I am not at all convinced that this kind of speaker is worth the expense and, so far, I have not found anything better than a well designed paper-cone speaker, not only for the efficiency they usually provide but most of all for their absence of colouration. This, of course, applies to bass and mid-range units and although I did build cabinets with a paper-cone tweeter, I must say that I certainly prefer ribbon tweeters. Full-range transducers (Lowther, Supravox, Audax, Sound-Lab, Fostex) providing they have a proper load. Folded-horn, TQWT, folded-line are excellent too and they usually are paper coned as well.

So my system mainly consists of equipment of my own design, apart from the CD player, a Philips CD 630. I have been thinking of building a separate converter with valves filter and output circuit and also wondering about the purchase of the Arcam Alpha 5, just to find out if all these differences between CD players or separated drives and converters I have been told or read about can really be heard and worth the bother and the expense.

Well, thanks again for your great magazine, its features, its reports and tests, the consulting and expert opinion and advice of the writers and journalists and the always interesting supplement; all this devoid of the "hi-fi nuts", naive jargon and equipment. Carry on, you are doing great!

P. Fontaine
Evry, France.

CLEAR IMPROVEMENT
I managed to pick up an old Kenwood P26 turntable for £45, a model they supplied with their mid-fi systems. Even with the standard cartridge supplied, the sound quality was very smooth and richly textured compared to my Sony CD player, although the overall clarity was not so good. If this cheap turntable and cartridge could almost rival my CD player, then a Shure M75B (type 2) cartridge I found in a drawer could have great potential.

One slightly major problem that arose was of course that the Kenwood's supplied cartridge is held in by one small screw placed in the middle of the bracket on the end of the arm, unlike the Shure, which has the usual twin bolts. In the end I put a bracket across the top of the headshell, which secured the cartridge pretty well.

Then came the problem of weights. The Shure is considerably heavier than the cartridge supplied with the turntable, but I managed to find a weight from an old record player which was stuck on with blu-tack.

After cutting the automatic return system to pieces because it was cutting off before the end of the last track and slightly modifying the power supply I was ready for connection.

Amazing! I am aware that this is not exactly a high end cartridge but the sound compared to CD was brilliant. All the clarity of CD is present, yet with a sound that is not thrown at you so much but given to you in a smooth, refined way.

I am, as I mentioned earlier, only using budget equipment (NAD 3020A pre-amp section, home made MOSFET amplifier and Mordaunt-Short MS 3.50 loudspeakers) and feel that it would be daft to upgrade the mat the record sits on etc. when the upgrade compared to modern turntable may not sound so great, but then the upgrade cost me about 20 pence for two nuts and two bolts and now sounds better than my Sony CDP-991 (costing £230).

Just to end on a lower note. I have been enjoying Hi-Fi World since April 1991 and have always liked the layout. Then the measured performances were all moved to the back of the magazine which is, I feel, a great shame. I always read the reviews with interest and then like to be able to have a look at the technical spec. I am aware this may seem trivial as the measured performance is still in the magazine, but I don't like having to fumble through the rear pages of the magazine to try and find the page with the measured performance on every time I have read a review.

John Battersby
Teddington, Middlesex.

We weren't happy at this move either, but had to find more space up front in the colour section for pictures and copy. Test results do not need to occupy valuable colour space. Also, many readers don't like to see technicalities on the page. We've had complaints about "paying two quid for something I don't understand". We hope to be able to expand the magazine further in future and perhaps we will then be able recombine test results with the main review.

However, militating against this have been some huge increases in paper costs recently, roughly 30% in the first round at the end of 1994, with a further 20% threatened. This is putting a lot of pressure on magazine design and quality, at least if such costs are not to be passed on in raised cover price - something we've avoided ever since the magazine was started back in 1991. NK
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World Radio History

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World Radio History
Orelle's latest entry level CD player, the CD100, follows on from the under-rated (and increasingly overtaken) CD480. It features the same new styling as Orelle's latest amplifiers, giving it a more distinctive appearance.

Internally, however, the CD100 shares much with its predecessor. The Philips 16-bit "Crown" chipset and swing-arm laser assembly were seen as passé when the CD480 was launched two years ago. There are no longer machines at this price range, that I'm aware of, still using the technology, making the Orelle unique. Despite this, it's a well proven formula and one that has produced some excellent results in the past. You can be sure that Orelle have retained their usual attention to detail in the power supply, output, filtering and screening.

Although its obvious rival will be Arcam, I selected a Marantz CD-63SE to play alongside the CD100. Although it's £150 cheaper, it goes without saying that the Marantz has proved itself time and time again against machines of a supposedly much higher calibre.

From the first play of Andy White's 'Street Scenes' it was immediately apparent that this was a CD player from the "old school" of multi-bit design which isn't necessarily a bad thing. It was surprisingly smooth (more so than the CD480) and produced fine detail retrieval from the complex tracks too. Yet somehow it didn't manage to create the sense of space around instruments that the CD-63SE does. The bass weight also didn't sound quite as authoritative as the Marantz.

Sound staging was a mixed bag. Vocals had excellent coherence, good projection and were free from the nasal harshness that can plague other multi-bit machines. But, overall, the sound seemed rather constrained, lacking the expansiveness of the Marantz and other more recent designs which defy the physical constraints of the 'speakers.

Suzanne Vega's 'Blood Makes Noise' showed a slight veiling with the Orelle, highlighted by this female vocalist. There was good definition of the contrasting bass and electric guitar, although drums were not quite as incisive as they could have been. Again, the Orelle lacked the enveloping nature of the CD-63SE and wasn't quite as fulsome. Background noise was impressively low for a multi-bit machine, easily matching the Marantz here.

Vivaldi's 'Four Seasons' demonstrated most where improvements have been made over the CD480. Where the 480 could blur the lower bass notes, the CD100 was clean and precise. Violins also benefited from the Orelle's smooth, even nature. It made for a relaxing listen, yet despite good dynamics, the sound was once again constrained in terms of stage width. More's the pity, as the CD100 is capable of producing fine depth of sound.

There's much to be said for Orelle's evolutionary approach to developing their CD players (and hi-fi in general for that matter). The sound they've managed to squeeze out of supposedly redundant technology goes to show there's more to decent sound than the latest chipset. Yet despite this, and quite credible sound quality, it's not enough to put it ahead of the field. The Marantz CD-63SE and NAD 514 offer that bit more listener involvement for less money. Still, if you're next CD player has to be British, then the Orelle does offer a punchier alternative to the Arcam.

Orelle Hi-Fi, Unit 11, I-MEX House, 6 Wadsworth Road, Perivale, Middx. UB6 7JD
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WORLD VERDICT
A smooth and punchy sound makes this British player one worth looking out for. Tough competition though.

Orelle CD100 £499

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Measured Performance see p113-121
The retro styling of Galactron’s pre/power amplifiers takes Dominic Baker on a trip back to the past.

The Galactron MK 2016 preamplifier and MK 2121 power amplifier answer to that familiar styling cliché: ‘love it or hate it’. I’m one of the latter and most friends felt the same. Set in a Seventies time warp, the Galactrons have a grey Nextel finish, red wood end cheeks and a perspex window through to a green LED lit circuit board. They are designed to stand upright, being taller than they are deep. Their saving grace is a full feature remote control which allows them to be hidden from view.

It’s hard to know where Galactron are coming from. Both preamplifier and power have balanced XLR connectors, and they do have a kind of ‘professional’ look about them. Indeed, they would fit in well next to an open reel recorder in a studio. But the remote control and literature both suggest that they have been aimed at domestic audiophiles.

The MK 2016 preamplifier has four line level inputs, one with a facility for balanced connection, a tape monitor, headphone outputs in the form of two phono sockets and two sets of line outputs for power amplifiers. These are labelled high and low, corresponding to high-pass and low-pass filters for a bi-amplified system, but in the standard configuration our samples arrived in, both are wired as full bandwidth outputs. The power amplifier boasts 60 watts output and both it and the pre-
amp have a flashing LED which stays on when warm-up is complete and they have reached optimum temperature. One of the things that instantly characterises the sound of the Galactron MK 2016 preamplifier and MK 2121 power amplifier is a soft, warm balance. Whilst this can be most welcome with bright recordings or when partnered with less refined CD players, it was just a little too soft for my taste. Sheryl Crow's 'Strong Enough', already quite a rich recording, verged on sounding dull; there was a loss of sparkle and extension in the treble. With mellow and smooth albums like this the Galactron makes the overall balance too laid back, softening transients and removing some of the sense of excitement from a performance. On lighter, brighter material, like the Lightning Seeds' 'My Best Day' the Galactron was better balanced, but only marginally. Some of the sibilant edge to cymbals was usefully smoothed over to give a more rounded sound - good! Even here though, there was a noticeable lack of upper midrange and treble detail - bad! The bright upper harmonics of strings and cymbals were blurred and decay was over damped to give little real impression of acoustic space around performers - very bad! To try and alleviate some of these shortcomings I decided a change of loudspeakers was in order. I had been using KEF's Reference 3s, which although sensitive enough to be driven by just a few watts of power, can present an awkward load to many amplifiers. Heybrook's Heylos, with their colder, more up-front balance fitted the bill nicely. Unfortunately, the improvement was only small and the Heylos highlighted other suspicions I'd started to form with the KEFs. Their forward midrange squeezed a little more projection and perceived detail out of the Galactrons, opening up the sound to a more satisfactory standard. Treble was still too soft and the bass was, well, curious. With the KEFs, bass had sounded lumpy and indistinct, almost as if it was trailing behind the rest of the mix. With the Heylos it caught up a little, but bass notes remained ponderous and poorly defined. This was especially noticeable on the title track of Blur's Parklife. Here, where tempo and superstructure depend on the bass line, the Galactron was far from convincing. Rather than the succinct, well timed piece of pop it should be, it became a rather dull mess. Giving the Galactron another chance I moved to Suzanne Vega's simpler, and mainly acoustic first album. Here the it made a better stab at things. The acoustic guitar was clear and sounded tonally neutral, coming across as realistic. Vocals were improved, having a dryer, less muffled quality. Projection and detail could have been better, but on the whole I felt the performance seemed to be more musical. The Galactron appeared to be confused by more complex music, favouring simple acoustic pieces where its shortcomings were less obvious. If you like a warm sound and have a system that needs its treble taming, and if you can live with the styling, then the Galactron pre/power is worth seeking out. But personally, in a balanced system, I found the sound too dull and lacklustre to be inspiring - and I couldn’t stand the styling! Seventies retro is not for me. I'm reminded that Aura's VA-80 is every bit as smooth, a little more balanced with it, has nearly as much power, and costs a fraction of the price. Galactron need to have a serious rethink if they are to be successful in the UK. To try and alleviate some of these shortcomings I decided a change of loudspeakers was in order. I had been using KEF's Reference 3s, which although sensitive enough to be driven by just a few watts of power, can present an awkward load to many amplifiers. 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SHURELY A CONNOISSEUR
I am lucky enough to live in the Derbyshire Dales, although the down-side of all the lovely scenery is that radio reception is rather difficult, which is compounded by the need to use an indoor aerial. Can you recommend a sub-£250 tuner that will give me the best chance of good reception?

My second question concerns a twenty year old Connoisseur BD1 turntable fitted with a Shure M75ED cartridge which needs replacing, and I was wondering what would be suitable. I find the M75ED too bright for my favourite modern jazz and classical music. Perhaps it would be better to replace the turntable with something more modern, or would it be worthwhile having the Connoisseur refurbished?

Finally, I recently bought a Musical Fidelity A1 final edition, which I am thoroughly enjoying. However, neither the dealer or the manual proved very informative concerning the specification and history of the model. The manual specifies 40 watts per channel, but previous models were rated at 25 watts. Similarly, previous models were famous for running very hot, but mine only gets moderately warm. Do these changes indicate that the amplifier has been re-biased away from its original Class A to deliver the extra power?

Peter Cressbrook, Derbyshire.

Write in with your problems to Hi-Fi World, 64 Castellain Road, Maida Vale, London W9 1EX. Our panel of experts will endeavour to solve them, or at least offer some practical advice.

The NAD402 (£160) is as sensitive as anything we have measured recently and has super sound quality. In your predicament, this is the one I'd go for. Your closest transmitter is at Sutton Coldfield, about 25 miles away as the crow flies. There are relay stations at Chesterfield and Buxton, but these are much lower power (400W and 150W compared to the 250kW of Sutton Coldfield) so I suspect you will be tuned to this main transmitter.

If it is possible, try a good 5-element aerial mounted in your loft. Ron Smith Aerials, Tel: 01582 36561, can supply a Galaxy 5-element aerial for around £49, which should give you more than enough signal. This will give the best results.

If you can't get an aerial in your loft, use a simple metal dipole aerial, which is best accommodated upstairs on top of a wardrobe, or in a stairwell, to gain height. There are many hi-tech indoor aerials around, but when we have tested them they come out no better than a simple dipole, the only benefit being smaller size.

Also steer clear of aerial boosters. These are often misused, users expecting them to turn a weak distorted signal into a strong clean one. All they do is amplify the signal, so if it is weak and distorted on one side of the booster, it will appear strong but equally distorted on the other.

A warmer, smoother sounding cartridge for your Connoisseur, and one with super detail too, would be one of the Goldring 1000 series. These start with the 1006 at £49.95, and rise to £104.95 for the 1042GX. A good value and competent one to go for is the 1012GX at £64.95.
As your Musical Fidelity A1 final edition seems to run cooler than the original, and power has increased, it does suggest that it has been biased more toward Class B operation. However, we are not familiar with this product so your best bet is to contact Musical Fidelity direct. DB

**VALVES IN S.O.H.O.**

Your correspondence earlier this year concerning the venerable Mullard 3-3 amplifier prompted me to dust off and refurbish my own home-made example. I had forgotten what an easy, sweet sound was possible from so few, relatively low quality components. I would now like to re-install it as part of a second system in my 13ft x 11ft home office / bedroom, linked to the Nakamichi DR3 robbed from my existing system.

What I would like to achieve is a low volume of high quality, mainly classical sound to serenade me as I pound away on the home computer during an evening (rather than room shaking, wake the children levels). To this end, I would appreciate your advice on the selection of suitable speakers to meet this rather modest demand. As my desk looks out of a dormer window, the listening triangle is far from ideal. The speakers would probably have to be not so much bookshelf... Continued on page 55...

**ON A WINNER**

I was the lucky World reader who won the Epos ES25s from the July issue competition and very grateful I am. Thanks to all concerned with the competition.

I wonder if you could spare me ten minutes of your time to answer a few queries?

1. Can you tell me what equipment and cables were used to partner the ES25s.
2. Did you review them with spikes fitted or without, as I noticed the facility for spikes. If so, are the spikes unique to Epos and could I obtain them from Epos?
3. Why was there no 'World verdict on the ES25s, or is there one?
4. Do they have to be tri- wired and if so can you recommend a suitable cable to partner with my Quad 34-306, Meridian 206 with Roksan DAC-DAI.

I also sometimes use a Radford STA 15/111 and SC22 pre-amp for amplification. Is the Radford capable of driving the 25s?

My current speakers are Quad ESL-57s.

Brendan Woods

Tile Hill Village, Coventry.

Sorry that the spikes were missing; we have posted you a set that will fit. The ES25s have super-tight, clean bass and the spikes are essential to exploit it fully.

I used the ES25s with a Deltec 50S power amplifier, which has its own special cables incorporating a feedback line. This is one of the cleanest and most transparent solid-state power amplifiers I've come across, but sadly it is no longer available. There is shortly to be a close replacement for the 50S, DPA Digital's 500S which will use a similar external feedback arrangement and DPA's unique hybrid op-amps. It may be well worth hanging on for this amplifier, which promises to be a cracker.

Your other option is Naim, which Epos use as a reference amplifier themselves. The NAP180 power amplifier has excellent dynamics and drive, and will control the ES25s, giving a powerful and dramatic presentation. If you can wait, audition this against the DPA 500S to see which you prefer.

The ES25s don't have to be tri- wired, but if you do want to try this option, I'd recommend Ortofon SPK300 bi-wire cable for midrange and treble, and a single run of SPK500 for the bass. These are high purity copper cables that have a very clean and transparent balance. Remember though, if you do decide to use either the Naim or DPA amplifiers recommended above, they both have their own special cables.

The Radford wouldn't really drive the ES25s properly. It will sound OK at low volumes in a small room, but doesn't really have the power or control for higher levels in a larger room.

I hope this answers your questions, and allows you to continue enjoying your prize.
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“All theory aside, the RINGMAT really works.”

Robert Deutsch (Stereoephile, Vol.17 No.5 May '94)

“Better than ever is what I have to report about the MkII. Buy a RINGMAT and turn your AR into a killer ‘table. It almost seems too good to be true.” Sam Tellig (Stereoephile, Vol.18 No.1 January '95)

“Essentially, RINGMAT helps give LPs the kind of firmness and stability normally only available from master tapes. Given the excellence of the original RINGMAT, I was a bit sceptical about whether or not the MkII would provide a worthwhile improvement - it did!” Jimmy Hughes (Hi-Fi Choice, February '95)

“This product really does have to be heard to be believed. On most turntables the bass seems to instantly reach down an octave lower, with noticeably better control and extension too... What's more, none of these improvements are ones you'd listen hard for and, as yet, I've found no adverse effects.” Dominic Todd (Hi-Fi World, January '95)

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... Continued from page 53

as corner of desk unless they were mounted on the walls to either side, or behind, firing back into the alcove! Is it possible to buy or build ultra miniature, possibly single cone, boxes to meet this requirement?

Also, do I have a potential RFI problem generated from the computer or screen? As I wish to move my cassette deck between systems as required, I would imagine this action might eventually weaken and degrade the wish to move my cassette firing back into the alcove! Is

... Continued from page 53

which are sensitive, which

In the UK's hyper competitive loudspeaker industry, it makes little sense to build your own budget miniature 'speaker. KEF Coda 7s, Mission's 760s, 731s etc are all small, high quality miniatures which are sensitive, which means you'll get reasonable levels in your office. For £120 or so these miniatures offer super sound.

The magnets from the drive units will interfere with your monitor screen if they are too close; keep them around 18 inches away to be on the safe side. If you are going to move your cassette deck around regularly, it may well be a wise idea to have a connection box as you suggest, I would. DB

**RETIRE HEATH ROBINSON**

Over the past few months I have been moving towards a decision to construct a valve amplifier such as the K588 featured in Supplement 13, as part of a major effort to upgrade my old Heath Robinson system that I currently enjoy (endure?)

As part of the upgrade programme I also wish to change my speakers to something that will offer a better level of sensitivity. In your second ever issue (April 1991) you published an offer for a horn loudspeaker kit (pages 96 & 97) that would be ideal for my needs. Could you please inform me whether full construction details of the design are available (or even if it is still possible to obtain a kit). Failing this, are there are suppliers who offer similar kits?

Dr Gareth Taylor

Gosforth, Newcastle upon Tyne.

The kit featured in the April 1991 issue of Hi-Fi World is no longer available, neither are the plans. It was in fact a truncated horn. Your best bet is to contact IPL Acoustics on Tel: 01373 823333 who have a range of modern, floorstanding TL designs available to the home constructor. DB

**BASS-O-MATIC**

I am searching for an active subwoofer with a frequency control and an electronic crossover that can create at 24dB per octave high-pass slope, if it exists! I would be happy to know if such a product exists. I am not a purist but am still keen for advice on how to obtain deep sub-bass. Should you suggest I have the thing built to spec., please advise me on companies with a mature knowledge and experience of building and tuning active hi-fi subwoofers.

Zygmund Balinski

Fulham, London.

The closest thing I could find that looks like it might suit your needs, is REL's Strata subwoofer. You can vary the point where the subwoofer comes in between 30Hz and 120Hz, allowing it to be matched to a wide range of loudspeakers. This subwoofer also has a high pass filter, to limit the bass getting to your main loudspeakers and improve power handling. This is set though, and not variable.

Generally, to get the best results from a subwoofer you would use it in the following way. Move your main loudspeakers out into the room a little where they will create a greater sound stage and better images. Bass will also be cleaner and faster here, if a little weaker, which is where the subwoofer comes in. With the Strata you can tune the crossover frequency and level until it blends harmoniously with your main loudspeakers. This may take some time, and you will probably still be tweaking the settings after a couple of days, but once set right, you should get terrific bass depth and power along with near seamless integration between the subwoofer and main loudspeakers.

Contact the Listening Room, Old Brompton Rd, Chelsea, who are the closest dealers to Fulham on Tel: 0171 244 7750. They normally have a REL Strata subwoofer in stock and will be able to demonstrate it and answer any queries you may have.

DB

I can't emphasise how diligent you need to be about tuning, which is difficult. Start with lowest output from the REL, as well as lowest band pass

![Mullard's Original 3W Circuit Prototype](image)

Continued on page 61...
Golden Dragon Pre-Amplifier Tubes

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Special Quality Golden Dragon Pre-Amplifier Tubes

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New FROM Golden Dragon

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<td>EL34 Super</td>
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When the instruction manual turns out to be twice the size of the machine it describes, you know you’ve stumbled across a serious piece of kit. Such is the case with the Sony TCD-D7 portable DAT recorder. Designed to faithfully and noisefully record speech and music in full blown 48kHz digital audio, the D7 is definitely not a toy.

Imagine the glee on my face when our gift bearing Editor presented me with not only this Walkman sized DAT, but also the only SBM I (portable Super Bit-Mapping processor) in the country. Armed to the teeth with a two track microstudio which could make Trevor Horn weep, I set out to do some serious recording.

My first stop off was on location in a large wheat field in rural Kent. I came away with a surprisingly transcendental recording of summer sounds: birds, insects and the obligatory drone of a distant tractor.

The second stop was a rehearsal session of the anti-fashion Reading band, Acoria. Eddie, the extremely talented Yamaha-endorsed guitarist, thrashed his wieldy axe, backed up by the thunderous drumming and bass of the ass-tight rhythm section. Karen’s gripping vocal power dominates this really fresh outfit, the Sony D7 loving the outing. Partnered with the SBM I, near professional results were a doodle.

The functions are so straightforward, and once you set a sensible level it does the rest, with no noise or distortion to speak of.

Although recording on a rather limiting semi professional condenser microphone, the live sound and feel was extremely well preserved, and the music setting (which I presume has a roll-off at about 80-100Hz) worked well. I had deliberately set the recording levels really low, to avoid any possible clipping and allow for maximum headroom. Acoria are not decibel shy, and despite the high levels, the D7 coped admirably.

Finally, I recorded an interview with the band in long play mode (operating at 32kHz). SBM does not work below 48kHz, but this is not of any real consequence when recording dialogue. Playback was vastly superior to the run of the mill Dictaphone, and I am sure...
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In NOVEMBER 1995 HI-FI WORLD
every self respecting business person would want to encode their next meeting with the D7. Line recordings were acceptable, although not in the same league as the counterpart studio Sony DTC-60ES.

The portable SBM1 proved an invaluable accessory, especially when recording music. The SBM results were vastly superior to an unprocessed comparison, which sounded dry, clinical and edgy. The SBM process, in a nutshell, really works - adding life, warmth and musicality. There is no 'dithering' or masking in this process, and the sound is certainly superior to other '20 bit' processors I have heard.

The D7 has a cool, purplish back-lit LCD display which has all the functions clearly laid out in a sensible and practical fashion. Despite the compact size of the D7, I was pleased that the main function buttons were accessible and had a positive click-on/click-off response. The machine weighs in at just over 500 grammes, yet it conceals some pretty impressive electronics. The D7 can provide up to four hours of recording time in long play (LP) mode when used with a 120 minute tape. This is ideal for long conferences (and brilliant bootlegs, if you manage to discretely tuck the D7 into your sporran or bra!).

In standard mode, recording time is the usual two hours. All recording levels are operated manually, either in pre-set mode or manual/variable. The D7 provides a counter-proof 3-way selector to optimally set the mic eq and recording levels. There is a 20dB pad for attenuation of excessive levels (jumbo jets, bands called 'Acoria' etc.).

The anti roll mechanism works really well, and despite my best attempts at vigorous air drumming, the music programme remained intact. Perfect for those early morning jogs through Regent's Park, without the cumbersome weight of a 48 channel recording studio - but with all the sound!

The SBM process moves unpleasant digital 'quantising' noise out of the audible spectrum, so you can, in effect, no longer hear it. The effects are quite dramatic and most effective. The perceived benefits are that the wave appears to have been 'rounded off', giving a more analogue, musical feel. Low frequency noise disappears, giving the effect of an improved signal to noise ratio as well as a significantly improved dynamic range (Sony claim up to 10dB improvement!).

Sony's SBM1 is a black box that really works. It is an effective recording tool and a perfect partner to the D7. This should make it a firm favourite among journalists, A&R people, recording engineers, bootleggers and even a few fortunate men in grey who need to decode digital minutes.

Sony TCD-D7 £410.00
SBM1 £399.99

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T: 01932 816000

WORLD VERDICT

An affordable wonder-toy that successfully brings a more analogue sound to DAT.

Measured Performance see p113-121
Bursting at the seams with tasty equipment, the December issue shouldn’t be missed by any serious audiophile or music lover. As always, there’ll be plenty of features and useful advice to guide you towards the right choices. Here’s what we hope to bring you in the next instalment of Hi-Fi World:

**McINTOSH CDM7009 CD PLAYER**
Another scoop for Hi-Fi World, we bring you the first review of this impressive £2395 integrated CD player from American giants McIntosh. Eric was grinning from ear to ear after listening to this one, so it’s well worth watching out for.

**KEF CODA 8**
The second loudspeaker to join the smaller 7 in KEF’s Coda range is the Coda 8. At £179.95 this one is a bigger, beefier version of the miniature 7, with a larger bass driver and cabinet for more extended bass. Claimed sensitivity is a very high 91 dB, so we’re hoping for a fast and detailed sound.

**SUGDEN OPTIMA SYSTEM/CASTLE SEVERN LOUDSPEAKERS**
A classic British system comprising Sugden’s Optima CD player, Optima 140 power amplifier and Castle’s Severn loudspeakers. A simple, stylish system for the dedicated audiophile, it promises top notch sound quality.

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A legend amongst cartridges, the £3450 van den Hul Grasshopper IV is regarded by many analogue aficionados as the best cartridge ever made. We’ve finally managed to get the UK importers to put one into our eager hands and will bring you our verdict in the next issue.

**CHARIO ACADEMY ONE LOUDSPEAKERS**
Using super quality drive units and solid walnut cabinets, the Chario Academy Ones certainly look the part. We take a long listen to these luxury miniatures from Italy.

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Please reserve/deliver your copy of Hi-Fi World on a regular basis, commencing with the next issue, until further notice.
78s - DIE SCHALLPLATTEN PROFI!
My Technics SE-A7 power amp delivers 2x90watts/4 ohms or 2x66watts/8 ohms. In the eighties, it was one of the darlings of the German hi-fi press. Maybe I shall look for a used counterpart, as the SE-A7 can be bridged for use in pairs. I’m looking for a turntable with 78rpm, because I have a lot of shellacs collected by my parents from the thirties to the early fifties! What do I want?

1. A phono amp with correct equalisation for both a shellac cartridge and for a normal MM/MC pickup.
2. A preamp without phono amp and headphone socket, but with defeatable tone controls.

Naturally, this preamp should match my power amp, which I hope you are familiar with.
Ralf Lauer
Idstein, Germany.

Unless you are prepared to build a phono preamplifier yourself, you are going to be limited in choice. There are many circuits available for designs that incorporate the correct equalisation, but most of them are valve designs from the sixties. If you are interested, books with such circuits include Mullard Tube Circuits for Audio, and Audio Anthology Volume One, which has a circuit for variable equalisation allowing you to balance each record you play, however it was recorded. A simpler approach would be to purchase a Quad 22 preamplifier. These were manufactured between 1959 and 1967 and can still be repaired and restored by Quad. Call Quad on Tel: 01480 52561.

As far as we know there are no modern commercial designs around that offer both normal RIAA e.q. for LPs, and correct e.q. for 78s. Michell Engineering may be able to supply a version of their Iso phono preamplifier set for 78s, but you won’t be able to switch to RIAA e.q. for your LPs. If you are interested though, give Michell a call on Tel: 0181 953 0771. DB

Mullard said, in their 1959 book Circuits for Audio Amplifiers, “The recording characteristics used by the different recording companies before 1955 followed an approximate constant-amplitude curve, but the differences were large enough to make equalisation a matter depending greatly on the records to be played. Examples of the playback characteristics of the major recording companies are shown in the diagram. In 1955, however, the majority of these companies agreed to adopt the characteristics of the Recording Industries Association of America (RIAA).”

The companies listed are Decca, EMI and RCA, as well as the AES (Audio Engineering Society) and NAB (North American Broadcast association). You may well find German record companies used their own recording curves for 78s. One of these published curves should give approximately correct results though. NK

Equinox or ProAc Response One speakers. My existing front-end is a Pink Triangle Cardinal/ Da Capo (1307).

What do you think the most synergistic combination would be?

I would prefer stand-mounting speakers though I would consider compact floorstanders if need be. The room is 27’ by 17” but because it’s open plan, the listening area is a relatively compact 14’ by 12’, and so the speakers need to be positioned close to the wall. I will shortly be visiting York and Edinburgh where I’ll try to do some auditioning, so your advice would be appreciated.

Mark Coles
St. Helier, Jersey.

£4000 is a considerable amount of money to spend, so what ever you do make sure you get an audition and listen carefully. You appear to be looking at solid-state amplification, in which case an audition with Michell’s Alecto stereo is essential. It has a very smooth, rich sound with fantastic sound stage depth and width which will compliment the Da Capo well, allowing it to show its true potential.

If you are only going to use CD, your choice of Audio Synthesis Passion is ideal, having a very transparent sound that imparts virtually no colouration of its own. If you are also going to be using a tuner or tape deck with lower output, the Alecto’s 600mV input sensitivity may cause a problem; in this case audition Michell’s Argo preamplifier.

There are several loudspeakers to recommend, but which one really gels with your system and room can only be found by home audition. The ProAc’s are well engineered, having a fast, detailed and open presentation. Also worth a serious audition at this price level are Spendor’s SP7/1s, which have a coherent and focused sound. Their tight, dry bass favours near-wall placement which should suit your situation well.

Because you are in Jersey, I’d listen long and carefully first in a dealer’s demonstration room and decide which combination you prefer. Then arrange for a home trial period so that you can check that the speakers match well with your room, giving you the option to re-think if they don’t.

Whilst we’re on the subject of matching a loudspeaker to a room, you would be well advised to read up on the tips we’ve given on room acoustics over the last year. The difference this makes can be worth thousands on an upgrade. DB

--- Continued from page 55

...a bit and tune up and down (f) until integration occurs subjectively. Then set bass level afterwards. NK

PLAYBACK CHARACTERISTICS FOR 78r (MULLARD)

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<th>FREQUENCY (Hz)</th>
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<th>2 DECCA 78</th>
<th>3 EMI 78</th>
<th>4 NAB 1952</th>
<th>5 RCA (1950)</th>
<th>6 RIAA LP (1954)</th>
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The Audiolab 8000 Series

Audiolab 8000C Pre-amplifier
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With the introduction of Zq TECHNOLOGY Audiolab is revolutionising conventionally accepted standards for sound quality and performance.

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Hear the difference
We've felt for some time that loudspeakers - meaning British loudspeakers - were becoming progressively less attractive. Not only that, but new model improvements have been shrinking to insignificance. A good shake up in ideas and outlook is needed, a return to more imaginative engineering. Competition is supposed to elevate standards across the board and it has arrived from Japan, courtesy of Technics with their new SB-M300s, reviewed in this issue. Will this speaker, and others in Technics' range, provide the sort of stimulus needed? Let's see what Technics have done.

Technics' cut-away diagram gives a glimpse of the SB-M300s' complex construction.

The current formula of a box with two drivers is now standard fare in Britain. It's as cost-effective as possible, a fact that I'm sure won't surprise you. The arrangement is simple and it's been tied down tight in terms of understanding through weight of research.

You might think Technics SB-M300 is no different, having two drivers on a small front baffle, with a tubby cabinet behind. But there's a lot hidden inside its 220mm wide, 365 high by 335mm deep dimensions. In fact, this is a three-way loudspeaker cleverly reversed coupled-cavity arrangement. "I worked on this principle when I first came to KEF, back in 1979," he told me. "I believe Elipson of France first used it in the Sixties, but Laurie Fincham (KEF) constructed an analysis of the system during the mid-Seventies and presented a paper (A Bandpass Loudspeaker Enclosure) to the 63rd Convention of the Audio Engineering Society in May 1979. Technics have replaced ports with ABRs. Yes, it is the same in principle as the bass loading we use in our Reference Series." Technics have sought to fulfil a perceived market requirement with this design, one I've been ruminating about over the last year or so. It is to produce a small loudspeaker with a large performance, which means generous bass. Far East markets in particular have a voracious appetite for such a beast. I have a solution to this problem too, which is why Technics' speaker was so interesting to me.

It illustrates my first point: here's a way of meeting an explicit market demand, with great sales potential in the Far East. Granted, Harbeth, Rogers, Systemdek and ProAc all make high quality miniatures that sell like Smarties overseas, but at home they are priced above the SB-M300s (with one exception) and it's arguable as to whether they have the bass quality - depth in particular - of the Technics' speakers.

British speakers are, by way of contrast, always simple two-way designs, whether aimed at overseas markets, or the cost-conscious home market. I suspect habit and the availability of prodigious computer power for conventional box design has something to do with this inertia too. It will have taken a lot of effort by Technics to get the SB-M300 working properly and they may well have written their own computer design software to juggle with all the parameters, likely working from Laurie Fincham's 1979 research paper.

Manpower is the key here and a company the size of Technics has vast resources; I'll never forget visiting their anechoic chamber in Japan. It was big enough to take an orchestra - and sometimes it does! That's what lies behind a product like the SB-M300.

Continued on page 69...
Sumo presents the Artemis, a totally new concept in preamp design featuring:

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Hi-Fi World October '95

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Heybrook Hi-Fi Ltd, Estover Industrial Estate, Plymouth PL6 7PL
Tel: 01752 731313 Fax: 01752 733954
Digital-analogue convertors appear to be aligning themselves on either side of a sonic fence these days. The choice is between the visceral and the elegant: either grab 'em in the guts and twist, or lay 'em back and seduce 'em with wine and soft back lighting. The Prosody DAC is of the former tendency, though not as markedly as DPA.

Try The Cranberries, for example, and Dolores' voice flowed right out of the speakers into the living room, with the band following hard and rhythmically on her heels in a concert-stage performance. The unashamed viscerality, albeit moderately judged, was a decided benefit on PM Dawn's 'So On and So On', which punched well out of the speakers. The Prosody put emphasis on the rhythm and the flow of the music. While it made the mix sound like three cohesive tracks, the Audiolab 8000DAC concentrated on unravelling the multitrack recording like a kitten does knitting.

There is enough elegance for the subtleties of classical music as well. In the Adagio of Mahler's Ninth, the orchestra was extremely well spread across the soundstage, second violins a touch forward, but with a good impression of dynamic strength from the bandsmen behind as well. There was a good warm feeling from the bass, too, like adding Bisto to the gravy on a cold Sunday. Double basses and timps were not as cleanly defined as the Audiolab, but the bassoon, often hardly noticeable in the more academic DAC, came over with just enough emphasis to recognise that composers do ask the poor man to play more than the occasional raspberry.

Only two minor niggles accompanied an otherwise excellent tonality and timbre. The BPO second violins had a slightly non-stick silicon paperiness of tone, not very distracting, but more evident on a solo violin's transition to top notes, while the firsts didn't quite rise to the climax eight minutes into the Adagio.

It was Dylan's folksy 'Good As I Been To You' which rather gave the game away about some very attractive sonic tweaking. In this he is more afflicted with sore tonsils than ever, and the Prosody had his voice just a touch too croaky and nasal, but on the plus side, with the guitar splendidly bright and melodic and acoustically warm. Commendably lucid and clear, the Prosody is among the best in its class. It gently bends a few rules in the pursuit of musical pleasure, yet is among the most adept at its price.

One rule it breaks. It has a whacking great 3.88V output. The brochure, says it will 'reproduce the most dynamic sound with the best transitory response'. Well possibly, but Philips' Red Book standard says the output ought to be 2V. Can we stick to it? One more grumble. If the single selector knob is supposed to switch only between a single coaxial and a single optical input, why should it click round ten positions? This is not the least frustrating way to travel to a sound. At least when we did, it was well worth the journey.

Pros Audio DAC £699
Pros Audio, 14 Montague Drive, Coulsdon Road, Caterham, Surrey. CR3 5BY T 01883 3419351

WORLD VERDICT ★★★★
A fine musical performance makes this idiosyncratic CD convertor worth searching out.

Measured Performance see p113-121
WIN ONE OF 15 PAIRS OF WHARFEDALE VALDUS LOUDSPEAKERS!

Yes, the headline does say 15 (that's fifteen) pairs of loudspeakers, worth over £2000 in total, are up for grabs in this month's competition. Wharfedale, based in Leeds is one of the best known loudspeaker manufacturers, and has recently launched an entirely new line up of five loudspeakers dubbed the Valdus range. All use light, and sensitive paper drivers and soft dome tweeters for a fast and detailed sound.

THE PRIZES
● 1st Prize - A pair of Wharfedale Valdus 500 loudspeakers worth £299.95. These three-way floorstanders use three 8" drivers, two for powerful bass and one for clean and open midrange. They are super sensitive, so will give a loud and powerful sound with just a few watts.
● 2nd/3rd Prizes - Wharfedale Valdus 400 loudspeakers worth £199.95. Again a powerful floorstander, the 400s are a three-way design using an 8" bass driver, 8" midrange and a soft dome tweeter mounted in an elliptical horn to improve dispersion and stereo imaging.
● 4th-6th Prizes - Standmounting Wharfedale Valdus 300 loudspeakers worth £149.95. These medium size standmounters use an 8" bass driver in a two-way reflex design, for a powerful sound from a compact enclosure.
● 7th-10th Prizes - Wharfedale Valdus 200 loudspeakers worth £109.95. This compact two-way design is great for use on a stand near a wall or on a shelf. It
uses a 7" bass driver reflex loaded for good, solid bass.

- 11th-15th Prizes - Miniature Wharfedale Valdus 100 loudspeakers worth £89.95. Designed for use on a bookshelf, the Valdus 100 uses a 5" bass driver. As with all of the Valdus range, the 100s are very efficient for their size, so can easily be matched to low power amplifiers.

All of the Valdus range of loudspeakers are aimed at producing a big, powerful sound from budget, low power amplifiers. Because of the light and efficient bass drivers and elliptical horn loaded soft dome tweeters, they are 'fast' and will help to bring any system to life. The tweeter is also electronically protected.

With so many prizes on offer your chances of winning are high, so make sure you enter this competition. All you have to do is simply complete the questions and tie breaker opposite.

Please send your entry on a POSTCARD, or the back of a SEALED ENVELOPE, and completed in block capitals, to arrive no later than 6th NOVEMBER 1995 to •

**COMPETITION ENTRY QUESTIONS**

Cut out and affix to the back of a sealed envelope

1) Where are Wharfedale based?
   - A. London
   - B. Leicester
   - C. Leeds
   - D. Lincoln

2) Which is not a feature of the Wharfedale Valdus range?
   - A. Light paper drivers
   - B. Need a lot of power to drive
   - C. Soft dome tweeters
   - D. Tweeter Electronic protection

3) The Wharfedale Valdus range are all very sensitive. This means?
   - A. They need to be treated gently
   - B. They will go loud with few watts
   - C. They are easily upset
   - D. They need a lot of power to drive

4) How many drive units are there in total in the fifteen pairs of Wharfedale Valdus loudspeakers offered for this month's competition?
   - A. 34
   - B. 38
   - C. 60
   - D. 68

**TIE BREAKER (obligatory)**

Wharfedale’s new Valdus loudspeakers
Use elliptical horn loaded tweeters
With bass drivers light
They’ll give you a fright
So powerful are these transducers

Compose a second verse to follow on in a similar style.

---------------------------------------
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Address: ...............................
Post Code: ...................... Tel No. .........................................

☐ Please do not add my name to your mailing list.

**COMPETITION RULES AND CONDITIONS OF ENTRY**

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

[2] In the event of more than one entrant submitting all correct answers, the winner will be picked from the tie-breaker by the editor. We will endeavour to publish the results in the January 1996 issue. Purchase of the magazine is not a precondition to entry.

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

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

Don’t forget to include your name, address and a telephone number if possible, so that we can contact the winners promptly.

Your name and address may be added to our mailing list only.

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[Signature]
Reflections from Noel Keywood

So this 'speaker is complex and clever. Whilst talking about driver-count, let's look at its marketing. Technics' product brochure says it all: this speaker has abundant USPs (Unique Selling Points). Not only is it small(ish) but cutaway shots in their colour sales brochure show an intriguingly complicated internal assembly, around which the Japanese weave a very complex arrangement, but it works and buyers are likely to be impressed.

Technics' SB-M300s are a fascinating loudspeaker. They're real competition - let's hope they spur us Brits on to better things. My final observation is that universal one: never buy on spec, listen first if you are interested. The SB-M300s do, inevitably, have their own character and impressive as they may be, they might well not be to your taste. I just hope that Britain's manufacturers don't think this is the escape clause they would so love it to be.

So there you are. Technics' SB-M300s are a fascinating loudspeaker. They're real competition - let's hope they spur us Brits on to better things. My final observation is that universal one: never buy on spec, listen first if you are interested. The SB-M300s do, inevitably, have their own character and impressive as they may be, they might well not be to your taste. I just hope that Britain's manufacturers don't think this is the escape clause they would so love it to be.

So this 'speaker is complex and clever.

1. Today's KEF Reference Series 'speakers use Coupled Cavity working for deep bass, the front firing port being shared by twin internal drivers.

2. Technics use a shared rear chamber and separate ports. The bass driver still sees front and rear tuned cavities though, making it a Coupled Cavity bandpass system.

3. The SB-M300 uses ABRs (a form of port) which fire forwards and backwards, in-phase. The front ABR radiates through front baffle vents. The midrange driver sits in its own small chamber. Structurally, it's a very complex arrangement, but it works and buyers are likely to be impressed.

**So this 'speaker is complex and clever.**

**What Hi-Fi? 61,607**

**Hi-Fi World 14,133 +3.6%**

**Hi-Fi Choice 14,537 -20%**

**Hi-Fi News 12,704 -19%**

**What Hi-Fi 61,607 -1.4%**

**for 1994. Hi-Fi News audits yearly.**

Here are the latest ABC figures for the period from the 1st January '95 to the end of June '95.

--UK & Eire Newstrade and single copy sales.

DOMINIC BAKER

Dominic Baker

Latest Audit Bureau of Circulation figures have come as a pleasant surprise to us. Hi-Fi World is now THE ONLY HI-FI MAGAZINE IN THE UK TO HAVE A RISING NEWS STAND CIRCULATION over the last six months. This calls for a big "Thank You" to all our readers.

This year, as always, the big publishers followed traditional wisdom, cutting back pages, features and costs through the summer months. In contrast, we continued our ongoing quest to expand and improve Hi-Fi World, last month publishing our biggest ever issue. We've done it again this month, hitting 180 pages including the DIY Supplement. DB
THOMAS HEINITZ

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I t happens every year. Sure as day follows night, one or two hi-fi products receive such rave reviews that they are somehow lifted above greatness and on to a plane where to merely mention competition seems churlish. In many cases these are fine products, but due to a desire to perhaps stimulate the hi-fi market, certain publications hype particular products to an absurd extent. This can have serious side effects. For one, it jeopardises the long term credibility of not only the magazine responsible, but also that of other more balanced publications.

The main aggravation is not felt by magazines, but by the dealers and customers who have to suffer the aftermath. Inevitably, a product that has recently been the recipient of such acclaim will be newly released and supplies will be limited. This, combined with a huge stoked up demand, causes immediate short supplies and endless headaches for customers led to believe that this particular product is the be-all and end-all.

Dealers are left to pacify such customers who can end up waiting months. I put pen to paper on the subject because it is happening again. It seems the industry just doesn't learn. This time there are shortages of the Kenwood KA 3020SE amplifier. In previous years we've seen exactly the same problems with the Sony Dolby-S cassette decks, the Cyrus Three amplifier, Mission 753 'speakers, Tannoy 609 and 611 'speakers and Pioneer A-400 amplifiers, amongst others.

In most cases these are fine products that do offer above average performance. However, what the impulsive reviews often fail to point out is that there are often equally good competing products that may be more suitable for an individual's taste and needs in music and sound quality. That's not counting the fact that some products which initially sound impressive can begin to grate as time goes by. And yet we are still decisively told that this is the product we must buy, even if prepared to consider a model costing three times as much!

For an example, look no further than the small ad pages awash with second-hand Mission 753 'speakers. Now, the 753 is a fine 'speaker that does sound impressive in a large room with similarly large scale music and many owners will be rightly proud of their purchase. But others, carried along on a wave of hysteria, will have later found that even though the 753 is a good 'speaker, it's not really right for their small flat listening to folk music. Likewise, as much as I respect the Pioneer A-400, it can be quite a difficult amplifier to match 'speakers with. With budget 'speakers and even 'speakers costing as much as the amp' itself, it can quite easily sound like just another Japanese amplifier. Once again, just look at how many clutter up the Classified Ads in the back pages, doubtless in many cases due to disappointment caused by incompatibility.

Similarly, I can well remember the stream of Tannoy 609 and 611 'speakers that left the shop because of their fine reviews and impressive initial sound, only to come back again in about a third of cases. The reason for this was that some customers were finding the distinctive dual-concentric sound difficult to live with over time, and not really the sort of thing they were after.

So, how do you avoid falling foul yourself? Well, the first step is often to read a variety of magazines. When there's general agreement amongst two or three, then the chances are that the product in question is genuinely worthy of praise. If, however, a recommendation is not reiterated in other magazines, it may be worth exercising a little caution. In one such case I remember a worthy amplifier receiving a five star review, only to be relegated to two stars during a group test in the following month's issue. Of course, there is an element of differing individual taste within magazines, but this inconsistency confused readers and jeopardised their future credibility. Clearly, it's up to the magazines to be responsible in the first place, and to point out any compatibility problems and personal preferences too, in so far as possible.

The second way of avoiding making a mistake is to find a dealer who you can trust. Actually listen to the product before you buy it, and find out if it's exchangeable after two weeks if you don't like it (most hi-fi shops will do this for you). Above all, go into the process with an open mind. You may find yourself with equipment you'd never even thought about and avoid weeks of delays and ultimate disappointment in the process. So if you've spent frustrating weeks over the summer waiting for your new "super hi-fi", take a little time to reflect. A change of tack may not be such a bad move after all.

...endless headaches for customers led to believe that this particular product is the be-all and end-all. **
As the scorched summer earth returns to its normal damp green, I've been reflecting on the summer's events. One happening in particular has special bearing on the pages of this magazine, more profound even than Robbie leaving Take That. It was instigated by one of the richest men in the world, sometimes described unflatteringly as a jeans'n'T-shirt-wearing computer nerd. Flummoxed? The man is Microsoft president Bill Gates, and the event is the launch of Windows 95.

Okay, this magazine isn't What Computer?, so what has this got to do with hi-fi? Well, anyone who's had the pleasure of using Microsoft's first half-decent operating system will have discovered that it's got a software 'CD player' built in. True, when Windows 3.1 got a video player, we didn't all suddenly discard our heap and trudge to the local megastore. In a decade's time, it's likely we'll just need to hit the 'short cut to Music' legend in Windows 2005, and automatically connect up via a phone line to an enormous file-server offering every published piece of music for sale. Using your trusty 986 DX64 with its built in modem, you can browse around, listen to samples, watch videos, read sleeve notes, and then if you want to buy anything, press a button. Your bank account is debited and down comes Now 65 onto your computer's 10,000 Gigabyte hard disk, complete with the artwork and documentation for your colour laser printer to print out.

Because your PC is no longer a large white box with a noisy fan inside, to use your 'software CD player' just point your intelligent remote at a Linn Knegt-style wall-mounted receiver and the remote computer's soundcard will play your new purchase directly into your antique Quad 606 and Mission 752s in your listening room.

Want to play it in the car or on the move? Simple. Because you've bought the album, just hit 'copy', stick a MiniDisc in your main computer unit, and it's now transportable. MiniDisc? Well, it's durable, portable and very compact. Data reduction will be a thing of the past - new high power lasers will get far more data on a disc, obviating the need for massacring your music with nasty bit-removal processes.

Sound quality? Another problem solved. When you buy your software, specify 'Standard' or 'Hi-Fi' before you download it. Choose the former, and dull old 16-bit comes down the line, taking up less space on your hard disk and giving longer playing times on your car MiniDisc player. Choose Hi-Fi, and you've got the latest chart opus in glorious 24-bit stereo. Played through your Linn Komputer PC soundcard, it sounds superb. Because all files are in the software domain, your enormous music software collection can be catalogued and organised just how you like it. Your old CDs can suffer a dropout again, and vinyl can be transcribed from your ageing Roksan TMS through the Komputer's ADCs.

Downloading music down your phone and storing it in your own personally configured software environment will prove quicker, cheaper and far more flexible than you'd think. People will look back nostalgically at skipping CD players and those quaint old 16-bit discs. 'How did we ever manage', they'll say.

This isn't all pie-in-the-sky. Strictly speaking it can be done now. 'Video on near-demand', working on similar principles, is already up and running in this country, hampered only by governmental dragging of heels (what a surprise). Modems are getting faster, and new delivery systems are appearing - ISDN (Integrated Services Digital Network) makes high speed data transfer a breeze, albeit an expensive one at present. Difficulties, I imagine, will come from the Recording Industry, who'll doubtless turn the idea of an integrated music software site into an horrifically complicated practical proposition faster than you can say "software piracy" or "music business lawyer". High volume storage systems are under constant development and we already have the technology, if not their methods of production.

Still, where there's a will there's a way. Bill Gates, who last year confessed, "I'm on the lunatic fringe of believers in this stuff - it'll certainly change everything", has the vision. Separates CD players, take cover, the microchip has your number and is coming for you bit by bit!
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Giovanni Dadomo

LIQUORICE
Listening Cap
4AD CAD 5008

- Remember The Cowboy Junkies? I do, with plentiful fondness. Well, there's a certain affinity between this group and those subtle Canucks - and I don't mean just in the crystalline vocal of one Jenny Toomey. This is nothing if not minimalist, all stark arrangements outside of the odd Feelies-style, post-Velvets guitar strangling. But this band make what Jimmy the M. called "a very gentle sound", and it's a treat to the ear. For the record, the group is no way devoid of pedigree. It includes Danny Littleton (ex-Hated, late of Ida) Trey and the aforementioned Ms Toomey, who's previously filled slots with the likes of Tsunami, Grenadine and Simple Machines. The proof of the pudding however, is that Liquorice have made a record of amiable charm and delicacy which makes truly pleasant listening. Head for the nearest listening post, pronto.

LUNA
Penthouse
BEGGARS BANQUET BBCD 17B

- Remember Television (I think we're getting déjà vu but what the heck)? Do think back if you can - or snap up their back catalogue otherwise, particularly Marquee Moon and the recent live compilation. Anyhow, if you're drawn to that frail but delicate drawl that is singer Tom Verlaine's greatest asset, not to mention some of the most glorious guitar parts this side of nineteen ninety-four, then you'll love this band. Neat wordplay too; just taste this one - "You're out all night, chasing girle, you're late to work, so you go home early". All this fading on a blissful series of "baum,
...work like a dream.

But thankfully there's more to Luna than Television revisited. "Side-show By The Seashore" is as delicately fragile a song as Lloyd Cole ever wrote. If the guitar is distinctively Richard Lloyd, it's still as fine and subtle a tune as you'll hear all season. To be totally honest though, weedingness (à la the wimps in Dennis The Menace strips) is always bare millimetres away with this type of heartfelt agonising. However, if Luna tend to skip the odd rail, as on the rather maudlin 'Moon Palace', they bounce back with some real sizzlers. 'Double Feature' swings like Christie at the end of the hangman's rope.

I confess that '23 Minutes In B' does sound like that awful last Velvet Underground LP without Lou Reed on it, but there are still plenty of treats. These range from the perky 'Rhythm King' to the moving 'Kalamazoo', or the aptly spiky 'Hedgehog'. The closing 'Freakin' And Peaking' just has to be the finest Television song Tom Verlaine and Richard Hell never wrote. Oh, and speaking of Television, Tom Verlaine actually makes a guest appearance on one cut. Work it out - I had to.

 jon clamp

MORRISSEY
Southpaw Grammar
RCA Victor 74321 299532

• Having given such short shrift to Master Morrissey's previous disc Vauxhall & I, I've given Southpaw Grammar as much time as I can humanly spare. For all its supposed frailties, some tracks here are as long as Bob Dylan at his most rambling and wordy. Even the opening cut weighs in at some twelve minutes - it seems boxing analogies are compulsory with the Mozzer's latest incarnation. But for all that, the arrangement of 'The Teachers Are Afraid Of The Pupils' is so deftly brisk and subtly lush that it feels like it runs a third of that time.

Still, mea culpa mea culpa, mea maxima culpa (Latin for 'I was an idiot that month, but who isn't sometimes?')

The only real fault I find is Morrissey's continual play on his sexual ambiguity. This emerges in the video of the title cut where he replaces Dave's girlfriend's name for 'Moz' on a tacky windshield sticker - those stickers are illegal now anyway. It's Stephen Fry all over again. Come on Moz! Either come out or shut up. I mean, celibacy's OK for nuns, monks and the odd Catholic priest but it's hardly a good example for young boys and girls of any age. Role model? More like a role over and pretend to snore model.

But this isn't to say there aren't some great lines here. Take "Books don't stay, but books aren't Stanley knives". Own up, there's brains under that barnet - even if I've never had any problem distinguishing a Stanley knife from a Penguin Modern Classic. Petty cavils aside, there's a breadth of arrangement and musical texture here many miles away from recent efforts. In fact, it's probably as broad a canvas as Morrissey's tackled to date. It's a nice surprise when you hit a slimline, hardnose rocker like 'Boy Racer', a three pints-too-many bruiser. Let's face it, even idiots get it right sometimes. Otherwise there'd be no Pet Shop Boys, would there?

jon clamp

VARIOUS ARTISTS
Jazzmatazz II
7243 8 34820 2 3

• One man's crusade against mediocrity has with Jazzmatazz brought about one of the year's most intriguing albums. Guru, of New York rapsters Gangstarr, is the man in question. Not happy just to stay faithful to the ever-growing and lucrative rap scene, with Jazzmatazz I and II he has done his very best to fuse a new music scene through crossing rap with jazz - the two strongest urban musical idioms black people have created.

Call it be-bop, cool, or just jazz rap, it's a mellow and compulsive scene to listen to. It takes rap to refreshing new boundaries or, as Guru likes to think, away from the unhealthy gangster rap vibe that has struck the States over the last couple of years.

There's no doubt Guru is an ambitious being, who with jazzman Donald Byrd as his mentor has worked incredibly hard to bring some of the greatest jazz stars onto this record. Despite the presence of Byrd himself, Marsalis, Courtneype Pine and Freddie Hubbard, this is no jazz album - it merely takes some of the best licks and fuses them with soul, rap and funk. And that is where Guru has cleverly gone to work. On this this Jazzmatazz effort he has brought into the studio not just the Jazzmen but an amazing range of modern day talent from other types of music. Hence on these tracks we find Chaka Khan, Ini Kamoze and DC Lee jamming along with Mica Paris, Shara Nelson and Me'Shell Ndegocello. And there are many more.

The 'Watch What You Say' track, has a hardcore rap breakbeat and cleverly mixes delightful trumpet licks with the still deeply soulful voice of Chaka Khan. It has been playing in the clubs all summer long, a fact which best sums up this album.

jon clamp

BLUR
The Great Escape
FOOD CD14

• Cor blimey, jellied eels and candy floss. Before you can say "Barnet Horse Fair" Blur are back with a new album. And what better timing after the - dare I say it - stage-managed Great Battle of Pop with Oasis last month?

No one can possibly ignore The
**BLACK GRAPE**

*It's Great When You're Straight...Yeah!*

J.V. RAD 11224

- Lauded 'The Greatest Comeback for Years', to me it sounds like Sean Ryder's merely been round the block, losing a smack habit on the way, and come back with some new mates, a spliff and a six pack. Whatever, the scrum ball of pop has returned with Black Grape and a brilliant new album. It's everything expected - an inimitable mix of rap and dance fused with that Happy Mondays' indie-punk slant, lumped in with a barrage of lairy, uncouth but always funny lyrics.

Last time we heard about Sean it was rumoured that his heavy heroin habit had played a part in the downfall of the world respected Factory label - the home of New Order. It was said that the cost of the Happy Mondays' final album - being recorded in the Caribbean with slices of severe indulgence - was the straw that finally broke the ailing label's back. And after the fuss and stories it was far from a masterpiece.

Here, a few years on, the main parts of the Mondays stay intact, with the best known rap band the Ruthless Rap Assassins and guitarist Wags from the Paris Angels. The team had apparently come together weeks after the Mondays split and according to Ryder and Bez are joined by Kermit and Jed from Manchester's most famous band of the last ten years.

But this album is too good to knock and by itself is easily worthy of the Number One slot. While the truth is that there are only a few really great tracks on it, there were only the same amount on Parklife. And with all its critical acclaim it should have easily won last year's Mercury Music Prize. Everyone knew Mondays People were lucky to walk off with the best album of the year award.

Great Escape is an all round more downbeat, less bubbly and cheerful LP than Parklife. It has more feeling and tinges of honesty. Have the paparazzi, the hectic London scene and the tabloid headlines taken their toll? Have the band just grown up and matured or have they gone for bigger bucks? Everything, from the obvious sentiments of the single 'Country House' to the up-yours speedboat on the cover, seems to suggest that cushy W11 nightlife has made Damon - after all an Essex boy - more reflective about life and seemingly one for the quieter side of it. 'Best Days' and 'The Universal' clearly show this.

But there's still a good old bite in Blur and five or six of the fifteen tracks have that Bank Holiday boys at the beach feel about them. 'Mr Robinson's Heroes' with its excellent 'Jesus was a black man, no Jesus was Batman, no that was Bruce Wayne' chorus, is an hysterical rile at heroes, who to Ryder all "seem like serfs". And final track 'Little Bob' is a funky little number which has one of the best outros of anything I've heard.

It's certainly the best Ryder's done since the bagged-up Thrills, Pills and Bellyaches. Buy It's Great When You're Straight, whack up the volume, act like the lad and try to remember when music was ever such fun before.

---

**RECORD OF THE MONTH**

Sean Ryder, the cocky Manc sitting at the helm, and Bez - as the album sleeve puts it - "on vibes". What Bez does apart from shake a castanet and dance like an idiot is debatable, but he's as much a part of Black Grape as he was of the Mondays. He sums up their image and he is their soul.

Ryder and Bez are joined by Kermit and Jed from Manchester's HI-FI WORLD NOVEMBER 1995

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Ryder and Bez are joined by Kermit and Jed from Manchester's
and psychological parallels to be drawn.

Blur have moved into the big time, record sales and sell out stadium concerts testify to that. Where they used to get lads in Parkas and target T-shirts pogo-ing around on The Big City, they now get teenage girls jumping on stage to kiss Damon on Top of the Pops. That’s life.

The Great Escape is where “Cor Blimey, let’s go down the boozer”, meets “shall we go for a quiet drink and a spot of lunch”. Not a bad mix really.

David Price

EDWYN COLLINS
Gorgeous George
SENTANTA SET CD14

In a world where the knowing cynicism of The Beautiful South can install itself at the top of the charts for (what feels like) years, you’d think Paul Heaton and Co. invented the pop song with a sting in the tail almost single-handedly. But cast your mind back to the days of foppish fringes a decade and a half ago and remember Orange Juice, Heaton and Co. invented the pop song (what feels like) years, you’d think Paul Heaton’s early lyrical sloppiness (“Tonight is forever, tell me now you don’t disagree...”, perchase) was hardly up to the Salford’s Shakespeare’s most miserable of out-takes. Still, one thing both bands had in common was a respect for the flip side of the humble pop single. And if you ever doubted it, Alternative is the proof.

A collection of no less than thirty songs, it chronicles their shift from early hi-NRG to their mid-period litchen house fixation and their subsequent pop classicism. In route we get an eclectic mix of melancholy and madness - ‘In The Night’ (AKA ‘that song from The Clothes Show’) explores the world of beatniks in occupied wartime France(!), ‘Paninaro’ the mid-Eighties Italian casual-fashion scene. ‘It Must be Obvious’ is Tennant artfully swiping back at those who’d wished to out him, while ‘Miserablism’ is an irreverent two fingered salute at humourless critics.

Although nowhere near as classy as Very, the last Petties album proper, Alternative still makes a great case for itself for those after choice snippets of pure pop. Who cares if Tennant’s lyrics make your average Eurovision fodder look like high art? Those majestic tunes, irreverent quips and silly poses are capable of - if not raising the dead - at least waking the Human League from their slumbers.

PET SHOP BOYS
Alternative
PARLOPHONE PCS CD166

When the go-getting, hard workin’, big talkin’ Eighties were young, you couldn’t move for pale and interesting synthi-bands singing songs of kitchen sink hope and despair. All looked (for a moment at least) remarkably stylish and poised for great things, but no one - not even the Human League - achieved anything more than fleeting fame and fortune.

But by summer 1985, when the likes of Blancmange and Yazoo were nothing more than Woolworth’s bargain bin fodder, Britain finally got itself an electro-pop duo sensation. Neil Tennant, one-time editor of that august teenybop journal Smash Hits, drew up a plan to storm the charts with Chris Lowe, a sultry looking Manchester architecture student. ‘Opportunities’ was the result, as tongue-in-cheek as it was self-referential, it failed to make an impression, leaving the subsequent ‘West End Girls’ to do that. But the Petties’ career that was to see them notch up a staggering 23 Top 30 hits and 4 UK number ones, had begun.

From the word go, Neil and Chris’ pop prescription was resolutely ‘fun, love and money’, with no time for the burgeoning indie scene’s catalogue of jingly-jangly doom and gloom. But Tennant’s penchant for intellectualising about music allied to his passion for throwaway disco led them to be branded ‘the Smiths you can dance to’. Naturally this raised the heckles of any self-respecting daffodil-wearing vegetarian of the day, especially when Tennant’s early lyrical sloppiness (“Tonight is forever, tell me now you don’t disagree...”, perchase) was hardly up to the Salford’s Shakespeare’s most miserable of out-takes. Still, one thing both bands had in common was a respect for the flip side of the humble pop single. And if you ever doubted it, Alternative is the proof.

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Grunge is the first against the wall, its contrivance slammed in ‘The Campaign for Real Rock’ (‘Her idea of counter-culture is Mama’s charge account at Sears? Yes, yes it’s a summer festival! A truly detestable summer festival’) and ‘A Girl Like You’ (‘Too many protest singers/Not enough protest songs’). The title track sees the knives out for ageing Soho media luuvies, while the parting ‘Subsidence’ (‘This music won’t take you higher unless you’re a moron/And that’s what bothers me’) sees techno music summarily dealt with.

But despite Collins’ propensity to polemicise, never does Gorgeous George hang heavy in the air. Full of the seriousness and silliness of it all, it’s a naive but knowing hike through the world of someone who’s been sadly overlooked for too many years. Happily ‘A Girl Like You’’s permanent summer seat in wonderful Radio Fab’s playlist has put an end to that. Long may he carry on up the charts.
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**A nice place to start a quick romp through some of the more interesting and enjoyable releases which have stacked up this summer, which I affectionately think of as “straight” jazz. Trumpeter Dave Douglas is unknown to me aside from his stirling contributions to John Zorn’s Masada group, but given his leadership of this group, that’s my loss. On In Our Lifetime he’s joined by clarinetist and tenor saxist Chris Speed, trombonist Josh Roseman, pianist Uri Caine, bassist James Genus and guest bass clarinetist Marty Ehrlich. Joey Baron, Douglas’ colleague in Masada, Zorn cohort in naked city and co-leader of the highly underrated Miniatures, also joins as the man I’m sick to death of describing as the most exciting drummer working in contemporary jazz. Period.

Now this kind of all-acoustic post-bop, going on hard-bop, going on free jazz, is one that doesn’t generally feature in this column. This music has been done to death for thirty years now, and one’s generally tempted to ask, “what’s the point?” But, these musicians bring such a cracking blend of grace, enthusiasm, (for once) highly focused virtuosity and visceral energy to a set of pieces written by either Douglas or Booker Little, that the music often transcends itself; a rare, and highly prized thing, indeed. Ripping stuff.

**GERRY HEMINGWAY Quintet, The Marmalade King.

Having raved back there for an instant about Joey Baron, I have to say that another young drummer, albeit a very different player indeed, has ranked up there with him in terms of the last decade or so’s most exciting skin-bashing; Gerry Hemingway. On The Marmalade King, a nigh-on hour long five part suite, Hemingway gets to lead a quintet of some of the more adept and considerate young improvisors working in contemporary jazz; saxist/clarinetist Michael Moore, bassist Mark Dresser (for my money just about the best jazz double bassist to have emerged in the last decade), trombonist Walter Wierbos and the stunning and highly mercurial Dutch cellist Ernst Reijseger.

Now to some extent, we’re talking a similar territory here to the Dave Douglas album, highly energetic acoustic post-bop, but there’s an altogether different sense of musical order at work on this set. The suite Hemingway has composed (and why is it that jazz drummers have often turned out to be such good composers, from Max Roach and Paul Motian through to Baron, Hemingway and Bobby Previte currently? There’s something to ponder over a swift half) is a densely structured, polyrhythmic affair with tightly written
parts. While its central program, a children’s fantasy story, is not really entirely evident, its deep architecture emerges and it’s perhaps the complexity of the composition here which coaxes such searching and intense solos from its performers.

Cracking playing all round, but definitely a special mention for Reijseger, whom I’ve meant to get round to talking about before. Given that it’s surely an instrument capable of perhaps one of the most gorgeously expressive sounds created by man, it’s sad that the cello is largely absent from the essentially post-military instrumentation of jazz. Sure, bassist after bassist has tried to capture the cello’s warmth by playing arco, but nothing comes close. Reijseger, in all kinds of stellar company, has taken the instrument into new worlds and shines here throughout.

Derek Bailey, Evan Parker - his playing has nonetheless always retained some spark from his initial love of Dixieland. His exclusive playing of the soprano (an instrument he apocryphally inspired John Coltrane to use, with pretty staggering consequences for three subsequent generations of jazz saxists) has always retained the unerasable cry of the blues.

That said, like the sheer size of his catalogue, Lacy’s music is daunting stuff. Revenue captures him with a quartet scaled down from his regular sextet: alto and soprano saxist Steve Potts (a great player himself), bassist Jean-Jacques Avenel and bassist John Betsch. Together the music they play ranges from the intensity of the Hendrix tribute ‘The Uh Uh Uh’, to the delicacy of the Johnny Hodges portrait ‘Esteem’. To all this music the group brings a level of spontaneity that’s a tribute to the years they’ve spent playing together, and an object lesson to those gigging jazzers who simply throw groups together at a moment’s notice expecting sparks to fly.

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STEVES BERESFORD, DAVID TOOP, JOHN ZORN, TONIE MARSHALL

Deadly Weapons

NATO DK018 S3021

STEVES BERESFORD, DAVID TOOP, JOHN ZORN, TONIE MARSHALL

Deadly Weapons

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- And finally, away from all this acoustic jazz mayhem, a timely CD reissue of a 1986 recording (‘I’ve no really accurate idea when the French record label did reissue this, but I’ve certainly only recently come across it in the UK) which, though flawed, offered paths forward for both improvised music and that area of environmental or imaginary soundtrack, or soundscaping or whatever, which would later get tagged “ambient”. These terms emerged in the considerable wake of rave’s rediscovery of producer, musician and musico-cultural theorist Brian Eno’s original conception of a music which could simultaneously exist as backround and deep listening material.

A quick run through the shared backrounds of these musicians reveals some of the depth of musical knowledge and vision at work here. John Zorn, of course, has featured so regularly here as to make most of you yawn, I’m sure; over the last decade and a half the jazz alto saxophonist, multi-reed improvisor, post-Cagean composer, arranger, producer, and record label mastermind, has been responsible for the most exhilarating - and often most shocking - music offered up anywhere, regardless of genre.

British improvisor and multi instrumentalist Steve Beresford is certainly a mercurial figure, whose CV stretches from radical weirdo improv to this year’s highly recommended Signals For Tea. This is a collection of melded tricksy little songs with the odd, momentary dash of be-bop thrown in for good measure.

Meanwhile David Toop remains unquestionably one of the most important musicians currently working in England. He is known now by the post-rave electronica community for
last year's Buried Dreams, a beautiful and terrifying collaboration with fellow improvisor and sculptor Max Eastley. Toop was best known through the 80s as a music journalist whose writing brought together thoughts about music as diverse as disco, improv, rap, jazz and salsa - to pick some at random. What Toop has demonstrated on the all-too-few occasions he's appeared on record is that he possesses a thorough-going understanding of - and awe for - the arcane and hidden rites which the finest and deepest music can either illustrate or reveal.

Vocalist Tonie Marshall, I'm sad to report, is otherwise unknown to this hack, and her beautifully sung and spoken contributions to the material, highlight what a shame that is.

There's something special at work here, some theme or agenda which my woefully limited knowledge of either French or the cinema prevents me from accessing, but who gives a flying one. This music leaps from atmosphere to atmosphere, from genre to genre, from theme to theme with a seductive ease, and while it's thoroughly picaresque nature will alienate some listeners, it would take stone ears not to be aware of the level of mutual understanding happening here, and a stone heart not to be charmed by it.

Simon Cooke

THE ORIGINAL AMERICAN DECCA RECORDINGS
Billie Holiday
GRP 16532

• Just about everyone has a favourite Billie Holiday song, maybe 'God Bless the Child', probably 'That Ole Devil Called Love', and what about 'Solitude', or perhaps the slowly-waning 'Lover come back'? If you do, and if you want to hear more of that proud, frail voice, then this compilation is definitely worth considering.

Like the American Decca releases I've reviewed before, this is a passable - even comprehensive - slice of her work, and almost all of the originals are still in acceptable condition, making it a purchase worth considering for the Billie Holiday fan of today. Recommended.

SOUND ADVICE
Byron Wallen
BW063

• Staying with Airto Moreira, who guided the production of, and provides much of the percussion on this album, which is headed by London-based trumpeter Byron Wallen, we come across an offering which is noticeably more rough and rumbustious than Speed of Light, whilst treading a similar - but less Latin influenced - path.

Again, impressive reputations lend weight to this recording. Ed Jones on soprano sax, Gary Crosby on bass, Jose Neto again, and the inimitable Orphy Robinson on vibes, all make their mark, but it doesn't really hang together the way that 'Speed of Light' does. It is difficult to actually pinpoint the fault since the musicians play well and the recording is much more than merely workmanlike, yet I still feel that this is a lesser recording than Purim's. Perhaps Wallen's arrangements are at fault, or possibly he does not have the reputation, charisma, or sheer bloody-mindedness necessary to weld these musicians into a coherent whole. It is possible that the intention behind this project was to create a less structured, more competitive and raunchy product than Purim aimed for. Unfortunately, I find it a less engaging CD than Speed of Light and so my verdict must be that it's a good recording of Wallen's band, but whether you will like it or not is not for me to say.
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Two times Eighth Symphonies, by Bruckner and Mahler, four times quartets by Schubert, and a Brahms Second that remains first in the field, bring a numerological link to this month's reviews. And the combination of the Corydon Singers and the 'Orthodox' Rachmaninov add up to another winner for Hyperion.

**Johannes Brahms**

Piano Concerto No2 in B flat Major Op83#/

Ballades Op10

Emil Gilels, piano;

Berlin Philharmonic Orchestra*;

conductor, Eugen Jochum Deutsche Grammophon

CLASSIKON 439 466-2 (ADD/76.50)

- No one is better than DG at recycling back catalogue and the appearance of Gilels' Brahms in the Classikon series - one hundred CDs approximating to a basic classical library - must represent its third or fourth incarnation since the original 1972 issue. Not that the performance doesn't deserve its continued place in the catalogue and, at its present bargain price, it still sweeps the board.

It's curious how certain works by an otherwise much-loved composer prove elusive. For me, Brahms' Second Piano Concerto is a prime example; it was many years before, as the vernacular has it, I 'got a handle' on the piece. This may have had something to do with its quite different nature in comparison to the intensely dramatic First Concerto, for which I felt an empathy the instant I heard the plunging chords of the opening of the first movement. Brahms himself predicted, after the unenthusiastic response to the first performances of the First Piano Concerto in 1859 that the Second would "sound quite different".

There is an equanimity, a loftiness, in the Op83 concerto which is in sharp contrast to the turbulence of its predecessor. The first movement is filled with a benign grandeur that may reflect that fact that Brahms wrote it surrounded by magnificent Alpine scenery in the town of Portschach. But it is difficult not to feel that it also mirrors a composer at ease with himself and with the world. The structure is writ large, but the detail has the translucency and delicacy of chamber music, and - amidst the calm - there are moments when Brahms seems to recall the fiery anger of his First Piano Concerto.

The second movement contains much trenchant writing, for both soloist and strings yet it is all sublimated to the trio, scored largamente, which spans the movement's energetic outer sections and restores the mood of contemplative repose. The Andante is quite magical - how could I have resisted its charms for so long? It is enhanced by some wonderful writing for solo cello, played here by Ottomar Borwitzky. The concerto concludes in playful mood, aptly enough for a work written, for the most part, at a time which Brahms' biographer, Karl Geiringer, described as "amongst the happiest [periods] of his life".

With its breadth, nobility and unforced pacing, Gilels' and Jochum's performance of the Brahms Second captures the character of the work as few others. Gilels' Brahms always was special, as the 'fill-up' to the concerto testifies. His 1976 recording of the Op10 Ballades, youthful and impassioned 'piano narratives' in the style of Chopin are unsurpassed.

Remastering has served the recordings well, especially the concerto, where the balance between soloist and orchestra seems to have been improved. And the acoustic of the Jesus-Christus-Kirche in Berlin is ideal. Late to appreciate Brahms' Second as I may have been, I am now in accord with DG's reissue specialists in placing the work and this performance in the 'essential' category.
A couple of years ago, I conducted an interview with Robert King the director of the King's Singers and responsible for a host of fine recordings on the Hyperion label, most significantly of Purcell's church music. I asked him how he had persuaded a record company to tackle repertoires that many would regard as far too specialised. "With Hyperion," responded Robert King, "it was simple: you called Ted Perry, the founder and managing director, and told him what you would like to record. Ted would ponder a while and then give you a 'yes' or 'no'. And that was that: no long programming discussions, no tedious meetings trying to convince A&R people to back your idea. It's a wonderful system, but of course it can only work if you are dealing with someone of the experience, judgement and instinct of Ted Perry. Ted's track record speaks for itself; it was he, after all, who first recorded the unaccompanied sacred music of an eleventh-century German abbess, Hildegard of Bingen. This apparently arcane repertoire has gone on to become one of the biggest-selling classical recordings of all time.

Like Robert King, one of Ted Perry's prize catches of recent times has been the conductor, Matthew Best, and his Corydon Singers. He has recorded them in award-winning CDs of Bruckner's choral music, and in some outstanding interpretations of Vaughan Williams, but I wonder how Ted responded when Matthew Best mentioned Rachmaninov to him. Hyperion has issued the solo piano music, in fine recordings by Howard Shelley, but has wisely given the symphonies and concertos a wide berth. Ted Perry would see no merit in issuing yet another performance of the Second Piano Concerto (the 'Brief Encounter' one!) or the Paganini Rhapsody, unless of course he could find performers who had something original and worthwhile to say about the works.

But when Matthew Best put forward the name of Sergei Rachmaninov it was not in connection with the piano music for which he is best known, but a proposal to record his setting of the All-Night Vigil of the Eastern Orthodox church, the Vespers of 1915. Now this is truly wonderful music, but the general assumption has always been that it could only ever be sung by Russian voices: they had the colour, the timbre, the range, and it was pointless for a western choir to tackle the piece. Well, Matthew Best and the Corydon Singers triumphantly put the lie to that notion - in Radio 3's 'Record Review', their version of the Vespers beat off all competition from Eastern Europe in the 'Building a Library' slot. Even Matthew Best was astonished by the accolade!

On the strength of that success, I wonder how much persuasion Ted Perry needed to tackle Rachmaninov's other great choral masterpiece, the Liturgy of St John Chrysostom? I would guess his instinct told him that this was another potential winner, and another fascinating addition to what I still believe is the most attractive, interesting and collectable record label of them all.

SERGEI RACHMANINOV
The Liturgy of St John Chrysostom Op31.
Corydon Singers; Peter Scorer, deacon; conductor, Matthew Best CDA66703

At the turn of the last century, there was a move within the Russian Orthodox Church to rid its sacred music of what were regarded as corrupting foreign influences, principally German and Italian, and return to music based on the traditional, pure roots of Russian chant. The crucible for this change was the Moscow Synodal School and a number of composers became closely
connected with the School and its campaign, including Kastalsky. And it was Kastalsky's chant-based style which influenced Rachmaninov when he came to set the Liturgy of St John Chrysostom, in a fashion that would reflect the search for 'authenticity'. The work was composed at Rachmaninov's uncle's country estate at Ivanova, some 300 miles Southeast of Moscow, and first performed by the Moscow Synodal Choir on November 25, 1910.

Writing to his friend, Nikita Morozov, Rachmaninov commented: "I have been thinking about the Liturgy for a long time and for a long time I was striving to complete it. I started work on it somehow by chance, and then suddenly became fascinated with it. And then I finished it very quickly. Not for a long time. I have written anything with such pleasure."

After hearing the work, Kastalsky criticised its 'subjectiveness', and the church authorities refused to sanction liturgical performance because of its 'spirit of modernism'. They missed out on music full of glowing beauty and haunting sonorities, and a work which is far from being merely a prelude to the better-known Vespers. Today, the suggestion of 'modernism' seems ludicrous: Rachmaninov's setting is the capabilities of the average choir. But the Corydon Singers, as in their recording of the Vespers, take these difficulties in their stride and adapt to the Russian idiom confidently and convincingly. Peter Scorer is magnificent as the Deacon, intoning the texts with commanding gravity.

But what exactly is the Liturgy in the context of the Eastern Orthodox Church? Specifically, it is the eucharistic service - quite simply the equivalent of the Roman Catholic Mass, with which it shares several points of reference: the Introit, Creed, Lord's Prayer and Sanctus, for example. Four forms of the Liturgy remain in use today, St John Chrysostom's version being the most frequently heard. It is sung on Sundays and during the week; the Liturgy of St Basil the Great, however, is employed just ten times a year, while that of St James, the Brother of the Lord is sung only on St James' Day, 23rd October. The fourth Liturgy, that of the Presanctified, is employed on the first three days of Holy Week and throughout Lent.

But while such background knowledge is useful in appreciating this marvellous music, it is not a prerequisite. Rachmaninov's setting, and this Hyperion recording, can be enjoyed for the quality of the Corydon Singers' performance and the superb tone, engineered by Mark Brown and Antony Howell in St Alban's Church, Holborn, London. It is music that, at first, intrigues and then becomes wholly absorbing, in an almost hypnotic way. As with so many Hyperion issues, it is a recording to refresh the most jaded ear.

and power that this work demands, but also allows the wealth of detail in the score to shine through - Wand rightly uses the Haas edition. Part of this, of course, is down to Günter Wand's sensitive balancing of the orchestral components; too often Bruckner's symphonies can sound like concertos for brass.

But what of this new Hamburg performance? I'd say it possesses all you could want from great Bruckner conducting. As ever with Wand, it is scrupulous to the score and attentive to every detail. It is also utterly independent in its approach - such playing needs no gimmicks - and commanding in its grasp of the structure, all of which may suggest a rather dry, unemotional interpretation. That couldn't be further from the truth, it is simply that Wand - like Furtwangler, Jochum, Giulini, Tennstedt and Karajan - reaches the spiritual and emotional heart of this work without any self-indulgent dallying en route. The result is unerring in its vision, compelling in its inexorable progress, and overwhelming in its impact. You will hear, for example, how well Wand judges the climaxes in each movement, which comes through understanding where Bruckner is leading; other conductors make the mistake of overplaying their hand too early and the apocalyptic moments of the Adagio and Finale are diluted as a result. Günter Wand is too wise, too immersed in Bruckner's idiom to fall into that trap. Like that 1992 Proms performance, and I hope that of 1995, this is a great musical experience.

GUSTAV MAHLER
Symphony No8 in E flat Major
Ulla Gustafsson, MariAnne Haggander, Carolina Sandgren, sopranos; Ulrika Tenstam, Anne Gjevang, altos; Seppo Ruohonen, tenor; Mats Persson, baritone;
Johann Tilli, bass; Estonian Boys' Choir;
Gothenburg Opera Chorus;
Royal Stockholm Philharmonic Choir;
Gothenburg Symphony Chorus;
Gothenburg Opera Orchestra and
Gothenburg Symphony Orchestra;
conductor, Neeme Jarvi.

Taped at concert performances given in Gothenburg during November 1994, the BIS label is donating all proceeds from sales of this CD to the Tallinn M/s Estonia Foundation which supports Estonian children orphaned by the sinking of the ferry M/s Estonia early last year. It is a cause to which all the musicians involved gave their services free of charge. It is pleasing to be able to report that this abundant generosity produced a result that is also worthy of your support.

In truth, Mahler's Eighth Symphony isn't a symphony in the true sense at all.
It belongs more to the world of large-scale oratorio, a hybrid of the sacred and the secular that perhaps reflects Mahler’s pantheism - he was a Jew by race, not religion. It is a work in two movements (it was originally to have been four but Mahler, for reasons unknown, abandoned this scheme). The first movement, or part, is a setting of the medieval hymn Veni Creator Spiritus (Come, Holy Ghost); the second - the longest single span of music Mahler composed - is a setting of the closing scene from Goethe’s Faust.

It is a symphony writ on the grandest imaginable scale, although the description appended by the manager of a concert agency - 'Symphony of a Thousand' - was made without Mahler’s knowledge and to his annoyance. It has, however, stuck with the work ever since its first performances in 1910, the last time Mahler was to conduct in Europe - he died eight months later.

The Estonian-born conductor, Neeme Järvi, although not known as a Mahler conductor, produces a performance of compelling vitality, especially in the contrapuntal tour-de-force of the Veni Creator Spiritus. Given the live concert conditions, he achieves remarkable technical excellence. The Swedish forces may not be a match for those of Chicago, who are directed by Sir Georg Solti in a Decca studio recording which remains the first choice in Mahler’s Eighth. However, there’s no denying that they play and sing their hearts out in what must have been a highly-emotional atmosphere. Indeed, I have grown to appreciate the qualities of this performance with each hearing, which is not always the case with Jarvis’ recordings, where a superficial excitement cloaks a lack of inner substance.

Moreover, the BIS recording, with its thrilling range and weight, admirably captures the overwhelming scale of the symphony. The resolution of the inner detail is remarkable, even if at times it exposes some of the voices at full stretch. A willingness to help the young sufferers of the Estonia disaster, is just one good reason to add this Eighth to your Mahler collection.

During his brief lifetime, Schubert had at least twenty attempts at mastering the demanding disciplines of the string quartet medium. Seven youthful efforts were left unfinished and, of the fifteen quartets listed in the catalogue, it is only in the last three that he can be said to have resolved the problems posed by the genre. But what 'solutions' each of these works presents: the poetry of the A minor D804; the poignancy of the D minor D810; and, at the apex of his achievement, the emotional roller-coaster of his last quartet, the G minor D887.

The first two works in this triptych have both earned nicknames from Schubert’s use of other themes in their slow movements; in the case of the A minor an entr'acte from his incidental music to a long-forgotten play by Helmina von Chezy, 'Rosamunde'. Schubert seems to have had a special affection for this enchanting tune, because he reworked it again for a piano impromptu. Better known is the link between the 'Death and the Maiden' quartet (D810) and the song of the same name, where Schubert set a text by Matthias Claudius which describes a dialogue between Death and the young woman he has come to 'collect'. Schubert maintains the mood of the song in the quartet through death the sweet comforter, a theme which is developed into an exquisite set of variations.

But how the atmosphere changes with the final two movements. Death is evoked with vivid terror in the song Die Erkönig (The Elf King), to become wild, frenzied and demonic. The same disturbing, nightmarish world is inhabited for much of the course of the G minor quartet D887; a world ushered in on fearful tremolo strings and which, even in its lighter moments, still seems full of dread and uncertainty.

It is only in this last quartet that I feel the Italians do not fully penetrate its inner tensions and torments; their performance emphasises the work’s lyrical beauty, its compassion rather than its passion. Perhaps they chose not to go further into this musical 'heart of darkness', as for example, the Alban Berg, Lindsay or Hungarian Quartets seem to do, taking the accompanying risks in the process. However, this by no means invalidates the Italians’ interpretation, and their playing remains both inspired and compelling in what, for me, is some of the most deeply affecting music I know.
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<td>ECC 83/EF86 MULLARD</td>
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<td>Px25 MARCONI OR OSRAM GLOBE SHAPE</td>
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<td>Px4 MARCONI OR OSRAM</td>
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<td>DA100 G.E.C</td>
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Dear Mr. Soper,
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LOUDSPEAKERS
Smooth, flat frequency response is important to ensure a balanced sound. Look carefully at overall trends; rising treble will give a bright sound, falling treble a dull sound. A rise through the midrange normally corresponds with good projection.

High sensitivity (better than 86dB) means less power is needed for a certain volume, meaning a low power amp. can be used.

The impedance curve tells us how easy loudspeakers are to drive. Low or wildly varying impedance is bad; a flat impedance around 8Ω is good.

CD PLAYERS
Even small trends in frequency response of CD players can affect their subjective balance. Generally, those with a gently rolled off treble and, more rarely, a rising bass will sound best. Rising treble can produce a sharp sound.

The distortion plot we show is taken at -30dB, to represent a typical music signal. High distortion at this level, combined with rising treble, can result in a harsh sound. Yet other effects have to be considered, especially low level linearity, which we also test for, including -90dB signals with dither applied.

AMPLIFIERS
Distortion from solid state amplifiers should be no more than around 0.2%. Even order (2nd, 4th, 6th etc) distortion is usually innocuous, but odd order (3rd, 5th, 7th etc) distortion makes for a glassy, hard sound, or grittiness.

Frequency response can be band limited, with bass and treble rolled off just out of the ear's range, or wideband. Each has its own characteristics. Small wideband response variations colour tonal balance.

Power output is easy to understand: the higher the figure, the louder it will go. Just make sure there's enough power output to drive any loudspeakers you intend to use.

TUNERS
Frequency response, as always, says much about tonal balance and character traits, like peaky treble (due to a mis-matched MPX filter). Distortion and channel separation need to be less than 0.3% (according to harmonic structure) and better than 25dB.

Sensitivity on all inputs was low at 450mV, not enough for some budget tuners

GALACTRON

For its size, the Galactron is not especially powerful as solid-state amplifiers go. It produces 72 watts into 8Ω and 132 watts into 4Ω. It will, however, drive low loads adequately.

In spite of hot running, suggesting high quiescent current and substantial Class A working, distortion was on the high side, although much of it was innocuous second harmonic at low levels, as we would hope. Distortion increased with both output level and frequency, with strong higher harmonics at 10kHz. We measured 1% distortion at around 12volts (18 watts) into an easy 8Ω load, with extended harmonics, and a maximum distortion of 1.8% at full output, 10kHz. Harmonics were extended - not a good sign.

Sensitivity on all inputs was low at 450mV, not enough for some budget tuners

and cassette decks, which give 300mV out.

Frequency response was adequately wide at 14Hz-76kHz, at all settings of the remote volume control.

The Galactron measured satisfactorily in most areas except distortion, which was high. NK

TEST RESULTS

Power 72 watts
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Noise -91dB
Distortion 0.4%
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dc offset 3mV
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CD PLAYERS

PROS AUDIO DAC-1000 MKII

The DAC-1000 Mk11 has an interesting frequency response. There is a noticeable lift towards low frequencies which will give a full and powerful bass. Also associated with subjectively good results is the gentle treble roll off, which helps to remove some of the edge from CD. Through the midband there is a ripple which causes a lift around 1kHz, which may push detail forwards, aiding projection, but this can only be confirmed with listening tests. Distortion is reasonable at all levels, if unexceptional. At -30dB, a level picked to represent a typical music signal, you can see from the plot below that distortion was high and wide ranging. The vertical scale actually had to be re-adjusted to get the tops of the harmonics in. However, as we have found exceptional sonic results with other DPA discrete designs, the Little Bit III shouldn't be discounted on its high distortion alone. Noise is low enough to be inaudible, although only just. and channel separation narrower than normal, but again plenty wide enough for good stereo. Dynamic range is low at 96dB due to the high distortion at -60dB (EIAJ test). Output was healthy at 2.2V, just above the Philips standard.

DPA LITTLE BIT III

DPA's new Little Bit III has a flat and smooth frequency response. There is a gentle lift at frequency extremes which will give added bass power and a brightness or incision to the treble. Distortion, as with all of DPA's discrete designs, was high at all levels. At -30dB, a level picked to represent a typical music signal, you can see from the plot below that distortion was high and wide ranging. The vertical scale actually had to be re-adjusted to get the tops of the harmonics in. However, as we have found exceptional sonic results with other DPA discrete designs, the Little Bit III shouldn't be discounted on its high distortion alone. Noise is low enough to be inaudible, although only just. and channel separation narrower than normal, but again plenty wide enough for good stereo. Dynamic range is low at 96dB due to the high distortion at -60dB (EIAJ test). Output was healthy at 2.2V, just above the Philips standard.

ORELLE CD100

The CD100 is Orelle's latest integrated player, and at just under £500 and British built, could prove successful. It is a well engineered player too, making it even more appealing. Frequency response is very flat, so I'd expect a neutral and clean sound. Distortion was low and reasonably well mannered across the band. In our plot below, taken at -30dB - a level picked to represent a typical music signal - you can see quite a wide range of harmonics, but they are reasonably low apart from 2nd harmonic, which tends to be innocuous anyway. At -60dB distortion stays low, giving a wide dynamic range figure of 107dB (EIAJ test).

Elsewhere, the Orelle measures very well, with wide channel separation, very low noise and output spot on the Philips standard at 2V. The CD100 is well engineered with a good all-round performance. Orelle look set to leap into Arcam territory.

TEST RESULTS

<table>
<thead>
<tr>
<th>Frequency response</th>
<th>4Hz-21.1kHz</th>
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<tr>
<td>Distortion (%)</td>
<td></td>
</tr>
<tr>
<td>-6dB</td>
<td>0.005</td>
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<tr>
<td>-30dB</td>
<td>0.024</td>
</tr>
<tr>
<td>-60dB</td>
<td>0.88</td>
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<tr>
<td>-90dB</td>
<td>32.1</td>
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<tr>
<td>-90dB dithered</td>
<td>9.2</td>
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<tr>
<td>Separation (dB)</td>
<td>left</td>
</tr>
<tr>
<td>1kHz</td>
<td>101</td>
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<tr>
<td>20kHz</td>
<td>88</td>
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<tr>
<td>Noise with emphasis</td>
<td>-114dB</td>
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<td>Dynamic range</td>
<td>104dB</td>
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<tr>
<td>Output</td>
<td>3.8V</td>
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</table>

| Distortion (%)    |             |
| -6dB              | 0.008       |
| -30dB             | 0.076       |
| -60dB             | 1.96        |
| -90dB             | 55.3        |
| -90dB dithered    | 49          |
| Separation (dB)   | left        |
| 1kHz              | 81.5        |
| 20kHz             | 68.5        |
| Noise with emphasis | -95dB      |
| Dynamic range     | 96dB        |
| Output            | 2.2V        |

| Distortion (%)    |             |
| -6dB              | 0.008       |
| -30dB             | 0.058       |
| -60dB             | 0.55        |
| -90dB             | 50.0        |
| -90dB dithered    | 15.4        |
| Separation (dB)   | left        |
| 1kHz              | 112         |
| 20kHz             | 101         |
| Noise with emphasis | 104dB       |
| Dynamic range     | 107dB       |
| Output            | 2V          |

Frequency Response

Distortion

Frequency Response

Distortion

Frequency Response

Distortion
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HORN LOUDSPEAKERS

MISSION 73 ILE
The 731LEs have quite a different response to the standard 731s, showing that quite some considerable work has gone into improving performance. Where the 731s were tuned high in the bass, to give a peak that adds punch and speed, the 731LEs are tuned smoother and deeper, which will give a more natural bottom end, although one that may be initially less impressive.

Up in the treble the 731LEs show a stronger crossover dip, the midrange curving off a couple of dB before the treble comes in. This will change their character quite considerably. The gently lifting response of the 731s through midrange and treble gives them a bright and open sound, but the 731LEs should have a slightly more refined and smoother balance by comparison.

Mission's 731LEs have average sensitivity at 86dB and overall impedance measures 7.5Ω with dips in the impedance curve as low as 5Ω. This makes them a little more difficult to drive than the standard 731s; I'd recommend a good solid-state amplifier capable of 40watts or so for good volume in moderate size rooms. DB

TECHNICS SB-M300
An interesting little speaker, the SB-M300s use four drivers in a three-way system; two bass units housed inside. The frequency response of the SB-M300s is essentially very smooth and even showing good engineering. There is a small peak at 1.25kHz which may add some projection and bass output falls gently suggesting the '300s rely on room reinforcement to even things out.

Overall impedance measured 7Ω, and sensitivity was a low 85dB at 1m for a nominal watt (2.83V) pink noise input. This, along with low impedance through the bass, means that the '300s will need a powerful amplifier for best results. I'd recommend an amplifier capable of producing at least 50watts. DB

KEF REFERENCE MODEL 3
As you'd expect from one of KEF's top of the line loudspeakers, the Reference 3s have a very smooth and flat response through the midrange and treble. There is a slight plateau lift in the treble, but only by 0.5dB or so, enough to add insight and detail without becoming bright. In the bass there is a lift of around 3dB, which should ensure deep and powerful bass in large rooms.

Although the Reference 3s are sensitive, producing 90dB at 1m for a nominal watt (2.83V) pink noise signal, they are certainly not going to be an easy load for amplifiers to drive. The low overall impedance of 6.5Ω hints that they are going to draw more current than most, and the impedance curve looks like a cut away view of a Tour-de-France mountain stage. The steep slopes of the impedance curve indicate that the Reference 3s are a reactive load, and one that, from experience with other KEF Reference series loudspeakers, will prove difficult for many amplifiers.

Although well engineered in response terms, the KEF Reference 3s will need careful matching for best results. A powerful, solid-state amplifier capable of delivering good current into low impedance loads (4Ω) is recommended. DB
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GOODMANS LOUDSPEAKERS LTD IC100

Using a 165mm ICT driver, the Goodmans IC100s need no crossover. The plot below shows a basically smooth frequency response; there are no serious peaks or troughs. But the lift in the upper bass will add warmth, maybe thickness, to the bottom end, and the rise through the lower treble will push detail forwards. In between, there is a wide, but shallow trough, which may restrict vocal projection. One other thing worth mentioning is the rolled off treble. Treble doesn't appear to extend all that far, starting to roll off at 13kHz or so and 3dB down at 16kHz. This may give a softer sound than most, but one that could be welcome with CD.

Sensitivity of the IC100s was an average 86dB, measured at 1m using a nominal watt (2.83V) pink noise signal. Overall impedance was high though at 10Ω, so they will not demand heavy current to drive. I'd recommend a good solid state amplifier capable of producing at least 30 watts for best results. DB

TUNER

PIONEER F-504RDS TUNER

Some slight plateau emphasis from 1kHz to 6kHz in the frequency response may make itself known as brightness in the sound, but a gentle roll-off at higher frequencies is likely to limit harshness and may even have a beneficial effect. All aspects of audio performance measured well, with hiss in particular being very low at -76dB, around 4dB better than usual.

Sensitivity was high, although to reach full quieting (minimum hiss) no less than 2.5mV is needed from the aerial. Interestingly, 2mV is the top limit of their 7-bar signal strength display, so the two appear linked, as they should be. Output measured 650mV, a healthy figure. Alternate channel (0.4MHz) selectivity was as deep (better than 80dB) and symmetrical as expected from Pioneer. Switching to Narrow IF improved adjacent channel (0.2MHz) rejection from 18dB to 30dB, both excellent results.

The F-504RDS measured very well in all areas. Pioneer have paid much attention to detail. NK
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On the subject of valves, the mighty Baron made its first UK appearance from Mesa Engineering and is an absolute delight for audiophiles.
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Rega now also have a new remote control pre-amplifier called HAL, features include more inputs, also MM/MC phono stage. The Output Stage is run in semi-balanced mode.

There are two new power amplifiers, the EXS and the EXON, the EXS is a stereo power amplifier rated at 70 w p.c. and the EXON is a mono design rated at 125wpc. Finally, Rega now have a modular table system, which really looks a million dollars. Modules start at £30.....

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The increase in interest in hi-fi, and the adoption of a "Hi-Fi" lifestyle, has been accompanied by a trend towards the use of reference-grade components and systems. However, it is important to remember that these components are designed for a specific sound quality and may not be suitable for all applications.

Hi-Fi systems are often associated with the pursuit of perfection in sound reproduction. However, it is important to remember that perfection is not always achievable or desirable. The goal should be to achieve a sound quality that is appropriate for the intended use and that is enjoyable to listeners.

The use of reference-grade components can also be a source of frustration for some listeners. These components are often expensive and require a significant investment of time and money to set up and maintain. However, it is important to remember that these components are designed to provide a superior listening experience, and that the effort required to achieve this experience is worth it.

In conclusion, the use of reference-grade components can be a source of great enjoyment and satisfaction, but it is important to remember that perfection is not always achievable or desirable. The goal should be to achieve a sound quality that is appropriate for the intended use and that is enjoyable to listeners.

Additional reading:
- "High Fidelity: The Art of Sound Reproduction" by Max Lifton
- "Hi-Fi: A Guide to Audio Quality" by John E. THOMAS
- "The High End: A Comprehensive Guide to Audiophile Sound" by Michael K. RAY

magazines of the 1970s. It is a questionable practice of industry, and one that is often followed by the crass marketing manipulations to mislead consumers. The result is a market that is full of half-truths and exaggerations, and a consumer who is mistreated by unscrupulous dealers and manufacturers.

Conclusion

In conclusion, the use of reference-grade components can be a source of great enjoyment and satisfaction, but it is important to remember that perfection is not always achievable or desirable. The goal should be to achieve a sound quality that is appropriate for the intended use and that is enjoyable to listeners.

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Our policy is to accept only the best quality components, and we are restricted to the same stringent standards that we apply to the production of our kits. This is why we are selective in our component sourcing, and why our components are very expensive, and why we are not able to supply our customers with a range of lower quality components. If you are not able to find the component you need, please contact us and we will do our best to help you.

BLACK MAGIC ELECTRON TRANSFORMER PRODUCTION: HUM PERFORMANCE, EMPIRE LASTING VALUE

Finally, we have been asked if the Black Magic can be used with a transformer. We have found that the Black Magic is very compatible with transformers, and that the performance is very good with transformers. We also found that the Black Magic is compatible with a variety of transformers, and that the performance is very good with transformers.

There are a few ways to achieve a suitable transformer for your Black Magic. One way is to use a transformer with a turns ratio of 1:1, which will result in a transformer with a very high impedance. Another way is to use a transformer with a turns ratio of 2:1, which will result in a transformer with a very low impedance. You may also use a transformer with a turns ratio of 3:1, which will result in a transformer with a very low impedance.

If you have a transformer with a turns ratio of 1:1, you can use it with your Black Magic. If you have a transformer with a turns ratio of 2:1, you can use it with your Black Magic. If you have a transformer with a turns ratio of 3:1, you can use it with your Black Magic.

The transformer you choose will depend on the impedance of your Black Magic. If you have a transformer with a very high impedance, you can use it with your Black Magic. If you have a transformer with a very low impedance, you can use it with your Black Magic. If you have a transformer with a very low impedance, you can use it with your Black Magic.

Our range of transformers is constantly expanding, as we find better transformers and transformers that are better suited to our products. We also have a range of transformers that are specifically designed for our products.

We recommend the use of a transformer with a turns ratio of 1:1, which will result in a transformer with a very high impedance. We also recommend the use of a transformer with a turns ratio of 2:1, which will result in a transformer with a very low impedance. We also recommend the use of a transformer with a turns ratio of 3:1, which will result in a transformer with a very low impedance.

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This month - We would like to introduce our £1200 system to you. We find that the most difficult type of system to assemble properly, in order to obtain convincing results, is the one for the customer who wants to spend less than £1500, but obtain a realism approaching that of the ‘cost no object’ system. Over the last few months we have tried many different combinations of equipment, and finally have what we believe is the answer. It’s capable of portraying a beguiling soundstage, has sufficient control and dynamics to excite, and above all, holds you captivated as live music should! We can’t think of a better way of spending £1200 and get this close to real music. Call for more details, or better still arrange for a demonstration and hear for yourself.

We supply and recommend the following established products:

- **UNISON RESEARCH**: Outstanding range of single ended valve amplification. The ‘Simply Two’ is simply outstanding.
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- Michell Girodek T Table with RB300 tonearm £475.
- Leak Troughline 3 Tuner with Studio 7 decoder (totally original, unmarked) £195.
- Musical Fidelity The Preamp 2 £125.

Large range of records and CDs in stock. New lists every two months. Audio By Development, Rotten Row, Wiveliscombe, Somerset TA4 2NB.
Hi-Fi World

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**TECHNICAL INFORMATION BULLETIN No. 2**

**SYSTEM INTEGRITY**

System Integrity Components

We have been working on a way of wiring music-playing systems that maintains the integrity of the signal path in a more sophisticated way than on general systems. The results have been astonishing and this could be the next major system break-through after equipment supports and bi-wiring. Present systems are limited by the inadequate connectors that are ubiquitous and System Integrity requires a complete rethink on these lines. We are currently being commissioned by a number of customers to rewire completely their system and this won’t allow us many more commissions before Christmas but we can offer immediately 7-channel tonearm rewires and a passive preamp together with appropriate cabling in readiness for full conversions. A System Integrity phone stage will also be available very shortly.

The philosophy behind it. Audio signals are commonly thought to comprise a signal referred to a ground (or signal earth) and 99% of all available equipment is wired in this way. Inevitably, the grounds of both channels are connected together at numerous points within the system and more often than not also connected to mains earth. Some manufacturers separate signal earth from mains earth but fail to separate channel earth. A fully integrated system would have one star earth point referenced to a true ‘real’ earth from which all of the safety earths would radiate independently of signal earths so that every channel of every piece of source equipment would have an independent return path to the star. Screening would be separately independent.

What is required? Every system needs an independent consultancy due to the wide variety of components on the market but audiophiles with separate mono amplifiers have a good head start. Four and five channel connectors (seven in the case of tonearms) are an essential part of the work and equipment can be modified prior to a full system overhaul or as budget allows. As always ring us for full details and a free of charge individual prospectus.

**NEWSLETTER NO 6**

While most of us have been relaxing in the Mediterranean heat of this wonderful English summer, J.E. Sugden & Co have been busy working on their latest creations. By the time you read this, I will have on demonstration a pair of the company’s brand new class “A” mono 40watt per channel amplifiers. Having used the prototype units at the Great British Hi-Fi show I can report that the final completion has been well worth the wait. Most readers of the newsletter will know that my own preference has always been for class “A” amplifiers. There is an old saying “if it doesn’t get hot, it ain’t playing music” These amplifiers get hot! These amplifiers play music!

In fact for anyone who is obsessed with valve amplifiers but do not want the maintenance problems (read fun here) the solution is the S. I. amplifiers. I originally auditioned them with Sugden’s own AU51 pre-amp and phono stage using a pair of pro-ac studio 200s and gyro-dec fitted with Wilson-Benesch act 1 tone arm. Cartridge used was goldring elite £690.00 phono stage using a pair of pro-ac studio 200s and gyro-dec fitted with Wilson-Benesch act 1 tone arm. Cartridge used was goldring elite £690.00. Reproduction of music should never be obviously limiting, pure class “A” output, very low feedback, bi-polar trannies, incidentally all of sugden’s audio equipment is phase linear but they allow the music to sing for itself, only to be recognised for what it is... musical in itself!

Coming back to the mono blox i can only suggest strongly that you audition them at your leisure, they are very special and deserve to be partnered with good ancillaries. ring for help if needs be. sugden have also updated the AU34i pre-amp which will complement the above mentioned items of desire, the new pre will use motorised volume for convenience and is completely d.c. coupled throughout for sonic purity. separate phono boards for mm/mc are available in either, or format. Every gain stage has its own power supply. incidentally all of sugden's audio equipment is linear but they don't make a song and dance about it! the whole philosophy of the company is one which I can only agree with.

Here comes another of my sweeping statements, non- bandwidth limiting, pure class “A” output, very low feedback, bi-polar trannies, discrete audio circuitry and low impedance power supplies make this range of electronics my own personal favourite transistor components. certainly this is a system i will enjoy for a very long time! until next month, enjoy the music....

As ever, a musical month to you all.

Kind regards

David W. Spiers (PROPRIETOR)

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a lot more respect for the brand name bailing from “up north” than we do in sugden's own native country. not a lot of audiophiles, let alone hi-fi reviewers realise that it was this company who invented the class “A” transistor output stage, back in the 1960’s. perhaps it is because the company themselves are music lovers and not technology freaks that the equipment is allowed to sing for itself. only to be recognised for what it is... musical in itself!

Coming back to the mono blox i can only suggest strongly that you audition them at your leisure, they are very special and deserve to be partnered with good ancillaries. ring for help if needs be. sugden have also updated the AU34i pre-amp which will complement the above mentioned items of desire, the new pre will use motorised volume for convenience and is completely d.c. coupled throughout for sonic purity. separate phono boards for mm/mc are available in either, or format. Every gain stage has its own power supply. incidentally all of sugden's audio equipment is linear but they don't make a song and dance about it! the whole philosophy of the company is one which I can only agree with.

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Kind regards

David W. Spiers (PROPRIETOR)

The philosophy behind it. Audio signals are commonly thought to comprise a signal referred to a ground (or signal earth) and 99% of all available equipment is wired in this way. Inevitably, the grounds of both channels are connected together at numerous points within the system and more often than not also connected to mains earth. Some manufacturers separate signal earth from mains earth but fail to separate channel earth. A fully integrated system would have one star earth point referenced to a true ‘real’ earth from which all of the safety earths would radiate independently of signal earths so that every channel of every piece of source equipment would have an independent return path to the star. Screening would be separately independent.

What is required? Every system needs an independent consultancy due to the wide variety of components on the market but audiophiles with separate mono amplifiers have a good head start. Four and five channel connectors (seven in the case of tonearms) are an essential part of the work and equipment can be modified prior to a full system overhaul or as budget allows. As always ring us for full details and a free of charge individual prospectus.
JVC JT-Viol tuner - stereo £50.

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GRADO SIGNATURE junior car, new £100. Rogers BBC LS3/5a loudspeakers and stands, refurbished £250. Audio Technica electronic stylus £150. £10, Roberton 410 amplifier £425. Tel: 01631 74528. anytime before 9pm
SUGDEN floor standing speakers £300. John Sharrane Phase II intergrated £330. Rotel RB990 DX power £200. Chord 200 power. £100. WANTED. Pintle jumbo CD trays. Tel: 01226 710665 (B. Yorkshire)
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LINN NAP 140 power amp, old style v.g.c. boxed £290. Meridian 206B CD with Trichord clock ii mod. As new, boxed £480. Tel: Dave 01703 220521 daytime.
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SUGDEN A25B, A28, A48 FROM £199.00
1pr MARTIN LOGAN AERIUS £1,650.00

N.B. All products are in very good i.e. new condition, unless otherwise stated.

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V’audio
Hi-Fi Consultants

(a) Speakers II
Last month we wrote at length about the Alan speakers from the States. What we did not have space to mention is that it is no good attempting to drive speakers such as these, or most of the other speakers we stock (such as ATC, Ruark, Heybrook, Opera etc.) with a low powered amplifier. In some cases you might get by with a 50 Watter, if it has a strong bass, such as the Shearne Phase II, or has a large current delivery as in the case of the new Electrocompaniet ECI-2. But to be safe, aim for a minimum of 100 watts and you can drive most speakers with safety. Don’t forget that you are more likely to damage a speaker by using a low powered amplifier and hence sending it into clipping.

Even speakers that we would normally consider as efficient, such as Klipsch and triangle (91/92db), really do benefit from a powerful amplifier. The Klipsch Forte for example, loves the AVI integrated, as does the Triangle Zephr, while the Comet TZe loves the 150 watt Heybrook signature.

(b) Amplifiers
So you want a 100 watt amplifier? If you can bi-wire and therefore bi-amp your speakers, we can cheat slightly and recommend one of the integrated amplifiers, such as the Shearne Phase 2 and Heybrook Integra, which have preamp outputs to enable the addition of a matching power amp, such as the Shearne Phase 3, or the Heybrook TEG/7D. Alternatively, you can for less money have the superb remotely controlled AVI Integrated which provides 100 watts, from a tiny little box. Then we have the Electrocompaniet ECI-1, which will deliver 80 amps of current in addition to 100 watts. If you want Monoblocks then the Electrocompaniet can provide them, but at £4200 per pair for 180 watts, while AVI can provide you with 150 watts for £1100. You can go for either the Electrocompaniet AV250 at £3600, or the chord 1200b at £3800. If you want valves we have those as well. We don’t know a speaker we can’t drive. Do ring us for a chat.
AMC CD player CD06 £280 brand new. AT-OC9 cartridges brand new £180. Quad 34-616 mint cond. £650. Heybrook HBI Mill cond. 2 year guarantee £150. Jules 01792 280061 ROGET RC970 BX 1 pre 970 BX ii power amplifier £300 the pair. R970 BX phono unit £100. Absolutely as new. 10 hours use. Boxed. Adrian 01 444 4126/413782 LINN KARIK CD player £1050. Numark DAC £70. Kairn pre-amp £90. Linn Axis turntable, Bask ii arm, K9 cartridge £300. Tel: 01344 27911 (East Berks)
Pair of original Quad Electrostatic speakers, bronze. Can demonstrate. No Quad boxes so buyer must collect. £150 offers
NEIL HI-AP new style case £300. Manda Sound table £100, Manda three ter equipment stand £200. Tel: 01509 215622 (Loughborough)
ARCAM 290 int amp £30, Arcam 290 power amp £285, Mission 75 speakers, rosewood and deflex panels £165. All v.g.c. includes postage. Tel: 01344 66238
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LEAK SANDWICH speakers £75. Celestion Dinton 15XK speakers £70. JVC JR-5300 receiver, garnetoon £20. JVC LF-F45 record deck, exceptional build quality £75. All boxed and immaculate. Tel: 01245 498485
MERCERIA 190 DAC, acclimated DAC-7 model £215. Tel: 01923 782381 (Sunbury on Thames)
NAIM NAC 160 power amp (old style). Must be good condition. FOR SALE. Naim NAC 110 power amp v.g.c. Tel: 01294 217323
NAIM NAC 32-SNAP1490 1680, MMC/CD boxes, variable, boxed £357. Rogers R50 kit transmission line loudspeakers £150. Tel: 01508 507354 (Norfolk)
QUAD L67 cd player, 66 tuner, 66 pre amplifier and 616-2 power amplifier (one year old) £1,950 o.n.o. Spendor BBCi, (new drivers etc) and Foundation stands £295 o.n.o. Triangle floor standing speakers £350 o.n.o. Nakamichi 6022X cassette deck £50 o.n.o. Revovl tape deck and various cables. Tel: 01292 441544
NAD 402 tuner, 12 months old, little used, perfect, £155 for quick sale. Tel: 01350 831337 (Leicestershire)
ARCAM TWO PLUS speakers, black Ash box, can demonstrate £120 o.n.o. Tel: 01481 249691 after 6.30pm
QUAD FM4 tuner, grey £265. Quad 606 power amp £400. both as new. Tel: 01767 631268 evenings only
ALPHASON HK-100-150/15. Vithed Boxed with instructions, v.g.c. £230. Gryoder power supply £55. Tel: 01891 299 0075 eves & w/end
LINN HI-AP new style case £300. Manda Sound table £100, Manda three ter equipment stand £200. Tel: 01509 215622 (Loughborough)
BEARD P100 Mk ii power amplifier, just serviced, new valves £50. Revovl A77. Mk ii high speed two track recent £380 serviced. Bargain. 401 KEF 139 £95. Pair Decca London Ribbon tweeters £150. Acoustic Research AR3A improved speakers with stands. £250. Tel: 01767 35 1587
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