SUPER SYSTEM
FROM NAD AND TANNOY

TECHNICS' SB-M500 FLOORSTANDERS

QUAD'S LATEST 77 CD PLAYER

COMPETITION:
WIN 5 PAIRS OF ROGERS LOUDSPEAKERS
One of life's more rewarding decisions.

If only all decisions in life were as straightforward as this. The fact is that if you want the purest sound and the most uncompromising specification, it simply has to be New KEF Reference. Every speaker must match our engineers' 'reference' prototype to an almost unbelievable tolerance of 0.5 decibels. This means you can be sure that the sound originally achieved at KEF will be recreated in your home. Exactly.

Our breakthrough Uni-Q technology delivers an astonishing stereo image, its unique point source design, with the tweeter at the exact acoustic centre of the mid-range cone, lets you visualise the precise location of every performer on the stage. What's more, because of Uni-Q's smooth, even dispersion you'll hear that incredible realism throughout the room. From speakers this good you'd expect outstanding bass performance. With KEF's famous 'coupled cavity' bass system, now further improved with interports, you get it. We go to similar extremes in perfecting every detail. Some you can't see, like Oxygen-Free Copper internal wiring or magnetic shielding (vital in Home Theatre). Some you can - sumptuously veneered cabinets with heavily gold-plated feet and terminals, for example.

In other words, each pair of Reference speakers is as close to perfection as KEF can make it. When you know you can choose the best, would you willingly settle for anything less?

KEF Reference Series

The experience of sound

KEF Reference Series Authorised Dealers

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Huddersfield Hi-Fi 01484 544686
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Martins Hi-Fi 01553 761633
LONDON W1
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LONDON W1
K J Leisure Sounds 0171 466 8282
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Martins Hi-Fi 01603 627690
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Aston Audio 01223 598704
OXFORD
Audio T (head office) 01865 742044
PETERBOROUGH
The Hi-Fi Company 01733 349756
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Sevenoaks Hi-Fi 01905 612929
WORTHING
Phase 3 Hi-Fi 01903 245577

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KEF AUDIO (UK) LIMITED, DEPT HFW1, ECCLESTON ROAD, TOVL, MAIDSTONE, KENT ME15 5QF. TELEPHONE (01622) 672261 FAX (01622) 765663 e-mail: 100447.1106@compuserve.com kefaudo@kefaudio.demon.co.uk

SPEAKERS SHOWN ARE MODEL FOUR IN ROSEWOOD FINISH. KEF AND UNI-Q ARE REGISTERED TRADEMARKS. UNI-Q IS PROTECTED UNDER GB PATENT 2236929. WORLDWIDE PATENTS PENDING. KEF AUDIO (UK) LIMITED, DEPT HFW1, ECCLESTON ROAD, TOVL, MAIDSTONE, KENT ME15 5QF. TELEPHONE (01622) 672261 FAX (01622) 765663 e-mail: 100447.1106@compuserve.com kefaudo@kefaudio.demon.co.uk
When we spotted a High Definition Aerogel cone Uni-Q driver in KEF’s 60S loudspeakers, even though they’re intended for AV, we had to have a listen. Read our findings on these and the matching 30B subwoofer on page 58.

A dedicated follower of fashion, Audio Innovations’ Alto CD player is certainly eye-catching. But does the sound live up to its looks? See page 30 where Jon Marks has the answers.

Technics’ SB-M300 loudspeakers came as a bit of a shock when we reviewed them in our November ‘95 issue. We were prepared for the SB-M500 floorstanders, but they still managed to captivate us - see page 20.

Also captivating, but from closer shores, is the Audion ETSE Sterling single-ended valve amplifier. At £599 its performance had us hooked - read all about it on page 28.

Hi-Fi World has its own advanced test laboratory and acoustically treated listening room. No other hi-fi magazine has the benefit of such facilities.

Hi-Fi World has a dedicated in-house team of experienced listeners, and uses selected freelance professionals. We review thoroughly by extensive auditioning, rather than by quick-fire group listening tests.

Hi-Fi World’s engineering team designs a wide range of products in-house. No other hi-fi magazine is so expert and dedicated.

TEST EQUIPMENT

TEAC A-BX7R AMPLIFIER
Following the success of the audiophile aimed A-BX10, we audition the Teac A-BX7R, its smaller brother.

UKD CALLAS GOLD LOUDSPEAKERS
The ‘Gold’ version of UKD’s solid walnut miniature uses a Scan Speak fabric dome tweeter in place of the Focal inverted dome of the original. We listen closely for the differences.

NAD 412 TUNER
In 1994, NAD’s 402 tuner set the standard. Just as the competition’s getting close, NAD have launched its replacement, the 412. Will it push the boundaries even further?

THORENS CONSEQUENCE TCD/TDA2000 CD PLAYER AND CONVERTOR
Using a unique three point suspension system, CDM12 pro transport mechanism and DAC-7 convertors is Thoren’s TCD 2000 CD player. We check it out and audition the TDA 2000 convertor too.

SPENDOR 2030 LOUDSPEAKERS
Spendor are aiming to reach a wider audience, and this, their £600 2030 floorstander looks like it could get them where they want fast. We take a first look at this new breed from an established manufacturer.

ROGERS E20a AMPLIFIER
Rogers make their return to valve amplification with this, a 20watt integrated design. Will it be as popular for them second time around?
THIS MONTH'S REVIEWS

AMPLIFIERS

SUMO ATHENA II AND POLARIS III 23
No, this pre-amplifier and power amplifier is not Japanese. The name is a reverse acronym: it stands for 'Only Made in the United States'. Haider Bahrani knew that!

AUDION ETSE STERLING 28
An affordable single-ended valve design from Audion which is especially good with vocals. Read Haider Bahrani, guitarist and lyricist.

AUDIO VALVE PPP 45 51
These very distinctively styled 45watt valve monoblock power amplifiers from Germany immediately caught Douglas Floyd-Douglass' attention. Did they hold it?

COMPACT DISC

AUDIO INNOVATIONS ALTO 30
This is hi-fi, Jim, but not as we know it. Jon Marks is seduced by the space-age looks of this CD player, but is the sound spaced out?

QUAD 7712 41
Quad's latest version of the new 77CD player. Now with added mains power so, unlike the first, you don't have to own the matching amplifier to make it work. Haider Bahrani tries it out...

QUAD 7712 41
Quad's latest version of the new 77CD player. Now with added mains power so, unlike the first, you don't have to own the matching amplifier to make it work. Haider Bahrani tries it out...

LOUDSPEAKERS

TECHNICS SB-M500 20
Technics put twice as many drivers in this floorstanding loudspeaker than are visible to the naked eye. Eric Braithwaite says never mind the number, hear the quality.

MUSICAL TECHNOLOGY

FALCON EXPORT 25
Foreign manufacturers send us products tweaked especially for the UK; this British loudspeaker has been tweaked for the export market. Eric Braithwaite goes bird-watching.

KEF 60S/30B SUBWOOFER 58
It was really meant for audio-visual purposes, but Dominic Baker heard a rumour that it was pretty good for serious hi-fi too.

REL Q-BASS 65
Try an organ transplant right in your living room. Haider Bahrami listens to those low, low notes from this new subwoofer.

SUPER SYSTEM FOR £700!
We put together a very special budget CD system with NAD's latest 512 CD player and 312 amplifier and Tannoy's 'Special Edition' 631 loudspeakers. Plus cables and stands, that's everything you need for less than 70 tenner.

THE BIG SWISS CHEESE 33
If you have to ask the price of this top-quality high-end Swiss hi-fi system, you can't afford it! But like Eric Braithwaite, we can all dream, can't we?

CASSETTE DECK

DENON DRM-550 57
Noel Keywood tests Denon's new £150 deck. Will it awe Aiwa, trounce Teac or maul Marantz?

WORLD VERDICT

OUTSTANDING - Superb sound, something we'd use ourselves.

GOOD - Has strong merits. Well worth an audition.

ADEQUATE - Mediocre in vital areas. May be worth auditioning.


MAY 1996

HI-FI WORLD
REGULARS

NEXT ISSUE
Flaming June already? Check out what will set Hi-Fi World on fire next month.

NEWS
A new turn-up for the book (shelves) from Tannoy; Verity plc buy Roksan; a new budget hi-fi range for Britain; a Special Edition of a classic 24-year old turntable... If it isn’t here, you don’t need to know about it.

READERS’ LETTERS
Who? When? Where? Why? Questions, questions... and, answers, answers. We have a prize for every reader’s letter printed, too!

COLUMNS
Where we let our three columnists sound off about the hi-fi business.

SUBSCRIPTIONS
Subscribe to Hi-Fi World at our special rates. Let your postman do the walking!

SPECIALIST HI-FI DEALERS
Hi-fi is a better investment than any Barings made. Let your dealer help you make the right decision.

MEET YOUR MAKER
If you’ve had the call to serious hi-fi, trawl through these names for future enlightenment.

WORLD AUDIO DESIGN
Introduce yourself to your toolbox again. Put it to use building a World Audio kit.

HI-FI WORLD LIBRARY
Book a session with our booklist for those balmy spring evenings.

DIAL A DEALER
It’s good to talk. It’s even better to talk to a dealer before you buy.

WORLD BUYING GUIDE
Over a hundred run-downs on the best hi-fi we’ve reviewed.

MEASURED PERFORMANCE
Testing, testing... The technical low-down on every product reviewed in this issue.

READERS’ CLASSIFIEDS
Probably the greatest number of second-hand hi-fi bargains in the world.

ADVERTISERS INDEX

FEATURES

FIRST GENERATION CD
It’s 12 years since the first CD players appeared. How do the first machines compare to today’s? David Price investigated and found himself in for a surprise.

SOUND AND VISION, BRISTOL ’96
Five years ago, this show was where Hi-Fi World was launched. This year it was better than ever.

COMPETITIONS
PREMIER PRIZE
Courtesy of Carling, five readers can each win a case of Carling Premier, a CD of Gary Numan’s hits and a T-shirt. Look out for this easy-to-enter competition on p11!

WIN FIVE PAIRS OF SPEAKERS!
Five wonderful prizes worth £1400 to be won! Rogers International offer our readers their latest tasty LS33/AB33 speaker and subwoofer combination, two pairs of the new LS33s and two pairs of LS1s. Go for it! See page 66 for details.

MUSIC
The best of this month’s albums

ROCK AND POP
RECORD OF THE MONTH:
Lou Reed: Set the twilight reeling.

JAZZ

CLASSICAL
RECORD OF THE MONTH:
Olivier Messiaen: Et exspecto resurrectionem mortuorum
At B&V 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 host 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&V UK on 01903 750750. And see that the best European players don't have to start at £8.5m.
**AUDIOPHILE AURAS**

The Aura electronics division of B&W Loudspeakers has announced three brand new audiophile amplifiers. Typical of Aura's slimline styling are the CA200 pre-amplifier and 100W per channel PA200, which can be bridged to deliver 250W.

The pre-amplifier is a pure Class A design, the power amp Class A/B. Both input selection, for the eight possible sources, and volume on the pre-amp are operated by remote control. A programmable ‘intelligent’ display shows the input and volume level and dims automatically after 10 seconds. In mirror black finish, the CA200 costs £699, the PA200 £1199. Chrome is an additional £50.

Also new is a 'high end' integrated amplifier, the 100W per channel VA150. Like the pre/power combination, this features surface-mount technology and internal modular PCB design. Six inputs include an MM phono stage. Price is £799 in black, £849 for chrome.

Aura (B&W UK),
Marlborough Rd,
Churchill Ind. Est., Lancing,
W. Sussex BN15 8TR
Tel 01903 750750

**BUDGET BRAND BACK IN BRITAIN**

After a few years away from the UK, Amcli Lin's AMC range of budget hi-fi is back. First to appear on dealers' shelves is the AMC 3025, a 30W per channel integrated with an MM/MC phono stage for a mere £149.95. Next up is a remote-controlled 50W integrated at £219. Designed to go with both is a CD player, the CDB, at only £199. Equipped with a digital output, this in turn can be linked up with a bitstream CD converter which has four digital inputs and retails for £169. Other digital products are the £299 CD6 CD player and the novel £339 CDM7.

Those who remember the AMC hybrid valve/transistor integrated amplifier which brought the name to our attention in the UK originally will not be surprised to hear that the transistor output stage of the CDM7 can be replaced with a valve one for another £169. The hybrid integrated is also back with us; now in Mark II form, the CVT3030A is priced at £459. A budget tuner is expected to be added to the range during this year. Other AMC products include a Dolby Pro-Logic pre-amplifier, the 2445 two, three or four-channel power amplifier, which sells for £249, and a £399 powered subwoofer. If that weren't enough of an assault on the British budget market, there are also hints of a 'super-budget' range in preparation at prices that will compete directly with Richer Sounds brands.

Home Entertainment Club UK,
St Giles House, Narcom Lane,
Chalfont St Giles, Bucks. HP8 4EU
Tel 01494 874366
Don't ask me why or how, but the Rogers has an exquisite ability to shape each note and to mould every phrase. It takes the raw material and moulds it into living, breathing music.

ALVIN GOLD HI-FI NEWS FEB '96

What inspired Hi-Fi News to deliver such unsolicited praise?

And, why did the Studio Engineers at BBC Pebble Mill insist on Rogers Studio 5s' for their production facility?

Discover Rogers for yourself and it will all become crystal clear.

Rogers
BRITISH HIGH FIDELITY

IT'S WHAT'S INSIDE THAT COUNTS

ROGERS INTERNATIONAL (UK) LIMITED - Unit 3, 310 Commonside East, Mitcham, Surrey CR4 1HX.
Tel: 0181 640 2172. Fax: 0181 685 9496. International Audio Club e-mail: gloots@rogerinternationaluk.net.
NEW THIN FILM FROM TECHNICS

Technics unveiled two new cassette decks at their trade shows for dealers last month. Both feature 'thin film' head technology developed from use in Digital Compact Cassette recorders. Technics promise a playback frequency response from this smaller-than-usual head in the RS-AZ7 of DC to 40kHz. Price will be £300; the sister deck, the RS-AZ6, will be £230. Both will be in the dealers' shops in May.

The SU-A600 and SU-A700 integrated amplifiers were launched in MkIII versions. Upgrades include a micro-particle carbon volume control in a zinc case with gold-plated contacts, bamboo dielectric electrolytic capacitors and carbon film resistors, which chief engineer Kiichiro Watari says have better thermal characteristics than conventional types. A brief listen suggested a very promising sound. The SU-A600 MkIII (£230) and SU-A700 MkIII (£280) will be available in July.

Disc jockeys everywhere were tempted by a limited edition of the classic SL 1200 turntable. This must now be one of the longest-lived vinyl spinners ever; first released onto the market in 1972, it has been in continuous production ever since. There will, a Technics spokesperson said, "only be 10,000 made." Only? That's more than some turntable manufacturers expect to sell in a lifetime. Price is yet to be confirmed, but are expected to be in the £230-£350 region.

Panasonic/Technics
Willoughby Road, Bracknell,
Berks. RG12 4PF
01344 862444

LINN WEB LINK UP

Internet surfers can now swim across to a Linn Web site. Product news will be regularly updated and the site includes a list of Linn dealers world-wide. Customers can also Email Linn direct through the Email Helpdesk. Anyone with a home page who would like to develop a 'hot link' to Linn's Web site should contact Brian Morris, whose Email address is: 100445.773@compuserve.com
Linn's home page can be found at http://www.linn.co.uk/linn
Snail mail goes to:
Linn Products Ltd., Floors Road,
Waterfoot, Glasgow G76 0EP
0161 280 5115

CATCH YELLOW TAG FEVER!

Musical Images' Yellow Tag Sale is in its last week. Customers have until 8th April to pick up bargains with as much as 50 per cent off the normal prices on ex-demo and end-of-line equipment. Branches are at 173 Station Road, Edgware; 45 High Street, Hounslow and 18 Monmouth Street, Covent Garden, in the centre of London.

Panasonic/Technics
Willoughby Road, Bracknell,
Berks. RG12 4PF
01344 862444

TWO NEW PLAYERS ON STREAM

Harman Audio has two new bitstream CD players coming on to the market. The Harman/Kardon HD710, at £249.99, uses Technics' MASH bitstream conversion; the HD730, at £50 more, uses a Philips Bitstream chip. Both offer the usual range of functions, a variable volume headphone output, the ability to switch off the display and co-axial digital outputs. The more expensive of the two adds on peak search, tape editing and synchronising functions for recording, and gold-plate on the output sockets.

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

MARCHAND ELECTRONICS

We have just been notified that as a result of a "new retail policy" the price of Marchand Electronics' XM26 valve loudspeaker crossover, featured in Tradewinds last month, has been increased to $1250.

GUN SHY

For a new series of loudspeakers, Revolver has renounced names from the gunsmith, like Purdey, for numbers. First in line is the 260, a £350 three-way bass-reflex floorstander. Two 165mm long-throw mid-bass drivers are combined with a 25mm ferrofluid-cooled tweeter in a 960mm-high enclosure which is available finished in either Black Ash or Bahia Rosewood. Revolver claims an "exciting, dynamic, big sound".

Two smaller models in the range, the 230 and 250, are due to be released in the Spring.

RAM UK Ltd., 16
Willan Trading Estate,
55 Waverley Road,
Sale, Cheshire
M33 7AY
0161 9730505
Masses of offers in store!

**THE YELLOW TAG SALE!**

Saturday 16th March to Monday 8th April 1996

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Middlesex HA8 7JX
Tel: 0181 952 5535
Fax: 0181 951 5864

18 Monmouth Street
COVENT GARDEN
London WC2H 9HB
Tel: 0171 497 1346
Fax: 0171 497 9205

*on selected items only
E. & O. E.
Sale price not available with any other offers. Subject to availability of stock.
LOOK! NO VALVES FOR COPLAND
Copland's long-awaited CD player is the company's only product to use nothing but transistors. Behind the central loading drawer is a Teac VRDS mechanism, with data conversion using two 20-bit Burr-Brown converters in each channel in a time-averaging configuration. A Pacific Microsonics HDCD module will decode HDCD discs. It can be yours for £1,799.

Absolute Sounds Ltd.,
58 Durham Road, London SW20 ODE
0181 947 5047

MICS AND MAGNETS
B-Tech has produced a novel device which combines a phono stage for MM cartridges with a microphone pre-amplifier. Price is a mere £29.95.

B-Tech Ltd.,
10/11 Meridian Centre, Vulcan Way, New Addington, Croydon, Surrey CRO 9UG
01689 848535

ALBUM SALES AS HIGH AS THE SKY
According to the record companies' association, the BPI, album sales reached an all-time high in 1995. The numbers of albums sold went up 10 per cent by 20 million, while sales value exceeded £1bn for the first time. The boom in business, says the BPI, was helped by the "deluge of new releases" from Michael Jackson, Blur, Pulp, Queen, Robson and Jerome and all the rest. Robson and Jerome's debut album I Believe outsold even the all-plastic all-American boy's Earth Song in the last quarter of 1995.

The 12" single now accounts for 49 per cent of the vinyl market. Sales of 7" singles dropped and LPs declined yet further to below a million in the last three months of '95, down 30 per cent on the same period in 1992. Over the year, LP sales were down nearly 20 per cent on 1994, totalling 3.6 million, almost half of what was sold three years ago. They account for just 1.2 per cent of the market, with cassettes, also down, taking 30 per cent.

Compact Discs account for the majority. Despite continual complaints of the price of CDs, three-quarters of the albums shipped to dealers in 1995 were full-price. There were no figures collected for Digital Compact Cassette or MiniDisc; presumably their sales are still too small to count.

Source: BPI, 25 Savile Row, London W1X 1AA
0171 287 4422
Internet: http://www.bpi.co.uk

PHILIPS KEEP A TOEHOLD IN SEPARATES
This May sees a relatively rare event: an analogue cassette deck from Philips. The new FC731 will retail for £199.99. Philips appear to have conceded Digital Compact Cassette is not going to take over. DCC machines are being concentrated in musical instrument retailers, with Philips' eye on the semi-pro recording market. The company claims 250 DCC machines sold through these outlets per month.

Two new Philips CD players are due later this year. July will see the arrival of the CD751 at £199; a £299 machine, the CD791, will follow in November. There are hints that the Dutch company is considering launching a range of hi-fi amplifiers and loudspeakers, but not before next year.

COMPETITION
STAY AHEAD WITH PRIZES FROM CARLING PREMIER!
Carling Premier have teamed up with Gary Numan and Hi-Fi World to give five lucky readers the chance to win the ultimate Premier prize. Five cases of Carling Premier, five copies of 'Premier Hits', the album and five Carling Premier T-shirts are on offer. All you have to do is answer this simple question: "In a world that's losing its head, which lager doesn't?"
You will all have seen the TV commercial which uses Gary Numan's '79 single 'Cars' for the soundtrack, now re-released on CD as 'Premier Mix'.

Send the answer on a postcard, with your name, address and a statement that you are 18 years of age or over, to:
Carling Premier Competition,
Hi-Fi World, 64 Castellain Road, Maida Vale, London W9 1EX

Winners will be picked from a hat by the Editor.
When Reality becomes a Dream....

80W Pure Triode.
Single Ended & Balanced Inputs ....
Pure Magic

FOR YOUR NEAREST STOCKIST CONTACT

AUDIO ILLUSION

ELEMENTAL OR ELEMENTARY?

Back in the good old days, when life was simple and so were those that lived it, there was a group of men that called themselves Alchemists. They heralded the beginnings of what we might call the scientific age. By questioning the world around them, they devoted their lives to finding ways of changing the unchangeable: to transform. Transformation is the process of turning something that is plentiful but ordinary into something special. Water into wine, lead into gold, and in our case, hi-fi into art. That's why we called our company Alchemists. Anyone with a little technical know-how can build an amplifier. The components are freely available and a rectangular box is easy enough to make. At Alchemists we endeavour to transform the ordinary into something special, something unique - something you can be proud of owning.

Alchemists amplifiers are available for between £250 and £15,000. Call us now on 0181-883 3008 for details. We just might transform your life.

Doug Brady Hi-Fi

Warrington.
TEL: 01925 828009.

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stereoplay
BEST OF HI-FI '96
THE ONLY BRITISH PRODUCT TO WIN
THIS YEAR'S HIGHEST ACCOLADE FROM
stereoplay
MAGAZINE GERMANY
EIN TFAUM VON EINEM LAUFWERK

From the look of the crowds outside Bristol’s Marriott Hotel, it looked as though hi-fi would have the wind in its sails (and sales!) in ’96.

And sales there were.

Taken by surprise was Ortofon, demonstrating the Rohmann cartridge reviewed in last month’s issue. By the end of the weekend, they’d sold four of these £1,000 needles! Who said vinyl is dead. Now, it’s a top end medium.

Among the surprises from manufacturers was another new speaker from Harbeth, the K6, slightly more compact than the HL Compact 7. QLN raised eyebrows with its first basic budget floorstander, the QUBIC 122 (their spelling) for only £269.95. Also at the budget end, NAD had its new 312 integrated amplifier (reviewed in this issue), while Rotel had an affordable new CD converter and transport to add to their revamped range.

Sonneteer were also into digital, with a prototype CD player to match the Campion amplifier in their room. Audiocraft made its debut with some stylish-looking electronics.

New to the Bristol public, but not to our readers, was Audiolab’s 8000S, reviewed in these pages last month and the REL Q-bass subwoofer, featured in this issue. New to the UK was American valve brand Kora, looking spectacular in Audio Illusion’s room.

Mission Cyrus played musical chairs in their large room, moving listeners round three different Cyrus systems. Linn sat fairly large crowds in front of wide-screen TV, surrounded with a sneak preview of its home cinema set-up. Elsewhere, brands like Levinson and Enlightened Audio Designs from the States rubbed shoulders with British stalwarts like Arcam and Quad (at their first hotel show in years).

As they say, it was a jolly good show!
At KJ West One we pride ourselves on seeking out the very best audio equipment from around the world to offer our discerning customers. We try to put the magic back into your music.

With Unison Research and GRAAF we now have on demonstration two of the world's finest brands of valve amplification. Although very different in concept and in looks, both GRAAF and Unison have one thing in common. A little touch of magic. In design and construction, and in the quality of sound they provide, these amplifiers are quite simply in a class of their own. From the delightful Unison Research Simply Two to the awesome 845 Absolute, from the versatile GRAAF WFB Two to the stunning 5050, these are products which will put real enjoyment back into your music. Come and listen to the magic. Ring now to arrange a demonstration!

**UNISON RESEARCH SMART 845**

**GRAAF 5050**

**KJ WEST ONE**
26 New Cavendish Street,
London. W1M 7LH
Tel: 0171-485-8262/3
Fax: 0171-487-3452

products shown: Unison Research Smart 845, single ended pure triode monoblock power amplifiers, £2995 the pair. GRAAF 5050 Stereo Power amplifier, £2100
STOP PRESS!

BELT DRIVE TOP LOADING CD TRANSPORT £1695

The superb CBP-2000 transport is difficult to equal at almost any price. It's an ideal partner for the D/AC-1600 HD £1449, or for the top of the range DAC-2000, £2495, using Ultra Analogue converter chips and input receiver – arguably the best available in the world today.

The products are designed by John Curl, whose legendary designs virtually defined Hi-END and set the standards for others to follow. The results speak for themselves. Not even considering the products' low price, they outperform almost any product available.

So, if you’re passionate about your music, give us a call for more information on (01752) 731313.
Here's a great system based on super new products from NAD and Tannoy. The price! As keen as you'll get, is the answer. Dominic Baker tests a rocker.

It's been a while since we put a system together, so when the arrival of NAD's new 512 CD player was followed shortly afterwards by the 312 amplifier and then a pair of Tannoy's 631 SE loudspeakers, it was too tempting an opportunity to miss.

All three are essentially budget products, but being a step or two off rock bottom, they offer a high level of performance and sound quality for the money - or in other words, fewer corners have been cut.
NAD 512 CD PLAYER

Starting at the source end first, the 512 CD player is NAD's latest budget machine. In true NAD style, the front panel is devoid of unnecessary clutter, carrying just the basic functions. The 512 comes with its own remote control, but connecting it to other NAD equipment via the NAD Link allows control from one hand-set - although unfortunately the 312 amplifier chosen as its partner was not NAD Link equipped.

Inside the 512 is a 1-bit MASH convertor. Those with an eye on future upgrades will be pleased to know that it comes with a digital output. No optical though, just a single phono socket, but most quality external CD convertors come with inputs for both anyway, so upgrading will not be a problem.

NAD 312 AMPLIFIER

Anyone who has been following hi-fi for more than a few years will have come across NAD's entry level integrated amplifier in one guise or other. It started life in 1979 as the 3020, and continual development has seen it hold its crown as the one to beat for many, many years.

Around three years ago the 3020E version was replaced by a leaner, cleaner sounding 302. Now this in turn has stepped aside to make way for the latest £199.95 312.

From the outside you could be forgiven for thinking that things haven't changed that much. Apart from the racey (?) pin-stripe across the front panel, styling hasn't moved on a great deal in 17 years. But what you get with the NAD 312 is a good basic specification and a sensible range of facilities, at an equally sensible price.

It has a phono stage suitable for MM or high output MC cartridges, six line level inputs including two for tape decks, bass and treble controls with a defeat button, a balance control and you can use it as either a pre or power amplifier by removing the external link between the two sections. If that isn't enough, the 312 even sports a headphone socket. So, simple in terms of styling it may be, but there are very few amplifiers out there at this price that combine so many facilities with high performance sound.

TANNOY PROFILE 631 SE

From the outside there is little to distinguish the SE from the standard 631. The 5” injection moulded bass driver looks identical, but in the SE version it gains an additional flux optimisation magnet. This increases efficiency which Tannoy claim improves midrange resolution. This, and the 1” aluminium dome tweeter are connected to an upgraded crossover, which not only uses higher grade components but, Tannoy claim, gives a flatter, more neutral response through the crossover region.

Tannoy’s 631 is the first loudspeaker in their Profile range to receive the ‘SE’ treatment. Like the standard 631, the SE’s are built into a trapezium shaped cabinet which helps to reduce internal standing waves, giving a more open, less boxy sound. The baffle edges are rounded too, reducing diffraction and improving imaging. The only change to the cabinet with the SE version is a new black Ash vinyl cabinet top. This is laid on a slim panel of MDF and bonded to the cabinet top to help damp cabinet resonance.

The 631 SE loudspeakers came complete with a pair of matching stands, which I must say were not the easiest to construct. Self tapping screws are Spiked to the floor, filled with Sound Bytes filling which really cleaned up the bass end, and screwed firmly into the mounting plate of the 631 SE’s. They certainly gave the speakers a solid footing.

WHAT A SYSTEM!

I must say that I’d forgotten how good a properly sorted budget system can sound. I was taken aback. Straight away it displayed remarkable fluidity and openness, giving a surprisingly lifelike and realistic sound stage.

Heavy keyboard notes on Bjork’s ‘Crying’ from the Debut album, stopped and started with superb precision and accuracy; overhang and waffle were non-existent. Bjork’s vocal had a wonderfully breathy quality to it, a real out-of-box sound devoid of any significant colouration. I had half expected to hear a thickening of tone from the Tannoy’s plastic moulded cone, but this fear was quickly dispelled by their neutrality and clarity.

Although not the richest sounding player, the 512 is respectably smooth through the midrange with excellent upper extension in the treble. This lends a level of insight and excitement to whatever it plays, making listening both engaging and rewarding.

Against a Marantz CD-63SE, the 512 does lack a little sweetness and musicality. Where on a CD-63SE Vivaldi’s strings were sweet and accurate in their harmonic signature, giving a relaxed charm to the piece, the NAD is more of a technical rendition with a keen eye on the rule book. It remained

"Guitar strings were clear in focus and projected forwards, ripe with delicious harmonics. The high quality of production on this track was done ample justice by the system."
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---

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

---

**Contact Information**

TEAC
5 Martin House, The Croxley Centre, Watford, Hertfordshire WD1 8YA
TEL: 01923 819630 FAX: 01923 236220

---

*World Radio History*
smooth and consistent across a wide range of styles and recording qualities, only verging once on sharpness with an early and particularly thin-sounding REM recording.

Although not quite as dry and steely as I remember its predecessor, the 302, the 312 amplifier certainly couldn't be described as soft. With the sharp transient attacks on the Chemical Brothers' introduction track, 'Leave Home', it had a firm grip sending out pulses of energy to give real pace and direction. Detail resolution was superb, and although not as sweet as an Aura VA 80 I tried, the extra incision and tighter, faster bass really bought this system to life.

Lightening Seed's 'Open Goals' had strings crisp and clearly defined, with a great sense of the acoustic space on this track coming from fine treble extension. A rich and funky bass line gave real body, and on 'Punch and Judy' even the Cello helped to open out the stage and create atmosphere. Sound staging from the little Tannoy's was first class, stretching well beyond their own compact boundaries whilst holding the image firmly in place.

Surprisingly, although the cheapest component in this system, the Tannoy's were the most amenable to improvements in partnering equipment. A spell with Audiolab's 8000Q preamplifier and 8000M monoblocks fed by a Da Capo CD convertor proved interesting. Here the little Tannoy's performance grew. Bass lines drove even deeper with more force behind them, vocals gained greater depth and strings were sweeter with a greater range of tonal colour.

Although the tweeter's metal dome was certainly noticeable, it stayed remarkably well behaved throughout my listening. On 'Chico's Groove', another superb Chemical Brothers track, bass rolled along effortlessly, displaying scale and power with every note. The Tannoy's seemed to play off this track, hungrily feeding on every note. At higher levels it was possible to force some boxy colouration from them, but these are small speakers for small rooms. The system invited me next into the all-enveloping ambience and atmosphere of Primal Scream's '(I'm Gonna) Cry Myself Blind'. Guitar strings were clear in focus and projected forwards, ripe with delicious harmonics. The high quality of production on this track was done ample justice by the system.

Dynamic contrasts were superb. Staccato struck guitar chords ripped out of the left hand loudspeaker straight at me while backing guitars strummed softly at the back of the stage. This contrast adds an extra dimension to music which, combined with its other qualities, makes this an extremely believable system to sit in front of.

CONCLUSION

For less than £900 complete, I was thoroughly impressed by what this system had to offer. Some may find the Tannoy's a little too forward, but I'd argue what they are doing is accurate. And partnered with the NAD electronics the whole most certainly achieved a performance far greater than the sum of its parts. Possibly I've been a bit lavish with cables, but the performance reward more than justified it, the system giving more and more the better the cables I used.

\[
\begin{align*}
\text{NAD 512} & \quad \£249.95 \\
\text{NAD 312} & \quad \£199.95 \\
\text{Tannoy 631 SE} & \quad \£169.90 \\
\text{Stands} & \quad \£89.90 \\
\text{Chord Co. Rumour - 103.60 2m silver plated copper bi-wire set} & \quad \£878.30 \\
\text{Chord Co. Sire - 65/m silver plated copper} & \quad \\
\text{System Total} & \quad \\
\text{NAD 401-405 Nether Street} & \quad \text{Finchley} \\
\text{London N3 1QG.} & \quad 0181 343 3240 \\
\text{TANNOY} & \quad \text{Rosehall Ind. Est.} \\
\text{Coatbridge} & \quad \text{Strathclyde ML5 4TF} \\
\text{01236 420 199} & \\
\end{align*}
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WORLD VERDICT

As a system, it obtains a very high standard of reproduction. Clear focused sound is musical, involving and realistic.

Measured Performance see p119-127
An ordinary two-way floorstanding design?
There's more to Technics' SBM 500 loudspeaker than meets the eye, Eric Braithwaite discovers.

It's what's hidden away inside this speaker that counts. Technics have shoehorned in another pair of drivers - in addition to those you see on the front panel - and a couple of passive radiators (ABRs) as well. The idea is to produce a coupled-cavity arrangement, developed by KEF and used in their Reference Series, to get exceptionally deep bass. That's a lot of drivers for the money, which is just £450. Not bad for a complex floorstander.

There's probably no way Technics could build this 'speaker in Japan, where labour rates are now high, and then transport it around the world. They build it at their Spanish factory; I suppose technically it counts as an EU product. Certainly, these 'speakers come in one of the very few boxes I've ever seen which bear the legend 'cajas acusticas' as well as 'enceinte acoustique' and 'speaker system' on the
side. Technics haven't made much play of this; after how British fishermen reacted to Spanish trawlers being given the freedom of the Irish Box, perhaps they fear a Cornish uprising: trailers of loudspeakers being burnt the way the French took to roasting English lamb a year or two ago. What a thought!

Like the SB-M300s we reviewed in our November 1995 issue, the 500s use mica diaphragms for both midrange and treble drivers. This is a wise move, helping to keep tonal character intact as midrange crosses over to treble. Unlike the SB-M300s, though, the forward firing half of the coupled-cavity bass system doesn't vent around the midrange driver; the vent is hidden instead behind a cloth grille. The other bass driver fires rearwards. This I found surprising. The arrangement in the SB-M300 was very successful, so I expected the 500 to be a variant on it.

In a floorstander a lot of internal volume is available, which in theory allows much deeper bass to be obtained. So although the bass drivers and accompanying passive radiators in the new 500s are the same size as in the smaller 300s, meaning power handling will be similar, they should all the same have better bass extension.

Technics' new floorstander is quite an athletic animal, especially linked up to the Audiolab 8000A integrated that was mainly used for the listening sessions. It is sometimes awkward mentioning test discs that are out of the ordinary, and which readers won't know, but Urs Wagner of Switzerland's Ensemble passed me a Swedish disc by a gent called Knut Reiersrud last September. This is mostly acoustic, with that superb Swedish recording quality that readers will know from the Opus 3 recordings. A firm favourite is his band's version of Blind Willie Johnson's 'Everybody Oughta Treat A Stranger Right' with the vocals, mercifully, in English, thanks to some chaps called 'The Five Blind Boys Of Alabama'.

This is a fast, rhythmical and melodic piece and it swung like a family of playful chimps. What with a well-scaled acoustic guitar, taut drumming and perfectly-scaled and melodic vocal backing, through the SB-M500s this was a real treat. If the 'speakers didn't do a complete disappearing act, there was so much of the real acoustic and instrumental quality that the music became involving enough not to notice them for the duration.

Changing to EMI recordings of Beethoven and Shostakovich did show that where a full orchestra was given a holistic soundstage to play in, the SB-M500s were highly competent. There is a degree of hardness, especially to the sound of violins and violas and upper woodwind, however. This might prove disconcerting to some, because it doesn't give any quarter to recording quality and tends to emphasise the notes at the expense of tonal shading. At this point I turned a little more thoughtful and on went some jazz.

Here, the Technics' midband clarity came well into its own, with a superb ice-clean sharp-edged sound. A touch of compromise gradually impinged, however. In dynamics, these 'speakers are not as responsive as their initial cleanliness leads one to believe. Thoughtful inspection and comparison (admittedly with more expensive monitors) showed that instruments like saxophones weren't delivering their all; rich and throaty in the mid, but somewhat reduced in apparent scale in the treble clef.

Down in the bass department, the SB-M500s don't do at all badly for the price. For once, these are floorstanders that do go low when they have to. The word is 'when'. Unlike some cheapish floorstanders, the low bass is delivered on demand, rather than being an almost inharmonic rumble. Low organ notes certainly had a depth to them that proved these SB-M500s were doing a little mining rather than delivering a mere surface impression.

On the plus side, this added forcefulness and a worthwhile extension of dynamic range which is unusual in this kind of price bracket and it was very effective, particularly on rock tracks. It was noticeable that the timing was a trifle suspect, however. Low double bass notes, however deep and strong, had an element of time-lag, particularly in jazz pieces where the interplay of melody and rhythm is all-important. That is even allowing for home-grown Mission 752s, probably their nearest rivals. Eminently listenable though they are, critical nitpicking uncovers a warmer, frifter balance in the mid, with an element of cuppiness and nasality higher up. By comparison the Technics are very much more neutral thereabouts, but less dynamically free. Their imagery, too, is marginally tighter. Huntingdon scores over Osaka, however, with better timing and detail at the bass end, for all that it is a little over-full for my taste.

Technics SB-M500 £450
Panasonic/Technics
Willoughby Road,
Bracknell,
Berk's RG12 8FP
01344 862444

WORLD VERDICT

Clean, dry and taut sound with good imaging and sound-staging. More neutral than Mission's 752s, but less euphonic.

Measured Performance see p.119-137
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Haider Bahrani wrestles with Sumo’s Polaris III power amplifier and Athena II pre-amplifier.

Take all the best aspects of a good valve amplifier and of a good solid-state one. Put them together and you get something closely resembling what comes out of Sumo’s Athena II and Polaris III pre/power combination.

The Athena II is described as a ‘modular pre-amplifier’. Supplied for review in line-level configuration, with five inputs and balanced output via XLR sockets, there are optional plug-in boards for a MM or MC phono stage or even a CD convertor. A digital co-axial socket is already in place on the rear panel along with space for an optical input.

The Polaris III is a MOSFET 120watt per channel stereo power amplifier; some mildly complicated connection work via the XLR and RCA sockets will bridge it to turn it into a 350W monoblock.

Most of my listening was done with the pre-amplifier in ‘Direct’ mode, which effectively bypasses the pre-amplifier’s switching circuitry. This gave a subtly cleaner sound than with the selection circuitry switched in.

Tori Amos’ ‘Past The Mission’ live EP has probably some of the best-quality live recording I have ever heard. The Sumo pair certainly did justice to it. The first track, ‘Upside Down’, which has been honey to many a bear at hi-fi shows, had me imagining, believing even, that I was sitting right next to her on her piano stool. The sound, more raunchy than sweet, had plenty of punch in the mid to upper ranges. The lower end was a little more easy-going, but still full of sumptuous flavour. If it’s musicality you are looking for, take a peek at this Sumo pairing.

Paier tracks like REM’s ‘Orange Crush’, from their album Green, had a breadth and depth of stage, which, if not covering a wide expanse, was definitely more than adequate. At times the image was slightly cluttered, and although the Sumos were not exactly struggling with the dynamics of the CD, the lower mid to bottom end could seem a wee bit muffled at times, with the sound stage narrowing a little too.

I wouldn’t say the Sumos were mad about Vladimir Ashkenazy’s interpretation on Decca of Beethoven’s Moonlight Sonata, but the Adagio bore all the hallmarks of truthfulness to the recording, while the Allegretto was joyful rather than wild. Jimi Hendrix’s ‘Highway Chile’ and Rickie Lee Jones’ ‘Easy Money’ were a couple of tracks seemingly recorded just for the Athena and Polaris. Guitars were gutsy and crisp. I could picture Rickie singing in front of me at a smoky, seedy club.

Our American friends do like power, and there is certainly none lacking in this case. The Athena and Polaris might be a bit pricey for the average shopping list, but for this kind of power and musicality, how could you possibly complain?

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
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<tr>
<td>Sumo Athena II</td>
<td>£767</td>
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<tr>
<td>Sumo Athena IIIB</td>
<td>£987</td>
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<tr>
<td>Sumo Polaris III</td>
<td>£898</td>
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Audusa & Co.
4 Arundel Road,
Kingston Upon Thames,
Surrey KT1 3RZ
0181 942 6241

WORLD VERDICT

More valve-like than transistor in sound; highly competent if not spectacular.

Measured Performance see p119-127
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Let the Music Fly!

Eric Braithwaite swoops down from above to take a closer look at Musical Technology's Falcon Export loudspeakers.

Had a baby lately? If you have, at least you probably had one of those books of first names to help you decide what to call your offspring. Now when a loudspeaker company like Musical Technology gives birth, there's no 'Guide to Naming Your New Loudspeaker' to help.

Some companies, like Rogers, Tannoy and Technics, go for numbers. Some go for association, so Castle picked fortifications like Richmond, diversified into palaces (Howard) and ended up in the rivers. Musical Technology's eye, however, obviously fell on the Observer Book of Birds of Prey. Hence Kestrel, Harrier, Hawk and, what we're listening to here, the Falcon. Soon to come, the Condor, the Vulture... Only joking!

There are, in fact, two Falcons. This one, the Falcon Export, has had its feathers fluffed out a bit. It seems Musical Technology's European distributor asked, like Saudis do with the flying kind, for an improved breeding sample. Wanting a high efficiency speaker which could be easily driven by a low-power valve or transistor amplifier, MT responded by genetically engineering the Falcon.

Cabinet damping has been strategically added and crossover components specially selected. The Vifa 25mm dome tweeter used in its 'raw' state in the standard Falcon, has been modified with a copper 'heat' pipe tuned with foam to take its natural resonance below the crossover frequency. This adds £125 to the standard Falcon's price of £574.95 with a vinyl finish; the spiked steel base plates supplied are £54.95. In real walnut veneer, like the review samples, the price comes to £954.90.
MODEL: DEFINITION D700

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Discovering from the instructions that "the optimum listening height" is 90cm above the floor, I thought I might have to hover like the feathered friend itself above my settee, which puts my ears a little lower. It proved essential, so a cushion was used, though in the case of the Falcons, space between the listener and the loudspeaker is just as important; in their case, distance lends enchantment. Except for the wall behind them, when the exact opposite was a splendidly atmospheric affair. The way Sinead O'Connor's Fires of Babylon thundered out, the town was more like Sodom and Gomorrah. Her voice floated crisply up. Even the dulled vocals on a rap track, which on truer monitors are striking about the Falcons is a sense of scale. Rhythm guitars that are recorded for the apparent dynamics of orchestral tonality to play with, too, the Falcons occasionally produced some softer upper regions, which would undoubtedly help.

As it happens, the bass is not that extended in reality. It's forceful, but playing an organ recording (the famous Westminster Carillon) it was noticeable that low notes hit a kind of plateau, before which they were distinct and clear, and then dropped down to the bottom of the octave in a low rumble with much less definition. Again, it's a personal preference, and though I prefer a higher degree of definition when it comes to low bass, these are effectively £700 loudspeakers after all.

There's no doubt that the Falcon Exports represent a lot of wood and drivers for the money. They provide a greater sense of musical scale than almost anything around at the (vinyl-covered) price. That's especially important to add to the spontaneity of mainstream jazz. Their punchy presentation adds bite to even fairly mediocre-quality rock recordings, which for a lot of rock fans will be a distinct bonus.

What the Falcon giveth, however, in this respect, it taketh away from the classical buff. However attractive the yardage of real wood veneer, when that brings them up towards £1000, that should mean fewer sonic compromises. Listen before you buy.

**Musical Technology Falcon £954.90**

**Musical Technology**

Unit 10, Howard Ind. Est., Chilton Road, Chesham, Bucks. HPS 2AU

Tel 01494 793137

**WORLD VERDICT**

Give a big sense of scale on rock and jazz, but not subtle and even enough to satisfy a critical classical buyer.
his valve amplifier is a vocalist's delight. As for instrumentalists, well, they would be happy with Audion's ETSE Sterling too. A hallmark of any good valve amplifier, its midrange was clear, open and sweet. Wondrous stuff indeed; I was hooked!

Apart from the Audion ETSE Sterling being a mouthful, it is a £599 single-ended 12watt per channel power amplifier with a passive volume control. £200 more buys another four inputs, but even then it is still valve amplification on a budget; its closest rival, the Unison Simply Two, retails for £995. The Sterling was reeling me in.

Lighter than the average valve product, this Audion is an economically, but not cheaply, built specimen with a smart metallic finish which shows off the output and front-end tubes. The input valve is an E88CC/6922 and the driver a 5687 double triode. These I suspect have been selected to balance the full and
warm sound of the EL34 output valves, having a brighter, clearer sound than the more commonly used ECC83.

Underneath the chassis the Sterling’s simple circuit is neatly arranged. The valves are all PCB-mounted with a sprinkling of components around them. A high quality Alps volume control and film signal capacitors are used. The rear cover hides a toroidal mains transformer, which helps to keep the Sterling compact, and the two output transformers. These only have a single 8Ω tap, but because the Sterling has a reasonable amount of feedback in its circuit which lowers output impedance, it will still match a wide range of loudspeakers. Sockets were all chunky and gold plated; overall I was very impressed with the quality and construction at the price.

I’m far from old enough to have been around during the era of music halls and fifties movies, but Björk’s ‘It’s So Quiet’ from his Come to Find CD was, however, about as good as it could be through Harbeth’s HL Compact 7 loudspeakers. Bass was relaxed and free, giving a suitably mellow feeling to this track further enforced by the clear and easy going guitar. The image was neither the widest nor the deepest I had ever heard and the dynamic response was a little top-heavy. But when it comes to this kind of album, all I hear is the music. As for the vocals, well, I think I’ve repeated myself just once too often. Despite having spent twenty hours in a studio a few years back recording an amiable string quartet, I can hardly claim weight in the bass and a sometimes cluttered image. But, oh! those magnificent vocals.

Doug MacLeod’s ‘Bring it on Home’ from the Unison is as smooth and attractively euphonic as the latter is controlled.

The Audion has character, and a pleasing one too, but at the expense of some vital ingredients. Bass is well controlled, but lacks real weight and softens out a little too early. With ‘Toodles Mr Jim’ from Tori Amos’s Caught a Light Sneeze, the vocals dominated the backing.

Tori’s pianos are recorded so closely the listener is practically sitting in her seat, so everything, pedal thuds and all, can usually be heard. It was difficult to be sure of this from the Sterling’s reproduction. Nearly everything came from the middle. The piano also had a little harshness, mainly in the mid-range, but it wasn’t overly displeasing.

Doug MacLeod’s ‘Bring it on Home’ from his Come to Find CD was, however, about as good as it could be through Harbeth’s HL Compact 7 loudspeakers. Bass was relaxed and free, giving a suitably mellow feeling to this track further enforced by the clear and easy going guitar. The image was neither the widest nor the deepest I had ever heard and the dynamic response was a little top-heavy. But when it comes to this kind of album, all I hear is the music. As for the vocals, well, I think I’ve repeated myself just once too often. Despite having spent twenty hours in a studio a few years back recording an amiable string quartet, I can hardly claim weight in the bass and a sometimes cluttered image. But, oh! those magnificent vocals.

\[\text{"Its midrange was clear, open and sweet. Wondrous stuff indeed; I was hooked!"}\]

Audion ETSE Sterling £599

Audion
25 Montefiore Road,
Hove,
Sussex
Enquiries taken by Fax, not telephone:
01273 722250

WORLD VERDICT

Perfect for vocals, not so good on soundstaging. Nonetheless, at the price, an entry-level valve bargain.

Measured Performance see p119-121
Definitely a statement of style.
Maybe in sound too.
Audio Innovations' Alto CD player captures the eyes and ears of Jon Marks.

If the rest of your hi-fi rack is filled with the usual assortment of anonymous black boxes, then an Audio Innovations Alto CD player perched on the top shelf is certainly going to make a very different visual statement. The wing shape, with its polished chrome fascia (black is also available for £50 less than the chrome version's price of £449) almost totally devoid of clutter, is guaranteed to get any visitor rubbernecking as soon as they enter the room.

The only controls on the player are for powering it up and opening or closing the drawer. Inveterate button-pushers like me have to content themselves with the remote control. Operating the player from across the room is made a little less convenient by the blue LCD display crammed in next to the drawer; it was hard to read from more than a few feet away. This meant a fair bit of to-ing and fro-ing at the beginning of the listening session to confirm track numbers. Otherwise only one thing detracts from the general air of quality about this player, and that's the clanking and whining from the transport when it opens and closes.

The Alto's component list makes impressive reading: “premium grade selected op-amps, close-tolerance resistors and polypropylene signal coupling capacitors.” The DAC, a Philips TDA1305 Bitstream chipset, is referenced to a high-quality crystal oscillator for re-clocking the data stream which reduces jitter.
It and the analogue circuitry are powered by no fewer than ten separately regulated power supplies. These are laid out almost entirely in dual mono - a real testament to Audio Innovations' attempts to ensure the proper isolation of each stage, and to keep RF and power supply noise out of both digital and analogue circuitry.

Pressed into service from cold, the Alto had a rather thin, bleached presentation. The midrange possessed a papery quality that was obvious on guitars and vocals. However, most CD players benefit from being powered up for a while before use. Although this one had been running in on the test bench and in the system over the previous few days, it had been switched off overnight. So a cup of tea was duly brewed, and the Alto was left to cook for a few hours with Oasis' 'Definitely Maybe' in the drawer on repeat.

Initial impressions on resuming the hot seat were more promising. From the opening bars of 'Rock 'n' Roll Star' it was obvious that the brothers Gallagher were emerging from the Alto dynamically intact. Drum thwacks exploded from the speakers and kick drums had a good apparent sense of extension, even if some of the control and tautness of the reference Da Capo/Audiolab combination was lacking.

A sense of air around the instruments, especially noticeable with cymbals and tambourine, helped give the impression of a soundstage which was broad left to right but slightly foreshortened front to back. The detailing on cymbals was so good you could almost see the individual rivets rattling each time they were struck, even though this player's portrayal of the full harmonic structure of the sound as it died away wasn't as convincing as some of its competitors.

It was not such a happy story with Tori Amos' Boys for Pele CD. Dynamically, the tracks were as convincing as they had been with Oasis' album, but there were just a few tonal problems which manifested themselves on this recording. Amos' breathy vocal on the prefatory 'Horses', although matching the Da Capo in smoothness, had a paperiness to it that wasn't part of the recording. Notes from the keyboard lost a little of their body and depth, hardening slightly, which had me reaching for the remote to knock the volume down a notch or two.

Track four of this CD, 'Professional Widow', is a superbly bitter, vitriolic little number. On the Da Capo it positively shrivelled the speaker cones with its spite, but on the Alto it didn't send quite the same chill down my spine; it became a more 'technical' rendition, missing out on some of the emotional content. Compared to the NAD 514 though, it was notably cleaner, with a less gritty, more refined sound.

It was time for a musical change of direction, so Grace Jones' Slave To The Rhythm was the next disc to find itself under the laser. I headed straight for the huge title track which possesses a truly over-the-top operatic sense of scale. The effects and samples on this track can sometimes become divorced from the main body of the song, but the Alto produced a coherent overall mix.

Classical music showed up the same basic traits I'd noticed earlier: the lower registers of the organ on Franck's Chorale No.2 rolled uncomfortably around the sound stage, while there was that now familiar papery quality to mid and treble.

With its open, detailed, but never sibilant treble, its dynamic ability and good bass extension, the Alto created, on the whole, a decent impression. There was a fair measure of rhythm to most of the music it played, although this came across as being more of the cerebral score-following type than the emotional full-blooded kind. That vital emotional spark, for me, is the be-all and end-all of hi-fi. Ultimately, in the Alto, I failed to find it, but then players that do have it at this price point are few and far between.

Audio Innovations Alto £449
Audio Components Ltd., Albany Court, Albany Road, Granby Industrial Estate, Weymouth, Dorset DT4 9TH 01305 761017

WORLD VERDICT

Detailed treble and smooth sounding, but otherwise lacks that essential, vital emotional spark.

Measured Performance see p119-121
Trust your instincts.

For further information, a colour brochure or the name of your nearest stockist please ring 01722 332266.

Naim Audio Ltd, Southampton Road, Salisbury SP1 2LN.
NOT CUCKOO!

Swiss Ensemble hi-fi makes a timely entrance to Britain, thinks Eric Braithwaite.

Remember Orson Welles’ throwaway comment about the Swiss in The Third Man? “Four hundred years of peace, and what have they produced? The cuckoo clock!” And Ensemble hi-fi.

To buy it you don’t have to be rich enough to have an account with the Züricher Bank, but it would probably help. But then, when sound is this good, the rule should be: if you have it, lavish it. If you don’t, we can all dream, can’t we? The tout ensemble chez Eric was the Dichrono pre-amp, which is also a DAC with five digital inputs for those who are seriously into digital sources and two analogue ones to cope with a tuner or outboard phono stage, Profundo subwoofers doubling as stands for the Elysia speakers, the Dichrono Drive CD transport and Corifeo hybrid power amplifier.

This month’s Zen question: what is the sound of one foot tapping? Answer: at the third play of Abdullah Ibrahim’s Live at Sweet Basil LP, the sax player’s. It took two plays to velcro my own foot to the tapis to be sure it wasn’t mine. We are talking finesse and fine detail here, such that it was tempting to lean forward towards an invisible table to the right and ask them to stop clinking their glasses please. This was courtesy of a Gyrodec, MC7500 and...
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Michell Iso, confirmed on CD with Ensemble's own Dichrono transport. Just as the space surrounding Ibrahim and Carlos Ward was tangible, so classical CD was definitely one for the connoisseurs of the sonic signatures of Walthamstow or St Eustache.

Perhaps the DAC proved a mite too elegant; supremely smooth, but gently laid-back in the presence region. This didn't stop the Philharmonia's blazing brass in Bruckner from being fiery, but did put a degree too much distance between listener and chorus in a Telarc recording of Beethoven's Missa Solemnis. Transferring to a Sugden DAC and Argo straight into the power amplifier proved the Corifeo could bite with the best Pit-bull if need be, but at the expense of putting in Baroque decor instead of the Ensemble's Georgian gilt elegance.

A quick bash with Glass' Itaipu showed the subwoofer doing its job properly, just as it had beefed up both the Philharmonia's double basses and Rob Wasserman's on his Duets album. Movement IV of Itaipu has some deep grumbling percussion almost worthy of the FX artillery beloved by home theatre buffs, except that this is hi-fi bass. It underpins the music coherently without trying to outdo Concorde at take-off. To ask for an even deeper crisp bass would be tempting, but the Profundos are passive subs not active Stratas, and the seams don't show.

As with all serious hi-fi at this kind of price, patience in positioning the speakers pays off in precision imagery. Equally, patience in listening is rewarded with nothing more than pure alpine air between the listening seat and the music. Ensemble's ensemble is like those alpine plants from its homeland: delicate, fine, intriguing, but robust without brutality. It's one of the finer things in life to seek after, like Swiss watches. There's much to be said for the products of four centuries of peace when they soothe the febrile brow as beautifully (I know it's not in the normal hi-fi lexicon of approved subjective terms) as this. I ask you, Mr Welles, what hi-fi has come out of four years of war in Bosnia?

Dominic Says ...

A well-matched system of this calibre really is something to behold. The level of realism and life behind every track was awe-inspiring. It had all the qualities you could ever ask for: a full, sweet sound, layers of fine detail and texture, a wide acoustic and deep, taut basslines. Unfatiguing, but also exciting, dynamic and involving at the same time.

With a convertor inside as smooth and as sweet as I've heard, the Dichrono DAC/PRE was capable of opening up a level of detail that only a handful of convertors even hint at. The pre-amplifier added very little to the sound, bettering Audiolab's 8000Q in terms of transparency.

Again, resolution was a key word with the Elysia loudspeakers. Using a specially-built light-weight metal cone and a fabric dome tweeter on a slanted baffle to time-align their acoustic centres, they are the latest version of the highly-regarded PA Is. The enclosure itself, loaded with a large, rear-firing passive radiator, is quite compact.

Treble had a lovely silky quality to it, sweet and open, its extension and detail matching the rest of the system with good power and solidity giving a crisp edge to strings. The midrange was softer, but still clear and revealing. Images spread wide across the stage, without being too forward or demanding. The metal cone aided clarity with a brightening of tone; far from being at all detrimental, it proved a lot more neutral than many.

Blending smoothly into the Elysias, stereo Profundo subwoofers-cum-stands add just the right level of weight to the lower octaves. The Elysia/Profundo loudspeaker combination was more than capable of revealing all of the qualities of the electronics, which is rare. The Corifeo power amplifier is clean and neutral, but there are those that do more musically too, whilst retaining all of its best points.
David Price looks back to the early days of Compact Disc and finds out how a first generation machine measures up in the Nineties.

A decade ago mobile phones were for royalty and secret servicemen only. Computers loaded programs from audio cassettes. And Compact Disc players - well, they were the stuff of affluent lifestyle dreams. Now, CD seems the granddaddy of all formats, with audio players in nearly half of the UK's homes.

Recently I have heard some well-preserved first generation machines through properly-matched modern systems and it has been unexpectedly enjoyable. More and more I have been asking myself whether the first generation players were really as bad as I'd remembered them. The challenge was on to pit a good first-generation machine against a modern design.

BACK TO THE FUTURE

The first players reached these shores in a blaze of publicity in early 1983. There were two 'family' types: front-loading Japanese machines using the same 16-bit, two-times oversampling chipset, or Philips-based players with 14-bit, four-times oversampling DACs and top-loading transports. Sony's CDP101 was a highly individual oriental design and, at £800, one of the most expensive first-generation players. With features like motorised tray loading and remote control, it soon became the Rolls-Royce of the first machines. Nowadays, the 101 is something of a cult in its native Japan.

LIVING IN THE PAST

Though as compact as midi-sized machines, by today's standards the 101 is remarkably heavy, the massive independently-sprung transport upping its weight to nearly eight kilograms. Styling is still quite fresh by modern standards. The front panel is a familiar affair with the exception of the Stop button, which Sony's technophile designers chose to label 'Reset'. With just the basic repeat functions and no programming facilities, life is pretty austere, but the brick-sized remote does offer the decadent luxury of a numeric keypad offering 'direct music selection', something many manufacturers didn't manage until much later.

Round the back is the world of the
surreal, with switches for 'Beep' (causing the machine to sound like a Casio calculator when it reads a signal from the remote, something which is now a feature on some personals), 'Anti-Shock' (said to help the machine read a skipping disc) and 'Auto Pause'. This little facility surely alludes to Sony's early thinking on future uses for CD: working in conjunction with a 'microphone amplifier' according to the manual, it pauses the player at the end of each track - presumably for karaoke singers to get their breath back! With digital outputs just a figment in designers' imaginations at the time, sockery doesn't stretch beyond gold-plated line-out phones.

OLD MEETS NEW

Compared to today's hardware, using the Sony feels as anachronistic as driving a vintage car. Hit the Open button and an LED illuminates as the big disc tray laboriously chugs out to you. Insert a disc and hit Play and the Scan legend lights while the mechanism whirls around hunting for the disc's TOC (Table of Contents), until the laser crawls across to the first track.

Charming as this was, distant memories of my old first-generation machine had me envisaging bleeding ears and shattered windows after the first four bars, so I decided to take precautions. Using some late-nineties 'best practice', I gave the laser lens a good clean and de-tarnished the dulling phono sockets.

But maybe I needn't have worried, because when crunch time came and a shiny pressing of Teenage Fanclub's Bandwagonesque was loaded in, it sounded just great, with a consummately smooth, big-hearted and thoroughly musical rendition of 'Starsign'. The excellent tonal colouring struck me first, an unusually deep and fruity sound issuing from the speakers. Bass guitars had an extremely satisfying analogue-like depth and bloom, while treble was smooth and velvety and the midband inoffensive but involving. Very strange, and not what I'd expected!

To make sure I hadn't suddenly fallen under the influence of isopropyl alcohol, it was time to put things in their true perspective. A polished example of the latest generation of players, the Marantz CD-635E, was powered up. The young blood's sharper, more focused sound produced more detail, with more air around the drum kit and a better sense of the recorded studio acoustic.

Where the oldster was big and bloated, the new boy was clean and incisive. But despite this, I wasn't convinced that the sound was better so much as different.

CONCLUSION

Without a doubt, CD has made considerable advances over the years. Nowadays, players are far cheaper, easier to use and yet more sophisticated. But Sony's first player proves it was possible to produce a musical, enjoyable machine from the word go.

But what of the Sony? To my surprise, it too gave a silky smooth presentation totally devoid of grain. In fact, the 101 was softer with a fuller, faster, more airbrushed delivery and no less control. The player's antique DAC was indeed audible, but instead of coarsening and hardening the sound, it softened proceedings, imbuing the midband and treble with a downy fuzz that was far from offensive.

Sure enough, rock cymbal work from Neil Young's classic analogue recording of 'Like a Hurricane' confirmed this. The touch of fizz as the Sony's steam-age DAC tried to describe the sound of a hi-hat decaying into the background wasn't like the painful glare I remembered from my early Yamaha player, instead it was euphonically enhancing the song.
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PHILIPS CD100
For many this was the definitive player. A silver top-loading machine with a row of LEDs to indicate track position, its ergonomics were crude in the extreme. Nevertheless, this 14-bit, four-times oversampling player soon gained a good reputation for its sound quality.

MARANTZ CD63, CD63B
No, not today's front loader with rave reviews! The original '63 was a champagne gold clone of Philips' CD100, although reviewers preferred it to its Eindhoven uncle. In an early example of Marantz's love of tweakery, the 'B' version appeared in black with a couple of internal mods.

MERIDIAN MCD, MCD-PRO
Meridian set to work on Philips' CD100 to produce Britain's first audiophile player, with encouraging results. The subsequent MCD-PRO - which looked like a two-box player but wasn't - won many friends.

PHILIPS CD104
The Dutch giant's second-generation machine caught up with Japan by offering luxuries like a digital display and motorised drawer loading.

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CD - THE EARLY YEARS
When CD players gained a foothold in the High Street, competition hotted up and prices tumbled. First-generation players like Philips' CD100 which had come on to the market in 1983 at around £500 were in discount shops for less than £250 by 1986. Obsolete Japanese players were retailing at less than £200 by 1987. Software prices remained high, new releases never being cheaper than their £10.95 launch price despite tumbling production costs.

CD players superficially measured startlingly well by conventional standards. The CDP101's quoted 5Hz to 20kHz (± 0.5dB) frequency response, 90dB dynamic range, 0.004% distortion and 'Below measurable limit' wow and flutter must have seemed like heaven on earth. It was left to journalists to point out how much the new machines distorted at low levels.

Oversampling and digital word size soon became effective marketing tools on the High Street. The early Philips players were 14-bit 4x oversampling while the Japanese players were 16-bit 2x. Soon this became 4x, and then increased to pseudo 18-bit 8x until single bit Bitstream and hybrid DACs arrived to confuse everyone. Despite the popularity of bitstream machines today, liked from the beginning for their smooth sound, some manufacturers like Naim and Orelle (to name but two) still prefer Philips' late Eighties 16-bit 4x chipset, often characterised as being more involving despite its age.
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HI-FI WORLD
World Radio History
40 MAY 1996
Now, Quad's stand-alone mains-powered 77CD player can be used with any amplifier.

Haider Bahrani plugs in.

Maire Ni Bhraonain brought a tingle of Celtic pride to my bones, despite my own roots being on the other side of the Irish Sea. The effect was down to her voice, a harp, a double bass and acoustic guitars on 'Bhean a Ti' from the live Clannad in Concert CD. The fact it was spinning inside the drawer of Quad's mains-powered 7712CD player might have had something to do with it, too, of course.

The 'Quadlink' model, now known as the 7714, was reviewed in the November '95 issue and can only be used in conjunction with the 77 integrated amplifier, from which it takes its power. The 7712 is for those who prefer to use other amplifiers and therefore need to plug it into the mains. It will set you back £250 more, priced at £850.

The second track on Bjork's Post CD is, soundwise, a bit of a hybrid. Her voice mixes it with strings, accompanied, unusually, with a plethora of techno-type delights. Although her voice sounded somewhat hollow, Quad's slimline CD player reproduced the rest with excellent instrumental detail and good depth. Ricky Lee Jones's laid-back 'Easy Money' had all the cool of someone driving down Highway No 1 in an open-top Mercedes wearing Raybans. The image was uncluttered, both instrumentalists and vocalist having a clear but not overwhelming presence, and stretching beyond the 'speaker boundaries. The guitar on Paul Weller's 'You do Something to Me', raunchy but smooth enough not to be piercing on the higher notes, had such an analogue character to it it almost distracted me from the song. Weller's 'Broken Stones' was warm and relaxed, with an equally open image and a calmly controlled bass.

Up-tempo music, though, found the lower-mid and upper-bass registers dominating the proceedings. Tuce's 'Celebration of Life', a bass-heavy funk album, boomed more than thundered. Marvin Gaye's 'What's Going On' is carried along by its bass line, but on this occasion it engulfed the other instruments, obscuring their expressiveness.

Unlike Quad's 67CD, which had only a single Open/Close/Play control on the fascia, the 7712 has four: Standby, Drawer Open/Close, one which toggles between Next and Previous tracks and another which combines Play and Stop. A 'basic' remote adds the usual random play, track skip and track access functions.

Using an Audiolab 8000Q pre-amplifier, 8000M monoblocks and Mission 752 loudspeakers, the 7712 would be judged, at least, adequate in the face of its direct price competitors from Teac and Marantz. Except that the 7712 has no digital output, just analogue RCAs.

Quad 7712
£850
Quad
St Peters Road,
Huntingdon,
Cambs. PE18 7DB

WORLD VERDICT

A sweet and musical sound, but competition from Marantz and TEAC is particular is strong.

Measured Performance see p119-121
Hi-Fi World's letter of the month: A CASE OF HI-FI STYLE

I D Curry
Gt. Yarmouth,
Norfolk

Dear Hi-Fi World,

Do other readers of Hi-Fi World agree that amplifiers in so many cases are just plain ugly? Is it just me, or do other readers of Hi-Fi World agree that

It seems the more money we part with, the more 'biscuit-tin' like the product becomes: poor graphic printing, plain aluminium fascias, accessory-bin buttons and knobs and so on. I am not doubting the sonic ability of these products. Clearly they are of very high component quality, offering, sonically, very good value for money. But what surprises me is why manufacturers who show such brilliance in creating these dynamic works of art house their components in casings that are lacking any design concept whatsoever.

When you consider these amps cost hundreds, or even thousands, of pounds, you would think manufacturers would show more interest in trying to create a more stylish, more saleable fascia for their amps. Customers are influenced by the appearance of a product and do not buy on sonic ability alone. We not only want to hear the quality, we also want to see it!

I agree not all manufacturers fall into this category, but perhaps we have come to accept the 'biscuit-tin' as the norm. But I feel with more imagination from manufacturers and more discerning demand from customers, things may change for the better.

I entirely agree. Too many British manufacturers have neglected aesthetics, and, alas, sometimes quality control, over the last few years.

To give an example or two. One pair of loudspeakers, in use over a few months, had a veneer which discoloured and cracked. A pre-amplifier, said by the manufacturer to be straight off the production line, arrived with a selector knob spinning uselessly on its spindle. The paint on the fascia also began to flake off at a touch in a matter of days.

A well-known company apparently is unable to ensure a BNC socket on its CD transports stays secured to the PCB. Other items have turned up for review with control knobs that would be considered too plasticky and cheap for a Chinese-made toy. Once, I watched the brass finish of a valve amplifier chassis literally tarnish before my eyes with the heat from the transformers. It's been lacquered since to prevent this happening, but it should have been done in the first place, surely?

And the aesthetics! While British designers are highly rated when their talent is applied to motorbikes or household implements, their expertise seems rarely called upon for hi-fi. The last time I remember being excited by the look of a new British hi-fi product was the appearance three years ago of the Michell Alecto.

Probably, the lack of 'design' is a product of both complacency and lack of cash. The first has resulted from general acclaim worldwide for the way British hi-fi sounds and has led, particularly on the part of some smaller companies to the notion that as long as it sounds good it doesn't matter what it looks like. In my view this is wrong-headed, confirmed by a spell talking with Ken Ishiwata of Marantz on their stand at Live '95.

We had been talking about the 'look and feel' of hi-fi that summer and agreed that manufacturers needed to pay the same kind of attention to elements of design that car manufacturers do to a dashboard. We were confirmed in our belief as to its importance just watching people stroking the metalwork.

I know that hi-fi is in a more precarious position than it was ten or twenty years ago and that costs have to be shaved. Few companies can afford to pay a design group like, say, Pentagram. But if companies carry on thinking they can get away with the hi-fi equivalent of a Morris Oxford instead of a Vectra, their position, methinks, is going to become even more precarious. EB
THE DEFENCE

After reading your letter and Eric’s reply, I must say I have to disagree. I penned a list of ten or more manufacturers’ names straight away whose products combine performance with style and quality. The thing is, products such as these naturally take longer to develop and cost more to produce, so there aren’t that many new ones each year and they tend to be higher priced too.

Here’s just a few examples that spring to mind: Eric mentioned Michell’s Alecto, but take a look at the engineering and design quality in the Gyrodec and Orbe turntables too. Whilst we’re on the subject, what about SME tonearms - which I don’t think anyone could criticise and Linn, Ortofon and Lyra all make cartridges that show remarkable engineering elegance.

Meridian, Quad, with their growing 77 series, and Mission all offer ranges of electronics that I feel are superbly built and styled, with a real luxury feel in use. They are conservatively-styled I must admit, but then that is what the public demands in most cases. If you want something a little more showy, Audio Innovations’ Alto CD and amplifier, especially in chrome, set the standard, and at a reasonably affordable price.

Again conservatively styled, but with absolutely fabulous build and finish are loudspeakers from Castle, ProAc, Spendor and Harbeth. It never ceases to amaze me that these manufacturers manage to finish their cabinets to such perfection on a production line. Have a close look at how the veneers meet at the edges - not a missing fibre or split in sight, and on more expensive models veneers are even pair-matched. The quality of cabinet work here is unmatched in my opinion.

There are many more I haven’t listed, but I hope the above is enough to re-assure you that there is quality-engineered, built and styled equipment out there to be found. Primarily, I feel equipment should be designed and engineered for reliability and sound quality, its performance if you like. If it sounds terrible and blows up after a few months, all the styling in the world won’t save it.

There are many products out there from specialist manufacturers that offer this ‘performance’. I don’t think they should be discounted just for using an off-the-shelf control knob because the manufacturer concerned can neither afford nor justify the expense of a custom alternative. There are a few that offer neither the performance or build quality appropriate to the price, but these are few and far between and a fact of life in any industry.

Anyway, I’ve probably gone on too long and I’ve just remembered your criticism was regarding amplifiers. Here’s ten across a wide price range I think you should take a look at:

Mission
Cyrus III,
Unison
Simply II,
McIntosh
MA6800, Meridian
551, Quad 77,
Michell Alecto,
Alchemist Axiom, Audio
Innovations Alto, John Shearne Phase
II, Focusrite Red 4/5. I rest my case in the defence of hi-fi style. DB
Concerning the request from S.M. Beckford (Letters, Dec '95) for help finding material recorded in '3D sound', as on BBC's Tomorrow's World back in early '92, your reader wasn’t thinking of EMI's Sensaura.

The actual process demo'd on TW was Roland's RSS (Roland Sound Space) system based on distortion phase/intensity. The effect is quite dramatic but like the similar 'Q-sound' it sounded dreadful in mono. Music recorded with this process won’t get air play as T.V./Radio still have to cater for the huge number of mono receivers.

Your readers may like to purchase Essential Hi-Tech, BBC CD 856, mastered by Nimbus. This includes the Tomorrow's World theme as demo'd in Roland's RSS system on the programme that one time. I know of no other discs recorded in this process.

John Slevin
Stockwell,
London.
the following.
I too have a 'stand alone' CD ROM player. An NEC unit, it cost nearly £400 and is built like the proverbial battleship. For computer use - a lovely bit of kit!

Being curious I connected its audio output to my system (Naim 42.5, Hi-Cap, 250, Isobariks) and guess what? Its audio capabilities are severely limited. In short it sounds bloody awful!

Before I am accused of belonging to the Flat Earth Society, I use (and enjoy) a Pioneer PD801 for CD listening. The difference between this and the NEC is about the same as the difference between the Pioneer and a Wadia/Krell player.

You have been warned. Want to play Sonic? Buy a computer. Want to listen to music? Buy a dedicated CD player.

A. Andrews
Linslade, Beds.

The trouble is that computer CD-ROM drives do not play hi-fi quality audio. Then again, have you seen the sort of speakers people use with their computers? Very lo-fi as a rule, so perhaps people just don't notice. Mind you, I've heard a computer-synthesised orchestra start off on Apple Macs and end up sounding very successful through Quad ESL-63s. EB

A WOMAN'S WEEKLY HI-FI TROUBLE
Has Dominic Todd (Feb. '96) really thought through the implications of his sofa-in-every-shop policy? I have a horrible vision of being steered towards an old armchair and a pile of Woman's Weeklys every time I visit a shop in the company of a man.

It is already almost inevitable that when a woman asks a question (especially if it is more technical) the reply will be directed towards the man. At best, the more 'informed' dealers might, as an afterthought, tell the wee lassie that it's really no more complicated than whether or not you can tap your foot to it. "Just keep on tapping your foot, dearie, and leave all those nasty technicalities to the men."

Is this any way to treat a sentient being?

Please, Hi-Fi World, think twice before making any more suggestions like this. Retailers already have enough ways of keeping women in their place without being encouraged to dump us in the 'soft play' area!

Fiona Lucock Lancaster.

I think you may have misinterpreted Dominic Todd's views. The point he was trying to make is that a hi-fi retailer should make the shop as inviting and comfortable as possible for a wide range of customers in various circumstances. Providing comfortable seating, coffee, magazines and games to keep children amused can only make the whole experience of buying a piece of hi-fi a more enjoyable and civilised occasion for everyone.

The large majority of hi-fi dealers are very professional and caring in their approach to customers. Many of the staff in hi-fi shops are there through their love of music and hi-fi, which makes them very valuable when it comes to choosing the right equipment. A good approach to making the very best of this service is to call your hi-fi dealer first and arrange a time for a demonstration. This will give them time to set up an example system that they think will be suitable and ensures that you will have their undivided attention throughout your visit.

Often, if you book like this, you will be assigned one member of staff who will be with you the whole time, setting up different systems and helping to guide you towards the best possible choice. If you want to make the right choice and come away with something that will give years of enjoyment, I think it is well worth trying this approach. DB

Audiophile Int. Tel: 01276 855578

Make the most of a demonstration with this Mobile Fidelity Sound Lab album.

TIME TO ASSEMBLE A DAC?
My system consists of a Linn LP12, Ittok, and Audio Technica OCS, via a Hart phono stage and Roksan Attessa DP-2 transport with dual Positron QED Digit. Amplification is a passive preamp feeding two re-conditioned Leak TL12 Plus power amplifiers (new Audio Note caps/resistors and Sovtek valves). Speakers are Epos ES1Is.

Having recently added the Attessa transport, I am keen to bring my DAC up to standard, and have audited various designs including the Pink Triangle Ordinal which I found very good. As it will be a long time before I can afford such a thing, I was considering the Assemblage DAC tested in your January issue. How does it compare with the Ordinal?

Kevin Beel, Herts.

Your dual-Positron'd QED Digit has a very clear, punchy sound, but could be described as lacking in warmth and body compared with today's best convertors. I can see why you liked the Ordinal; it has a similarly forthright and powerful presentation, but is a little more refined, bringing greater detail and atmosphere to music.

The Assemblage is a step beyond what you have, having a sweet and gentle sound that many
Real Hi-Fi in the City

DANISH HARD CORE! Amplifiers that is. Check out the outstanding value for money offered by the Densen Beat 100, a minimalist integrated combining articulation and rhythm with a power delivery that drives all but the most demanding loudspeakers. The powerful and refined DM10 offers more of the same, but with the advantage of dual mono operation and massive (150wpc) power capability. The sheer power and presence of these amplifiers contrasts nicely with the delightfully refined sound produced by the range of valve and hybrid models from Copland. The CTA14 integrated combines valve sound with the muscle of solid state power at a very reasonable cost while the all valve integrateds and pre-power combos combine the best of modern valve technology with great build quality and finish, all at real world prices.

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V’audio
Hi-Fi Consultants

So, yet another show has been and gone and I’ve just managed to recover after being shut in for 4 days! Having assisted in a room demonstrating mainly Shearne Audio amplification and the Alop II and Petite speakers from the USA, it was gratifying to feel that it is possible to produce a good sound under difficult conditions - Having a home cinema + subwoofer next door didn’t help! Alright we did mainly use an expensive front end consisting of the Audiomeca Mephisto transport (whose looks alone produced many appreciative comments) plus the Trichord Pulsar DAC and power supply, but you need all the help you can get! the Alop IIs are quite large speakers and I must say the Shearne Phase 2 integrated plus Phase 3 power amp, although only 50 watts/channel each, did a fine job in driving them in bi.amp mode. Indeed, the Phase 2 when tried on its own, when everyone had gone home also sounded excellent and the fact that you can start out with this attractive £650 amp, and later add on the Phase 3 makes it a very attractive package. Although obviously the larger, Alop IIs are very impressive, the small Petites were much appreciated by those who heard them and are well worth hearing it in the market for a mini. Do ring for a demo.

HELP!

But it was very obvious speaking to visitors to the show, that many customers out there are finding it very difficult to get good advice on where to go next, and we get loads of phonecalls from people asking for help. Generally all we can offer is to make a visit to their home, evaluate their system’s sound and then we can recommend what to do. Every system is different in one way or another, even if it’s just the room it’s in, and the customers’ musical tastes also play an important role. With speakers by ATC, Ryark, Heybrook, Electrocompaniet, Triangle, Alop etc. and amps from AVI, Electrocompaniet, Triangle, Heybrook, Shearne, Arion, Unison Research, plus cd players by Avi, Parasound, Trichord, Harman Kardon etc. We can satisfy most people.

Ian C. Vaudin
36 Druid Hill, Stoke Bishop, Bristol BS9 1EJ
Tel/Fax: Bristol (0117) 968 6005

MAY 1996 HI-FI WORLD
would find captivating. But combined with the richness of your Leak TL12s/ES11s the sound could become a little too soft and vague. I'd recommend trying something like DPA's Little Bit III. This discrete-design convertor has all the blood and guts dynamics of your Digit, but with greater detail and a super sound stage. This should bring a whole new dimension to your music. DB

Cord Co. Tel: 01722 331674

Get the best from your new convertor with this Chord Co. Siren interconnect.

MYSERY TURNTABLE

I am writing to ask you for some advice on an old turntable I bought called Input Design. It has a Mission 774 arm that needs re-wiring and overall it needs quite a bit of work to get it up and running. I don't mind that because I am using it to gain some experience in setting up a turntable, arm and cartridge.

I have tried to get some information from Technical & General and Loricraft Audio with no success. If you could please send me the following information I would appreciate it very much:
1) Input Design turntable - set-up, spare parts or any contacts that can help.
2) Mission 774 arm - set-up, rewiring, spare parts and address.

3) Are there any books available on generally setting up turntables, arms and cartridges?
S. Lazzari
Galashiels, Scotland.

I thought that between us Noel and I had come across practically every turntable, but alas Input Design has escaped us. Whether it deserves the amount of work you have to put in will very much depend on how much it needs.

It is not, generally, a good idea to take a tonearm to bits. If the tonearm is the original, i.e. without a fingerlift on the headshell, Mission can rewire it and bring it up to scratch. Sorry, perhaps not the best word in the circumstances. Up to standard, maybe. Call their service department on 01480 451777. EB

Audiophile Int.Tel: 01276 855578

When it's running, check out your turntable with this Mobile Fidelity Sound Lab LP.

SPEAKER FOR THE NIGHT

I'm a regular reader of your magazine although it is sometimes quite hard to get your magazine here in Germany and it is also expensive. Accordingly, I thought of getting a subscription in the new year. Through your magazine I got interested in valves and hey! that is the sound I have been after throughout the years!

I listened to the Silver Night monoblocks from Audion with Impulse Lali loudspeakers (at Zen Audio, Hull) and it was just life-like. Graham from Zen Audio gave me your review on the amps from Feb. '93. He had only the impulse speaker to listen to.

And since you didn't recommend any loudspeakers in your test, I wanted to ask you what would be the best combination? I would be very, very thankful if you can name me two or three loudspeakers that you would think perfect for the Silver Nights. The problem here in Germany is that valves haven't established themselves yet, at least not in the shops I know. Therefore I always turn to English hi-fi magazines and study them.

David Ringel
Heidelberg, Germany.

Dearie me. I wrote that review three years ago! Graham's copy must be a bit dog-eared by now. Turning back to it, I find I did mention I used the Silver Nights with Quad ESL-63s which despite others' doubts do handle low-output valve amplifiers pretty well unless you want disco levels. A horn design like those from Impulse should also suit them very well. EB

A great favourite among followers of valve amplification are ProAc loudspeakers. These generally use very high-quality drivers: fabric dome tweeters and light, sensitive paper cone woofers. This makes them reasonably efficient and tonally pure, both of which attributes will help you get the best from valves. DB

The Audio & Hi-Fi Handbook makes a great read for any enthusiast.

A WORD ABOUT REVIEWS

A request and a question: In future loudspeaker reviews, please give dimensions and weight. The question: how can you comment on the tonal characteristics of a turntable when the whole loop of turntable, arm and cartridge...

MUDDY WATERS

fbj
Sier

When it's running, check out your turntable with this Mobile Fidelity Sound Lab LP.

How do you review a turntable like the Michell Orbe? Eric Braithwaite explains.

continued on page 49...

Newnes. Tel: 01865 310366

The Audio & Hi-Fi Handbook makes a great read for any enthusiast.
Imagine an amplifier which offers the simplicity of an Integrated Amplifier and the flexibility of a separate Pre-Power Amplifier. It is the new Audiolab 8000S Stereo Amplifier.

At the turn of a switch you can use it as an Integrated Amplifier, as a Pre-Power Amplifier together with the Audiolab 8000P Stereo Power Amplifier in a bi-amplified system, as a high performance stand alone Pre-amplifier, with an external surround sound processor, or with a sub-woofer. It has remote control and outstanding sound quality. We couldn’t think of anything else an Amplifier needs to do!

Ask your Audiolab dealer for a demonstration.
are involved?
A good example is the Best of 1995 review of the Michell Orbe turntable where the sound of finger-cymbals is praised when surely sounds of this type are 90% down to the cartridge.
J. E. Ellis
Pinner, Middlesex.

Since I was the perpetrator of the original Orbe review from which the 'Best Of...' was condensed it behoves me to reply. The cartridge used, which had previously had a full review, not so coincidentally by me, was the Ortofon MC7500. The SME V arm I had also heard and used several times before.

As a preliminary to the full review of the Orbe, my own SME IV was transferred to the new turntable from its long-term residence in my own Gyrodec.

The mechanics and logistics of the listening process preparatory to a review are seldom mentioned in print. They would likely be objected to as boringly repetitious, since the preparation is often the same. Nor does space allow it.

So, everything had been heard elsewhere other than on the Orbe: mentally subtract the similarities and Bingo! what's left is unique to the turntable.

That's why the finger cymbals could be attributed to the Orbe, not just the cartridge. Trust me. EB

QUAD SURVIVAL QUESTIONED

I read with sadness that Quad had been sold. I well remember Leak, to which I remained faithful until it was sold to Rank. At that point I changed to Quad and I have stayed with the product to date, upgrading whenever new items were introduced. I would like to pay tribute to their outstanding personal service. Quad has been a landmark of the hi-fi world for over fifty years.

I wish I could agree with NK that 'Quad's future seems assured'. I feel the reverse is more likely. Look at the many yeoman names of yesterday which are now just labels for system components.

I hope Hi-Fi World, as the only magazine to give Quad a fair hearing over the last forty years. Product life-cycles are becoming shorter and shorter and products are becoming more and more complicated.

The Quad II power amplifier took two man-years to develop, had about fifty components. It remained in production unchanged for eighteen years. The Quad 77 integrated amplifier and remote control system has taken about 15 man-years, has more than 500 components and will have a production life expectancy of about five years. This trend will continue, and this means that companies have to be bigger to fund the ever-increasing R&D needs for the future.

As part of Verity

Quad's 'intelligent' remote control which partners their 77 series of electronics.
One thing the Lalis did that few other speakers do was make listening to music fun. Chris Beeching, Hi-Fi News '95

You can follow the digital revolution or you can follow the Groove

"The sounds from the Pro-ject 1 had the famous engaging bloom and warmth so characteristic of LP, which is either caused by analogue's inherent superiority over digital or a mixture of distortion, crosstalk and microphony according to your viewpoint. Anyway, I liked it ..."

John Borwick, Gramophone

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Pay us a visit, we are near Olympia
Audio Valve's monoblock amplifiers look like a double-decker bus, thinks Douglas Floyd-Douglass, but he enjoys the ride.

A weekend on the continent recently confirmed my suspicions: they're out to get us! The threat is coming, not from the Americans or the Far East, but from the old world's champions of fine cuisine and exemplary styling. The proliferation of Italian, German and French high-end hi-fi throughout Europe is not to be scoffed at.

Sonus Faber, Unison, Focal, Leedh and others are all competing strongly with British products.

Like Eurogastronomy, Euraudio can be unexpected, delicious and often downright adventurous. Just the impression created by these German Audio Valve PPP 45 monoblocks, a pair of glass-and-lacquer finished Deutsche double-decker buses with eight valves inhabiting the upper deck. The power valves in this 45W parallel push-pull design are six of the classic EL84s, the input valves ECC83s.

Jazz on these omnibuses was peachy, to say the least. The saxophone on Wes Montgomery's 'Round Midnight' reeked of 'Art Pepper-edness' with its commitment and deep, churning melody. The distinctively soft Montgomery thumbed guitar sounded authentically Gibsonesque and his octave chord-slides were as clean as his teetotal reputation. The intonation on this recording and the differentiation of each note and chord were precise.

Double bass could be felt; it had just the right amount of buzz on the strings as Arthur Harper slid from one note to the next. Piano was smooth, but with a slight upper-bass edge. Older recordings like this (Paris, 27th March 1965, just three days older than me) are blissfully free of digital reverb and the crowd noises were atmospheric and real. The soundstage was stable even during demanding passages. Jazz fans will love these amplifiers.

There was a real feeling of synergy between these power amplifiers and their countryman Beethoven. The Harnoncourt/Teldec recording of well-known pieces is spot-on. And what a performance! These valves really brought out the passion. The woodwind and flutes were open and fast, with a sense of urgency. Soft passages were luxuriant and the basses and cellos were superbly together. There was a big, even, comforting, soundstage.

A big sound and substantial power reserves bely the Audio Valves' modest stature. They may lack something in refinement, but they confirm for me, once again, that valves are one of the best forms of amplification.

Audio Valve PPP 45 (pair) £1195

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134 Parkside,
Wollaton,
Nottingham NG8 2NP
Tel 0115 928 4147

WORLD VERDICT
Listenable, likeable and good value.
For those of you that think that modern life has been immeasurably improved by the advent of nuclear power, soap operas and the ending of all wars, you should replace all your records with CD's.

"I WANT ONE"

- Douglas Floyd-Douglass, Hi-Fi World

Now you don’t often hear a reviewer say that about a product, do you? So what exactly was it that moved D.F-D to lavish such fulsome praise on the Unison Research Simply Two? Was it the specification? (12 Watts of single-ended pure Class A). Or the finish? ("It would do a Ferrari proud"). The price maybe? ("real value for money with no compromise"). All very impressive, no doubt. But the real answer is both deeper and more subtle. Simply Two is one of those rare products that makes listening to music a magical experience. Just as it should be.

For a list of approved stockists and full details on the Unison Research Simply Two integrated amplifier (£995), Simply Four (£1495), or the amazing 'Smart 845' monoblocks (£2995), contact:

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Some call it a lark, others say it takes the edge out of their mouths. Thinking of the blinding blue flash that vapourised a circuit board engaging about it I'm not about putting wallpaper up things. I'm not talking track the other day, I'd call mouths. Thinking of the chance, a lot of people find sure, because having been here, so much as building is fun. It seems that, given a challenge. I'm not at all familiar as eating, if more fun. The surprise is that so many people get just as big a kick out of this "lark" providing frustration doesn't overwhelm them. It seems that, given a chance, a lot of people find building something, which is a creative process, very rewarding.

You've got to want a challenge. I'm not at all convinced that a kit which is so slick that it requires no mental effort to assemble is a good idea. Heathkits became this before they disappeared: super slick and much like normal commercial product when built. When the price approached that of commercial product there was no magic nor any "reason to build" left.

There's a challenge in building, especially if you can make a contribution to, say, the finish. Then there's the mental tussle of getting it all working. Just about every amplifier I have ever built has not worked properly first time, so take heart! But sorting it out has been absorbing and educational, if frustrating as well. It's a great help to have a meter and a 'scope, both of which come cheap these days, plus a signal generator. How I used to dream of these things when trying to get various short wave receivers going, during my schooldays. They'd whistle and squeal and do all sorts of peculiar things, I was never quite sure what.

In those days I dreamt of making what was known as a "wobbulator". This wasn't a machine for lazy slimmers, so much as a frequency swept RF signal generator capable of displaying IF alignment on an oscilloscope. In spite of these difficulties though, my receivers - the last being a 24 valve double-conversion type were dear to me. At the time motorways were a novelty, so our Devon town was isolated by modern standards and might just as well have been on Mars. Listening to Luxembourg, Voice of America and what have you, was far more exciting than going to the local fleapit to watch corny old flicks like Pride & Passion or Presley's April Love (yech!).

In those days test equipment weighed a ton and had a price to match. Maplin and others now offer some amazing devices for those who want to take a more serious interest and this really does open up the subject for those who want to get serious.

We started DIY in Hi-Fi World because readers constantly asked for it, and because we understood from our hands-on experience just what the attraction is. It was the second Supplement, dated May 1993, with the Mullard 5.20 valve amplifier, that really took off. I was amazed. I've always loved valve amps. but was far from sure anyone else did. Haider Bahrani, who works on this magazine but is a solid-state engineer, thinks we are a trifle bonkers. He became even more convinced of this when I shorted down 500volts of H.T. the other day with an almighty flash and bang in the editorial department (we keep 'em on their toes!). Yet that Mullard amplifier was one of the most popular projects we have ever featured, in spite of the dangers.

Now it's becoming received wisdom that valves are where it's at in high fidelity. This hasn't quite got out into the High Street yet, but it is beginning to capture the attention of big manufacturers as they see sales go up as fast as a 10V electrolytic with 500volts across it. When Marantz brought out the £30,000 T2 and Western Electric announced they were to restart manufacture of the 300B valve, the whole business got a big publicity boost. I'm mightily amused by the way so many of Britain's manufacturers are now beginning to wonder whether this represents some sort of commercial way forward for them.

As with valve amps though, DIY loudspeakers, at their best, can offer extraordinary performance. One key advantage the constructor has over the commercial manufacturer is a relative lack of cost restraint. Manufacturers have to add on their own margin and then a retailers margin on top of this. Adding to this are R&D, transport, packaging and warranty costs, not to mention advertising and what have you. It all adds up to quite an extra load, seen either in the profit margin that must be applied or in direct add-on costs. The big victim in all this has been drive unit quality. We've seen some real cheap drivers in very expensive speakers - a daft way of doing things. DIY allows constructors to use high quality drivers, fitted with Kevlar, Carbon Fibre and High Definition Aerogel cones, housed in beautiful cast alloy chassis. That's a great starting point for producing a quality loudspeaker.

I look at DIY like this: you can sit in front of a TV and vegetate, or you can be in the workshop building something. Just try not to destroy it - what you are building and the workshop that is - in a blinding blue flash.

S

Mysteries from Noel Keywood

kaleidoscope
In art, the simplest disciplines can also be the most demanding. To write a haiku, a traditional Japanese poem, a poet is allowed just 17 syllables to capture a complete thought. So each word has to be weighed against every possible alternative to ensure there is no better alternative. The engineers and designers at Aura would immediately recognise the rigour of this approach. Like the poet, their goal is deceptively simple – to reproduce music perfectly. So each component must be carefully evaluated against alternatives. Every design route is checked against other possibilities. And when a decision is made, the key components are specially manufactured to
isn't it?

our own stringent specifications. Meticulous attention to detail has led to fewer and fewer details. The fascia of our amplifiers are uncluttered by unnecessary controls. Freedom from electronic gadgetry allows us to minimise the single paths to the electronic circuits inside the amplifier, reducing 'crosstalk' and distortion. Even Aura's distinctive chrome finish has taken us years to perfect. Stainless steel is repeatedly polished until it shines like a mirror. The result is simplicity and pure beauty. If you would like to know more about Aura amplifiers, tuners and CD players contact B&W Loudspeakers (UK Sales) 01903 750 750
Flipping through our DIY Supplement and copies of Glass Audio and Speaker Builder from Audio Amateur publications, as well as the mainstream electronics titles such as Elektor and Electronics World, it strikes me that the need for a PC is becoming more and more important for the DIY designer. There’s a wealth of computer packages out there at affordable prices that will aid anyone with a basic grounding in electronics to produce their own unique designs that, with care, will yield superb performance.

A distinction should be made here between what I would call the DIY constructor and the DIY designer. The constructor is a hobbyist who has seen the benefits of building hi-fi. A good kit accompanied by easy to understand and follow instructions is great fun to build and may outperform built-up products of similar cost. If you have the ability to construct your own hi-fi, great fun can be had and the end result can be customised to suit personal tastes.

The DIY designer is more dedicated and has different goals. He or she will probably have built kits in the past, but a desire to learn more and develop knowledge will lead them further. Friends come and listen to what you have built, and quickly you’ll be building hi-fi for friends and colleagues, learning and experimenting all the time. It’s natural that you start to develop your own ideas, ideas drawn from the experience of building kits and reading journals such as those mentioned above.

So you think you’re ready. You’ve spent months planning your own loudspeaker design. You’ve picked the best drivers from manufacturers’ data sheets, developed your own cabinet design that you’re convinced will out-perform any mainstream product. More often than not, once built you’ll realise that the design process has only just begun. You can get yourself 90% of the way there with little more than good books, experience and by selecting high quality components, but you’ll quickly find yourself blind without any way of measuring what you have done.

It is this last 10% which really makes a product special. The careful tuning and balancing process is what lifts a design from satisfactory, to exceptional. Ironing out the creases and tidying up the loose ends will make your design function far better, and importantly, far more consistently.

Luckily, exactly the help you need for this tuning process is on hand if you have access to a PC. There are an increasing number of packages available which are invaluable when planning the initial design, making sure you get off on the right foot. But more and more packages are appearing that can turn your PC into an extremely powerful piece of test and development equipment.

Liberty’s IMP and Audiosuite packages are aimed mainly at building loudspeaker designers. A good kit accompanied by easy to understand and follow instructions is great performance.

The careful tuning and balancing process is what lifts a design from satisfactory, to exceptional.

For more electronics-based projects there’s Picoscope from Pico Technology. This is what has become known as a virtual instrument, where hardware and software are used to convert your PC into a range of instruments. Picoscope has virtual instruments such as a spectrum analyser, voltmeter, frequency meter and so on, making it an extremely powerful and compact test set. The top-of-the-range package costs only £199.

Another virtual instrument package is Allison Technology’s O-Scope, a plug-in module/software system for your PC that allows it to perform as a digital storage oscilloscope, spectrum analyser, frequency counter, digital voltmeter and data logger. There’s a sound level meter option too, but the basic single-trace package is available for just $230, amazing value considering that to buy the range of instruments it replaces would cost thousands.

There are many more useful packages available, and we hope to be bringing you reviews of some of the more affordable and suitable ones for DIY designers in the near future. Packages like these provide an invaluable insight into how a design is performing. Remember, for true hi-fi performance it’s not enough that it works, it’s how well it is working that makes all the difference.

Regular readers of our Supplement will have seen recent reviews on both of these systems. IMP is a basic test set, with facility to measure frequency response, impedance and produce waterfall plots. Audiosuite is really an extension of this, using a PC sound card to generate test signals. It performs as an oscilloscope, and distortion analyser as well, and has all of the usual loudspeaker tests. Both are available with a calibrated microphone; a computer disc supplied with it corrects for any errors in the microphone’s response to make it extremely accurate.

LMS, aimed mainly at loudspeaker design, uses a dedicated PC slot card which is installed inside your PC. Along with the software, LMS will give you the ability to measure frequency response, phase, impedance and just about everything you’ll need to fine tune your designs. Like many of these packages, you can also use it to check the Thiele-Small parameters of the driver you are using. In the case of LMS, this Thiele-Small data can then be inserted into their LEAP package which is used for box design and optimisation. So a measurement system can make your initial design ideas more accurate too.

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I found the budget DRM-550 easy enough to use and quite slick too, like all Denons. But beneath the DRM-550's smooth exterior my measurements showed that performance was pretty mediocre. The main weakness was the magnetic head that lurks in the cassette compartment. It was unable to get high recording levels onto metal tape in particular, throwing up masses of distortion if pushed.

How did this affect results? With TDK MA metal tape there was obvious muddle and messiness, especially in the treble, even though I recorded scrupulously to 0VU and no further. One answer is to reduce recording level, but then hiss became more obvious, although Dolby C did a good enough job in suppressing it.

Another solution is to use less expensive ferric or chrome tapes. They need lower bias, which in turn reduces head saturation and distortion.

The low level intro to Tori Amos' new album, Boys For Pele, was a perfect test. With quiet TDK SF (chrome bias) tape and Dolby C hiss was minimal and I could hear just the vaguest hum close up to the speakers, something most decks suffer. The recording sounded soft and a little woolly until I cranked bias back two points on the five point scale, then the whole came more into balance.

However, with TDK AR ferric tape, which can record massive bass levels cleanly, the thunderous bass from Isaac Hayes' Branded album was obviously a bit weak, emphasis being thrown onto the midband, where his vocals were relatively clear. Today's budget recording heads are so poor, including the DRM-550's, that TDK AR, used in conjunction with variable bias (i.e. tape tuning) represents the best option. At this price point nowadays, little more can be expected, with the exception of Aiwa's AD-S750 Dolby S deck.

The facilities Denon fit are all tried, tested and useful. There's Dolby B and C noise reduction systems, a counter zero-stop, Dolby HX Pro to give cleaner treble when recording. The fascia is clean, lacking unnecessary legends, and the controls move smoothly. Automatic tape type selection is provided.

Pre-recorded tapes came across well. From Supertramp through to the piano sustains of Ashkenazy, the DRM-550 sounded clear, concise and temporally stable. For the price I wouldn't criticise it, knowing that the opposition offers no more.

Cleanly styled, well equipped and easy to use, the DRM-550 is visually attractive. It offers best results with low coercivity tapes, meaning ferrics. In my experience TDK AR and AD, as well as Maxell XL-1S, are the best choice, used in conjunction with Dolby C to suppress hiss. Metals don't suit. I'd rate the DRM-550 as a safe enough buy, providing too much is not expected.

Denon DR-M550 £159.99

Hayden Labs
Hayden House,
Chiltern Hill,
Chalfont St Peter,
Bucks. SL9 9UG
TP 01753 888447

WORLD VERDICT
Good enough performance for the price and certainly no worse than current competition.

Measured Performance see p119-127
I spotted the little KEF 60S loudspeakers in one of the many Tottenham Court Road hi-fi retailers. At first glance they didn't really appeal (there were four of them along with a centre-channel speaker and subwoofer AV style.) But as the next track on the demonstration album kicked in, my ears pricked up. Here was an AV system with remarkable clarity and detail, quite unlike the majority I've heard.

More light was shed when I peered closely at the 60S loudspeakers. Sitting behind their thin cloth grilles was a single Uni-Q driver screwed neatly into the moulded plastic cabinet. But this wasn't KEF's normal driver, which uses a 6.5in plastic cone woofer surrounding a 1 in soft dome tweeter. Instead, the 60S uses a 5.25in High Definition Aerogel (HDA) cone, the same material used by Mission in their 752s. This is the loudspeaker we use as a benchmark in our in-house listening room. Its openness and clarity are unrivalled at the price, so needless to say I was keen to audition the 60S at greater length.

A week later a selection of packages duly arrived from KEF, adding up to four 60S monitors, a centre channel speaker and the matching 30B subwoofer. One pair of the monitors and the centre channel speaker were discarded (well this is Hi-Fi World after all), but I kept the subwoofer as it had seemed to be doing a pretty good job in the dealer's showroom.

The Uni-Q driver in the 60S is a very high-quality unit for such a loudspeaker. Sitting in the centre of the Aerogel cone is a 14mm polymer dome tweeter, which, although quite cheap-looking, tends to give a fast and precise sound. This is partly due to the construction, where the dome and voice coil former are all one piece rather than separate units glued together. This also makes them light and efficient.

With the 60S loudspeakers the build budget seems to have been allocated differently to most, with more of the money directed to the main driver.

On its own, the 60S has a very open and coherent sound, with a precise tone through the midrange. But, as you'd expect from such a compact device, it is quite light in the bass.

Using High Definition Aerogel drivers, KEF's tiny 60S monitors look to have quality. Hoping their subwoofers have control, Dominic Baker listens in.
They'd be great in a bedroom but in our listening room a subwoofer was needed to add a degree of extra weight and extension. I had a choice of two: the 30B supplied by KEF and REL's new Q-Bass, also reviewed in this issue.

I approached KEF's subwoofer with some scepticism. Many manufacturer's efforts fall short compared to a REL, which are not only the best-sounding but, in my opinion, also the most flexible to use. However, congratulations are due to KEF here, because the 30B is the first sub I've come across that even gets close to competing with a REL. It suited the 60S's far better than the Q-Bass, which although fuller and richer, didn't match as well. The KEF was notably tighter and cleaner, although in fairness to REL, the Q-Bass is £150 cheaper. It would be interesting to play the KEF against REL's Strata, both having the same price.

So, with the KEF subwoofer installed I started my listening proper. In this set-up it was best with the highest roll-off selected. The 60S's don't stretch that far down, so they cross over to the subwoofer quite high up. This also helped to warm up the sound, the 60S's on their own sounding a touch cold, although this in itself is a function of their clear projection.

With classical music, the KEF system was confident and sure-footed. With their coherent delivery through the midrange and treble, violins on Locatelli's Opus IV were pushed well out into the room. Violin presents a tough task for any loudspeaker, often becoming phasey or blurred on higher notes, but the KEFs sailed through this test with surprising ease. Apart from a little cuppiness lower down, they were pure and uncoloured, able to describe both tonal shading and delicate harmonic structure.

The limitations of the 60S and 30B system became more apparent with Sheryl Crow's Tuesday Night Music Club album. "What I Can Do For You" gave the system a broader range to deal with, and at a faster tempo too. Here the cuppiness became more evident, adding a hollow, resonant thrum to her powerful projected vocals. They pushed right out into the room, but this emphasised a slightly cold and hard quality. It was evident that the system was revealing a lot of detail, an ability of the HDA driver, I suspect.

This general feeling continued with the Lightning Seeds' 'Punch and Judy'. Although the set-up had super detail and dynamics, and taut, powerful bass, the hollow, boxy colouration in the lower midrange detracted from the whole experience. There are certainly many budget loudspeakers that are worse here, but the more I listened the more obvious it became with the KEFs.

Ultimately the KEF 60S loudspeakers and 30B subwoofer don't make the audiophile grade. As a system they do have some exceptional qualities, and for someone into AV they are well worth auditioning. For that purpose they are far more musical than the majority I've heard at this price. But at just under £200 the 60S's have fierce competition to face not least from KEF's own Coda 7 which is £50 cheaper.
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Attention-grabbing headlines are far from restricted to our much-maligned tabloid press. Anyone who follows the motoring magazines can’t fail to notice the shock headlines that crop up regularly.

You can probably guess the sort of thing, even if you aren’t familiar with the intricacies of quad-cam variable valve timing. ‘BMW Slaughtered By Toyota!’ ‘Astra Deals Deadly Blow To Golf GETI!’ ‘The Best Car In The World - It’s A Mercedes Not A Bentley!’

You can bet your bottom dollar that BMW hasn’t really been crushed and as soon as a new ‘hot hatch’ comes along, it too will overtake the Golf. What always promises to be the final word never really materialises.

The same is true in the hi-fi business too. We’ve had the Japanese super budget amplifier that wipes out the home-grown competition, the super-fi that will crush the best high-end efforts from the States and the continental loudspeakers that will definitely destroy the home industry. Of course, as in the motor trade, the predicted consequences never materialise, or only to a small degree. The publicity may cause a bit of concern among manufacturers at first, but after a while things settle down and it’s all forgotten.

There is a strong feeling for the status quo in the hi-fi industry. What retailers seek is not a manufacturer who produces one exceptional product which, either through their persistence or simply by circumstance, is exceptionally well reviewed and well thought of. This is because the next model to come along is usually nothing like as good and will struggle to meet the class average left alone set a new standard.

This is well illustrated by Pioneer’s dilemma over the A-400 amplifier. The original proved a much greater success than even Pioneer themselves could have dreamt of. The problems arose when it became due for replacement in the range.

The trouble was, with the original being so highly regarded, the A-400X which took its place faced an uphill struggle to make anything like the same impact. In fact, Pioneer were so concerned they ended up keeping the A-400 in production alongside the product that was meant to take its place! As it turned out, the ‘X’ never did quite catch on. While the original best-seller carried on until quite recently.

Since then, Pioneer hasn’t had the same amount of attention - and that was all over one product.

The prizes a retailer seeks are accounts which have an aura of respect within the industry and can survive a poor review, or even a year of bad reviews, simply because of who they are.

“The prizes a retailer seeks are accounts which have an aura of respect within the industry and can survive a poor review, or even a year of bad reviews, simply because of who they are.”

Keep the A-400 in production alongside the product that was meant to take its place! As it turned out, the ‘X’ never did quite catch on. While the original best-seller carried on until quite recently.

This obviously creates concern among other companies which have their work cut out competing with such well-established and recognised brands. Yet not even ‘Key Accounts’ can afford to be complacent in such a small but fast-moving industry.

There is an underlying tension concerning its future. This has manifested itself in our first-ever trade-only event (to be held this April) at which manufacturers, distributors and the press can all get together and talk about the state of the industry and how things can be improved.

The Consumer Electronics Trade Interface (CETI) will face issues such as the impact of future technologies and trends, staff motivation techniques, selling and communication skills, marketing, distribution, shop presentation, even room acoustics and computer software. There will be seminars where the industry can meet the press and, no doubt, give them a good grilling over product selection and reviewing technique.

The irony is that CETI is to be held in Harrogate, the very place where the north has been crying out to have a hi-fi show for years, and it is not open to the public. Many of the topics to be covered, such as room acoustic techniques and the latest recording technology, would interest hi-fi enthusiasts too. They are not the sole preserve of the trade. An exclusively trade audience could be catered for with trade days before a public one, as the hi-fi shows manage to achieve.

Despite this, will CETI be headlined ‘The Show To End All Shows’ at the end of this month? We shall have to wait and see.
We offer below a selection of our CVC PREMIUM range of audio valves. These CVC BRAND valves are from selected world wide sources, processed in our special facility to provide low noise/hum/microphony. PRE-AMP valves and POWER VALVES burnt-in for improved stability and reliability. Use this sheet as your order form. If you require matched pairs, quads or octets etc. Please allow £1.00 extra per valve for this service and mark alongside the valve type number ‘M2, M4, M8’ etc as required.

### Price list and Order Form for CVC PREMIUM Audio Valves

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There's much more to good bass than boom, as Haider Bahrani discovered playing with REL's new Q-Bass subwoofer.

Today I sat in on recording sessions for Paul Weller's Stanley Road album. I popped in on Bjork and Tori Amos and even Mr Roger Nelson played me a ditty. Jealous? You needn't be. It sounded like that because I had a REL Q-Bass subwoofer in the system playing in front of me. This is not just a nice £350 boom-box toy for the bass hungry; it will subtly enhance your system as well as adding important subsonics.

REL recommends the unit be placed between the speakers with the driver firing towards the wall behind. Tried it, wasn't all that impressed. To be fair, the manual also suggests the driver could face into the room, "for a more upfront and dynamic bass sound for heavy rock". Now that was more like it! The system was a pair of Harbeth HL Compact 7s driven by a pair of Audiolab 8000M monoblocs with the signal from an Audiolab 8000CDM transport and Pink Triangle Da Capo CD convertor feeding an Audiolab 8000Q pre-amplifier.

This has multiple line-level outputs, so a pair of phono leads were easily connected to the Q-Bass. There is an alternative 'high-level' option, which allows connection direct from the amplifier's loudspeaker terminals.

It's a fine balancing act to get things spot on with the Q-Bass. The Filter control sets the upper roll-off frequency, which must be adjusted to match the natural roll-off of the main speakers you are using. This is also dependent on the level of bass set. I picked a couple of tracks which I know to be well balanced and quickly had the Q-Bass matched in.

It took a while but then Paul Weller's 'Broken Stones' had a drumkit so real I sincerely believed I could get up off my seat and touch it. Playing some other CDs, however, showed I'd obviously put a heavy Weller bias on the beast. Over the next few days I played a wide range of material, slowly homing in on the ideal setting for this system. Once there, the subwoofer vanished, integrating superbly.

Among CDs which aspire to thunderous bass is Portishead's Dummy, particularly the track 'It Could be Sweet'. The REL certainly brought it out to the full while still allowing the rest of the music through. Dummy and Bjork's Post CD were good guides for setting up this system. Both have heavy bass tracks but good vocals, so if they had been over-ridden by the bass it would have been not only criminal, but obviously a mistake.

This is really where the subtlety comes in. A sub-bass system should bolster, not dominate, what is already an appealing sound. Taking a Tori Amos CD out of its case was inevitable. The acoustic thuds and rumbles from the grand piano on 'God' perfectly complemented what was coming through the Harbeths.

At this price, for the results that can be had (with a little bit of effort) the REL Q-Bass is something all bass-seekers should consider. Especially anyone who wants to hear the lower half of Barry White's vocal register and other whale sounds.

### REVIEW

**REL Q-Bass**

£349.99

REL Acoustics Ltd.,
North Road,
Bridgend Industrial Estate,
Bridgend, Mid-Glamorgan CF31 3TP

Needs care in setting up, but this subwoofer offers serious quality bass for not a lot of money.
This month cheer up your hi-fi with a pair of Rogers loudspeakers. We have five sets to give away.

**First prize** is a pair of LS33s and their AB33 subwoofers worth £600; **second and third prize winners** take home a pair of LS33s valued at £249. **Fourth and fifth prizes** are a pair of LS1s worth £149.

Rogers will be celebrating its fiftieth year in 1997. Starting off in Hampstead, in London, it took its name from founder Jim Rogers. The initial product line included the classic Williamson mono valve amplifier, built under licence.

A few years later, in 1954, by which time they were based in Greenwich, they began to produce their own amplifiers. First of these was the Rogers ‘Minor’ valve monoblock, followed shortly by the ‘Junior’, a tuner and... loudspeakers.

Over much of its history, Rogers was almost synonymous with the BBC, manufacturing BBC monitors like the famous LS3/5a and others used in studios around the world. This relationship continues with the latest BBC monitor, the LSS/12a.

A few years on and, expanding, Rogers were on the move again. This time they stopped at Catford. Here, the company began developing other amplifiers, among them the Ravensbourne and Ravensbrook, named after two local London rivers.

The Ravensbourne runs partly underground; but instead of choosing another of London’s subterranean rivers as a name for their little integrated valve amplifier, it was named to attract the entry-level buyer and came out as the Cadet. The Cadet is now viewed as a classic, and second-hand can fetch three times its original price of £30 or thereabouts.
In 1976 Rogers were taken over by Swisstone Electronics, and upped sticks to their current home in Mitcham, Surrey. Valve amplifiers were replaced with a transistor range, including the well-regarded A75 integrated, though after 1979 the company concentrated only on loudspeakers.

Over the years older models have gradually been improved, while the arrival of LS33/AB33 designer Andy Whittle saw the gradual introduction of completely new loudspeakers, beginning with the tiny Studio 3.

Now part of the Wo Kee Hong Group, Rogers International has now gone full circle. Last September they showed two new Rogers amplifiers. What was in them? Valves!

To enter this competition please make sure your entry reaches us before 3rd May 1996. Send your completed entry form, fixed to the back of an envelope, to:

Rogers Competition,
Hi-Fi World Magazine
64 Castellain Road,
Maida Vale,
London W9 IEX

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

MARCH ISSUE COMPETITION

THREE PAIRS OF HARBETH HL-P3ES LOUDSPEAKERS WORTH A TOTAL OF £2,400.

In the March issue we were offering a chance to win three pairs of the best mini-monitor loudspeakers in the business.

The three lucky winners are:
Martin Yip of Ipswich
Michael Hamilton of Kent
Sara Wilce of Bolton

CONGRATULATIONS!

COMPETITION ENTRY QUESTIONS

Cut out and affix to the back of a sealed envelope

1) Who designed the LS33 and AB33?
   A. Andy Whittle  C. Wo Kee Hong
   B. Jim Rogers   D. Haider Bahrani

2) What were the Ravensbourne and Ravensbrook named after?
   A. Rogers directors  C. Characters from Henry V
   B. Rivers     D. Brands of Coffee

3) Where are Rogers currently based?
   A. Catford      C. Mitcham
   B. Greenwich   D. Hampstead

4) With which broadcaster has Rogers long been associated?
   A. NBC         C. BBC
   B. ABC        D. NHK

5) How long has Rogers been in existence?
   A. 50 years    C. 40 years
   B. 39 years   D. 49 years

TIE BREAKER (obligatory)

What would you suggest is the best way for Rogers to celebrate their fiftieth birthday? Answer in about 20 words. No promises about whether the company will take up the idea though!

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[1] Only one entry per household. 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 second issue following the closing date.
[3] Purchase of the magazine is not a precondition of entry.
[4] No correspondence will be entered into; the Editor's decision is final.
[5] No employees of Audio Publishing Ltd. or of any companies associated with the production or distribution of the prizes may enter.

If you would prefer not to receive details of new products or special offers please tick the box.

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Volume One - May 1947 to December 1949

Summary of Contents: 9.5 watt, 5 watt and 6.5 watt 6AS7G amplifiers, 30 watt 30B8 amplifier, valve FM tuning indicator, 30 watt 211 power amplifier, cathode follower amplifier using 6V6, an adaptation of the Williamson amplifier, valve phono preamplifier, several horn and reflex loudspeaker designs and much more.

Volume Two - January 1950 to July 1952

Summary of Contents: Ultra linear 6L6 design and operation of the Williamson, a direct coupled amplifier, Williamson type amplifier using 6AS5, 40 watt 845 push-pull amplifier, valve phono and line preamps, valves and loudspeaker damping, design and construction of reflex and horn loudspeakers.

Volume Three - August 1952 to June 1955

Summary of Contents: Simple valve phono stage, transformerless amplifier using 6082, 20 watt 5861 amplifier, 10 watt 6V6 amplifier, stereo valve preamp, high quality valve phono stage, a preamp for the Williamson, low distortion tone control preamp, binaural or stereophonic, transistor phono amp, corner horn loudspeaker, concrete horn loudspeaker.

Volume Four - July 1955 to December 1957

Summary of Contents: 18 watt 5881 amplifier, 4 watt single-ended tweeter amplifier, budget 1 watt amplifier, versatile bass/treble control, transistor theory, transistor preamp, transistor techniques, battery powered transistor phono preamp, loudspeakers explained.

Volume Five - January 1958 to December 1959

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

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IGGY POP
NAUGHTY LITTLE DOGGIE
VIRGIN CDVUS 102

Iggy Pop's career has been as erratic and chemically blasted as Lou Reed's, but where the latter seems finally to have relaxed and said hello to maturity, Mr Pop seems to have regained his lust for life. He did it with his last album, the frequently monstrous metallic alliance of 'American Caesar'.

He covers much the same ground here, spilling out typically cocky lyrics in that familiar buzzsaw voice while guitars explode around him like he's a one man World War Three strutting through your living room. He may go over the top occasionally - the blatantly sexist 'Pussy Walk' won't endear him to any feminists - but you have to remember there's always a tongue-in-cheek element in Iggy's best work, something that hasn't always been appreciated.

Fans who go back all the way to The Stooges certainly won't be disappointed by such life-affirming balls of fire as the opening 'I wanna Live', the more introspective 'Innocent World' or the super charged 'Keep On Believing'. Full marks then to guitarist Eric Mesmerize, bassist Hal Wonderful and Larry Contrary on drums, who - along with the odd guitar contribution from Iggy himself - produce a rich, roaring sound that few latter-day upstarts can muster (surely not their real names?).

And if, judging from a recent TV appearance where he wore transparent trousers sans Y-fronts - maybe it's time Mr Osterburg stopped taking his shirt off on stage - let alone letting us view his naughty bits - there's ample proof on 'Naughty Little Doggie' that the man's anything like finished with the world. Another cracking comeback, it's fire and brimstone occasionally touched - as on 'To Belong' - with moving sensitivity. More power to his elbow.

VARIOUS ARTISTS
DEAD MAN WALKING
COLUMBIA COL 483534-10

All praise and great results to film director Tim Robbins for sending his completed version of this tale of a man on Death row to his favourite artists and asking them to write songs to fit the moods and pictures. I haven't seen the much lauded finished movie, but this is as good a soundtrack as that of any Scorsese or Tarantino, but with the added bonus that all the songs are new.

Bruce Springsteen is on top form with his little cut, as are the likes of Tom Waits, Suzanne Vega, Steve Earle, the evergreen Johnny Cash also on top form with the sturdy as the proverbial brick Khazi 'In Your Mind'. Earle's 'Ellis Unite One' is a cracking song too, one the errant cowpoke guitarslinger reckons is the best thing he's ever done and he could just be right, turning in a compassionate and tearsome tale that'll give giants like cash and Brucie one or two grey hairs.

Nusrat Fatem Ali Khan and Eddie Vedder's collaborations are represented by two songs, the mystic 'The face Of Love' and the powerful 'The Long Road', while another ear-opener is a
LOU REED
SET THE TWILIGHT REELING
WARNER BROS 9362-46159-2

Lou Reed's umpteenth re-ascension continues: after the critical/commercial re-acceptance garnered by the loose trilogy encompassed by 'New York', 'Song for Drella' and 'Magic and Loss' (and discounting the necessarily so-so Velvet Underground reunion LP) Mr Reed is back on familiar territory. He's walking the mean streets of New York accompanied by the splendidly talented bass of Fernando Saunders - last seen with Reed alongside Bob Quine in his 'Blue Mask' era - and with solid drums of the aptly named Tony 'Thunder' Smith.

And if this is primarily a laid-back, relatively sedate Reed, waxing nostalgic for his childhood in 'Egg Cream' (a brilliant sweet kid's drink you won't find duplicated outside the Big Apple) or enjoying slow, quiet ruminations as in 'The Propositions', waxing lyrical re. his love for new partner Laurie Anderson, then this is the sound of a man finally moving into graceful maturity.

But not totally, thank Beelzebub - there's enough acrimony and bad language on the rocking 'Sex With Your Parents (part 2)' to earn Louis a PARENTAL GUIDANCE ADVISORY sticker, and the delicate intro to 'Finish Line' - almost Spanish in tone - is a trap followed by mountainous guitar and rhythm work. 'Riptide' too lives up to its title with a blazing nod to the memory of Jimi Hendrix that the master would no doubt have smiled approval at, and the coda of the closing title cut is a veritable blitzkrieg of sound.

Reed's own production is clean and balanced, and the lyrics scintillate with all the wisdom and bitter-sweet knowingness of his best work. "He actually was murdered/I'd taken him apart/But then I put him back together/I couldn't find his heart" for example, from the witty 'Trade In', along with a cast of Shakespearean characters and more (other) good lines than most contemporary writers can muster over an elpee's worth of toons. Hot stuff.

welcome return to form from the too-silent Patti Smith with 'Walkin' Blind'. Essential film soundtracks are a rarity but this surely is one of those. And I can't wait to catch the movie too.

ROCKET FROM THE CRYPT
SCREAM, DRACULA, SCREAM!
ELEMENTAL ELM 34 CD

Confession - they may have been around for three years and have released a number of discs, but this first full-length album is the first time I've heard this bunch of San Diego crazzies. It's still convinced me they're one of the most powerful and exciting bands to come out of America in a behemoth's age.

Rocket From The Crypt hail from San Diego - not a town synonymous with Rock'n'roll - but this is certainly the band to change all that. Three years old and consisting of lead vocalist/guitarist Speedo, mad axeman supreme N.D., bassist Petey X, the humungous drumming of the justly named Atom, and the big fat horn section produced by Apollo 9 (sax) and J.C. 2000 (trumpet), the combo have toured extensively with acts as varied as James Brown, The Misfits and Sun Ra.

It's cliché, true, but it must be said that "Scream, Dracula, Scream!!" (fab title) really is one of those discs that lets rip with a stupendous opener - the helter-skelter craziness of 'Middle' leaves even prime-era Ramones pipped at the post when it comes to energy and power - and simply never lets up until the closing 'Burnt Alive'.

According to the band's own sleeve notes the album was originally recorded as an entire, non-stop work, the gaps between the songs filled by "lush string arrangements" but had to sliced into "easily digestible pieces". Whatever, it's still a remarkably powerful, driven and fully cohesive work, as in early Ramones, Clash, Television, Love's 'Forever Changes' or the Stones' 'Let It bleed'.

HI-FI WORLD
MAY 1996
Television apart perhaps, all the aforementioned bands appear to have been put into the cauldron of Rockets' imagination, but they manage to still produce results that are uniquely their own. For the most part it’s brash, unadulterated rock out to the max - even when they do let up a bit, as on the relatively relaxed 'Used', the energy level remains valve-busting high.

This is what the Stooges tried but seldom managed to be, what the early Clash would have sounded like with better production. The remarkable thing is that this is an all but live recording and done - hard to believe but they say it's so - on 4-track. Hence perhaps the dense, soupy but highly effective and totally overwhelming mix. It may sound extremely pompous but this could easily be the next band to give Guns'n'Roses a run for their money. Nobody who loves their popular music fast, loud, snotty be the next band to give Guns'n'Roses a run for their money. Nobody who loves their popular music fast, loud, snotty should possibly afford to ignore this lot. A palpable HIT!!!!

I'm not sure what the Stooges tried but whatever it was, Is the Stooges Carole simply scored. It's so - on 4-track. Hence perhaps the dense, soupy but highly effective and totally overwhelming mix. It may sound extremely pompous but this could easily be the next band to give Guns'n'Roses a run for their money. Nobody who loves their popular music fast, loud, snotty should possibly afford to ignore this lot. A palpable HIT!!!!

The evil old Aussie is still around. But the decrepit Goth is turning into quite a handsome crooner these days. His material becomes more like Leonard Cohen with every record, while he still manages to maintain the shambolic, anarchic style that we associate with him.

Murder Ballads does in fact contain a good deal of humour and light hearted moments. It picks up from his excellent mid '80s Kicking Against The Pricks album of covers of American classics. Here, Cave continues his interest in American cultural ballads, trawling through the low-life, poor white trash of America's mid-West.

Musically, Murder Ballads veers from the rampaging, whacked-out polka that is The Curse of Millhaven to the bluesy soulful sounds of Stagger Lee, to the country hue of the Kindness of Strangers. With the talented help of the Bad Seeds, Murder Ballads stands out as one of the better albums of the year.

Mr Smith is a smooth, soulful voice. He has some clever rhymes and smart guitar solos for country chords. One for the mellow 'Hey Lover', and LeShaun on the brilliant duet 'Doin It', with samples from Grace Jones' 'My Jamaican Guy'.

Don't be put off. The old-timer wouldn't be cutting another album unless it was worth listening to. He's bigger and deffer and here to stay.

VARIOUS

Twisted Willie
JUSTICE TRACD 230
Yes, it's another compilation by assorted rock bands, this time paying their respects to Texan country-rocker Willie Nelson. With the likes of Johnny Cash, Jello Biafra and L7 covering Nelson's distinctive blend of redneck music with hippy ethic, the results are disparate. The tracks selected don't just stick to the hits, but delve deeper into the Nelson back catalogue. It seems that the more alternative the band, the more obscure their Nelson tune of choice.

There are fine moments on this CD, but as with many crossover compilations the product doesn't quite gel. Screaming Trees' Mark Lanegan delivers a magical slice of super cool country-rock, and Steel Pole Bath Tub's version of 'The Ghost' floats along with just the right proportions of grunge guitar and folk vocals. The Presidents of the United States' attempt at an up-beat funky number sounds like a clichéd butter commercial and L7 sound like... well how they've always sounded.

While some songs on this CD stand out as emotive slices of lost love, rebellion and the road, others lazily have replaced rock guitar solos for country chords and Nelson's effortless vocals for down-tempo rock drwalls. One for the obsessive collectors only. If you want country/rock crossover at its best, buy Nelson's original albums.
Another fantastic compilation from Soul Jazz Records, the people that brought out last year’s essential exploration of 70’s psychedelic jazz, United Sounds of America. This time, Soul Jazz have turned their attention to “Experiments in Latin Music, 1970-77” as this set’s sub-title has it.

This two-CD compilation explores various cross-genre recordings made during that time by musicians from the Salsa and jazz scenes.

Given that jazz is essentially a hybrid form and that Salsa is, truly speaking, simply a generic term for music from any of New York’s Latin population (Cuban, Puerto Rican, Brasilian, Dominican) the scope here for marvellous hybrids is infinite, as this collection bears out.

Fusing the basic elements of Salsa, its highly-charged, searing melodies and the essential rhythmic complexity of the clave, with the full-on intensity of group-improvised jazz and the propulsive drive of funk, the music here is a representation in sound of a city teeming and buzzing with the richest diversity of life imaginable.

There’s too much to go rough track by track, but the album’s closer, the Machito Orchestra’s epic 15-minute ‘Macho’ sums up much that’s great about this compilation. A simple vocal and percussion Cuban son-style opening builds into a giant suite with two dozen or so musicians swinging effortlessly from one (water-tightley arranged sequence to another, with individual soloists diving off into mind-bendingly expressive solos.

Of course, any compilation will have fans asking what happened to personal favourites but, overall, Nu Yorica, with its copious liner notes and fantastic (but too few!) photographs, offers a fascinating glimpse of another time, a world away.

I listened to this back-to-back with some recent drum-and-bass releases; for all Jungle’s claims to being a great and audaciously new hybrid, as an unspeakably exotic fusion of dance music, technology and expressive freedom, this more than 20-year-old music wins hands down. An essential album.

If you like your Latin jazz fusion a tad more pastoral, you might try this for size. Brazilian Egberto is one of contemporary music’s most astonishing - if overlooked - players and composers.

Originally a pianist, in the 70’s he taught himself classical guitar, eventually taking up a unique instrument, the 10-string classical guitar to re-create the piano’s range.

Meanwhile, the music he has developed, is a part-written, part-improvised blend of traditional Brazilian folk-forms and advanced European composition. That might sound pretty dry, but the music he’s made over the years, much of it charted on beautifully recorded albums on ECM, has been among the most seductive music of our time.

ZigZag, a trio recording made last year with guitarist/keyboard player Nando Carneiro and double-bassist Zeca Assumpção, doesn’t really map out any new areas, but it is a particularly fine example of Gismonti’s quietly exploring and richly beautiful music.
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Simon Cooke

TEODROSS AVERY

My Generation
IMP 11812

Reviewing Teodross Avery's debut album In Other Words (GRP 97982) in June '95 I closed with the prediction "I expect to recommend the next release even more heartily". That album, however, was by the Teodross Avery Quartet and this, while retaining Charles Craig on piano boasts a different line-up.

Behind Avery's tenor and soprano saxes John Scofield, Mark Whitfield and Peter Bernstein share the guitar credits, while Rodney Whittaker plays bass, Greg Hutchinson drums and Andrew Daniels provides the percussion. Black Thought of The Roots raps on track nine.

The 'rap thang' highlights this album's intent to offer a jazz-inspired voice for - or more accurately of - Avery's generation. This is a grand concept, but at 22 he still has some way to go to master all the jazz idioms. He switches styles rapidly from track to track in what might be thought a puckish and fickle way, but it doesn't dissipate the album's enjoyability.

Avery manages to pull off the trick of making contradictory styles - mainstream modern jazz and rap, for example - work together to produce a whole which is undoubtedly greater than the sum of the parts. It's done with thought and care for detail as well as an impressive musical knowledge and instrumental ability which would shame some older, more established players. There's a growing spark of spontaneity in his work, too; something I felt the previous album lacked. That makes this one a wholly engrossing work.

Of the 11 tracks here, Avery wrote all but three: Donald Brown's 'Theme for Malcolm', Nick Cave's 'Lover Man' (an excellent take) and Janet Jackson/Harris Lewis' 'Anytime, Anyplace'. The recording on all 11 is excellent.

THE KLAUS IGNATZEK QUINTET
Silent Horns
CCD 79729

Although it states on the cover that nine tracks on this album commemorate Fats Navarro, Howard McGhee, Lee Morgan, Booker Little, Kenny Dorham and Dizzy Gillespie, it's not immediately obvious on listening. Seven are written by Ignatzek himself, Claudio Roditi, who plays trumpet and flugelhorn) penned one and the last, 'Autumn Leaves' is by Mercer/Prevert/Kosma.

Roditi, Gustavo Bargalli (who shares the trumpet and flugelhorn credits with him), Ignatzek on ivories, Jean-Louis Rassinfosse on bass and Jorge Rosse on drums turn in an impressive performance both as soloists and as a unit playing mainstream jazz.

The only problem is that the recording is not quite what it should be, with the brass, especially suffering at the top end along with a slightly muddled staging. A pity, as otherwise, these guys work well as a band. Their names could be the result of an obscure directive from Brussels. I bet they're all called 'Fats', 'Slim' and 'Django' really.
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If a common thread links this month's very diverse recordings, it is that they all have a clear purpose. Whether it be music for the soundtrack of one of the year's major films, or to accompany the burial of a French king, to affirm a belief in the power of God and nature, or merely to demonstrate how period performance can alter the perception of even the most familiar pieces.

JOHANN SEBASTIAN BACH

Suites for solo cello No 1 in C Major (after BWV 1007); No 2 in A minor (after BWV 1008); No 4 in B flat Major (after BWV 1010 transcribed for lute).
Nigel North, lute.
Linn Records CKD049 (DDD/63.50)

There is an impeccable precedent for the ongoing tradition of transcribing the works of Johann Sebastian Bach for alternative instruments - no less than the composer himself. Bach was a fertile transcriber, especially for instruments which history suggests he did not find especially inspiring in the creative sense. Surprisingly, despite its widespread popularity throughout the musical world of the seventeenth and eighteenth centuries, the baroque lute was one such instrument.

Taking his cue from Bach, Nigel North has now completed transcriptions for lute of both the solo violin sonatas and partitas, and the six suites for solo cello (BWV1007-12), and it has proved to be a highly satisfying exercise. His recordings of the violin transcriptions were released to considerable critical acclaim on the Linn label last year, and I would imagine those of the cello suites - of which this is the first volume - will be similarly well-received.

Naturally, the success or failure of any transcription rests with more than the basic reworking of the notes. Is the style or character of the original unacceptably altered? Is its expressive power diminished? With Nigel North's Bach, the answer to both questions is emphatically, no. True, the very different sonority of the lute has an effect: cooler, perhaps, than the cello original, but not noticeably less engrossing or convincing. Much of this is attributable to the intelligent and sympathetic approach taken by Nigel North in his transcriptions, but the technical excellence and expressive understanding of his playing also make a substantial contribution.

Importantly, the nobility and splendour of Bach's conception is retained, along with its rhythmic vitality and a captivating translucency of texture. Bach, you can but feel, would have thoroughly approved of this most recent perpetuation of the ancient art of transcription, an art of which he was an undisputed master. He would also doubtless have relished the airy, limpid and naturally-detailed sound engineered by Philip Hobbs in St Martin's Church, East Woodhay. Altogether, a thoroughly rewarding musical experience.

PATRICK DOYLE

Sense and Sensibility - original motion picture soundtrack.
Tony Hymas, piano; Jonathan Snowdon, flute; Richard Morgan, oboe; Robert Hill, clarinet; Jane Eaglen, soprano; orchestra conducted by Robert Ziegler. Sony Classical SK62258 (DDD/42.57)

After graduating from the Royal Scottish Academy of Music and Drama in 1974, Patrick Doyle has enjoyed considerable success as a composer for radio, television, theatre and - most notably - film. In 1987, he joined Kenneth Branagh's Renaissance Theatre Company as composer and music director and went on to produce music for the company's productions of Hamlet, As You Like It and Much Ado About Nothing.

He went on to compose the scores for Kenneth Branagh's films of Henry V, Dead Again and Frankenstein, worked with Brian de Palma on Carlito's Way and Mike Newall (Into the West) and,
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in 1990, was commissioned by HRH The Prince of Wales to write The Thistle and the Rose, a song cycle for choir and orchestra to mark the nineteenth birthday of Her Majesty Queen Elizabeth The Queen Mother. Now, his score for Ang Lee’s film of Jane Austen’s Sense and Sensibility will surely enhance Patrick Doyle’s reputation still further.

It is not especially innovative - that probably wasn’t in the brief - but its mood, especially in the livelier sections, strikes me as ideal for the subject; a pleasant mix of folksy charm and high romance. Of particular note are two song settings, one to an anonymous text (Weep You No More Sad Fountains) and the other to words by Ben Jonson (The Dreame), beautifully sung by Jane Eaglen, both superbly crafted and worthy of exposure beyond the film soundtrack proper.

Of course, the final question to be asked of any soundtrack such as this is does it qualify as an enjoyable musical experience in its own right? The answer here - listening, for example, to the plaintive melodies of Combe Magna and To Die For Love - is undoubtedly, yes, especially as the orchestral and solo playing throughout is uniformly fine and imaginatively directed by Robert Ziegler. The recording, too, is sumptuous and well-balanced. I’m left intrigued to see how the aural experience fits in with the visual in the film itself.

**MICHEL-RICHARD DE LALANDE**

**Regina Coeli SS3/De Profundis S23/Cantate Domino S72.**

Ex Cathedra Chamber Choir and Baroque Orchestra; conductor, Jeffrey Skidmore.

ASV Gaudeamus CD GAU141 (DDD/56.06)

Born in Paris in 1657, Michel-Richard de Lalande enjoyed a forty-year career composing music principally for the court of Louis XIV at Versailles and attaining the post of Superintendent of Music to the court. His most enduring legacy was a wealth of sacred music for performance at liturgical occasions at the court, not least the daily ritual of the messe basse solennelle.

For these occasions, Lalande produced a host of ‘grands motets’, settings of psalms and canticles notable for their melodic invention, rich scoring, contrapuntal mastery and harmonic colour. The Easter antiphon, Regina Coeli, which opens the programme on this CD, was one such and provides an arresting entry-point to the music of this rather shadowy figure.

Lalande may have benefited handsomely from the patronage of Louis XIV, but the downside was that his music was rarely performed beyond the confines of the court. The first of the public concerts, Spirituels, in Paris in March 1725, came just a year before Lalande’s death denying him the pleasure of seeing how well his compositions were received by a wider audience.

Opportunities to hear Lalande’s music today are also few and far between, with few extant recordings outside France. So the enterprise of Jeffrey Skidmore’s Birmingham based Ex Cathedra ensemble, and of the ASV label, is to be applauded here, for this is music well worthy of wider appreciation. Ex Cathedra has made a specialty of championing neglected and unfamiliar composers of the French and Italian baroque, and this enthusiasm and experience is evident in the authority and panache of these performances.

Alongside the Regina Coeli setting, Jeffrey Skidmore has included Lalande’s magnificent setting of the De Profundis, composed for the funeral of Louis XIV in the Basilica of St Denis, Paris, in 1715 (although the work had its origins some twenty six years earlier). In his accompanying essay, Lionel Sawkins suggests that the concluding Requiem aeternam of this work is a movement without parallel in French baroque music and, hearing it so sensitively and movingly performed here, it is not an opinion I would disagree with.

The Cantate Domino of 1707 has come to be the most performed of all Lalande’s motets, so it is surprising to learn that this is the first recording of this wonderfully descriptive piece, music which also displays Lalande’s grasp of counterpoint to the full, not least in a mighty double fugue which could easily be mistaken for the work of Bach. Authoritative performances, and a well-balanced, recording engineered by Mike Hatch, make this issue in ASV’s Gaudeamus series an ideal introduction to Lalande, his music, and in no small measure, the world which he served loyally for the best part of four decades.

**FRANZ SCHUBERT**

**Drei Klavierstucke D946/Valse Nobles D969/Moments Musicaux D780.**

Peter Katin, piano.

Athené ATHCD7 (DDD/73.33)

Peter Katin is a recent convert to the notion of playing the solo piano repertoire on instruments appropriate to the period, but is now an enthusiastic advocate, witness this third recording for the Athene label. As he insists in his illuminating notes accompanying this new CD, the square piano should not be viewed as an outmoded predecessor of our present day concert grand, but rather as an instrument in its own right - and he then goes on to demonstrate the truth of that statement by giving an
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utterly compelling Schubert recital on a fine Clementi instrument from 1832. What will be immediately evident here, to those who have heard other recordings in this series from Athené, is that the sound of this instrument is much closer to that of today’s pianos than, for example, the 1789 Broadwood played by Joanna Leach in her revelatory Haydn recital (ATH CD2). Nevertheless, the Clementi still possesses an inherent intimacy and tonal subtlety which is not so easily accessible on a modern piano, yet its six-octave range in no way compromises the player, although - as Peter Katin points out - phrasing, pedalling and, to a lesser extent, fingering have to be re-thought. It is a challenge he clearly relishes.

After his fine performance of the Impromptus (ATH CD5), Peter Katin here moves on to the three piano pieces (Drei Klavierstucke). They bear all the characteristics of Schubert’s mature style, the outbursts of demonic energy, the episodes of dreamy melancholy, the undertones of dark foreboding and the moments of still, bittersweet sadness. In contrast, the Valses Nobles are charming, lightweight miniatures, written as entertainment pieces and wholly enjoyable for being just that.

The best-known pieces here are the six Moments Musicaux composed between 1823 and 1828 and published as Schubert’s Op94 in 1828, the year of his death. The title belies the true substance of these deservedly popular miniature masterpieces. Tersely expressive, there are close tonal links between them, yet each possesses its own individual mood and character, and each represents Schubert’s keyboard style at its most enigmatic. They can seldom have been played and recorded so convincingly as here.

OLVIER MESSIAEN
Chronochromie/La Ville d'en Haut/ Et exspecto resurrectionem mortuorum.
The Cleveland Orchestra; conductor, Pierre Boulez.
Deutsche Grammophon 445 827-2 (DDD/57.48)

Pierre Boulez’s recent recording contract with Deutsche Grammophon continues to pay handsome dividends. In the main, as well as committing his own compositions to tape, it has been an opportunity for the septuagenarian Boulez to revisit some of the composers with whose music he made his name as a conductor back in the ‘sixties and ‘seventies: Stravinsky, Schoenberg, Webern and his tutor at the Paris Conservatoire, Messiaen.

It was Boulez who made a pioneering and revelatory recording of one of the works appearing on this new issue, Et exspecto resurrectionem mortuorum (And I await the resurrection of the dead), for CBS some thirty years ago, when it was coupled with an equally memorable performance of Couleurs de la Cite Celeste (Colours of the Celestial City). That recording, as far as I am aware, has yet to be remastered for compact disc, so the arrival of this new interpretation of what is one of the most exciting and compelling of Messiaen’s orchestral works is especially welcome.

Et exspecto mortuorum is a vibrant tapestry of sound colour, drawing on a rich palette of woodwind, brass, bells and gongs, and taking the inspiration for each of its five sections from a Biblical text. Birdsong flutters between solemn brass chorales, ancient Indian rhythms, chiming bells and thunderous blows on the gongs. It is supremely effective as a piece of music in its own right, ignoring the theological foundation and it is not difficult to imagine the impact this music would have had at its first performance amid the sumptuous colours of the medieval stained glass in the Saint Chapelle in Paris on a May morning in 1965.

Clearly, Pierre Boulez has lost none of his enthusiasm for this work; the performance is as taut and dramatic as that CBS recording of three decades ago, and the playing of the Cleveland Orchestra is outstanding, as it is on the other works here: Chronochromie of 1960, and La Ville en Haut (The City Above) from 1987. Where Et exspecto represents Messiaen the musical theologian, Chronochromie portrays the ‘nature mystic’, the collector of exotic birdsong and the re-interpreter of arcane rhythms and modes. But, principally the work is concerned with the colour of sound.

Chronochromie marked Messiaen’s return to large-scale orchestral composition after an absence of some fifteen years, and comparisons with its predecessor, the Turangalila Symphony, demonstrate how much he had refined his musical language. Here we have not so much symphonic movements but a symmetrical seven-part structure within whose ordered time frames Messiaen creates a dazzlingly disordered sound world which draws upon birdsong from Europe, Asia and the Americas. However, there is no requirement to be an ornithologist to delight in this musical synthesis!

Between the two large-scale pieces, Boulez offers one of Messiaen’s later ‘theological’ works, La ville en haut, completed five years before his death in 1992. Scored for wind, brass, piano and percussion, it is an ideal companion work, recalling both the elemental simplicity of Et exspecto and the jewel-like colours of Chronochromie, and like its companions, its impact is only enhanced by the clarity, detail and atmosphere of DG’s recording, made in the fine acoustic of Cleveland’s Masonic Auditorium.
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There's also the question of durability. Although midis look good on the outside, they use budget components on the inside. This means they'll wear out quicker than separates, and should they be repairable, you'll often have to live without the whole system while one part is fixed. With separates, you can service or upgrade each part individually, recouping much of the new cost by selling the parts through Hi-Fi World's Classifieds in the main magazine. Most all-in-one systems are all but worthless second-hand.

DECIDE ON A DEALER
Don't automatically assume that buying mail order from a discount house is the cheapest in the long term. If you've got a good dealer nearby, you'll find paying slightly higher prices is well worthwhile in the long run. You wouldn't buy a car from Arthur Daley, so why throw caution to the wind with hi-fi? Some discounters aren't official stockists for brands they sell, meaning you could be buying a 'grey import' with the wrong plug, handbook or overall specification, let alone no warranty!

A good dealer will be able to demonstrate the system you're interested in, possibly in your own home, and advise on upgrades, tuning and matching. The latter is crucial. If you put together a system of unmatched top-end gear it may sound worse than properly matched mid-price equipment. That's just where a good dealer comes in. So in the long run, you'll get better sound, service and value from a real hi-fi dealer, rather than just a midi-system selling box shifter.

Continued on page 101...
GET THE BUDGET BALANCE RIGHT
Okay, so you've decided on a separates system from a decent dealer. What now faces you is finding the right combination, tailored to your needs. The good news is that you don't need to spend a lot of cash to get something really impressive. Taking a little time at this stage could save you a tidy sum.

When building a system for maximum sound quality, get the best source component you can sensibly afford, as the best amplifier and 'speakers in the world won't make a cheap CD player sound expensive. To illustrate this, we've put together some superb components in different combinations.

System 1 has most money spent on the 'speakers, while system 2 has most funds devoted to the CD player. In system 2, as the better Marantz player gets more music off the disc, the rest of the system has a better chance of reproducing it.

Excellent as the cheaper NAD player is in system 1, it can't get as much music off the disc. If it's not there the better 'speakers can't reproduce it, making the sound less involving.

When you're allocating your budget, as a general rule, funding should be tipped in favour of the front end of the system. Another thing to consider is the cost of decent equipment supports and cables. It wasn't so long ago that 'speaker stands were on castors and cables were usually wrested from doorbell wire! However, we now know these things greatly influence the sound. So, as it's essential to support and connect your system properly, leave some of your budget (usually around 10 per cent) for this.

MATCHING THE SYSTEM
This is the tricky bit. Use the Hi-Fi World Guide to short-list the best products to fit your budget. Use our in-depth reviews to advise on the particular characteristics of the products you've short-listed. Once you've got a good idea of the products you're after, use your dealer to audition them.

If you don't follow this approach, there could be problems afoot. Recommended products featured in the Guide are, in our opinion, the best available at their particular price points. But don't automatically expect them to all work well together. Bright-sounding CD players need smooth amps and 'speakers. Conversely, if your system is prone to boom, don't go for a bassy CD player. Don't be scared of the Measured Performance section of Hi-Fi World. Even if you don't understand the figures, there is some very useful and easy to understand advice to be had on matching.

INSTALLING THE SYSTEM
Most reputable dealers will offer a home installation service, but should you need to set up a system yourself, here are some things to remember. Ensure your system is out of direct sunlight and placed in a well ventilated location. If possible, use a dedicated equipment stand.

Use good quality interconnects between source components and the amplifier and use equal length runs of good quality 'speaker cables. If arrowed, it means the cables are directional and should be connected so the arrows point from source to loudspeakers - the direction of the signal.

Speaker placement is vital, and will require a degree of experimentation. Most work best with their grilles off and placed a reasonable distance away from the rear wall. All speakers, whether standmounters or floorstanders, should be spiked rigidly to the floor, and kept as far out of corners as possible. As a rule, bi-wiring is a useful, but modest improvement if you have this facility, but don't squander money on extravagant cables if it can be better spent on the source.

If you want high quality sound and value for your money, follow these simple guides:

1. Buy separates - don't be fooled by the flashing lights and gimmicks of micro, mini or midi systems.
2. Find a good hi-fi dealer - they can give you advice that will save you money and give you a better sound.
3. Read Hi-Fi World every month!
COMPACT DISC PLAYERS

DENON DCD-315 £150
Real hi-fi and real music for a mere £150. Achieves a good semblance of orchestral dynamics and acoustic space.

NAD S10 £200
A competent all rounder with lifelike soundstaging and impressive treble clarity.

NAD S12 £250
Its smooth sound and fine treble extension make the S12 something of a rarity at the price. For the money rivals are few.

ARCAM ALPHA ONE £300
An excellent entry-level player from Arcam that's far better than equivalently priced Japanese machinery.

MARANTZ CD-63 Special Edition £350
A superb budget buy. Addressing the problems of the CD-521 SE, its detailed and musical sound embarrasses many expensive players.

NAD S14 £350
The S14 delivers deep bass notes with conviction and weight. A supremely relaxing player to listen to with fine build quality.

ARCAM ALPHA FIVE PLUS £480
A well-built mid-price player that's a great all-rounder. Although highly musical and engaging, it has lost some of the warmth that made its antecedents so pleasant to listen to.

LINN MIMIK £839
The Mimik does what it's designed to do very well, with super-tight rhythmic presentation and plenty of detail. It can sound rather grey and clinical though.

QUAD 67 second-hand
One of Quad's best products for a long time, the 67 is warmer and smoother than most, yet is highly musical and revealing. Good enough to frighten many rivals.

DPA RENAISSANCE £895
Words cannot describe its infinite variety, but suffice to say you'll love it or hate it. Highly emotional, involving presentation with not a hint of self-doubt.

MARANTZ CD-16 £1399
An extremely neutral CD player, smooth and reserved in its performance. Beautifully built too.

LINN KARIK 3 £1600
Superb one-box player. Its supremely rhythmic, musical sound with delicacy and finesse puts it up with the best of the rest.

NAIM CD1 £1600
This single box 16-bit player sounds very engaging compared to your average bnistreamer. Has that vital single factor of the larger, two-box CDS.

MCINTOSH CDM709 £2635
A thoroughly inspiring machine. One of the most musical CD players around; sweet, open and detailed.

COMPACT DISC TRANSPORTS

TEAC VDRS-T1 £550
Not as substantially built as its chunky looks suggest, the T1 is nevertheless a good entry-level transport with a warm, expansive sound.

ARCAM DELTA 250 £800
A well-built transport with serious sound quality. It partners the BB50 well, especially when synced.

AUDIOLAB 8000CD £1300
Beautifully built and finished, the CDM is packed with sensible features and performs superbly, day-in day-out.

CD CONVERTORS

DPA LITTLE BIT 111 £300
A lot more weight at frequency extremes than the II and far better control. For £300 there's nothing to beat it.

PINK TRIANGLE ORDINAL £837
Pure, smooth sound free from harshness. One of the best at any price, losing little to the big guns.

DPA ENLIGHTENMENT £795
Some believe this to be the best convertor around. A truly charismatic performer, it dives into rock music with rare passion.

PINK TRIANGLE DA CAPO £1450+
Offers a choice of filter modules, all up there with the best. The Da Capo is superb in many respects, but can sound a touch polite on rock.

DPA 1024 £6000
Proof positive that today's CDs needn't sound like CD! Uses an in-house discrete convertor, and DPA haven't skimped on the build either!

TURN TABLES

GARRARD 401 second-hand
In a decent plinth with an arm of SME309 calibre, the 401 has a highly authoritative overall sound with the most solid, expressive bass in the business. Very musical, but treble isn't up to modern standards.

THORENS TD124 second-hand
One of Thorens' best-ever turntables. Needs a modern plinth to give it its best. Duly installed, it's good enough to face off the Garrard 401, swapping some of its bass power for a more delicate, incise treble.

SYSTEMDEK UX900/RB250 £330
A fine all rounder and easy to upgrade. Brings more depth and breadth than a Rega 3.

RESON rs1 £600
A lean, yet vibrant sound quality that really draws the listener in. With good detail and rhythmic integrity this is an impressive turntable package.

MICHELL GYRODEC £800
Stunning looks, build and engineering, and don't under estimate the sound. Standard PSU and SME arm gives a detailed, architectural, if undynamic sound. With QC PSU and SME V, its scale and insight kills the competition at the price.

PROJECT 6.1SA £999
The Pro-ject places the listener in the best seat in the control room. Outrageous dynamics and a punchy, seriously deep bass. Comes with Sumiko arm and Ortofon MC30 Supreme.

LINN SONDEK LP12 £840 - £1350
Cirrus bearing puts it back up with the best. Superbly beguiling, rhythmic sound that plays jazz like few others, but lacks the Groov-3's detail or imaging. With a Lingo PSU and EKOS tonearm, you'll forget CDs were ever invented.

PINK TRIANGLE ANNIVERSARY £1200
One of the finest-sounding turntables around, the Anniversary takes the listener nearer the recording studio than almost any other deck. Works with Rega, Linn and SME arms alike.

MICHELL ORBE £1950
The Darth Vader of analogue, the Orbe builds on the strengths of the Groov-3. An ultra-tuneful, expansive sound.

SME MODEL 20 £2495
Including the excellent SME V tonearm, the Model 20 is possibly the last great turntable, unless you've got £1,100 for the Model 30, that is.

TONEARMS

REGA RB300 £130
Supremely capable at the price, but not quite humankind's salvation as has been suggested. Detailed, tight, rhythmic sound but tonally rather grey and cold-sounding.

LINN AKITO £300
A well made entry-level tonearm which works especially well with the LP12, but struggles to match the RB300 on other decks.

SME 3009SII £375
This Paleolithic device doesn't bother with frequency extremes or detail, but its legendary serviceability makes it a cult in Japan. Oh death, where is thy sting?

SME 309 £750
A down-market version of the IV and V with aluminium armtube and detachable headshell. Tight, neutral sound with good tonality, but lacks the IV's pace and precision.

SME 309 £850
A Series V with lower toleranced bearings, cheaper cables and no damper. Still vastly over-engineered and almost capable of its bigger brother's sonic fireworks. SME's best value product.

SME V £1235
A masterpiece of precision engineering with a cohesive, ultra-transparent sound. A dream to set up and use.

LINN EKOS £1400
A thunderous battleship of an arm, with a very impressive sound, masses of detail and dynamics, but lacks the SME's cohesion and musicality.
CARTRIDGES

ORTOFON YMS-2E £10
Warn, full-bodied, punchy and fast. Not to be sniffed at for a tenner. Can be upgraded with a better stylus at a later date.

GOLDRING 1012GX £60
An accomplished MM with a solid bass, slightly forward midband and clean transients. £20 buys the faster, more dynamic 1022GX.

GOLDRING 1042 £100
The best moving magnet available. Has an extremely cohesive sound that's warm but highly involving. Deliciously delicate treble and strong, powerful bass.

ORTOFON MC15 SUPER II £109.95
An excellent budget moving coil with a smooth, polished, detailed sound. Tracks superbly but verges on the analytical at times. A bargain.

ORTOFON SUPERMITE £225-£450
The MC10, MC20 and MC30 Supremes all offer superb sound and value for money, with a distinctively rich, smooth and detailed musical performance. The valve brigade love them.

LJNN KLYDE £450
The Kykke's soft treble and prodigious bass mean it's tonally unbalanced, but it's still a real musicmaker that many will love in the right system.

ORTOFON MC2000 £650
We came across this one in a SME IV on a Garrard 401; it duly gave one of the best results we've ever heard.

ORTOFON ROHMANN £1000
In recent years, the MC2000 meets MC7500 with all the tonal strengths and dynamo sound Ortofon has been putting into its best moving-coil cartridges of late.

LYRA LYDIAN £649
A truly musical, sophisticated device that makes most other MCs sound frigid.

VAN DEN HUL MC-10 £840
Fluid bass, finely etched treble and highly tuneful in between. The MC10 is honey, pure and simple.

ORTOFON MC7500 £2000
Conclusive proof that there's hope for humankind. Makes music of enormous scale and vibrancy. CD lovers would die if they heard it.

INTEGRATED AMPLIFIERS

NAD 3020 second-hand
Classic sweet sounding, punchy budget super-amp with strong phono stage. Able to embarrass many modern budget amps.

NAD 310 £130
A real hi-fi amplifier at a bargain price. Forms the heart of a separates system that will murder any mid system at twenty paces. No phono stage, but you can't have everything at this price.

NAD 312 £200
Smooth, clear and dry. Fine detailing with little to complain about at the price. Good facilities.

ARCAM ALPHA 5 £230
A well-engineered budget amplifier with a bold, exciting presentation. Plenty of power and facilities, but lacks subtlety.

DENON PMA 450II SE £270
A solid, refined sound with plenty of power make this a good all rounder, but hard and steely with the wrong ancillaries. Mediocre phono stage.

AURA VA-80 £280
The VA-80 is superb for the price with a confident, powerful sound. One of the smoothest around, it is capable of embarrassing more upmarket competition.

PIONEER A-400X £300
A good budget amplifier but not as competitive as it once was. Phono input lets the side down somewhat.

AUDIOLAB 8000A £500
A jack-of-all-trades whose facilities, build, power and top-rate phono input make it a steal. Sound is good, but less involving than the Naim Nait 3.

NAIM NAIT 3 £500
A taste of high-end audio. The most involving, musical design at the price, but low power. Superb phono stage is £100 extra.

MISSION CYRUS 3 £500
Superb engineering, a solid cast chassis and a clear, spacious sound. Phono stage could be better.

SONNETEER CAMPION £579
An amplifier that delivers Oear studio definition along with exemplary timing. Utterly gripping.

DPA RENAISSANCE £595
Rich and smooth, the Renaissance is one of the sweetest amps around, if lightweight.

AUDION STERLING ETSE £600
Economically but well built single-ended valve amplifier. Wonderful clarity with vocals. £600 with 1 line input, £800 with 5.

SUGDEN A21 £640
Class A transistor amp. Rich, crisp, deep, tight sound and it images well too. Wonderful.

AUDIOLAB 8000S £650
Fast, clear, crisp sound with a wide-open sound stage. One of the best at the price.

MERIDIAN S51 £795
Beautifully-built integrated with a sweeter, cleaner sound than mid-price alternatives. Plenty of facilities and remote controllable.

UNISON SIMPLE 2 £995
This single-ended valve amplifier is smooth, sweet and open. An extremely musical amplifier.

UNISON SIMPLE 4 £1495
Somewhat similar to the Simple 2, but with more power and control.

AUDIONOTE OTO SE £1500
10 watts of the sweetest sound around. Use sensitive speakers though, because it's unlikely to crack windows or trigger earthquakes.

 McIntosh MA6800 £3725
The MA6800 not so much plays music as takes control of it, with effortless bass drive and a three-dimensional sound stage. Versatile with a broad range of abilities.

PRE-AMPLIFIERS

NAIM NAC32.5 second-hand
Naim's one-time top preamp is still a force to be reckoned with thanks to its precise, fast sound and excellent phono stage.

ROTEL RQ-970BX £130
Superb value entry-level phono stage with audiophile quality components and clear sound.

DPA DSP3005 £495
Not quite the SOS, but there's little to match it at this price if outright sound quality is your priority.

ROSE RV13-5 £495
This interesting valve/Transistor hybrid has a smooth, rich, spacious sound.

AUDIOLAB 8000C £520
Versatile with superb phono input. Can sound sterile, but latest version is much improved.

MICHELL ISO/HERA £530
This phono stage has fine midband and treble detail, with taut bass. The £550 ISO/HR brings more of everything, and for many people is the last word on the subject.

AUDIO INNOVATIONS P2 £749
Fantastic bass and super insight make this one of the best phono stages around. One for vinyl lovers.

AUDIOLAB 8000Q £995
Excellent line-level only preamp, greatly improves on 8000C with a more fluid, musical sound and greater grip. Remote control.

NAIM NAC82 £1945
This remote control preamp thrusts detail forth in true Naim fashion.

POWER AMPLIFIERS

QUAD II second-hand
Classic valve monoblock with many thousands still in use around the world. Archetypal warm, smooth valve sound, although not the last word in detail or dynamics.

LEAK STEREO 20 second-hand
The Stereo 20 can sound impressively up-to-date, although power and detail are ultimately limited.

QUAD 405II second-hand
Solidly built, but lifeless sounding, power amp which can be substantially improved by a Quad factory service.

MISSION CYRUS POWER £450
This power amplifier is a honey. Rich and smooth, but with a firm grip; a fine blend of properties.

ROSE RP190 £495
Used with the partnering preamp it gives 70 watts of smooth, relaxing sound.

SUGDEN AU41P £530
Extremely competitive at the price with 100W of unusually smooth, full-bodied sound.

SHEARNE PHASE 3 £619
A neutral, highly dynamic and thoroughly exciting amplifier. A sonic bargain.
The best solid-state cassette decks

**AIWA AD-S750** £150

Sonically a very decent machine. For the price there's nothing better. With Dolby B, C and S.

**TEAC Y-8020S** £650

A top deck that's wonderful to use. Gives superb results for those who want the best from cassette, with or without Dolby S.

**NAKAMICHI DR2** £600

Where serious cassette decks start. The DR2 pushes recordings to the limit, remaining unfurled at all times.

**NAKAMICHI CR7** £1500

Kills every other cassette deck and stamps on their graves. And the CR7 shouldn't need baubles like Dolby S, either!

LOUDSPEAKERS

**MISSION 730SE** second-hand

Big clear sound and tuneful bass with plenty of punch. An audiophile bargain at a budget price.

**KEF CODA 7** £120

Arguably the new king of budget standmounters, the 7 has a highly musical presentation.

**MISSION 731 LE** £149

An extensive reworking of Mission's entry level 'speaker, much tighter on transients and more refined treble. Neutral and revealing.

**TANNLOY 611 SE** £170

Great bass extension, super open and focussed midrange and fine detail up-top. Work best on filled dedicated stands; unmatched at the price.

**B&W DM601** £200

Tight, solid and tuneful bass with a clean and pure tonal quality. Midrange is a little laid back, but sound stage is wide and open.

**ROGERS LS322** £249

Big sound and a wonderful impressionist. Combine with matching AB33 subwoofers for extra bass depth.

**TDL RTL 2** £300

Bass on a budget from one of TDL's best floorstanders. Solid, vibrant and spacious sound.

**SYSTEMDEK SYSTEM 921** £300

One of the best mini-monitors around, with a coherent, involving sound that really sings.

**REL Q-BASS** £350

Few subwoofers match the Q-Bass at the price. The tuning controls can be a bit of a fiddle, but once set up the rest is pleasure.

**EPOS ES11** £445

Expertly refined, well engineered standmounters that need distinguished partnering equipment if they are not to sound over-polite.

**REL STRATA** £500

The Strata is not a toy. Offers superb, true hi-fi bass depth and power.

**MISSION 752** £500

More capable than many twice the price. Using advanced High Definition Aerogel drivers, the 752s are clear, crisp and focused. Good sensitivity makes them easy to drive.

**TANNLOY D100** £650

This small dual-concentric loudspeaker produces believable three dimensional imaging.

**EPOS ES14** £675

Epos' classic first loudspeaker has a forward, rhythmic presentation that will eat poor ancillaries for breakfast.

**CASTLE CHESTER** £700

Good sound allied to Castle's exquisite cabinetry and finish. Quarter-wave bass loading.

**PROAC STUDIO 100** £700

Excellent monitors with detailed, natural sound and plenty of atmosphere.

**HARBEATH HL-PJES** £799

A fine example of good loudspeaker engineering. The top of the mini-monitor league.

**UKD CALLAS** £850

High quality sound with a high quality bass from this solid walnut miniature.

**KEF REFERENCE SERIES ONE** £995

The KEF's combine pin-point imagery and detail with a smooth and polite balance. Good, agile bass too.

**HEYBROOK SEXTET II** £1129

Heybrook have retained the strengths of the original Sextet, whilst improving on bass extension and smoothness. Treble and imaging still up with the very best.

**KEF REFERENCE SERIES TWO** £1500

A truly endearing 'speaker, with clarity, cohesion, detail and precise imaging. Bass has superb extension.

**EPOS ES25** £1505

Epos' best. Combines near-uncoloured tonality with characteristic fireworks in the rhythm department. Superb by any other name.

**SPENDOR SP7/1** £1970

This big Spendor is very appealing thanks to its lucid sound and valve-friendly load.

**QUAD ESL-63** £2860

A reference against all other loudspeakers, with superb imaging qualities and genuine transparency. Earlier ESL model is an excellent second-hand buy, and both enjoy that legendary Quad service back-up.

**SPENDOR SP9/1** £3400-£3600

One of the clearest and most expressive loudspeakers you'll find for a large room. Beautifully finished.

**TANNLOY WESTMINSTER ROYAL** £10,000

An incredibly dynamic, detailed full-range horn design with a rich sound. Its high sensitivity predisposes it to valve amplification.
High Density Filler Material for Speakers and Stands

For maximum benefit from your loud-speaker / speaker stand combination, you should fill your stands with a suitable material. **SOUND-BYTES** are uniquely shaped steel chips, far more superior and four times more dense than sand, that once poured into the speaker stand, effectively provide a solid steel core within. This makes the stand an extremely dense heavy platform, ideal for improving bass and imagery.

Available in 4 litre tubs of approximately 20Kgs in weight, each tub will provide enough **SOUND-BYTES** to adequately fill most commonly available speaker stands and floorstanding speakers.

"It'll transform your unfilled stands, budget or dear."

Ken Kessler
Hi Fi News & Record Review July 95

**RECOMMENDED BY THE UK'S LEADING STAND AND LOUDSPEAKER MANUFACTURERS.**

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**ALSO AVAILABLE FROM**

**HI FI CORNER IS**

**DENSEN CD MAGIC**

£ 9.95

The Densen disc will demagnetize your system through the C.D.player. We don't know how it works, but if it doesn't improve your sound we'll give you your money back!
A stunning range of valve amplifiers
What Hi-Fi Elektra review
“A superb valve amp”

CD at its very best... Transports, Players, DACs.
Exceptional looks... Exceptional sound

Loudspeakers from £325 to £3750
TE60 amp £649
Extreme Neutrality Extreme Musicality TE60/Comete Tze “There aren’t many systems which convey this much detail regardless of price”
HFNRR 1994

AVAILABLE FROM

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EX DEMONSTRATION EQUIPMENT SALE March / April 1996

| ATC SCM10 Walnut speakers boxed as new | WAS £1080 NOW £795 |
| AUDIOLAB CDM/DAC Transport & DAC      | £2100 £1750 |
| AUDIONOTE SORO SE Tube amplifier phone | £1999 £995 |
| AUDIONOTE DAC 2 Tube DAC              | £1099 £695 |
| AVI S200MC CD Player                  | £1149 £995 |
| AVI S200MA stereo power amp           | £599 £475 |
| EPOS ES14 spks inc EPOS Stands       | £790 £995 |
| MICROMEGA CDS.1DUO85 Transport & DAC  | £2150 £1750 |
| ROKSAN OJAN 3 Rosewood spks           | £995 £695 |
| RUARK TASMAN II Natural Walnut Speakers | £749 £625 |
| RUARK TEMPLAR Surl Walnut Speakers    | £499 £375 |
| YAMAHA DSP680 Processor Boxed as new  | £450 £325 |

The above is a selection of ex-demonstration equipment we currently have. A full offers list including second hand equipment is available on request. All equipment is guaranteed.

powerplant

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ATC, Audiolab, Arcam, B&O, Cyrus, Exposure, Microomega, Marantz, McIntosh, Proceed, Riqo, Roksan, Stax and other quality equipment.

Mail order and Worldwide Export service available

HOVLAND • MusiCap®
new distribution for Europe

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<td>£2.15 ea</td>
<td>3) PRIMARY 230V</td>
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**OIL FILLED CHOKES**

<table>
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<th>Type</th>
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<tr>
<td>5H 200MA</td>
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<td>5H 400MA</td>
<td>£2.25 ea</td>
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<tr>
<td>10H 250MA</td>
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<td>4.5H 280MA</td>
<td>£1.50 ea</td>
</tr>
<tr>
<td>4.5H 220MA</td>
<td>£1.50 ea</td>
</tr>
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</table>

**AVO CT 160 VALVE TESTER, REFURBISHED AND CALIBRATED**

- **MAKE AND MODEL**
  - ARCHANGELA KORA ONE
  - ARCHANGELA KORA 100
  - ARCHANGELA KORA 50
  - ELEONOR WANG X:1000
  - ENERGIX M4 100 E
  - ENERGIX M4 S
  - ENERGIX M4 1500 E
  - ENERGIX M4 1000
  - EMINENCE W2000
  - EMINENCE W2000 T
  - EMINENCE W2000 PW
  - EMINENCE W2000 N
  - EMINENCE W2000 EX

**TYPE**

- AV AMPIFIER
- CD AMPIFIER
- DYNAMIC AMPIFIER
- PRE AMPIFIER
- POWER AMPIFIER

**WAS**

- £799.00
- £799.00
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**Mail Order Services**

- Major Credit Card Accepted
- Call 01788 540772
- or write to 12 Regent Street, Rugby, Warwickshire
Hello Peter,

Recently you supplied me with Slate Audio speaker stands for my Harbeth Compact 7 monitors and a plynth, arm & cartridge for my Garard 301 turntable. I can honestly say that this was money well spent!

I am a studio engineer and as I use my Harbeths for mixing sessions, it is absolutely critical that they reproduce what has been recorded without colouration, warts & all! Other stands, despite manufacturers’ claims, are not always neutral. Not so Slate Audio. They give me definition from the loudspeaker I have not heard before. They also give me positive immaging.....I can place an instrument or effect wherever I want in the stereo with confidence. Recently I worked with a group that used a 26 inch kick drum...notoriously difficult to record. But I was able to record & mix knowing that what I was hearing was true. The proof of the pudding was when the test pressing arrived at my home and all the 30 & 40 hz were still present and not “rolled off” in the cut. Thank you Abbey Road Cutting Room.

The marble plynth for my 301 is a work of art. I am happy to say that it sounds as good as it looks. I had been listening soley to compact discs at home for the last five or six years, and when I first put up the Slate Audio 301 I must admit to having quite a shock. It took me a short while to get used to the sonics of vinyl. However, once adjusted, forever converted. Now that my cartridge is run in I am more than happy to ditch the CD player in favour of my old records. They have new life, dynamics & energy. Thank you Peter Soper.

Kind regards,

KEVIN VAN GREEN

STUDIO SALES - DESIGN - INSTALLATION

SLATE AUDIO
☎ 01525 384174

THE BEST SPEAKER STANDS & RECORD PLAYERS IN THE WORLD
The experience of listening to music on most Hi-Fi systems is a pale imitation of the experience of live performed music. This should not be the case but the language of Hi-Fi journalism shows us how we have come to accept that it is. Undue attention is paid to incidental issues whilst the fundamentals are overlooked. Unsurprisingly Hi-Fi has become an acquired interest, one that non audiophiles are amused or puzzled by. These non audiophiles would not be puzzled by a live performance of their favoured music programme. Live orchestral music has a rich balance of qualities that Hi-Fi can rarely reproduce, scale and effortless dynamic range, power with grace and fineness of tone. Definitive Audio has for years only been interested in equipment that can reproduce the full breadth of this experience. We achieve this to a standard that has been making waves and changing the industry. Experienced audio journalists have described our systems as "so real it makes a mockery of conventional stereo" (Jonathan Kettle - Audiophile) and "Good enough to represent the country" (Jason Kennedy - Hi-Fi Choice) Maybe you should find out why?

SECOND HAND ITEMS FOR SALE

<table>
<thead>
<tr>
<th>Item Description</th>
<th>SALE Price</th>
<th>RRP Price</th>
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<td>LFD PA2M MONO POWER AMPLIFIERS (CORIAN) 2months old</td>
<td>£1500</td>
<td>£2200</td>
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<tr>
<td>LFD LINE PRE AMPLIFIER TO MATCH ABOVE 2 months old</td>
<td>£1500</td>
<td>£2000</td>
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<td>LFD 5m BI WIRE SPEAKER CABLE</td>
<td>POA</td>
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<tr>
<td>HORNING AGATHON 3 WAY HORN OAK</td>
<td>£300</td>
<td>£180</td>
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<tr>
<td>STAX SR4 HEADPHONE</td>
<td>£2800</td>
<td>£1400</td>
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<td>TEAC VR-50 20 12 MONTHS OLD</td>
<td>£1380</td>
<td>£2500</td>
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<tr>
<td>MICROMEGA DUO CD2 TRANSPORT</td>
<td>£1500</td>
<td>£4500</td>
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<tr>
<td>SNELL AII 3 WAY LOUDSPEAKER SYSTEM</td>
<td>£450</td>
<td>£800</td>
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<tr>
<td>SNELL JII 2 WAY LOUDSPEAKER SYSTEM</td>
<td>£375</td>
<td>£520</td>
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<td>MONITOR AUDIO MA 801 ROSEWOOD</td>
<td>£230</td>
<td>£1500</td>
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<td>MUSICAL FIDELITY CDT VALVE CD</td>
<td>£600</td>
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<tr>
<td>AUDIO INNOVATIONS CLASSIC 25 KIT - NEW</td>
<td>£400</td>
<td>£500</td>
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<tr>
<td>AUDIO INNOVATIONS $200 POWER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VARIOUS EQ SUPPORTS AND USED HIGH END 1/2 CABLES AND SPEAKER CABLES</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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DIRECT FROM NVA OR PARTICIPATING RETAILERS:
- Chantry Audio-Newark.
- Doug Brady Hi-F-Warrington.
- Sound Approach-Norwich.

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All of us at Audio Engineering with everyone a very happy xmas and a sonic new year.
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MEASURED PERFORMANCE

It's important to measure products to assess performance, find explanations of sound quality and warn of peculiarities or faults. Only Hi-Fi World has an advanced in-house laboratory with digital signal analysis for this purpose. In conjunction with this facility we assess sound quality in our own acoustically treated listening room. We measure most products reviewed. Here's a simple guide on our test results.

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 aurally 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 mismatched MPX filter). Distortion and channel separation need to be less than 0.3% (according to harmonic structure) and better than 25dB.

Hiss level must be lower than -70dB for Radio 3 silences to be just that - silent. And full quieting, the strength of aerial signal needed for optimum results, should be around 1mV or less

Selectivity, the ability to separate stations under the most difficult conditions should be better than 60dB and sensitivity better than 30μV on stereo.

CASSETTE DECKS

Replay performance is measured to IEC 94 Standards using IEC test tapes. This ensures that recordings made on a machine transfer to a car player, personal stereo or another domestic recorder properly, as well as ensuring optimum results with commercially prerecorded tapes. Look for a quoted replay response of 40Hz-10kHz, no more than 1% speed error and hiss in the replay amps lower than -59dB.

Recording quality considers frequency response, bias variation, head performance and alignment. Frequency response should stretch from 40Hz-15kHz or so. Head overload (MOL315) must be above 0dB, reaching around +4dB for good results.

From the transport mechanism look for less than 0.15% wow or flutter. Overall (DIN weighted) wow and flutter should be no more than 0.1% or so.

AMPLIFIERS

NAD 312

The 312 was an interesting piece of kit to measure. To start with NAD have provided a switch at the back to select the load impedance. Into dummy loads of 8Ω and 4Ω power output was found to be 55 watts and 56 watts respectively.

Frequency response was very respectable spanning 8Hz to 42kHz at ±1dB. This amplifier also has a set of tone controls which can be bypassed by the use of the tone defeat button.

Other measurements were generally very good with distortion at normal listening levels going down to 0.008% at 1kHz. Distortion did, however, rise steadily at higher frequencies and was predominantly third harmonic.

Supplied too is an in-built MM phono stage. Frequency response at -1dB roll off was 13Hz to 45kHz. I would expect a solid bass response through this stage.

Otherwise, results were respectable with sensitivity a fairly normal 3mV with good 72dB separation and an input impedance of 47kΩ.

All in all, on the test bench, the NAD 312 is a well engineered amplifier with an competent Moving Magnet phono stage. HB

TEST RESULTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
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</thead>
<tbody>
<tr>
<td>Power</td>
<td>55 watts</td>
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<tr>
<td>CD/tuner/aux.</td>
<td>8Hz-42kHz</td>
</tr>
<tr>
<td>Frequency response</td>
<td>66.6dB</td>
</tr>
<tr>
<td>Noise</td>
<td>-104.2dB</td>
</tr>
<tr>
<td>Distortion</td>
<td>0.04%</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>220mV</td>
</tr>
<tr>
<td>dc offset</td>
<td>0.2/0.1mV</td>
</tr>
<tr>
<td>Disc</td>
<td>13Hz-45kHz</td>
</tr>
<tr>
<td>Frequency response</td>
<td>72dB</td>
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<tr>
<td>Noise</td>
<td>82dB</td>
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<tr>
<td>Distortion</td>
<td>0.04%</td>
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<td>Sensitivity</td>
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<td>Overload</td>
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HIFI WORLD

World Radio History

MAY 1996

119
**SOUND STAGE HI-FI**

**COMPETITIVE PRICES FOR EX-DEM & SECOND HAND EQUIPMENT**

**SOURCE COMPONENTS**

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Price</th>
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<tbody>
<tr>
<td>V.O.Y.D. &quot;THE VOW) TURNTABLE MAHOGANY S/PH PSU</td>
<td>£1100</td>
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<tr>
<td>V.A.N.DEN HUL ZETA TONE ARM, BOXED</td>
<td>£325</td>
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<tr>
<td>VAN DEN HUL MC ONE CARTRIDGE</td>
<td>£450</td>
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<tr>
<td>MICROMEGA STAGE ONE CD PLAYER</td>
<td>£400</td>
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**AMPLIFIERS**

<table>
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<tr>
<th>Product Description</th>
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<tbody>
<tr>
<td>AUDIO RESEARCH BLI BALANCED LINE DRIVER</td>
<td>£2800</td>
</tr>
<tr>
<td>AUDIO RESEARCH D125 POWER AMP (SILVER)</td>
<td>£600</td>
</tr>
<tr>
<td>AUDIO INNOVATIONS $500 INTEGRATED AMP.</td>
<td>£600</td>
</tr>
<tr>
<td>QUAD II VALVE MONOBLOCK (AS GOOD AS I'VE SEEN)</td>
<td>£450</td>
</tr>
<tr>
<td>AUDIO INNOVATIONS $1000 PHONO</td>
<td>£650</td>
</tr>
<tr>
<td>EAR 859 INTEGRATED AMP (SINGLE ENDED HEAVEN)</td>
<td>£950</td>
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<tr>
<td>LINN KS280/SPIRKL</td>
<td>£575</td>
</tr>
<tr>
<td>COUNTER POINT SA2 MC STEP UP TRANSFORMER</td>
<td>£550</td>
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**SPEAKERS**

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<tr>
<td>MAGNEPLANAR 3 (OATMEAL/ASH)</td>
<td>£1250</td>
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<td>MAGNEPLANAR SAGA (BLACK/ASH)</td>
<td>£310</td>
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<tr>
<td>MISSION 751 BLACK</td>
<td>£180</td>
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<tr>
<td>AEI METAL STANDS</td>
<td>£165</td>
</tr>
</tbody>
</table>

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**ALL GOOD EQUIPMENT BOUGHT OR PART EXCHANGED.**

**THE EMPORIUM**

283- Nicholas Street, Dix, Norfolk.

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Quad II 6 pairs available
Leak Stereo 20 7 available
Leak TL12 2 pairs
Quad 33
Quad 33/303, FM boxed
Garrard 301 grey min resprayed with
GME 3012 in 50kg plinth
Croft micro A
Garrard 401
Meridian 208B CD player, boxed
Meridian 201 pre
Meridian D600 digital speakers (3 digital & 2 analogue inputs fully remote, mint boxed, walnut, cost £2500 new)
TDL studio 2
Leak Througeline 2 gold with studio 12 decoder
Troughline 3, studio 12 decoder
Troughline stereo origin
Dynesco stereo 120 early transistor power amp
Raford STA25x22
Lowther cabinets & drive units available
Quad valve tuners
Musical Fidelity MX1
Musical fidelity pre 3a

**WANTED**

Good quality vintage HiFi
Tannoy HF0/200/amp
Pye HF12HF25/FB3/HF10/HF20
Avantec anything
Raford anything v/e/p
t Quad anything & everything esp 63
t Quad FM4 six wanted!
Radford anything valve
Leak TL12

**THE NEW ROSE SCION AMPLIFIER**

The two box 70 watt integrated amplifier contains the power amp, power supply with volume control in box 1. box 2 has the pre-amp source select excepting 5 input with 2 phons MM/ MC. Price £545. Orders are now being taken.

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AMPLIFIERS

SUMO ATHENA II POLARIS III

SUMO have put a bit of power our way. Utilising MOSFET output transistors the power amplifier delivers a massive 153 watts into 8Ω and an even greater 225 watts into 4Ω. This is plenty for all but the most inefficient loudspeakers.

This pre/power set up delivered a more than adequate frequency response, spanning 6Hz to 95kHz within 1 dB limits. Distortion figures were particularly impressive with very little change between low and high power levels. High frequency results were notably good which is a typical signature of Field Effect transistor output stages.

Separation figures were a bit lower than the best at 72dB and line sensitivity of 350mV too high for full power from some low output sources. There was no disc stage in the samples provided. HB

TEST RESULTS

| Power | 153 watts |
| CD/tuner/aux. | 6Hz-95kHz |
| Frequency response | 71.8 dB |
| Separation | -85.75 dB |
| Noise | 0.016% |
| Distortion | 350mV |
| Sensitivity | 0.8/3.5mV |
| dc offset | 0/0mV |

AUDION STERLING E.T.S.E

Using EL34M valves at the output stage the Sterling E.T.S.E (Extended Triode Single Ended) delivers 11.2 watts into an 8Ω load, so it does need a sensitive loudspeaker.

Frequency response at ±1 dB was found to be 16Hz to 30kHz with the latter figure falling on the plus side of the limits. There was also a noticeable 0.5dB lift at about 26kHz.

The noise and separation figures were found to be very average possibly giving some background hiss and a more centrally focussed image particularly in the mid-band. Distortion figures weren't of the highest standard either, reaching the mildly dizzy heights of 2.2% at full power, predominantly second order, with third order coming in at a very close second! This should contribute to a warm sound.

Input sensitivity is a fairly decent 200mV which is a little insensitive than average. A valve amplifier of average quality, standard measurementwise. HB

TEST RESULTS

| Power | 11.2 watts |
| CD/tuner/aux. | 16Hz-30kHz |
| Frequency response | 67dB |
| Separation | -78dB |
| Noise | 0.5% |
| Sensitivity | 200mV |
| dc offset | 0/0mV |

ENSEMBLE CORIFEO

A rather curious frequency response of only 4Hz to 18kHz within 1dB limits was achieved on the test bench. Although it could be argued that most, if not all of us can't hear beyond this, the trend has been for wider bandwidths of late.

Power handling into an 8Ω load is a neat 110 watts with a healthy 156 watts into 4Ω. This should be adequate for driving most loudspeakers.

The 280mV sensitivity through the pre-amp/DAC 'Dichrono', all in one unit, is fairly standard and should cope with most input signals subjected to it.

Unusually the Ensemble's distortion went down at higher frequencies (0.03 at 1kHz, 0.02 at 10kHz) which I can only attribute to its early high frequency roll off. A warmer than average sound can be expected. HB

TEST RESULTS

| Power | 110 watts |
| CD/tuner/aux. | 4Hz-18kHz |
| Frequency response | 84dB |
| Separation | -96.7dB |
| Noise | 0.02% |
| Sensitivity | 280mV |
| dc offset | 12/12mV |

AUDIO VALVE PPP 45 MONOBLOCKS

Built so fingers can relatively easily touch the circuit board inside, not intentionally I hope, this Audio Valve concoction delivers a neat little 12.5 watts into an 8Ω load. This seems a modest value when compared to amplifiers in general, but is not out of the ordinary in the valve kingdom. One should be careful however to match them with good, efficient loudspeakers with high sensitivity figures. Otherwise it is rare that anyone requires listening levels that go beyond the capability of this amplifier.

Frequency response is 9Hz to 22kHz, covering the sonic spectrum within the 1dB limits, but not going much further. This probably accounts for the low high frequency harmonic distortion figures that were achieved with 0.1% at full from 10kHz as opposed to 0.35% for the 1kHz response.

The noise figure was found to be higher than normal at -57dB so one might expect some audible hiss. Separation figures shouldn't really be considered here as we are playing with monoblocks, but sensitivity was good for a power amp block. HB

TEST RESULTS

| Power | 12.5 watts |
| CD/tuner/aux. | 9Hz-22kHz |
| Frequency response | 100dB |
| Separation | -57dB |
| Noise | 0.05% |
| Sensitivity | 450mV |
| dc offset | -1.8/-1.8mV |
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LOUDSPEAKERS

TANNOY 631 SE
The Profile 631 SEs have a very smooth frequency response. There's a little lift in the upper bass which with give them a rich and full-sounding bottom end. Above this though the response stays within tight 1dB limits. Treble extension is good too which should give them fine insight and detail.

They are not the most sensitive miniatures though. I measured 85dB sound pressure level at 1m using a nominal watt (2.83V) pink noise signal. Overall impedance measured 7Ω, and apart from a strong fall at high frequencies, the impedance curve was relatively flat.

I'd recommend amplifiers capable of delivering around 50watts for best results, although these loudspeakers are likely to be used in small rooms where high volume levels are impractical, so you may get away with slightly less.

TECHNICS SB-M500
Technics' SB-M500s have been engineered to a very high standard. Not only is the frequency response very smooth, but the small trends hidden within it I suspect will give good subjective results. There is a gentle plateau lift around 5kHz which will add insight and detail. Above this upper treble is smoothly rolled off to make sure they aren't too sharp. Bass output is very flat, again a gentle lift around 100Hz will add speed and punch.

Like the SB-M300s, the 500s aren't that sensitive. I measured 86dB at 1m with a nominal watt (2.83V) pink noise signal. The impedance curve also shows a sharp rise in the midband indicating that the 500s are a reactive load. With an overall impedance of 7Ω I'd recommend amplifiers capable of delivering around 50watts minimum.

MUSICAL TECHNOLOGY FALCON EXPORT
Big three-way loudspeakers are especially difficult to engineer, so congratulations must go out to Musical Technology who have managed to engineer a remarkably flat response from their Falcon Export loudspeakers. The lift in the upper treble should lend insight and detail, and a shallow drop through the midrange will keep them smooth. Bass didn't go that low though, so expect dry bass.

Driving the Falcon Exports won't be a problem either. They have a reasonably smooth impedance curve, apart from the dip around 3kHz where the tweeter comes in, and an overall impedance of 7Ω. This, coupled with high 90dB sensitivity measured at 1m using a nominal watt (2.83V) pink noise signal, means they will go loud with few watts. Amplifiers in the range of 15-50watts should be appropriate, depending on the size of room you intend to drive.

ENSEMBLE ELYSIA/PROFUNDO
The Ensemble Elysia loudspeakers can be used as a high quality miniature loudspeaker, or stacked on top of the stereo Profundo subwoofers. The response plot below shows a very flat and smooth frequency response from the Elysias, with the extra bass extension provided by the Profundo subwoofers. There is a slight plateau lift in the treble, not enough to unbalance the sound, but it will certainly give them a detailed and insightful sound.

The impedance curve of the Elysia/Profundo combination was especially smooth, presenting a mainly resistive load. Sensitivity was a little low though, so I'd recommend amplifiers capable of delivering at least 50watts, especially as the Profundo subwoofers benefit from the extra control afforded by more powerful amplification.
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LOUDSPEAKERS

KEF 60S

Coming from KEF I was expecting the 60S monitors to have a flat response. I was wrong. They have a lumpy response, and treble level is too low. As this is high treble it will be noticeable as a lack of space and atmosphere, rather than a dullness. The lift through the midrange will give them good projection though.

As you'd expect from a miniature satellite loudspeaker, bass rolled off early at 180Hz or so. But their intended partner is the 30B subwoofer. Pushing out just 86dB at 1m for a nominal watt (2.83V) pink noise signal, the 60S will need 30-40 watts to drive them properly. Their low overall impedance of 5.8Ω also means they will draw more current than most but impedance does stay high through the midrange and treble. DB

CD PLAYERS

NAD 512

New models seem to flood out of the NAD stable as often as thunder storms hit Florida. Again we have been handed a neatly engineered grey box.

Gently rolling off at the very top, which should ensure a smooth sound, the NAD 512 has a standard 4Hz to 20.8kHz frequency response. Amicably consistent throughout, this CD player displays low distortion at all levels.

No particular measurement aspects could be criticised, with noise low, separation wide and dynamic range healthy. A slightly higher than average output level of 2.25V was produced, but this is no bad thing for those who prefer to use passive preamplifiers. HB

Frequency response 4Hz-20.8kHz

ENSEMBLE DICHRONO

Ensemble have splashed out on TEAC's VRDS mechanism for their CD player and measurement wise at least it certainly seems to have paid off. The Dichrono system comes in the shape of two boxes, the transport and the DAC which is incorporated with the preamplifier (for the power amp.).

Frequency response was near perfectly flat from 4Hz to 21kHz. Distortion at -30dB was predominantly odd order harmonic although still at a reasonably low level of 0.021%.

High frequency separation was to say the least excellent, at well above 100dB. Most other aspects were in the above average class with output voltage at a value of 2.1V.

A generally well engineered set up which I suspect will provide consistent and accurate results. HB
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AUDI'O INNOVATIONS ALTO
The Alto gave us the lowest -60dB (music level) distortion measurement of all CD players measured to date. A contributory factor could be the neatly tailored high frequency roll off evident from its frequency response, although the Alto did maintain the standard 4Hz to 20.6kHz, at +/-1 dB, response found in most CD players.

Another plus for this baby was that the channels were almost entirely consistent, a remarkable achievement in itself. Clearly a lot of attention has been given to layout and component tolerancing.

Separation results were excellent throughout the audio spectrum with low noise figures too. Output was found to be much higher than the standard 2V giving a near 3V output.

All in all the Alto is a very well engineered product. HB

QUAD 7712
The Quad 7712 has 'well engineered' written all over it. Frequency response is immaculately flat in the range of 4Hz to 21kHz with both channels balanced to near perfection.

This theme really does run throughout. Distortion, separation and dynamic range measurements were virtually identical on both left and right channels as was output signal level. This was set close to the 2V Philips standard at 1.96V.

Separation figures at higher frequencies weren't found to be amazing, but adequate none the less. It was not possible to obtain a noise figure because the Quad muted. HB

CASSette

DENON DRM-55
The Denon cannot exploit metal tape. Under test the head overloaded early, especially at low frequencies, generating high distortion. Both the replay only (pre-recorded) and the record/replay frequency response (recordings) displayed falling bass, so I'd expect the machine to sound bass light too. Since variable bias tuned in ferric and chrome tapes well, I'd recommend users stick to quality ferric tapes, or perhaps chrome for less hiss. With light bass and upper treble roll-off, pre-recorded tapes are likely to sound both bass light and a trifle dull.

The tape transport mechanism held speed well, so I'd expect little audible slewing and jerking of the sort that intrudes into piano sustains, for example. This part of the Denon worked well.

Denon have placed the 0VU peak record point very high - above IEC 0dB. This is OK if the limit is taken literally, with short term peaks going no higher.

The DRM-550 is respectably engineered at the price, but no more. NK
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Technical specification: dual mono construction, 40W/channel, 12Hz to 25kHz frequency response and a primary reflected transformer impedance of 380Ω. Full connection diagrams, specifications, as well as circuits for using each transformer. £2.50. Power supply board: board only £20, component pack, add £45. Power supply board: board only £20.50. Power supply board: board only £27.50, component pack, add £44, populated board £56. Input board: board only £15.50, component pack, add £26, populated board £33.

The output transformers are configured for the McIntosh connection and have excellent low frequency response and a primary reflected impedance of 380Ω. Full connection instructions provided. Price £70. The mains transformer is wound for dual mono construction, as this gives superior isolation between channels which stops phasing and eliminates inter-channel ground loops in the amplifier. Primary 0-230-240V. Secondaries 2x295V@20mA, 2x6.3V@0.45A, 16V@1A. Price £90. Other primary voltages can be supplied to special order. These transformers are also suitable for power supplies in preamplifiers and other line level valve circuits - see data sheet for details, £2.50.

The chassis (main chassis and transformer cover) is made from mild steel, finished in black. Price £110. For those who wish to use a high quality chassis for their own projects, details of the chassis are given in the 402 reference manual, £0.50.

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WANTED: E.M.I. TR/90 studio recorder. £140. Sugden Connoisseur Craftsman 3 amplifier, two months old. 5 year warranty. £550.

CHOICE, November 1995 £600 pair or new £750. Harbeth Monitor £175, LS-10 £275.

RÓGERS - EXPORT MONITORS £175, LS-10 £275. KEF LS-50 £300, KEF LS-55 £600. Offers

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**World Radio History**

**MAY 1996**

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The Parts Connection Catalog & Resource Guide, Volume 2 includes specs and curves for the most commonly used audio tubes as well as some basic tube electronics theory from the RCA Receiving Tube Manual and that’s not all. There are schematics for many classic tube amplifiers and pre-amps from Dynaco, Marantz, Quad, McIntosh and more. Also included are white papers on the technical benefits of premium film caps and metal foil resistors.

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Lumley Reference passive preamp (chrome) £250
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YBA power 3 £299
Audio Note Melshu £210
Arion Elskota export £999
Adyton Opera integrated amp £1,995

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TURNTABLES
Michell Gyrodec / Well tempered arm / Supex cartridge £799
SME Series V arm £699

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YBA CD2 player £1,650
Meridian 208 Transport + DAC, digital preamp, remote control (inc volume) £650

SPEAKERS
Sonus Faber Amator IIs (just fabulous) £1,699
Triangle Altinis (beautiful speaker, sensitive for low power valve amps) £1,499
Triangle Alcante-speakers (sensitive, good match to valve amplifiers) £550
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Dacnoo PAS valve preamp £165.
PACT transistor tuner £55. £165. £165.

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DAC 5/6.2 power £430. DAC 5.
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