

HI-FI CHOICE

THE FINEST HI-FI MAGAZINE IN THE WORLD

WIN!
Mordaunt-Short
speakers worth
over £3,000

BEST BUY
HI-FI CHOICE
MAGAZINE



Pre and power amps

Are two boxes better than one? Six top combinations on test

Home Theatre Exclusive!

Why Yamaha's new home cinema system is simply the best



NOVEMBER 1993 £2.95 US\$6.95

117
9 770955 111007

CD PLAYER SHOOT-OUT

Our pick of 20 new models — see page 56

BUYER'S GUIDE

- The UK's ultimate review based catalogue
- Over 18 pages of products tested and rated
- Our reviewers choose *their* Best Buys

Marantz DCC. Treasures The

Imagine, if you will, standing in your living room. You've read about DCC, but words cannot fully describe what you are hearing from your new Marantz DCC deck.

It sounds like the original recording. Clean and pure as mountain air. Beautifully captured and perfectly reflected in the pure blue waters of digital technology.

How, you may be asking, do we achieve such a faithful sound from our new DD-92 and DD-82 DCC decks?



Could it be our 18-bit A/D converter. Or our unique DAC-7 bitstream converter - also 18-bit. Perhaps it's the know-how gained from our 40 year hi-fi heritage. Let your ears be the judge.

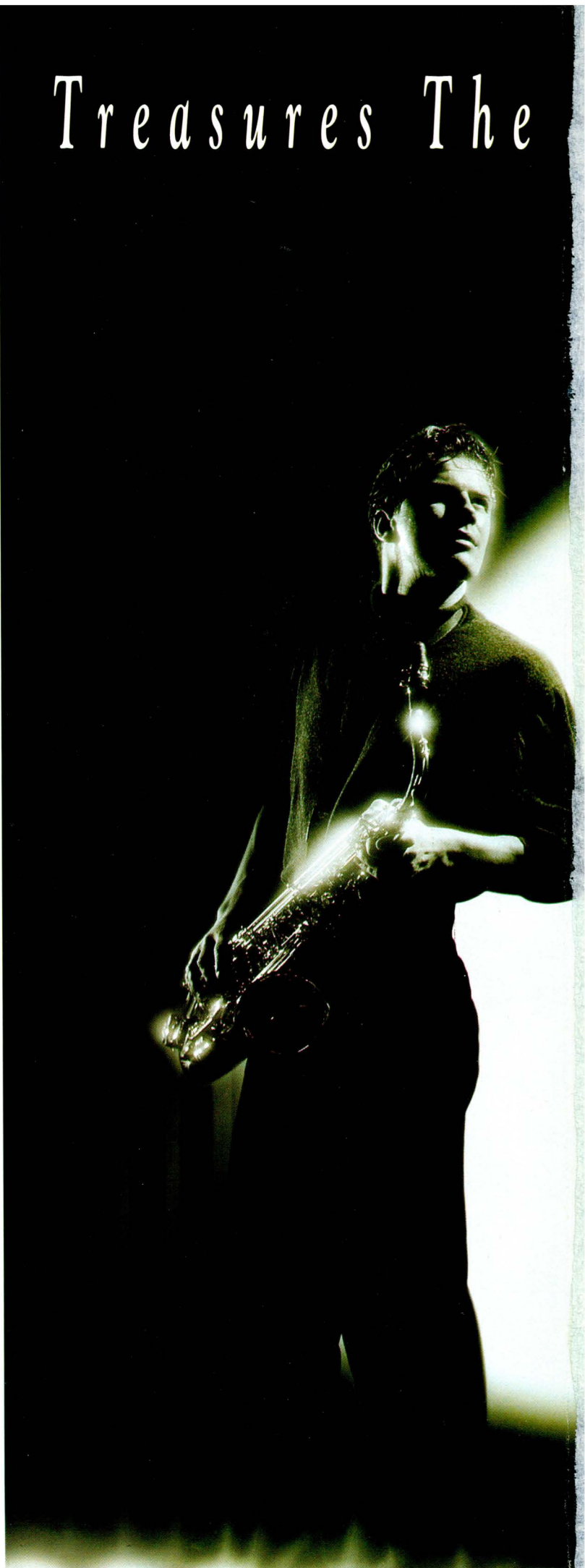
See, hear, and feel the Marantz DCC experience for yourself at your nearest Marantz dealer.

Marantz DCC. Treasures the soul and integrity of the original recording.

marantz®

PURE HIGH FIDELITY

Telephone: 0753 680868



Original.



DIGITAL
dcc
COMPACT CASSETTE

Driving up standards

In our group test of 20 CD players starting on page 56, we saw fit to recommend no less than 11 machines, many of them budget or entry level players at £200 or less.

The result is no fluke. Checking back over two years' worth of back numbers reveals that it's an established trend. Not only are CD players getting better, they're getting more affordable at the same time.

True, there has never been a shortage of budget machines vying for the attention of those eager to step on the first rung of the hi-fi ladder. The difference is that the latest entry level players are quality music makers in a way that their rather brash sounding forebears could never claim to be.

All of which is good news for the music

lover on a tight budget, and we are the first to applaud making quality sound available to a wider audience. But let's not get carried away with the thought that you need spend no more than £200 to buy the ultimate CD player. The differences between a budget CD player and one costing, say, £500 or even a £1000 may be narrowing, but they are still there.

A decent demonstration in a dealer's listening room will quickly reveal the marked differences that still exist between CD players, or any hi-fi equipment come to that, at different price points. As with all things in life, you get what you pay for, and

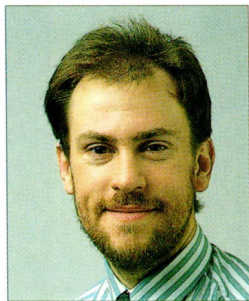
you cannot expect a £200 component to put you in the midst of a great musical performance in the same way as one costing ten times as much.

The trick is to search out a hi-fi dealer who can help you to recognise the different performance levels available, and settle on the cost versus sound compromise that best suits your individual requirements. The hi-fi manufacturers have done their bit by producing outstanding products at every price point. Now it's up to the dealers to match their customers' needs to the equipment available.

Good dealers have been doing this for years, but there are still rogues about. One of the worst problems has to be the here today, gone tomorrow operator who claims to stock some of the best names in the business in order to attract custom, only to be suddenly 'out of stock' or 'waiting for a delivery' of said items. Such a character couldn't give a hoot about catering for your listening pleasure, but he's only too happy to take your money for inferior alternatives or, worse, as a deposit against the delivery of goods that will never come.

We are constantly vetting the dealers who advertise in the pages of *Choice*, and we like to think that every product advertised has been obtained through the manufacturer's official channels. But we don't pretend to be perfect, and we want your help to ensure that only genuine dealers are found advertising in *Hi-Fi Choice*. It's a campaign for higher standards that we feel very strongly about, and we are looking for your input to police the market to the benefit of everyone.

So whether you're a first time buyer, a committed enthusiast or even working for a manufacturer, let us know if you think an advertiser in the pages of this magazine is letting the side down. In the search for the best hi-fi to suit you we can only help if you're prepared to help us.



Simon Davies highlights good value budget CD players and warns of rogue dealers.

HI-FI CHOICE



Editorial

FAX: 071 323 3547

Editor Simon Davies

Consultant Editor Paul Messenger

Art Editor Andrew Ryan

Deputy Editor Jason Kennedy

Production Editor Lisa Nickson

Reviews Editor Alan Sircom

Contributors Barry Fox, Alvin Gold, Jimmy Hughes, Paul Miller, Norman McLeod, Tim Frost.

Photography Chris Richardson

Advertising

TEL: 071 631 1433 FAX: 071 636 1640

Group Advertisement Manager Christine Reid

Advertisement Manager Rob Debenham

Sales Executive Marcella Smith

Sales Executive Emma Sherry

Production

TEL: 071 631 1433 FAX: 071 580 6430

Group Production Manager Simon Maggs

Deputy Group Production Manager Mike Robinson

Advertisement Production Jenny Wood

Circulation & Promotions

TEL: 071 580 6163 FAX: 071 636 5668

Circulation Director Sean Farmer

Mail Order Manager Julia French

Marketing Manager Paula Nulty

Publisher Andy Benham

Dennis Publishing Ltd

Publishing Director Bruce Sawford

Creative Director Jimmy Egerton

Managing Director Alistair Ramsay

Chairman Felix Dennis

PUBLISHED by Dennis Publishing Ltd, 19 Bolsover Street, London W1P 7JH

Tel: 071 631 1433

Company registered in England

Origination Those nice people at Graphic Ideas

Printing Riverside Press, St Ives Plc

Distribution Comag UK Ltd, Tavistock Road, West Drayton, Middlesex

Tel: 0895 444 055

A



PUBLICATION

PRODUCTS AND EDITORIAL SUBMISSIONS

Hi-Fi Choice welcomes all information on new and upgraded products and services, for possible coverage within the news and reviews pages. However, the publisher respectfully points out that the magazine is not obliged to either review or return unsolicited products. The editor is always pleased to receive ideas for articles, preferably sent first in outline form, with details of the author's background, and – where available – samples of previously published work. He cannot, however, accept responsibility for unsolicited copy and would like to point out that it may take time for a reply to be sent.

PERMISSIONS & REPRINTS

Material in *Hi-Fi Choice* may not be reproduced in any form without the written permission of the publisher. Please address such requests for re-use of copyright material to Andy Benham, 19 Bolsover Street, London W1P 7JH

SUBSCRIPTION ENQUIRIES

Hi-Fi Choice is available on subscription. The standard rates are (UK) £25.00 (1yr), £42.50 (2yr); rest of Europe £30.00 (1yr), £68.00 (2yr); rest of world £51.50 (1yr), £84.50 (2yr)

Please address all subscription enquiries to *Hi-Fi Choice* Subscriptions, Tower House,

Sovereign Park, Market Harborough, Leicestershire LE16 9EF

Back issues of the magazine are also available, please refer to page 165 for full details

THE GET OUT CLAUSE

While every care has been taken in the preparation of this journal, the publishers cannot be held responsible for the accuracy of the information herein, or any consequence arising from it. Readers should note that all judgements have been made in the context of equipment available to *Hi-Fi Choice* at the time of review, and that 'value for money' comments are based on UK prices at the time of review, which are subject to fluctuation and are only applicable to the UK market

This edition ©1993, Felden Productions. ISSN No. 0955 111 5.

Member of the Audit Bureau of Circulation.

HI-FI CHOICE



The Front End

- 4 Update**
The autumn hi-fi shows gave the first glimpse at the latest goodies. Find out what's going to be on the hi-fi enthusiast's Christmas list.
- 16 Sessions**
Bite size reviews of everything from the latest Yamaha AV amplifier to CD upgrades. Plus how to build your very own AM aerial.



Paul Miller has been having stacks of fun with CD players this month, check out his findings on page 96.

56 CD PLAYERS

The complete guide to the latest CD players, the technology behind digital audio and exactly what to look for in a CD player.

59 The Reviews

Our round-up of 20 of the latest CD players, from the cheap and cheerful to the seriously expensive. All comprehensively measured and subjected to our extensive blind listening panel tests.

96 Conclusions, Best Buys and Recommendations

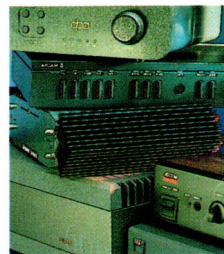
Our ready reference guide to the finest CD players on the market, today. Including at look back at our past Recommendations and Best Buys.

100 PRE/POWER AMPLIFIERS

Are two boxes better than one? What is the difference between an integrated amplifier and a pre/power combination? Find out in our guide to quality amplification.

102 The Reviews

Six well-known, popular pre/power amplifiers, new and old, fight it out for the chance to dangle a *Choice* Swing Tag.



108 Conclusions, Best Buys and Recommendations

The good, the bad and the boring. We pick the winners of the pre/power amplifier sweepstakes.

Features

- 28 Statements**
An exclusive look at the versatile new Counterpoint DA-10 DAC.
- 34 Readers Survey**
Tell us what you think of *Hi-Fi Choice*! You could win a CD player, amplifier or speakers, courtesy of Hyper-Fi.
- 52 Aspirations**
We visit the winner of the £4,000 Linn competition from the April issue of *Choice*. How well did it settle in?

Cover Offer

- 37** Read about the exclusive *On/Hi-Fi Choice* CD tray, free with UK editions of this issue — no it's not a toast rack. Plus, get £5.00 off all published prices of any purchase from Hyper-Fi.

Choice Matters

- 12 Coming Up**
In December, *Choice* will delve into the all-surrounding world of AV amplifiers, find the ultimate component system for the Christmas shopping list and look at infra-red headphones, for music without wires.
- 33 Choice Subscriptions**
Save shoe leather! Get your copy of *Choice* delivered to the doorstep.

- 119 Reader Classifieds**
The only place for pre-owned, pre-loved hi-fi, at a bargain price.

- 170 Reader's Offers**
The latest audiophile recordings and our recommended selection of top accessories.

The Directory

- 121 The Choice Directory**
A comprehensive list of all the current products that *Choice* has tested, with our own (not the manufacturers') comments.

The Front End

- 4 Update**
The autumn hi-fi shows gave the first glimpse at the latest goodies. Find out what's going to be on the hi-fi enthusiast's Christmas list.
- 16 Sessions**
Bite size reviews of everything from the latest Yamaha AV amplifier to CD upgrades. Plus how to build your very own AM aerial.



Pioneer's CT-95 cassette deck proves that analogue is still the medium to beat in Sessions.

- 39 Help!**
Does your hi-fi get in the way of the music? Let the *Choice* team of experts right your hi-fi system wrongs.

- 45 Write On**
Send us your hi-fi musings and you may find a *Hi-Fi Choice* sweatshirt squeezing through your letterbox.

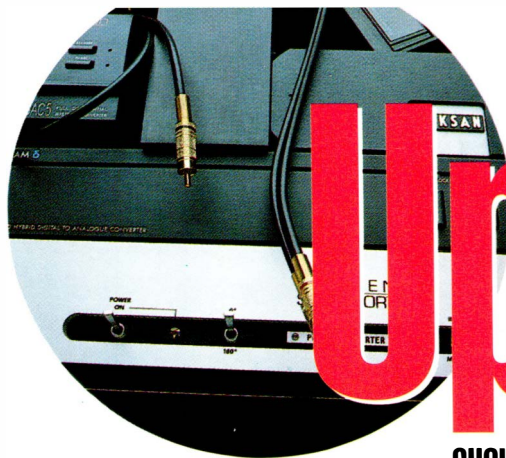
Columns

- 2 Edit Point**
Simon Davies finds much to commend in cheap CD players.
- 51 21st Century Fox**
Barry Fox gets behind the people who get behind MiniDisc and DCC.

- 168 Personal Messages**
Paul Messenger discusses the implications of widescreen television.

Competition

- 48 Competition**
A chance to win one of 14 pairs of Music Series loudspeakers in our fabulous £2,500 Mordaunt-Short competition.



Update

CHOICE NEWS FROM AROUND THE WORLD

Get in the Q for KEF's new speakers

Although one of the first UK companies to jump on the THX home cinema bandwagon, KEF has proved sluggish in releasing THX approved loudspeakers, compared to British rival B&W. The complete KEF/THX system is still some way from completion, but its first THX approved product is the Reference

AV-1 active subwoofer, which is designed to work in conventional hi-fi applications as well as home cinema systems.

The AV-1 has a removable stereo power amplifier to operate the two 250mm bass drivers and has the ability to handle both balanced and unbalanced signal inputs. The price is

yet to be fixed, but is expected to be over £1,000.

KEF has also consolidated the low end of its Uni-Q range of loudspeakers by announcing three new Q Series models for both the audio and video markets. At £199, the Q10 is the cheapest speaker to date to use KEF's proprietary Uni-Q driver technology, featuring a single magnetically shielded ohm 160mm LF/19mm HF drive unit assembly set into a reflex loaded nine litre bookshelf cabinet.

The same Uni-Q assembly is fitted into the Q30 loudspeaker. The £349 floorstanding reflex 17 litre design is said effectively to double the maximum output of the Q10, while taking the bass down to 50Hz instead of 60Hz in the bookshelf speaker.

Finally, the new 30 litre £499 Q50 adds a supplementary 160mm LF drive unit to the reflex loaded design and includes a Linn Keilidh-like front panel moulding and plinth. ☎ (0622) 750 653

Form an orderly Q; KEF's new models display their essentially British pedigree.



Micromega Tees off with new series

Having announced the end of the Logic and Leader CD players, French CD manufacturer Micromega has announced a new tray loading range. A completely separate family to the Microline and top loading ranges, the new £1,200 T-drive transport and £800 T-dac converter offer the convenience of tray-loading for those who would otherwise not consider a top loading Micromega player.

To get the best from tray-loading, Micromega opted for the new Philips CDM9 transport, mounted on a compliant suspension and separated from the power supply within the heavy, damped chassis.

Micromega has always been less than happy with tray-loading in high-end machines. Rather than compromise the performance of the T Series, however, Micromega used the CDM9 as a platform to develop new ideas, that could also be used in the rest of the range. This test-bed resulted in the new Acutrans digital output system, which is claimed to eliminate jitter from the transport. This, combined with the fully balanced 110 ohm AES/EBU digital output, is said to raise the performance of the transport to Duo levels.

A scaled-down version of the T series will be available

shortly, using the CDM12 mechanism and a less advanced variant of Acutrans. No date or price has yet been set for these products, but the S-dac, looking very similar to the earlier Micromega Duo BS, was seen at The Hi-Fi Show.

Micromega's top man Daniel Schar has been quoted as saying that the Acutrans system and the AES/EBU output are the most important events in the company's history to date, and the two systems are expected to appear in all Micromega's products shortly. Both are also expected to be retrofittable to existing Micromega machines. ☎ 081-989 0692

Bryston returns

Canadian electronics manufacturer once again has distribution in the UK courtesy of The Professional Monitor Company. Bryston makes a wide range of transistor pre and power amplifiers, active crossovers and home theatre electronics of the serious variety.

Prices start at £546 for the .4B preamp and £639 for the 2B-LP power amp and run to £958 for the all new BP-20 line preamp which features balanced in and outputs.

The Pro Monitor Co. also has a new bookshelf loudspeaker. The £399 TB1 is a two way design incorporating Transflex, a truncated transmission line system. ☎ (0923) 249 219

Trichord has its finger on the digital Pulsar

Still flushed from the success of its breathed-on Pioneer A-400 amplifier and modified CD players, Trichord Research has announced the new £995 Pulsar Series One D/A converter. It uses a hybrid Burr Brown PCM 69 chipset and can be switched to either 18 or 20 bit mode.

In fact, almost everything on the Pulsar is user switchable. Apart from the bit rate of the chipset, the Pulsar can be run in either jitter free or synchronous mode, with dither on or off, with or without phase inversion. It is also possible to upgrade the analogue power supply. It features just a single coaxial and Toslink input, with an optional AT&T optical connector, although Trichord is planning a digital switching unit in the near future.

The Pulsar can be used with any CD transport, but Trichord advises that only players and transports that have been through its own modification programme are used. ☎ (059789) 688

Dial-a-disc MD recorder from JVC

Snapping at the heels of Sony and Sharp, JVC introduced the XM-D1 portable MiniDisc recorder at The (Ramada) Hi-Fi Show. About the size of a Sony Walkman Pro, JVC's first MD recorder is designed to be used both as a portable machine, and as a part of a home system, as it uses JVC's proprietary Compu-Link communication port.

Featuring all the usual MD record and replay facilities, such as ATRAC data compression, 10 second memory buffer, SCMS copy protection and advanced track handling facilities, the XM-D1's backlit LCD display is fitted onto a pop-up panel and includes extensive editing and character handling facilities. Supplied with a standard rechargeable battery and AC adapter/charger, the XM-D1 can also be powered from a car battery, with an optional adapter.

Central to the editing/titling system is the 'jog dial' that allows



No it's not a personal computer, it's JVC's entry in the MD stakes.

the user to cue exact edit points in a more precise manner than with conventional cue and review buttons. The jog dial also doubles up as a speedy character dial — à la Dymo labelmakers — allowing up to 32 characters per recording.

These characters include European letters, to spell correctly names like Bjørk and Mötörhead.

The price of the XM-D1 has yet to be fixed, but is expected to be between £500-£1,000.

☎ 081-450 3282

The Systemdek System

Champion of the budget turntable market, Systemdek has broadened its product base with the Systym range of loudspeakers. Three two-way models were on display at The Hi-Fi show, the compact £280 931, a medium size bookshelf the £380 935 and the floorstanding £780 939. They share subtle but neat styling.

Waiting in the wings is a far more radical floorstanding speaker with a narrow baffle and great looks. What sets it apart is a 50mm dome midrange/treble drive unit. Developed by Systemdek it has a claimed bandwidth of 150Hz to over 20kHz. The whole speaker will probably cost in the region of £1,500, but won't be available until next year. ☎ (0294) 71251

A firm Base to Classic Music

Just missing last month's *Table Choice* round-up of equipment stands and tables, Audiophile Furniture is a new company producing a range of innovative baseboards and stands. The £64.99 Base platform uses a high-grade MDF top-board, together with beams of Sorbothane backed metal to the baseboard from its surroundings.

The Base boards can then be slotted into Audiophile Furniture's own stand, or else on any table or

shelf. The multi-tier Base stand is strikingly stylish and its top board allows for an anticipated tuneable version of the baseboard, for turntables and CD players. A bigger Base platform for larger components is expected to be about £130.

Designed by an architect with experience in the reduction of structure transmitted vibration, Base will be first seen underpinning Naim Audio's equipment at the BBC Classic Music show.

☎ (0342) 824 843

Kronos glows ahead with Arion

Northern Irish distributor, Kronos, has announced a new range of valve amplifiers, under the banner of Arion Acoustics. The first model in the range will be a 25 watt Class A line level integrated, priced at £999, together with a £1,150 version with a phono stage, and a £850 power amp variant.

Designed by the people behind the British Audio Note amplifiers and DACs, the new amplifiers use high quality components such as Audio Note transformers, Rhodenstein capacitors, and heavily copper plated circuit boards. The styling has also



The Arion is a new contender in the integrated tube amp market.

been carefully thought out, by John Choong of Frame Works stands fame.

Also new from Kronos is the £99.99 Titan mains filter. This 1000VA unit is said to help overcome the effects of mains borne RFI.

Lastly, French manufacturer Audiomeca announced its latest *Kreatura* CD player. Little is known about this 12 kg one-box player as yet, but the black metacrylate *Kreatura*, designed by Pierre Lurne, is said to feature a heavily modified transport mechanism and an 18-bit converter.

☎ (08687) 48632

In Brief

Royd Audio has produced the £230 *Minstrel*, a new compact loudspeaker which can be either floorstanding, shelf or wall mounted. The *Minstrel* has a reflex port on one side and can be used virtually anywhere without compromising bass performance. ☎ (0952) 290 700

Spendor has revised its popular SP2/2 speaker. The result is the 25 per cent larger £769 SP2/3. This features a 200mm, doped polypropylene bass driver and a 19mm soft dome tweeter. Spendor is distributed in the UK by Michael Stevens and Partners. ☎ 081-460 7299

T & R Industries has added a new medium priced pre/power amplifier combo to its range of electronics. The £1,999 SPP1 pairing comprises a line preamp and 70W power amp. ☎ (0203) 419 605

Polaris Plus is a new stylus alignment gauge that's not only highly accurate but easy to use, as it allows you to set overhang and cartridge angle at a single point. Anyone who has struggled with two point protractors will appreciate what a boon this is.

The *Polaris Plus* costs £2.

☎ (0902) 751 861

Posselt's elegant *Albatross* loudspeaker which measures six foot high by 12 inches wide and incorporates horn loading is available for £2,000 a pair from Nottingham Analogue Studio. ☎ (0773) 762 947

Chord Electronics Ltd has announced the SPM 1600, a high-end two channel power amplifier, designed for bi-amping with built-in 250 watt and 150 watt amplifiers. This is complemented by the SPM 2000 six-channel power amplifier for AV systems and a CBE LS12 subwoofer for the new BBC mini monitor, the LS5/12A. ☎ (0622) 764 874



Panasonic launched its portable DCC player, the £399.95 RQ-DP7, by presenting it to Sally Gunnell the Olympic Gold medalist and world record holder at 400m hurdles. The RQ-DP7 plays for two and a half hours with its built in rechargeable battery and automatically adjusts for analogue or digital tapes. ☎ 081-899 2200

The Bose® Lifestyle® Music Systems



Finally, the simple beauty of music.

"No visible speakers, no stack of components, nothing that looks like sound equipment... Hit the start button and suddenly the room fills with music of exemplary clarity and fullness."

Hans Fantel, The New York Times

Now you can get this revolutionary award winning music system. Fill your home with the power and simple beauty of music – instead of bulky, complicated equipment.



Lifelike sound.
Elegance. Simplicity.

Born from a new
system technology

Listen to Stereo Everywhere® Speakers and enjoy lifelike sound at any volume level. The system is easier to use than your telephone. With the radio controlled handset you can operate the entire system from anywhere in your home – upstairs, downstairs, through walls, even from outside. Choose the Bose Lifestyle® Music System that suits you best – and let it grow with your demands. Spend only minutes for a demonstration at your Bose Dealer – and have music for a lifetime!

For full details on your nearest Bose dealer call
FREEPHONE BOSE 0800 317533

BOSE®
Better sound through research.

SME moves into D/A conversion

The analogue engineering experts at SME have turned their attention to the problems of turning bits into notes and come up with a two box D/A converter that's likely to cost in the region of £6,000.

It has been designed entirely according to the principles of analogue electronics on the basis that a digital datastream is a very high frequency analogue signal. To this end meticulous attention has been given to signal transportation, power supply design and circuitry.

An unusual feature is its ability to assign the output signal to the digital input



The twin cases that mark SME's entry into the high-end DAC stakes.

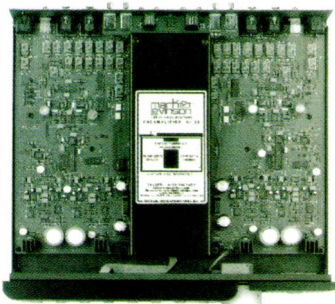
signal, which means that it can put out only the left or right channel, allowing truly

balanced operation when two DACs are employed. ☎ (0903) 814 321

More than just a number

Mark Levinson has taken the art of comprehensive preamplifier design to new levels with the £3,995 No.38 remote control, line preamp.

The No.38 is probably the most versatile high-end preamp on the market, it has remote operation for all the major functions including volume control in 0.1dB increments across the 'normal' listening range. It has a surround sound processor mode for home theatre applications, and an



LED display which can show twenty alternative names for the six inputs.

The No.38 has a variety of 'intelligent' functions such as ramping the volume up and down when changing inputs, and input sensitivities which can be adjusted to compensate for variations in source outputs. It has balanced in and outputs and a great deal of attention has been paid to switching paths, to the extent that all unused inputs are switched out of circuit to reduce induced noise. ☎ (0494) 441 736

Pink products pop up

Not satisfied with introducing two new digital converters over the past year, Pink Triangle has announced an upgraded filter for the converters, two new power amplifiers and a pair of loudspeakers.

Philips' newest 1307 filter system is said to hold 20-bit accuracy throughout and is promised to cope with real music signals accurately. The £300 1307 upgrade for the *Ordinal* and *Da Capo* converters is fitted into a standard PT filter module, to make upgrading easier.

The £2,860 *Pop* monoblock power amplifier is a totally new venture that follows in the footsteps of the earlier *Pip* preamplifier.

Having over 300 watts on tap, with the ability to deliver up to 2kW into a one ohm load, the *Pop*'s protection circuitry is unlikely to ever trip. However, as the output current is monitored by a microprocessor, not only can the protection circuit kick in rapidly, but it also records any problems over the years, to give a ready diagnostic guide for servicing. A scaled down 100 watt two-channel version of the *Pop* power amplifier, the £1,400 stereo *Poppet*, will also be available. It is expected that a new, modular version of the *Pip* preamp will be available in early 1994.

Pink has also announced the *Ventrical* loudspeaker, available in black ash and walnut for £850, or 'unusual' custom finishes for £980 — at the show, a marbled speaker was shown. Using a Tonagen ribbon tweeter and a polypropylene bass/mid unit, the floorstanding *Ventrical* is claimed to use a novel cabinet loading and is planned to be upgradable, by adding an active crossover system. It is intended to be a part of the basic Pink Triangle system available late next year, comprising *Cardinal* transport, *Ordinal* DAC, *Integral* amplifier and *Ventrical* speakers. ☎ 071-703 5498



May Audio distributor of the Totem loudspeaker brand has introduced the £2,500 *Mani-2* two way loudspeaker, which uses Isobarik-style twin woofers to achieve serious bass from a medium sized cabinet. ☎ (0943) 864 930

Lecson, builder of the *Quattra* amplifier, has widened its range with an £850 *CD1* CD player, £450 *CDT* transport and £595 *DAC 1* converter. These are complemented by a new remote control preamp, the £450 *API00*, £675 *APW 100 S* stereo power amp and £625 *APW 100 M* monoblok. ☎ (0480) 498 211

Monarchy Audio is an American electronics brand specialising in digital products that has been taken on by Wollaton Audio. The range includes the £1,595 *Audio Video Transport* which also plays Laser Discs, and the £1,495 20-bit DAC cum line preamp which has a volume control and two line inputs. ☎ (0602) 284 147

Swedish valve amplifier manufacturer, **Copland** has introduced a new £999 valve/transistor integrated amplifier, using only one E88CC per channel. The 60 watt *CSA-14*, which is not designed in a standard hybrid manner, doubles its power into a four ohm load and will be available by the end of October. ☎ 081-947 5047



Audiofreaks has taken on the Muse solid state amplification brand, whose line includes the 300 watt *Model Three Hundred* monoblock power amps at £3,900 a pair. ☎ 081-948 4153

Denon has replaced the *D100* mini system with the *D110*, £869.99 with the JPW built *SC-M2* speakers or £799.99 without. It features a 40W amp, RDS tuner with programme type station search and remote control. ☎ (0753) 888 447

Tesseract Research has unveiled the *TAADA* phono stage and *TALA* preamplifier, priced at £1,500 a piece. Tesseract has also created the £450 *TAGS* power supply for the Michell Gyrodec turntable, and is planning to release a scaled down version of the £7,350 *TAMP-60* amplifier. ☎ 081-669 0011

P.E.M. DD Converter? No self-respecting CD Player should be without one!



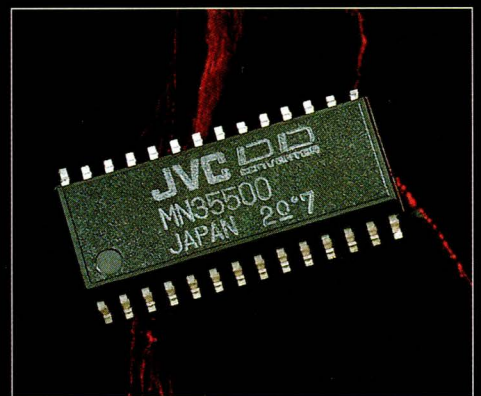
XL-Z464 CD Player

Pulse-Edge-Modulation-Differential-Linearity-Errorless-D/A. Quite a mouthful, you must agree, but as one-bit digital technology goes, it's the proverbial bees knees.

One-bit D/A (Digital to Analogue) converters eliminate the faults that conventional "multi-bit" players suffer from. For example; distortion, glitches and poor linearity at low levels. However, some noise still remains, especially when musical nuances are at their most subtle.

Get the Very Best from your CD's

JVC's new XL-Z464 CD Player has no such vices, equipped with the very latest in D/A converter know-how, the advanced one-bit P.E.M. DD with V.A.N.S. (a 4th order noise shaper), can deliver up to four times normal resolution, giving better expression of performance across the sound spectrum with no interference at low, subtle music levels.



Every bit a winner.

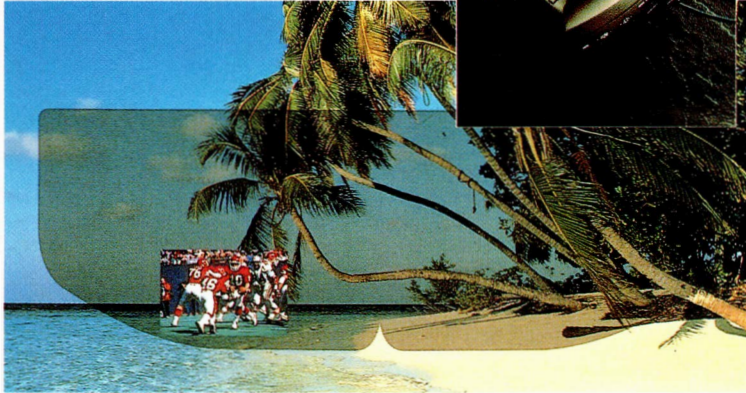
Obviously... **JVC**

Update

Oggle Goggles

Virtual Vision is attempting to usher in a new era of personal televisual entertainment with its Sport glasses. These goggles allow you to see what's directly in front of you or watch a projected TV image that is perceived to be six feet away, the size of the image is described as being 'very big'. It works by combining a miniature video display with a reflective optical system.

It can be used with a belt mounted receiver, camcorder or any form of video source, though satellite dishes might limit the portability factor.



Say goodbye to paradise island boredom with new, groovy tellie specs.

Sound is derived from ear-phones attached to the arms and the whole caboodle,

though bulky in appearance, only weighs five ounces. ☎ 071-584 0122

The Illusion of normality

Nottingham Analogue has built a turntable 'for people who feel the need for a deck with the proven values of its Spacedeck but in a more familiar form'. In other words Tom Fletcher has built a normal-ish looking turntable; the £600 *Illusion* is a regular square plinthed design with fluted sides and a powder coated black finish. Like the *Spacedeck* it uses an alloy platter which is externally driven by an 'O' ring belt. Nottingham Analogue is also making its own cartridges, the *Analogue Tracers 1* through 4 are moving magnet designs between £98 and £500. Stylus variations account for price differences, though the 3 and 4 share the same Super line contact design but vary in construction. ☎ (0773) 762 947

Bill Beard back with BB101

Bill Beard has returned to the tube scene with the £1,600 **BB101** integrated amplifier. This new line level design offers 50 watts a channel courtesy of twelve **EL84** pentode valves, and features remote control.

The two chassis dual mono construction is also uncommon, the former keeps the power supplies away from the signal, the latter is intended to reduce crosstalk. ☎ 081-749 4258

The Tone Scout connection

Living Voice has produced a baby brother for the substantial *Air Partner* loudspeaker called the *Tone Scout*. Built along similar lines, the *Tone Scout* is what Living Voice calls a 'compact domestic loud-speaker', though whether something that's 101x62x58cm (HxWxD) and weighs 11.6kg is compact is a matter of interpretation. The *Tone Scout* features a pressure driver midrange unit firing through a four cell horn, a horn loaded tweeter and a 300mm paper cone bass unit with its rearward output driving an compound horn. With 104dB efficiency the *Tone Scout* is designed to create the sort of energy that made the *Air Partner's* reputation at a more affordable price, which starts at £3,000 for the basic version and runs to £10,000 depending on drive unit choice.



At the recent Hi-Fi Show the *Tone Scout* was frightening the crowds in the company of the Border Patrol *Chargehand*, a new 300B equipped tube amp. ☎ 0602 813 562

Pioneer and CIC tie the LD knot

Pioneer LDCE has signed a deal with **CIC Video International** to bring selected titles from the **Paramount Pictures** and **MCA/Universal Pictures** catalogue out on **PAL Laserdisc**. This means that titles including *Indecent Proposal*, the most excellent *Wayne's World* and *Scent of a Woman* starring **Al Pacino** will soon be available on disc. The deal includes forthcoming titles including *The Firm* and *Sliver*. ☎ (0753) 789 631

New BBC compact monitor

The BBC has designed a new compact loudspeaker. Dubbed the *LS5/12* the speaker is about the same size as the classic *LS3/5A* and uses magnetically shielded Dynaudio drive units. The specification lays down extremely tight grade-1 manufacturing tolerances which are reflected in a price tag of £999 for the Harbeth model, which along with Dynaudio is the only company to be licensed to produce it. The Harbeth *LS5/12* will be available next month. ☎ 0444 440955

In Brief

Kodak is slashing the price of its Photo CD players in an attempt to get the medium off the ground. This brings the price of Photo CD players down to £149 for the *PCD 265* standard size player and £249 for portable or multi-disc versions. ☎ (0442) 61122

Thorens is making a play for the shellac market with the £199.99 *TD-180/5500*, a three speed turntable that includes 78rpm. A belt drive design with auto return it comes with the option of a Stanton *500 78* stylus for £26.99. ☎ (0494) 890277

Arcam is attempting to introduce the notion of cable quality to the AV market with a range of Audioquest SCART and custom made leads. Made up from combinations of existing Audioquest cables prices start at £64.90 for a one metre SCART lead. ☎ (0223) 440 964

In addition to its new *Majik-I* amplifier, **Linn Products** unveiled a prototype of the new £800 *Mimik* CD player at the Live 93 show. In essence a scaled down model of the popular *Karik* CD player, without the Numerik reclocking circuit, the *Mimik* is designed to complement the *Majik-I* amplifier and the *Keilidh* loudspeakers, making a complete Linn CD system for under £2,000. ☎ 041-644 5111

Tannoy has bounced into the home cinema with the new £179.99 shielded *623* centre/rear channel speaker and current driven active *625ALF* subwoofer, at £499.99. The sub-bass unit features a flat hi-fi setting in addition to a more dramatic home cinema option. ☎ (0236) 420 199

Micromega London has taken over the distribution of **Jeff Rowland** high-end amplification products from **Gamepath**. ☎ 081-989 0692

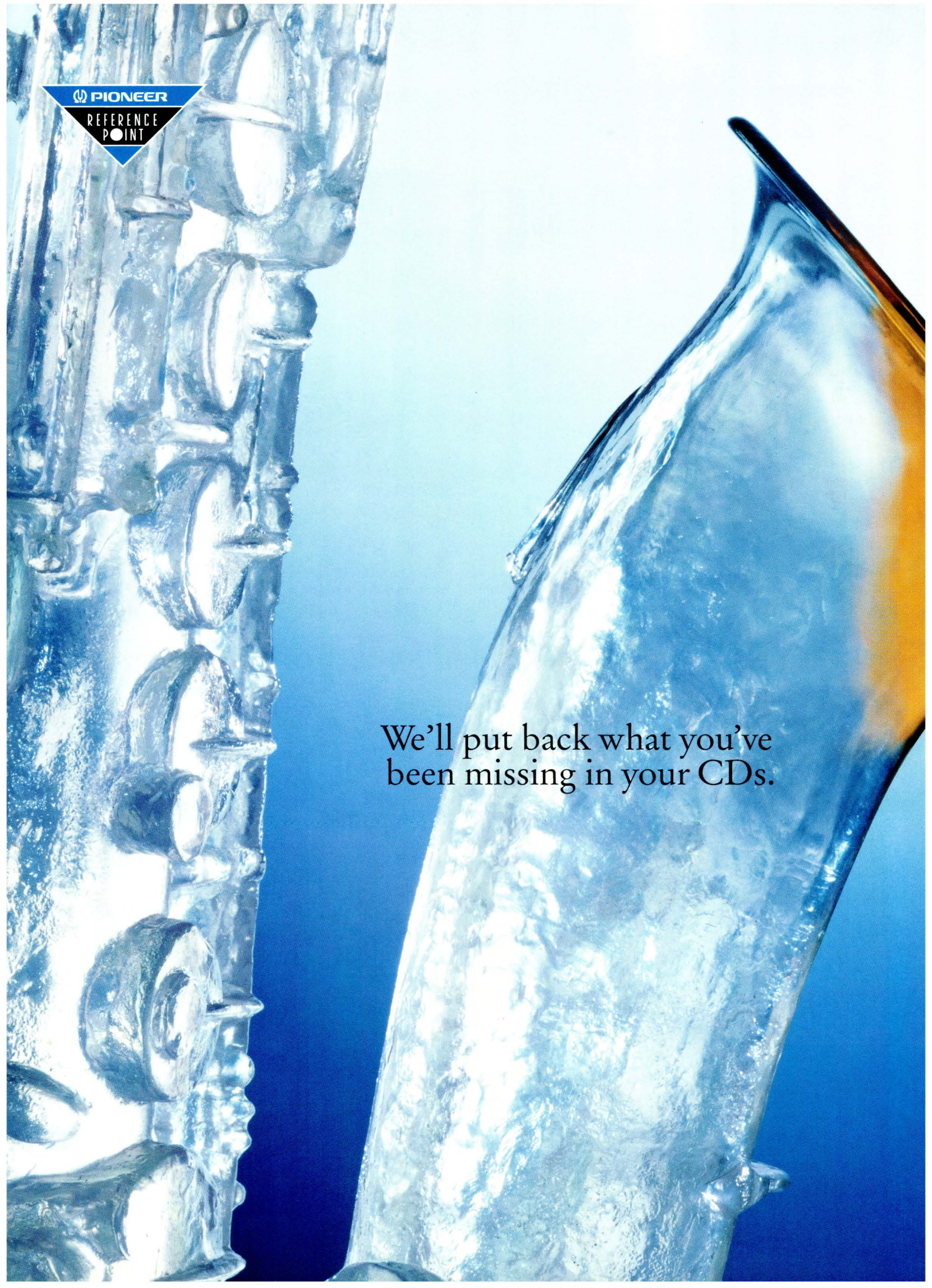


Kenwood's UD-951M system has a built-in Dolby Pro-Logic decoder and DSP effects. It can play one music source through the three-way speakers, while mixing another through upward firing omnidirectional speakers. ☎ (0923) 816 444



PIONEER

REFERENCE
POINT



We'll put back what you've
been missing in your CDs.



When CDs first appeared, they were hailed as being the perfect music medium.

However, some people maintained that CDs sounded harsh and lacked the warmth of vinyl records.

Now, Pioneer's Legato Link Conversion is about to change everything.

You see, when material is recorded onto CD, the format is such that frequencies above 20 kHz are abruptly cut off. And it is these upper frequencies which are abundantly present in musical instruments, giving them their warmth and natural timbre. Although you cannot hear these upper frequencies, you can actually feel when they are missing.

Pioneer's Legato Link Conversion now addresses the problem by putting back that original, natural warmth.

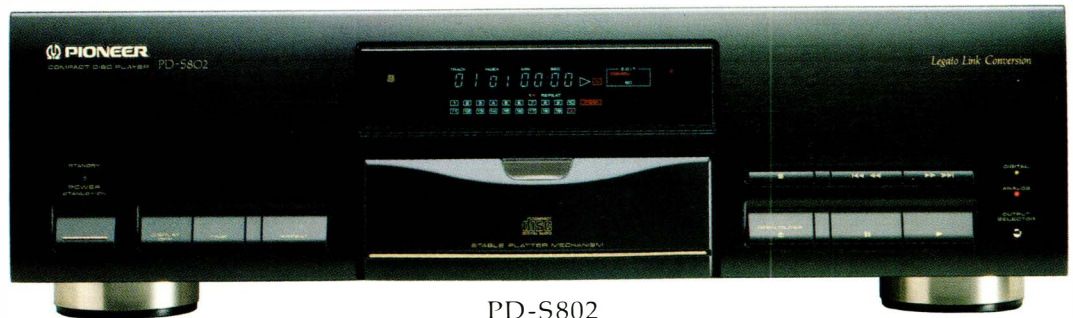
Using data already on the disc, Legato Link Conversion calculates almost exactly what and where the missing data should be and literally recreates a sound wave pattern that is much closer to the

original music. It's a revolutionary new technology that takes CD a real step forward and puts natural sound within the reach of every enthusiast.

Pioneer's unique Stable Platter Mechanism is also a key contribution to this more natural performance, giving full width support to the disc for reduced vibration and truly transparent sound.

Out of sight but certainly not out of mind, twin Pulseflow D/A converters cancel noise generated in and out of the audible range. While Direct Connection enables the music signal to travel along the shortest, most logical path possible for minimal interference.

So why not listen to Pioneer's new range of CD players (PD-95, PD-77, PD-S901, PD-S802 and PD-S702) very soon? Because if CDs have left you



cold until now, you'll certainly warm to the sound of Legato Link Conversion.

PIONEER
The Art of Entertainment
For a full information pack call us on freephone 0800 480 480

Don't miss next month's bumper issue of **HI-FI CHOICE**



Tag. How do they compare with hi-fi separates? Our line-up includes the newest models from Kenwood, Pioneer and Technics.

SCOOP! Horning Agathon horn loudspeakers

They're big, they're Danish and they're horn-loaded. We look at the dynamic, efficient Horning *Agathon* loudspeakers, which look set to put the domestic horn loudspeaker back on the map.

TDL's smallest speakers ever!

A brief look at the £99 TDL *Near Field Monitor* bookshelf loudspeaker, from a company best known for its massive transmission line models. How does the new speaker shape up against stiff opposition?

AV amplifiers

We put eight of the latest home cinema amplifiers through their paces. Is it time to switch over to a complete Audio/Video system? Including new models from Denon, Harman/Kardon, Sherwood and Yamaha.

Systems showdown

Full tests on six of the best integrated hi-fi systems, all competing for a *Hi-Fi Choice* Swing

FREE CD offer

Next month, *Hi-Fi Choice* is giving away a CD of European piano music from the popular Edelweiss label. This superbly recorded selection of piano favourites is bound to find favour with any discerning music lover, especially as it comes FREE with the finest hi-fi magazine in the World!

Plus competitions, features, reviews the latest news and loads, loads more!

It's all in the December issue of *Hi-Fi Choice*,
on sale Friday, November 12, 1993.

(All contents subject to change due to circumstances beyond our control)

YOUR REFERENCE POINTS FOR THE BEST HI-FI

Reference Point is a sound partnership between Pioneer and a nationwide network of specialist hi-fi dealers, selected because they're the most reputable independent experts. Visit any Pioneer Reference Point dealer for the best advice and service.

AVON

Paul Roberts, Bristol 0272 429370
Paul Roberts, Bristol 0272 250760
Paul Roberts, Weston-Super-Mare 0934 414423
Radford Hi-Fi, Bristol 0272 428248

BEDFORDSHIRE

B & B Hi-Fi, Luton 0582 459915
Richards Audio Visual, Bedford 0234 365165

BERKSHIRE

B & B Hi-Fi, Bracknell 0344 424556
B & B Hi-Fi, Maidenhead 0628 73420
B & B Hi-Fi, Newbury 0635 32474
B & B Hi-Fi, Reading 0734 583730
Frasers Hi-Fi & Video, Slough 0753 520244
Frasers Hi-Fi & Video, Wokingham 0734 794998

BUCKINGHAMSHIRE

B & B Hi-Fi, High Wycombe 0494 535910

CAMBRIDGESHIRE

Cambridge Hi-Fi, Cambridge 0223 67773
The Hi-Fi Company, Peterborough 0733 341755
University Audio, Cambridge 0223 354237

CHESHIRE

Hamlets Audio Visual, Cheadle 061-428 5278
Hamlets Audio Visual, Stockport 061-428 6367
Hamlets Audio Visual, Stockport 061-476 3500
Tomorrow Studios, Warrington 0925 36215

CORNWALL

ETS Electricentres, Helston 0326 573285
ETS Electricentres, Penzance 0736 64274
H.B.H. Woolacotts, Bude 0288 352269
Truro Hi-Fi, Truro 0872 79809

CUMBRIA

Kenneth Gardner, Kendal 0539 721953

DERBYSHIRE

Roy Smith Electrical, Chesterfield 0246 234953
Stuart Westmoreland, Derby 0332 367546

DEVON

Bernard Smith, Barnstaple 0271 43503
Radford Hi-Fi, Exeter 0392 218895
Radford Hi-Fi, Plymouth 0752 226011
Upton Electronics, Paignton 0803 551329

DORSET

Movement Audio, Bournemouth 0202 529988
Movement Audio, Poole 0202 730865
0202 721983

ESSEX

Chew & Osborne, Epping 0992 574242
Chew & Osborne, Saffron Walden 0799 523728
Classic Sound & Vision, Southend-on-Sea 0702 461634
Hi-Spek Electronics, Brentwood 0702 600130
Peter Foulkes, Colchester 0277 226303
Peter Foulkes, Maldon 0206 767428
Peter Foulkes, Maldon 0621 853148
Twenty 20 Audio Visual, West Thurrock 0708 891818
Waters & Stanton, Hockley 0702 206835
Waters & Stanton, Hockley 0702 204965
Waters & Stanton, Hornchurch 0708 444765
Woolmans, Basildon 0268 285922
Woolmans, Ilford 081-514 7231

GLOUCESTERSHIRE

Hutchinsons, Cheltenham 0242 573012
Robbs, Gloucester 0452 419777

GREATER MANCHESTER

Bill Hutchinson, Manchester 061-839 8800
Cleartone Hi-Fi, Manchester 061-835 1156
Hamlets Audio Visual, Ashton-u-Lyne 061-343 5127
Tomorrow Studios, Sale 061-962 4651

HAMPSHIRE

Bryants Hi-Fi, Aldershot 0252 20728
Cristavision, Fareham 0329 288660
Now That's Hi-Fi, Portsmouth 0705 811230
Sinclair Youngs, Basingstoke 0256 28623
0256 21307
Southampton Hi-Fi Centre, Southampton 0703 228434

HERTFORDSHIRE

Chew & Osborne, Bishop's Stortford 0279 656401
David Orton Ltd, Hitchin 0462 452248
Herts Hi-Fi, Hoddesdon 0992 441172
Radiolux, Watford 0923 229734

HUMBERSIDE

Superfi, Hull 0482 24051

ISLE OF WIGHT

Russells, Newport 0983 523864

KENT

Howes of Southborough, Tunbridge Wells 0892 528682
0892 537288
Kimberley Hi-Fi, Bexleyheath 081-304 3272
Whitstable Tele-Radio, Whitstable 0227 272028

LANCASHIRE

Cleartone Hi-Fi, Bolton 0204 31423
Kenneth Gardner, Lancaster 0524 64328
Norman Audio, Blackpool 0253 295661
Norman Audio, Preston 0772 53057
0772 555769
P & A Audio Video, Ormskirk 0695 573456
Romers Hi-Fi, Blackburn 0254 887799

LEICESTERSHIRE

Mays Hi-Fi, Leicester 0533 625625

LINCOLNSHIRE

Superfi, Lincoln 0522 520265

LONDON

Babber Electronics, W13 081-579 6315
Brians Hi-Fi, W1 071-631 1109
Covent Garden Records, WC2 071-379 7427
Hi-Spek Electronics, N3 081-349 1166
Hi-Way Hi-Fi, W2 071-402 2441
Kamla Electronics, W1 071-323 2747
Light & Sound, E6 081-472 1373
Myers Audio, E17 081-520 7277
Spatial Audio, W1 071-637 8702
Stereo Regent Street, W1 071-287 2458
Superfi, NW1 071-388 1300

MERSEYSIDE

Beaver Hi-Fi, Liverpool 051-709 9898

MIDDLESEX

Musical Images, Edgware 081-952 5535
Musical Images, Hounslow 081-569 5802
T.A.S., Eastcote 081-866 4911
T.A.S., Ruislip Manor 0895 632217

NORFOLK

Adcock & Sons, Watton 0953 881248
Martins Hi-Fi, King's Lynn 0553 761683
Martins Hi-Fi, Norwich 0603 627010

NORTHAMPTONSHIRE

H.G. Rapkin, Northampton 0604 37515

NOTTINGHAMSHIRE

F.L. Smith Electrical, Mansfield 0623 655684
F.L. Smith Electrical, Worksop 0909 479770
Forum Hi-Fi, Nottingham 0602 622150
Superfi, Nottingham 0602 412137

OXFORDSHIRE

Sound 'n' Vision, Bicester 0869 246491
Winley Audio Centre, Witney 0993 702414

SHROPSHIRE

Shropshire Hi-Fi, Shrewsbury 0743 232065
0743 232317
0952 613818
W. Owen, Telford

SOMERSET

Paul Roberts, Taunton 0823 270000

STAFFORDSHIRE

Purkiss Hi-Fi, Hanley 0782 265010
Universal Electronics, Cannock 0543 502118

SUFFOLK

Peter Watts, Bury St Edmunds 0284 703045
System Sound, Sudbury 0787 72348

SURREY

Audiolite, Thornton Heath 081-653 3657
Cosmic, Addlestone 0932 854522
Tru-Fi, Leatherhead 0372 378780
Tru-Fi, Redhill 0737 766128
0737 767404
Weybridge Audio, Weybridge 0932 851121

SUSSEX EAST

Smythe & Barrie, Eastbourne 0323 29192
Sunderland Electronics, Brighton 0273 774113

SUSSEX WEST

Cristavision, Chichester 0243 775444
Sunderland Electronics, Worthing 0903 201187

TYNE & WEAR

Bill Hutchinson, Newcastle-u-Tyne 091-230 3600

WARWICKSHIRE

Carvels of Rugby, Rugby 0788 541341
The Hi-Fi Company, Leamington Spa 0926 888644

WEST MIDLANDS

Bridge Hi-Fi, Walsall 0922 640456
Coventry Hi-Fi, Coventry 0203 440529
Naam Hi-Fi Vision, Birmingham 021-633 4944
Naam Hi-Fi Vision, Coventry 0203 632086
Superfi, Birmingham 021-631 2675
Universal Electronics, Wolverhampton 0902 23741
W.M.E.C., Rowley Regis 021-559 1412

WILTSHIRE

P R Sounds, Melksham 0225 708045
P R Sounds, Trowbridge 0225 777799

WORCESTERSHIRE

David Waring Cameras & Hi-Fi, Worcester 0905 27551

YORKSHIRE NORTH

Maxwells, Northalerton 0609 773535
Scarborough Hi-Fi Centre, Scarborough 0723 374547
Vickers Hi-Fi, York 0904 629659

YORKSHIRE SOUTH

Superfi, Sheffield 0742 723768

YORKSHIRE WEST

Amrik Electronics, Bradford 0274 722530
Amrik Electronics, Leeds 0532 752285
Bill Hutchinson, Leeds 0532 427777
Eric Wiley, Castleford 0977 553066
0977 556774
Superfi, Leeds 0532 449075

NORTHERN IRELAND**CO. DOWN**

Hi-Fi Experience, Belfast 0232 249117
LRG Sound & Vision, Belfast 0232 732452
0232 451381

CO. ANTRIM

LRG Sound & Vision, Larne 0574 272757
Nicholl Bros, Ballymena 0266 49616

SCOTLAND**GRAMPIAN**

Holburn Hi-Fi, Aberdeen 0224 585713
0224 572729

MID LOTHIAN

Bill Hutchinson, Edinburgh 031-667 2877

STRATHCLYDE

Bill Hutchinson, Glasgow 041-248 2857

TAYSIDE

Robert Ritchie, Montrose 0674 73765

WALES**GLAMORGAN**

Quinns Audio Visual Systems, Swansea 0792 773644

GWENT

Hi-Fi Western, Newport 0633 262790

GWYNNEDD

Owens, Bangor 0248 362951

PHILIPS INVENTS

The Digital Compact Cassette For generations

Philips has invented the ways we enjoy music. The compact cassette came with the freedom of the Sixties and Seventies. Play the music you want, wherever you want to play



it. In the Eighties the Compact Disc brought the absolute purity and reality of high technology sound. And now, for a new generation, Philips has invented a

new system, Digital Compact Cassette, DCC. Quite simply, the DCC System gives you

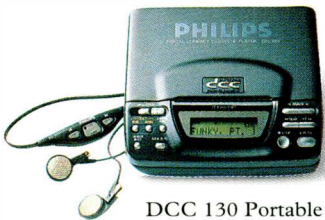
the best of all worlds. It is as portable and as versatile as an ordinary cassette. You can buy pre-recorded tapes or you can record your own. But anything an ordinary cassette can do, a DCC can do better because the sound quality has all the precision and beauty of a compact disc. And don't worry about your existing collection of ordinary compact cassettes, the beauty of the DCC System is that it

will play them too.



FD 920 DCC System

First we invented the compact cassette, then the compact disc,



DCC 130 Portable



DCC 811 In-car

so why have we invented the DCC?

**PHILIPS
INVENTS
FOR
YOU**



PHILIPS

Choice Sessions

The latest products, the best recordings and our own points of view on the most interesting developments to hit the hi-fi scene. Concise reports by the Choice team.

AV AMPLIFIER

Yamaha DSP-A2070

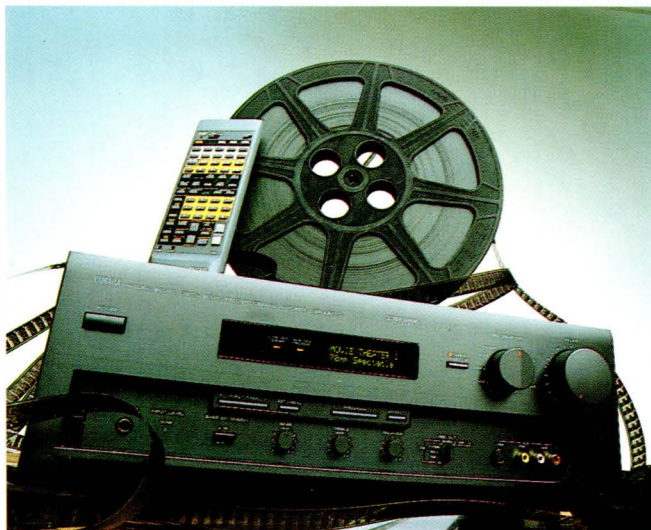
Having already hit the mark with the *DSP-A1000*, the combined AV amp/DSP unit that was so well received last year, Yamaha is now launching its successor, the *DSP-A2070*.

From the outside nothing much has changed — the minimalist fascia still has only a volume control and selector knob visible. But inside there have been several key changes. In the pure audio terms, the amplifier componentry has been upgraded, leading to marginally better sound from what was already a well-sounding box. Bigger upgrades have been made in the digital domain.

Yamaha has for years used digital processors for the Dolby Pro-Logic decoding. The original *DSP-A1000* used a single chip for both the Dolby Pro-Logic and the whole raft of effects routines used to re-create the sound of different venues in the living room.

In the *2070*, the DSP chip count goes up to three, all locked together to create a super-DSP, enabling more subtle and sophisticated hall effects. Yamaha also places the processor's A/D conversion function on a separate chip, further improving the sound in processor mode.

Despite the single box ap-



Yamaha's *DSP-A2070* AV amplifier. Is it the simplified face of home cinema and Digital Signal Processing?

proach there are few compromises in the performance of the *2070*. As a straight-forward amp it is pretty convincing. All three front channels have healthy 80W power amp sections (as opposed to one or two other AV processor/amps that radically underpower the centre channel — the most important one in an AV system). Basic Pro-Logic decoding is rock solid, but the system really comes into its own with its improved sound field processing with settings more tightly defined for CD replay or for video sources (where the sound image needs to locate a

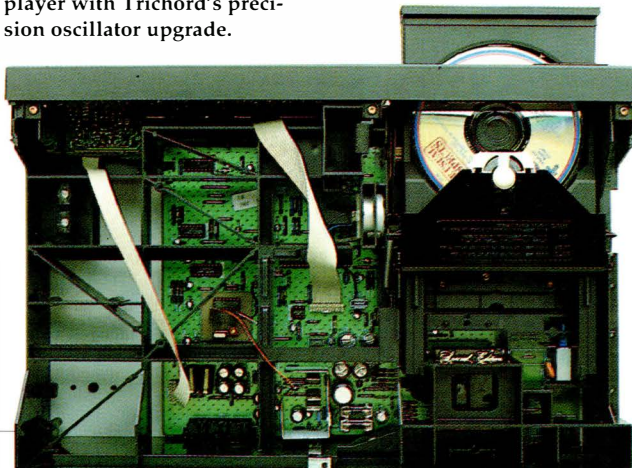
little more tightly around the centre channel).

These added reverberation effects are not to everyone's liking, personally I can take them or leave them, even when they are executed as well as they are in the *2070*. However, they can be both fun and entertaining, which is exactly what AV is about after all.

Tim Frost

Yamaha Electronics (UK) Ltd,
Yamaha House, 200
Rickmansworth Rd, Watford,
WD1 7JS. ☎ (0923) 233 166

Transform your aging CD player with Trichord's precision oscillator upgrade.



CD PLAYER

Trichord research

Every CD player faces eventual technological obsolescence; such is the pace of change that many are superseded within a year or so of their appearance.

What's worse, few CD players command anything like a decent price second-hand, trading old for new, you're unlikely to get much dosh. So it's good to see someone come up with a rescue package for ageing CD players at a reasonable price!

Trichord Research Limited offers an update that gets to grips with the accuracy of the digital clock — something that limits the performance of machines at all prices.

For £141, including return carriage and VAT, they replace the player's quartz-crystal oscillator (a single component) with their own custom high-precision oscillator circuit consisting of a quartz-crystal plus active components.

This high-accuracy clock produces a fast rise time square wave output with each sampling point precisely spaced. The result of this lower jitter and audibly cleaner firmer sound, with less glare and harshness. The level of improvement depends on the machine, but it can be very substantial.

With a good budget player

VERDICT

Yamaha DSP-A2070

- ▲ **PROS:** Solid Pro-Logic sound; good effects.
- ▼ **CONS:** DSP effects are not to everyone's taste.
- ▶ **£1,100.00**

SOUND QUALITY

■ ■ ■ ■ ■ □

VALUE FOR MONEY

■ ■ ■ ■ ■ □

VERDICT

Trichord CD modifications

- ▲ **PROS:** Clean, firm sound; revitalizes old CD players.
- ▼ **CONS:** Will invalidate CD player warranties.
- ▶ **£141.00**

SOUND QUALITY

■ ■ ■ ■ ■ □

VALUE FOR MONEY

■ ■ ■ ■ ■ □

like the Marantz *CD-52SE/II*, voices and instruments took on a clearer sharper outline, with greater tonal colour and a wider dynamic range. The total improvement, while not massive, was certainly audible — especially when a good outboard DAC was used.

Modifying a Pioneer *PD-75* brought even greater benefits, such as a firmer cleaner sound, wider deeper soundstage, finer midband detail and treble definition, more powerful bass, as well as greater rhythmic drive and coherence. This player, a trifle dull and over-damped by modern standards, sounded superbly athletic and crisp after treatment.

It's always difficult for magazines to authorise unofficial modifications — such things invalidate guarantees. But if your machine's two or three years old it's unlikely to be under warranty anyway. If you've a good, but aged CD player this is an excellent way to revitalise its performance.

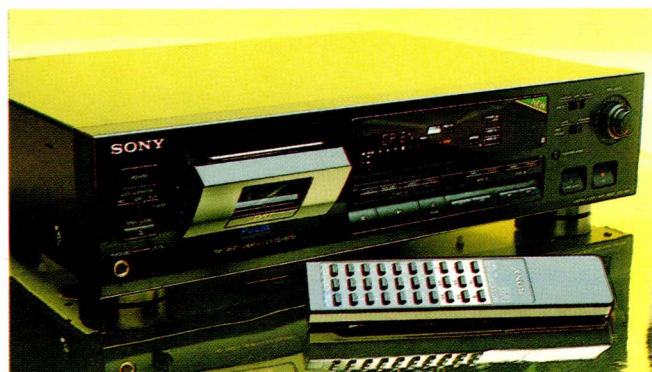
Jimmy Hughes

Trichord Research Ltd,
Cefn Ydfa, Newbridge on Wye,
Powys, Mid Wales LD1 6HT.
☎ (0597) 89688

DAT RECORDER

Sony DTC-690

Some years ago, Sony sold a well engineered DAT deck called the *DTC-55ES*, which outperformed and under priced most comers. But DAT has been less than a resounding success, and Sony's interest appeared to wane. Only now has it decided to resurrect a similar package, just as the early DCC decks have begun to appear on dealers shelves, and just before MD decks (also a Sony backed medium) are due to appear in force.



Sony's *DTC-690*. DAT's the way (uh-huh, uh-huh) I like it.

The *DTC-690* is laid out like a cassette deck, and operates like one, except that when recording digitally (through the electrical or optical inputs), record level settings are redundant, and the tape doesn't need to be turned over in the middle. On playback they behave as cassettes, except that subcode information helps find tracks with speed and precision. The various ID functions, including track (position) and skip IDs, can be edited after recording, and CD style track programming is available.

Musically, the *DTC-690* performs like an upper echelon DAT deck, which places it broadly on a par with low-end CD hardware. At its best with simple material, the Sony sounded muddled and out of its depth with complex, multi-layered orchestral (and other) music. Depth differentiation was often less than explicit, and subtle changes in musical intonation tended to be diminished compared to the 'original' CD. These findings held irrespective of whether the source was digital or analogue.

Nevertheless the digital feed produced cleaner, livelier, more detailed recordings, and with simpler material, the Sony sounded crisp, controlled and lively. Half speed recordings followed the same pattern at a

lower absolute level of sound quality, but suffered from intermittent signal loss or odd smearing, distorted effects due to dropout.

It would be interesting to speculate on the reasons, some presumably political, in Sony's renewed interest in affordable DAT, but the really important point is that with the *DTC-690* Sony once again has a high value DAT deck which puts the nearest opposition to shame.

Alvin Gold

Sony UK Ltd, Sony House,
South Street, Staines, Middlesex TW18 4PF. ☎ (0784) 461 688



LOUDSPEAKERS

Harman Kardon LS 0300

Rather than shipping over speakers designed for American ears, rooms and purse-strings, Harman/Kardon has opted for British design and build for its new range of three loudspeakers. The middle of the range £199 *LS 0300* uses a 34mm soft dome tweeter, and a bright yellow fibre-glass 170mm cone — both made by Audax — in a reflex design. It's a weighty box for the money, and uses proper bi-wired 4mm posts. The *LS 0300* needs plenty of run-in, however, far more than the three hours suggested in the manual.

The *LS 0300*s toned-down balance is fine for CD, but leaves many a turntable sounding too distant and rosy coloured. They also need substantial amounts of bottom end grip to get the best from the speaker. As this grip is generally a function of Harman/Kardon amplifiers, the speakers suit a complete H/K system. When poorly matched, however, the *LS 0300* can sound slightly constricted in the bass.

Those who admire that stu-

dio monitor sound — typified by the likes of ATC, B&W and Dynaudio — but are on a tight budget, will find much to admire in the *LS 0300*. Although they are voiced to forgive many of the sins of harsh sounding CD players, and are not so ruthlessly analytical to leave the music bare, there is little sense of coloration. They have the ability to be driven reasonably loud and you get that 'in the control room' sound. The *LS 0300* project a good 3-D image for the listener, but do focus their attentions into quite a small sweet spot.

I can't help wondering if the

Mellow Yellow. The fibre-glass drivers of the Harman/Kardon *LS 0300* speakers make for smooth sounding music.

Harman/Kardon *LS 0300*s will ultimately prove too smooth for some tastes. However, they can cope with most kinds of music without strain or dissatisfaction and offer very good performance at the price.

Alan Sircom

Harman Audio, Unit 2
Borehamwood Industrial Park,
Rowley Lane, Borehamwood,
Herts WD6 5PZ.

☎ 081-207 5050

VERDICT

Harman/Kardon LS 0300

▲ **PROS:** Well made; good for harsh CDs; uncoloured.

▼ **CONS:** Can be to refined; system dependent.

▶ **£199.99**

SOUND QUALITY
■■■■■□
VALUE FOR MONEY
■■■■■□

MASTERS OF MUSIC



The new Music Series loudspeakers from Mordaunt-Short

Mastery of Sound

This mastery of sound is the result of numerous technical innovations unique to Mordaunt-Short.



For instance, MCS technology – an injection moulded cone and surround which ensures a precise cross-section profile for exact bass unit performance.

All crossovers are first order configurations based on minimalistic principles because of the excellent performance of the individual drive units. Result? A simple load and fewer components between the amplifier and the final sound. Bi-wiring is possible too on all speakers except the MS10.

No Phase Cancellations

The conventional mid-bass unit dust cap has been replaced with a phase plug. The path length is calculated to eradicate phase cancellations and give excellent dispersion across the critical middle frequencies.

Low colouration baffles have been a design priority in all Music Series loudspeakers. On the MS10, MS20 and MS30 this has been achieved with mica-filled polypropylene tensioned with steel tie rods.



On the MS40 and MS50, a 30mm dual material composite baffle has produced an extremely rigid structure.

Exclusive

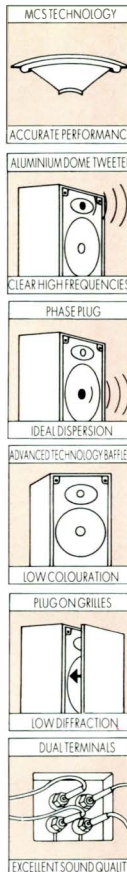
Controlled high frequency performance is achieved thanks to a 25mm aluminium dome tweeter designed and built by Mordaunt-Short.



The ultra thin metal diaphragm and compression moulded rubber surround are mounted on an elliptical low resonance chassis, utilising a high temperature voice coil with liquid cooling and damping.

Making Music

Music first. Music second. Music whichever way you listen to it. With the Music Series, Mordaunt-Short is making music more naturally than ever before. The masters of music are taking their title to heart.



We will be pleased to send you a Music Series brochure on request, together with the address of your nearest dealer.

Mordaunt-Short



D/A CONVERTER

Musical Fidelity Tubalog

Musical Fidelity's involvement with digital audio has not been without distinction as those who remember the *Digilog* — one of the first affordable stand alone D/A converters — will know. Since then there have been a couple of CD players, but before the *Tubalog*, there were no further DACs.

The *Tubalog* features an unspecified multibit 18-bit DAC and a tube (using two ECC88s) output stage. This is discretely done, as without removing the top cover there is no way of knowing that tubes are involved. The theme is continued externally. A bank of tiny LEDs show operating status, signal clock rate (32, 44.1, 48kHz) and de-emphasis, but there is no phase inversion circuitry (easy to implement digitally and therefore usually included), nor signal switching. There are Toslink optical and S/PDIF electrical inputs, priority switched but not manually selectable. This makes the *Tubalog* unsuitable for systems with multiple digital sources, though a digital output, looped through from the electrical input, is provided.

The *Tubalog* won't please the maximum information brigade. It doesn't pull as much detail off the disc as some and tonally it redresses the usual treble highlighting that arises probably as a psycho-acoustic side-effect of the brickwall anti-aliasing filters. In this case the converter's

balance sounds full and rich and gives a strong sense of presence combined with a very smooth, natural treble completely lacking in grain or other obvious digital artefacts. Assessed for its stereo qualities, the *Tubalog* gives very firmly defined central images, with stereo effects quite subtly defined towards the edge of the soundstage. Overall imagery is more distant than usual.

In short, the *Tubalog* is an easy, relaxed sounding design, lacking in tension except where the music calls for it, yet which responds organically to dynamic shadings at low and high levels alike. The individualistic presentation is less dramatic yet more coherent and naturally musical than most. On top of this, the *Tubalog* is a well built, electrically quiet and reasonably priced machine.

Alvin Gold

Musical Fidelity Ltd, 15/16 Olympic Trading Estate, Fulton Road, Wembley, Middlesex HA9 0TF. ☎ 081-900 2866

VERDICT

Musical Fidelity Tubalog

▲ **PROS:** Fine undramatic articulate sound; treble.

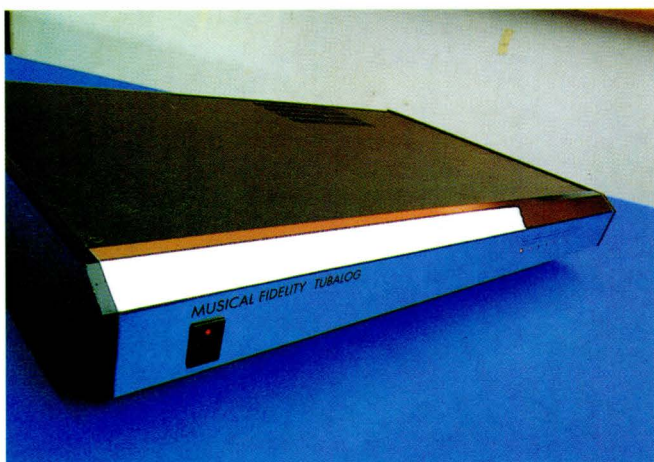
▼ **CONS:** No input options or phase inversion.

▶ **£499.00**

SOUND QUALITY



VALUE FOR MONEY



Musical Fidelity brings the price of valve DACs through the floor with the simple to use new *Tubalog* D/A converter.



CASSETTE DECK

Pioneer CT-95

The *CT-95* is Pioneer's riposte to the challenge set by MiniDisc and DCC. As such, you may think it rather ill-timed, as DCC and MD will, eventually, become important players in the home recording market. However, what you can buy right now only serves to illustrate that both media were pushed out well before they were mature enough to stand on their own feet. In the meantime, the *CT-95*, Pioneer's new flagship cassette deck, scoots home with all the trophies.

The basic spec includes a new high resolution tape alignment system (Super Auto BLE) with an additional user adjustable fine bias adjustment, three heads for real time off-tape monitoring, Pioneer's superb slanted dual capstan mechanism, Dolby S, switchable Dolby HX Pro, a defeatable display. The only notable omission is remote control, though a CD synchronisation socket is fitted for CD to tape dubbing purposes. The *CT-95's* USP, however, is an extension of the operating bandwidth from 20kHz-ish to 30kHz (Type IV metal tape only) courtesy of a narrow replay head gap, custom equalisation and a continuous automatic head azimuth adjustment. Internal construction is both elaborate and sophisticated, with high quality power supplies, capacitors and other components, acres of copper cladding, even screening of the various microprocessors to

Pioneer's *CT-95* Dolby S flagship takes on the digital challengers — and wins.

reduce the influences of radio frequency interference (RFI).

In this case, the technology is genuinely at the service of the music, and the Pioneer has a freshness and vitality combined with rock solid stability through the bass and midband which places it firmly in Nakamichi territory, and way beyond the standards of ordinary cassette decks. But is it worth the £1000 asking price? Although I had some problems with output uniformity with certain tapes (notably TDK Reference bodied metals) which requires further investigation, for most of the time the *CT-95* was the most lucid, transparent and realistic cassette deck I can recall. For the moment, the new digital media don't even come close.

Alvin Gold

Pioneer High Fidelity (GB) Ltd, Pioneer House, Hollybush Hill, Stoke Poges, Slough, Berks SL2 4QP. ☎ (0753) 789 789

VERDICT

Pioneer CT-95

▲ **PROS:** Top-notch player; excellent with metals.

▼ **CONS:** Possible tape path problems; I can't afford it!

▶ **£999.95**

SOUND QUALITY



VALUE FOR MONEY

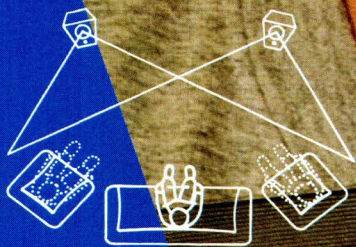


It's that **KEF** feeling

The **NEW Qseries**

ON A HIGH AND LOST IN MUSIC - THAT'S THE FEELING THAT LISTENING TO THE NEW KEF Q-SERIES CREATES EVERY TIME. KEF HAVE POURED ALL THEIR EXPERIENCE, DESIGN AND UNIQUE TECHNOLOGY - INCLUDING THE KEF UNI-Q® DRIVER - INTO A RANGE OF HI-FI SPEAKERS WHICH WILL ABSORB YOUR SENSES WHEREVER YOU SIT. ALL THREE MODELS ARE MAGNETICALLY SHIELDED FOR HOME THEATRE COMPATIBILITY, AND THEY'VE BEEN BEAUTIFULLY DESIGNED TO SUIT YOUR INTERIOR STYLE AS WELL AS YOUR LISTENING MOOD.

The Uni-Q listening benefit



KEF has pioneered the coincident source drive unit, which unlike conventional speakers, places the tweeter in the middle of the woofer cone in such a way that the acoustic centres coincide. The directivity or 'Q' of the woofer and tweeter is matched at the critical crossover point - hence the name 'Uni-Q' - and sound is reproduced with astonishingly accurate tonal balance throughout the room. This design gives the listener two sonic benefits; near-perfect sound wherever you sit, and the best possible sound in your listening environment.



The experience of sound

Tel: 0622 672261

KEF and Uni-Q are registered trade marks. Uni-Q is protected under GB Patent 2 236929 - worldwide patents pending.



PREAMPLIFIER

Art Audio VPL

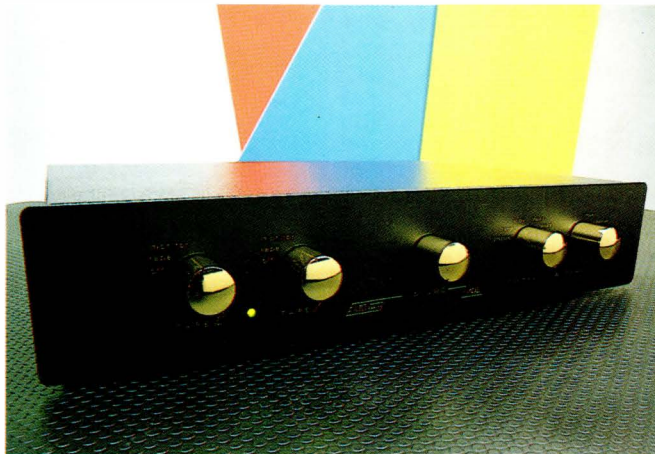
The Art Audio *VPL* is a tube based line preamplifier with the option of either passive or active operation. Priced at £695 it is a reasonably sturdy looking beast with lacquered brass knobs, solid casework and a most unusual feature for the breed, an LED indicator. As if that weren't enough it flashes green and red when the unit is switched on, now that's what I call sophistication.

The *VPL* harbours six line sockets, one of them misleadingly labelled phono/RIAA for external phono stages, two tape loops and a two pairs of output sockets for more excessive power amp set-ups. The inputs connect directly to a vertical PCB which houses the various pots and selector switches, the front panel knobs are connected by long bars, which explains their slightly flexible feel but makes for very short signal paths. Those of you that use them should note that this preamp doesn't have a balance control.

Before comparing the *VPL* with alternatives I compared it with itself, that is I listened to the passive and active options. Whether the passive option is effective depends largely on the power amps in use, if they have the right input impedance and gain it could prove the superior option, in this case, however, the active option was far more dynamic and powerful, so I stuck with that.

Next to a transistor design the *VPL* sounds like a tube device, it has the vibrant tonal colouring and dynamics of the breed alongside a slight defocusing and blowness that is often, though not necessarily a valve characteristic. Next to the *L2* it sounded 'loud', even with volume accurately matched the Art Audio had a degree of forwardness that seemed almost brash. Some discs exaggerated this more than others but extended listening revealed that it was a characteristic not easily ignored in a high resolution system.

The Art Audio *VPL* is a well made preamplifier with a good



Smooth operator. The well made, sophisticated *VPL* valve preamplifier with gusto from Art Audio.

range of inputs and a decent finish, its character suits softer sounding systems and will inject tube style dynamics and energy into them with gusto.

Jason Kennedy

Art Audio, 130 Main Street, Calverton, Nottingham, NG14 6LU. ☎ (0602) 653 604

VERDICT	
Art Audio VPL	
▲	PROS: Good build quality, facilities and finish.
▼	CONS: Slightly forward and overly energetic sound.
▶	£695.00
SOUND QUALITY	
■ ■ ■ ■ □ □	
VALUE FOR MONEY	
■ ■ ■ ■ □ □	

AMPLIFIER

Rega Elicit

A couple of dozen upmarket £500 plus stereo integrated amplifiers may be nominally available on the UK market, but none sells in any serious quantity. Audiolab and Arcam both sell bucketloads at £450, but above that point the hi-fi enthusiast opts for separate pre and power amplifiers, leaving the integrated package to cater for the multi-channel surround sound AV market.

This is a pity, because there's one integrated amp out there

which costs £730 and is quite capable of giving many a more expensive pre/power combo a run for its money.

The Rega *Elicit* doesn't provide the option of changing either pre or power at a later date, which might explain some lack of enthusiasm from the trade. Instead this complete package actually makes a virtue out of its integration, by eliminating one of the normal amplification stages, and is intended for those who want genuine audiophile performance without the bullshit — or the expensive interconnects.

It's no bigger physically than an Arcam *Alpha*, but the build and mass are more like a scaled down American super-amp. There's a lot of very solid and expensive engineering packed into the custom cast case, which acts as a heatsink, and it packs as much punch as most audiophile poweramps — the manufacturer claims 70W/120W and over 200W into 8/4/2ohms respectively. Inside, the whole thing is double mono from pre-

through to the very substantial twin toroid transformers, with fully complementary circuitry and symmetrical layout throughout. Which allow a proper moving-coil vinyl

disc stage to coexist alongside powerful output stages, and giving good RF interference rejection.

The styling is a mite quirky and features are minimised in the interests of sound quality, limited here to volume plus electronic selection between one vinyl disc (MC/MM) and four line sources, with one tape output and one set of 4mm stereo speaker sockets.

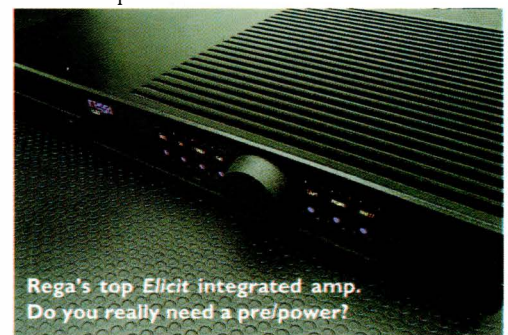
The *Elicit*'s first task was to replace a Pioneer *A-400*. Although considerably cheaper, the *A-400* has received such rave reviews I expected it to put up something of a fight, rather than capitulate with barely a whimper. If the Pioneer is good for the price, the Rega is good irrespective of price.

It's simply a class act — tidy and controlled, yet also superbly fast and coherent, with more than enough punch in reserve to drive even difficult loads to seriously loud levels. Valve-like it isn't, but it's unquestionably proof positive that an integrated amp can mix it with the separate combos.

Paul Messenger

Rega Research Ltd, 119 Park Street, Westcliffe on Sea, Essex SS0 7PD. ☎ (0702) 333 071

VERDICT	
Rega Elicit	
▲	PROS: Compact, powerful, fast, clean and fine value.
▼	CONS: Limited facilities; no upgrade path; quirky look.
▶	£730.00
SOUND QUALITY	
■ ■ ■ ■ ■ ■	
VALUE FOR MONEY	
■ ■ ■ ■ ■ ■	



Rega's top *Elicit* integrated amp. Do you really need a pre/power?

The highest fidelity. Naturally.

HD 580

Top of the range dynamic headphone using new duofoil diaphragm which virtually eliminates sound colouration.



HD 320

Part of the new generation of dynamic hi-fi stereo headphones, the HD 320 has ergonomic styling with a sound quality that is designed to optimise transparency and clarity, whilst ensuring a strong bass definition.



HD 560 II

"A detailed and open headphone with the ability to recreate the power and depth in a piece of music."

Hi-Fi Choice
Oct 91.



Immerse yourself in the music. No distractions, just pure sound reproduction.

It's no coincidence that Sennheiser headphones are acclaimed again and again in the hi-fi press. We set new standards of sound reproduction and quality at the leading edge of acoustic technology. Supremely comfortable and near-unbreakable, the headphones are specially designed for easy replacement of parts.

With accurate, detailed response and rich pure tone, recreate the eloquence of the instruments, the vitality of the vocals. Whatever your taste in music you'll appreciate the transparent natural sound quality, balanced by a wide dynamic range.

Now prove it. Try out our headphones for yourself.

You'll be convinced. Naturally.



HD 340

A headphone which produces a roomy and detailed sound whilst incorporating high quality in its design making it lightweight and comfortable to wear.

 **SENNHEISER**

Sennheiser UK Ltd, Freepost, Loudwater, High Wycombe, Buckinghamshire, HP10 8BR. Telephone 0628 850811. Fax 0628 850958

Choice Sessions

MD PERSONAL

Sharp MD-D10E

The Sharp *MD-D10E* is a tiny machine, the smallest personal stereo I've come across in fact and the only one I can fit into the back pocket of my jeans without discomfort. How small is small; the same length as a regular cassette box, a bit wider and a fair bit thicker. Thus it falls into the groovy toy category without difficulty. It weighs enough though, about the same as a decent CD personal with its rechargeable battery on board.

The rechargeable is the only way of running it on the street and will give you an hour and a half playback of recordable discs and an extra ten minutes with pre-recorded ones. Before I go

any further it's worth mentioning that the *MD-D10E* is a play-back only machine, you'll have to get another machine if you want to make your own discs. And given the current availability of software that wouldn't be a bad idea, I found about thirty or forty discs in the Oxford Street Virgin Megastore. This will hopefully increase as the medium gains popularity, but don't hold your breath.

The *MD-D10E* has an LCD display with adjustable contrast and the ability to show track title or track number and elapsed time in play mode, you've got to stop it to scroll through the name of the disc and artist. Controls on both the player and remote are basic, the only extras being 'display' and 'x-bass/NC', the latter exaggerating low stuff, or

reducing high stuff for the benefit of passive listeners (they call it noise control). There's a handy hold switch, but it doesn't affect volume, and annoying beeps every time you press a button, but they can be cancelled to very good effect.

I managed to get hold of a couple of discs to try this out with, Pearl Jam's excellent *Ten* and Bob Dylan's *Good As I Been To You* (surely 'As I Bin... ' Bob). Both sounded enduring if lacking in hi-fi graces when

Sharp's *MD-D10E* MiniDisc portable player. Small, yes, but is it beautifully formed?



viewed through the supplied earphones. Despite my fundamental loathing of such things I

Build your own AM aerial

A loop AM receiving aerial, popular in the early days of radio, is worth rediscovering today. Because it's much bigger than the loop or rod normally supplied, it intercepts far more signal. And it can be tuned to pick out the station you want and reject others, thereby reducing interference. It uses no batteries or power, and does not even need to be connected to the set — just place it alongside the existing aerial, and turn and tune it for best effect.

The loop works best during daylight hours in electrically quiet locations away from computers and TV sets. In the absence of local interference it can resolve French stations near the South Coast, Belgian and Dutch outlets in London and the Home Counties, or Irish services in the west, Wales and much of Scotland, as clearly as if you were listening in the country of origin. It can also be used to improve reception of out-of-area stations within the UK.

To make a loop you will need a non-metallic frame, a length of wire, and a double-gang AM tuning capacitor, possibly salvaged from an old radio. If you are prepared to experiment, different sizes and shapes from the one shown here are quite possible: the bigger the loop, the more signal pickup, but the clumsier it is to handle.

My frame is made out of 2x2cm timber, the top and bottom sections being 'H' shaped with a

60cm central bar and two 25cm end-pieces. File notches 2cm apart in the end-pieces to anchor the cable as it goes round the loop. The height of the central supports is also 60cm: they can be glued or tacked in place approximately 30cm apart, but all eight joints should be strengthened with 8cm metal 'T' brackets.

Nearly 30m of wire will be required to string the loop: eleven turns round the frame is a good starting point. 24/0.2mm insulated copper wire works well, although 16/0.2mm wire is nearly as good and places less strain on the structure.

Attach an 'L' shaped aluminium bracket to one upper corner of the frame to support the tuning capacitor. You may like to fit a shorting switch on the same bracket to turn the loop's effect on and off. Tuning capacitors vary somewhat in construction, but in essence there are two sets of vanes which mesh and unmesh as the spindle is turned: the moving rotors are earthed to the chassis of the capacitor, while the fixed stators are isolated from earth. The two stator terminals should be joined together to connect the two sections in parallel and the wire loop connected between to the linked stators and the chassis of the capacitor (either way round). The switch (if used) is connected in parallel with the loop.

If coverage of the whole AM band is not exact, remove turns from the loop to move the tuning range upwards, or add them to bring it down. The fullest high-frequency tuning range will be obtained by removing or setting to minimum capacitance with any trimmer capacitors which may be fitted to the tuning capacitor.

To use the loop, select the desired frequency on the tuner without the loop in place, and then move the loop close to the receiver's antenna. Peak the tuning capacitor carefully and orientate both the loop and the receiver's antenna for best reception.

Norman McLeod



1) Beginning to assemble the frame: The frame is held together by 'T' brackets, which are fitted 30cm apart on the main members, and centrally on the side pieces.

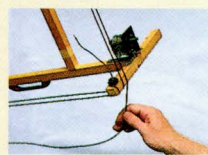


2) Mounting the tuning capacitor bracket: An 'L' shaped aluminium bracket, drilled to fit the tuning ca-

pacitor and switch, is fitted to one of the top corner pieces.

3) Winding the loop:

Anchor the loop by passing the unstripped wire through a 5A electrical choc-block. This will let you tighten the loop after winding. Twelve turns is a good starting point for experimentation — more turns move the tuning range down, fewer turns increase the frequency.



4) Tuning capacitor connections:

The two sections of the tuning capacitor are connected in parallel to one side of the loop, the chassis of the tuning capacitor to the other. The switch is wired to short the loop out so that reception with or without it can be compared.

5) Place an AM radio, or the antenna of a tuner, close to the side of the loop and adjust both the tuning and



the orientation of the loop for best reception. It may be necessary to extend the lead on most tuner antennas.

SME MODEL 20



Built to the same engineering standards and incorporating many design features originated for the Model 30, *'the best turntable of all time'* this attractively priced precision turntable offers the same reliability and freedom from critical adjustments. Massive construction and vibration free moving parts ensure wide-band sound of exceptional detail, resolution and dynamic range.

Now available through leading dealers, further information on request from:

SME LIMITED · STEYNING · SUSSEX · BN44 3GY · ENGLAND



(0903)814321

Fx (0903)814269



Choice Sessions

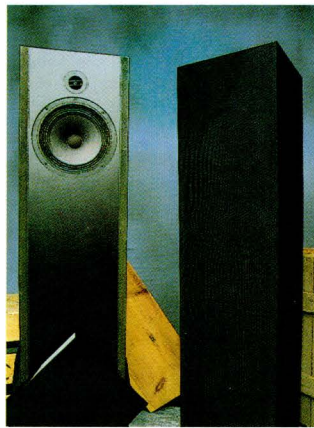
managed to sit throughout most of his Bobness while scribbling this. Comparing *Ten* on MD with other mediums didn't do the Sharp many favours, however, as the degree of compression reveals itself in a seriously shut-in, small sound that doesn't really do justice to the already compressed recording.

Still what has a MiniDisc personal got to do with hi-fi? The Sharp MD-D10E fulfils the requirement to play digital music on the move without too many glitches and plenty of facilities, including the ability to pick up where it left off. If I needed a walkthing, I'd certainly give it a second look.

Jason Kennedy

Sharp (UK) Ltd, Sharp House, Thorp Rd, Newton Heath, Manchester M10 9BE.

☎ 061-205 2333



recommended to run the *Normas* as such.

The crossover point is up at 9kHz or so, well above the ear's most sensitive region. The logic follows that this makes for a smoother, more integrated mid-range, and this is certainly borne out by the *Normas* overall performance.

Simply recorded music, such as Allegri's *Miserere* was reproduced with enough church ambience to make me feel like I should be penitent in sackcloth and ashes. The *Norma* will never satisfy the rabid bass fetishist, but for the most part, the performance is highly acceptable.

What the *Normas* do well is suspend disbelief across the mid-band, in a similar manner to the Audio Note AN-J and AN-E. The larger Audio Note designs extend this suspension of disbelief further into the frequency extremes, but the svelte Triangle makes just as strong a claim for the high efficiency speaker.

Alan Sircom

Kronos Distribution Ltd, 35 Farlough Road, Newmills, Dungannon, DT71 4DU.

☎ (08687) 48632.

VERDICT

Sharp MD-D10E

▲ **PROS:** Tiny size; sex appeal; enduring sound.

▼ **CONS:** Absolute sound quality; lacks software.

▶ **£399.99**

SOUND QUALITY



VALUE FOR MONEY



LOUDSPEAKERS

Triangle

I nearly missed the point of the floorstanding £775 Triangle *Norma* loudspeaker. The *Norma* is so transparent of source that it demands very careful system matching — anything less and the result is deeply unsatisfying.

The *Norma* is a highly efficient and easy 92dB, eight ohm load which makes it a natural partner for low-powered triode amplifiers. It uses a new and unique full-range drive unit, coupled with a small Audax tweeter unit that acts as fill-in at high frequencies. The new drivers allow the speaker to be bi-wired and it is highly

VERDICT

Triangle Norma

▲ **PROS:** Good looking; efficient; transparent.

▼ **CONS:** Frequency extremes; very system dependent.

▶ **£775.00**

SOUND QUALITY



VALUE FOR MONEY



RECORDING

Gershwin

Rhapsody in Blue, Second Rhapsody, Variations on I Got Rhythm.

Jeffrey Siegel, piano. Saint Louis Symphony Orchestra, Leonard Slatkin. Reference Mastercuts RM-1003 LP only

If you still retain allegiance to vinyl you won't need me to tell you that classical releases on LP have all but dried up. So it's nice to welcome a new series from the American audiophile label Reference Recordings devoted to quality remasterings of vintage analogue material.

For its first release RR have chosen three '70s recordings from the Vox catalogue of music by Gershwin, Ravel, and Rachmaninov. Vox was an American label that offered low-price LPs, often of neglected or unusual music.

One of Vox's most enduring creations was the Vox Box — a three LP boxed set of records that retailed for about the same as a standard full-price LP.

The Siegel/Slatkin Vox Box devoted to all Gershwin's music for piano and orchestra was originally released in 1974. One of the first Vox issues to be taped in America, the recordings were produced and engineered by Marc J Aubort and Joanna Nickrenz of Elite Recordings NY — a very reliable team.

In fact Vox Boxes were not officially available in the UK; Decca had the rights to the Vox catalogue over here, and issued this set on three separate Vox Turnabout LPs in 1976.

Certainly RR has spared no expense. The LP is cut by Doug Sax at the Mastering Lab in LA and pressed on heavy 180g virgin vinyl. The gate-fold sleeve is beautifully thick and nicely printed. Each disc is a numbered limited edition.

The recordings, made on half-inch four-track tape running at 38cm/s, were originally released in QS quadrasonic

format. For this reissue only the stereo 'front' channels are utilised; the ambience tracks have been ignored. The original four channel recording was QS encoded and copied to another tape from which the Vox LPs were cut. So this RR reissue is far truer to the master tape.

Few versions of Gershwin's popular *Rhapsody In Blue* have the luxury of being spread over an entire LP side, but that's what happens here. Cutting levels are nice and high, and the sound has plenty of amplitude and bite. The original Vox always sounded rather distant and ill-focused, but this RR cut is powerful and full-blooded, with bags of impact and presence.

Siegel and Slatkin play the *Rhapsody* complete avoiding the Cuts that were common at that time — for example, Previn/LSO on EMI — and their performance is powerful with lots of swagger.

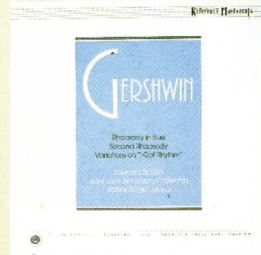
At times Siegel's playing is slightly prosaic, a touch staid, but the orchestra never falters.

The coupling is Gershwin's neglected *Second Rhapsody* and the *Variations on: I Got Rhythm*. Both receive good performances, though again conductor and orchestra make a more positive impression than the soloist. The sound is excellent, clean, sharp, detailed with excellent dynamics.

Pressing quality is good too — miles better than the old Vox discs — though be prepared for the odd click or two the first time you play. RR use a very hard vinyl to give maximum clarity and definition, and it may take a couple of plays for the stylus to sweep it clean.

No CD is available, though Vox have issued their own CDs of these recordings and the companion RR issues of Rachmaninov and Ravel at mid-price. So for once LP lovers have the field more or less to themselves.

Jimmy Hughes



playing is slightly prosaic, a touch staid, but the orchestra never falters.

The coupling is Gershwin's neglected *Second Rhapsody* and the *Variations on: I Got Rhythm*. Both receive good performances, though again conductor and orchestra make a more positive impression than the soloist. The sound is excellent, clean, sharp, detailed with excellent dynamics.

Pressing quality is good too — miles better than the old Vox discs — though be prepared for the odd click or two the first time you play. RR use a very hard vinyl to give maximum clarity and definition, and it may take a couple of plays for the stylus to sweep it clean.

No CD is available, though Vox have issued their own CDs of these recordings and the companion RR issues of Rachmaninov and Ravel at mid-price. So for once LP lovers have the field more or less to themselves.

Jimmy Hughes



THE FIRST THING WE LISTENED TO TO IMPROVE OUR LISTENING EXPERIENCE.

Did Technics manage to produce the astounding listening experience that is the SUA600 amplifier all by themselves? No. You played a big part. We asked what you wanted from an amp. "Music." You said "Purely and simply."

So out went all the ideas of extraneous circuitry. And when we felt controls were useful, into the SUA600 went massive gold flashed relays.

You wanted more. "Every instrument" you demanded "in its proper place".

"Sandwiches" we responded. Aluminium and resin ones encasing the capacitors.

Resisting vibration to an unheard of degree to give a smoothness of mid range

and three dimensional depth unheard in amps at this price.

Still you weren't finished.

You wanted experience. "The mood of the music, exactly as played".

We put the R core transformer in. You won't get one from anyone else, or the kind of bass and dynamics it produces.

But don't waste any more time listening to us. You could be experiencing the SUA600.



Technics
For music lovers.

STATEMENTS

Fed up with out of date CD players and DACs? Alvin Gold has been listening to a converter that

Counterpoint DA-10 D/A Converter

could make technological obsolescence a thing of the past.

Technical report: Paul Miller.

Are you one of those put off taking the plunge with a top ranking D/A converter by the fear that your new purchase will be quickly rendered obsolete by advancing technology? Or perhaps you would like a good but affordable converter which can be upgraded in stages? Either way, the Counterpoint DA-10 (from £1,679) may allay your fears and be the answer to your prayers.

In much the same way that CD players can be separated into converters and transports, the converter too can be separated into its key functional blocks. In this instance there's a 'mainframe' unit which consists of the case, sockets and controls, with power supplies, a low jitter Crystal digital signal capture IC, a zero-feedback discrete analogue output stage, and third-order passive Bessel filtering. The other part of the

DA-10 system is a range of replaceable D/A converter modules — DACCards in Counterpoint speak — which come in bitstream, delta/sigma and multibit configurations, and can be interchanged in seconds.

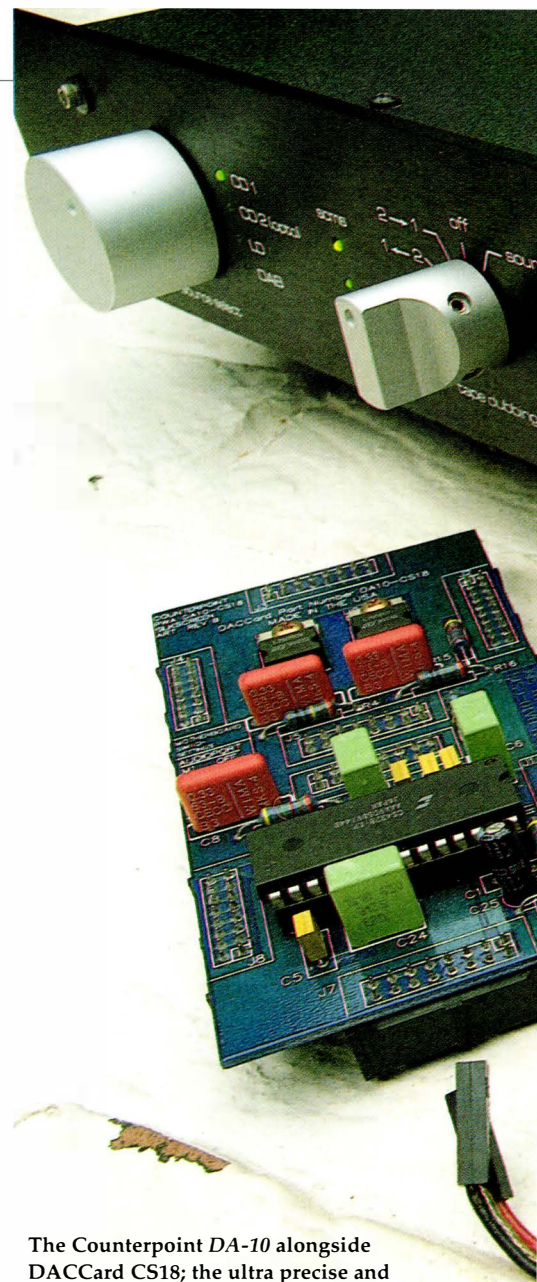
The subjective differences between the various converters are not small, and are sure to add further fuel to the low bit vs multibit debate which in the past has always been difficult to conduct rationally in the absence of a common platform on which the different technologies could be compared. Even here uncertainties

persist, the lab tests indicating that all are not implemented equally well.

Furthermore, the differences between the different converter modules is so chasmic that it's hard to avoid drawing conclusions which are unkind to Bit Stream, even if all allowances are made.

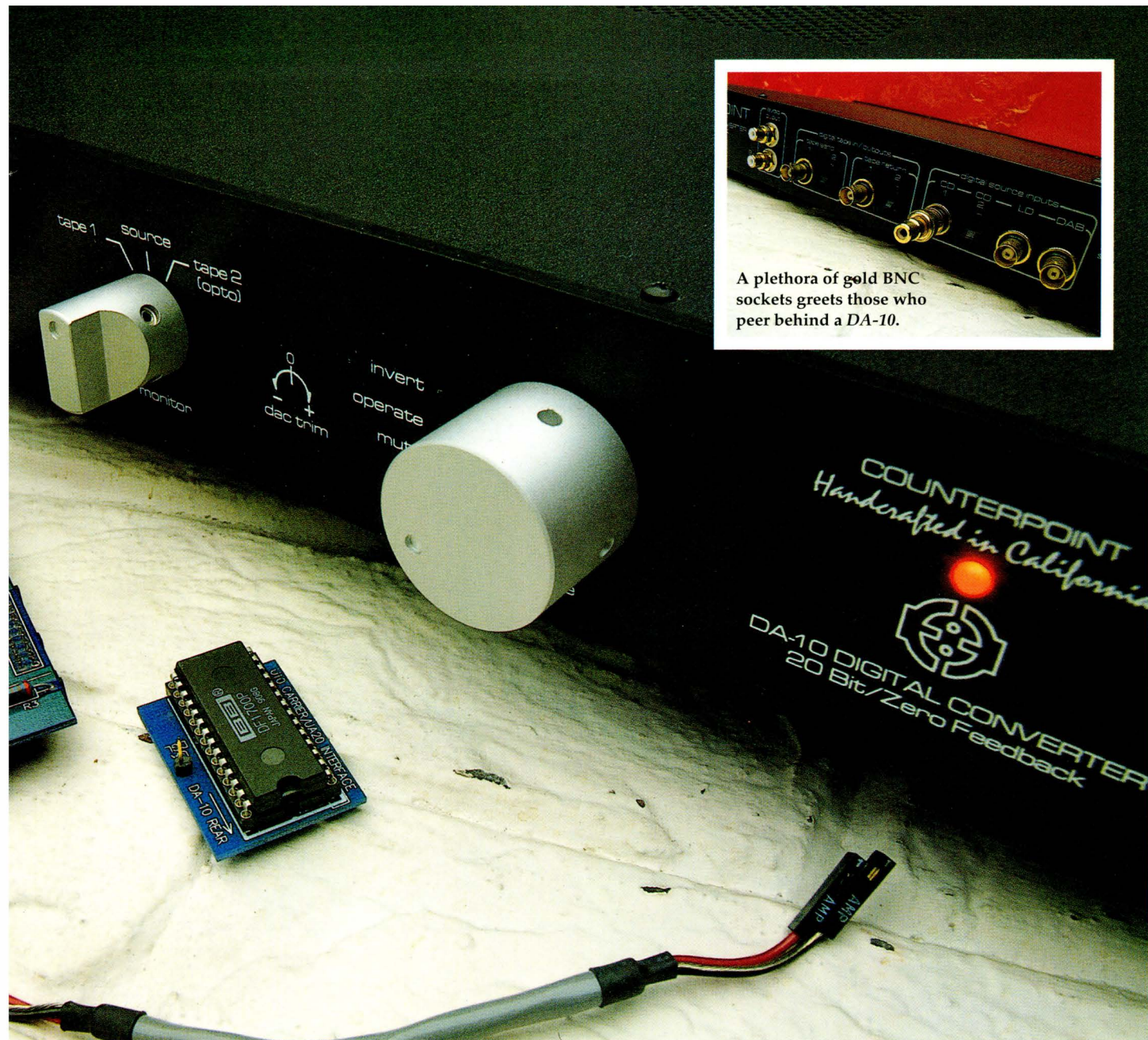
The D/A modules (DACCards) supplied for test:

DA-10-AD20 Analogue Devices AD1862N 20-bit AD1862 multibit DAC (normally supplied with mainframe)	£253
DA-10-CS18 Crystal Semiconductor CS4328 Delta-Sigma with 64 times oversampling, 18-bit resolution Crystal CS4328 DAC	£352
DA-10-PH20 Philips SAA7350 256 times oversampling, 20-bit equivalent resolution dual differential Bit Stream DAC (to be discontinued)	£239
DA-10-UA20 UltraAnalog UA20 20-bit D20400 multibit processor	£986
DA-10 mainframe (tested)	£1,679
DA-10ST as above, with ST optical input	£1,879



The Counterpoint DA-10 alongside DACCard CS18; the ultra precise and detailed Crystal converter.

The DA-10 is built into a full width, slimline case with a single, heavily populated PCB for the mainframe, the DAC boards fitting piggyback into sockets in a central position. The sophisticated power supply is based on separate digital and analogue transformers working through multiple regulators in a low impedance configuration. Four digital inputs are fitted, all capable of working at 32kHz, 44.1kHz and 48kHz clock speeds; the three electrical inputs use BNC connectors (superior to the more common phono socket, though adapters are supplied), and one Toslink optical socket (which can be replaced by an ST type to special order). In addition there are digital tape send and return circuits in both flavours, which act as additional digital inputs if not used for their labelled function, making up to six inputs in total. Muting and phase inversion are available, and a trim pot



A plethora of gold BNC sockets greets those who peer behind a DA-10.

is fitted to adjust the MSB (Most Significant Bit) on multibit converters that support this feature. Signal routing and switching for tape to tape dubbing is also fitted.

Musical organisation

I can think of three, maybe four D/A converters that are clearly superior to the Counterpoint, but they all cost considerably more, even when the DA-10 is equipped with the UltraAnalog DAC. In this form, an initially slightly messy sound from cold quickly settles down to a highly articulate and outgoing sound with a very alert and well delineated treble. It is not state-of-the-art, but it gets maybe 85 per cent or so of the way there courtesy of excellent internal musical organisation and a complete absence of the frazzled, tinselly quality associated with inferior breeds of digital hardware.

Ultimately, however, this all depends very much on the processor

chosen. To dispose of the no hoper at the outset, the Philips BS DAC implementation (not to be confused with a DAC7 by the way) was simply a waste of time. While neutral and sometimes quite sweet, its lazy, slurred delivery lived down to all the stereotypes, with compressed dynamics and a complete inability to juggle more than one ball at a time, in the sense that complex multi-instrument pieces simply congealed into a homogenous mass. Individual instruments fail to resolve out of the mix in a properly independent manner. Late in the day, the distributor informs me that the Philips DAC Card is to be discontinued.

It soon became apparent why the Analogue Devices chip was chosen as the factory fit module. It offers an excellent price/performance compromise, sounding much like a chopped down version of the UltraAnalog (though UA may not thank me for saying so). Whether you accept this

characterisation or not, this is still a processor that does all things well, and none either marvellously or disastrously. It has strong pace and timing, sounds tonally neutral and has a fair-to-good dynamic range and resolving ability. It reminded me of the multi-bit Philips TDA1541 when used in a good player, although it was a little less dynamic and structured but had slightly more finesse.

The two really interesting DACCards, however, are the Crystal and the UltraAnalog. The real star is the UltraAnalog, which offers an extraordinary combination of virtues, unfortunately with a price to match. It is as neutral as the Analogue Devices design, yet somehow has a wider tonal and dynamic compass. Much wider in fact; the bass is extraordinarily solid and physical in feel — a characteristic of the best record replay equipment — and with this DACCARD fitted the DA-10 was as close to Wadia/Theta

NEW PRODUCT

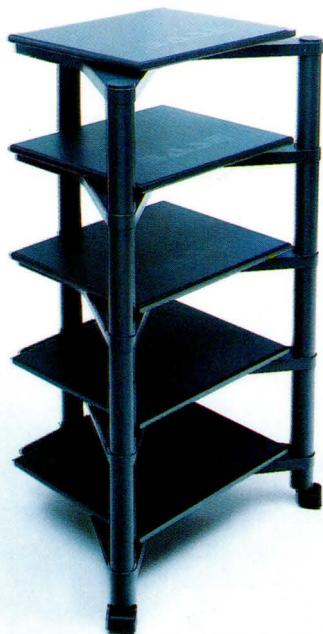


BASE

VIBRATION ISOLATION PLATFORMS

Realise the full undistorted potential and accuracy of your high fidelity audio components with the latest concept in platforms.

Available as individual platforms, modular racking systems or hardwood enclosures built by craftsmen to suit your requirements. Integral cable routing separates sensitive carriers from mains leads combining tidy appearance with elegant furniture design.

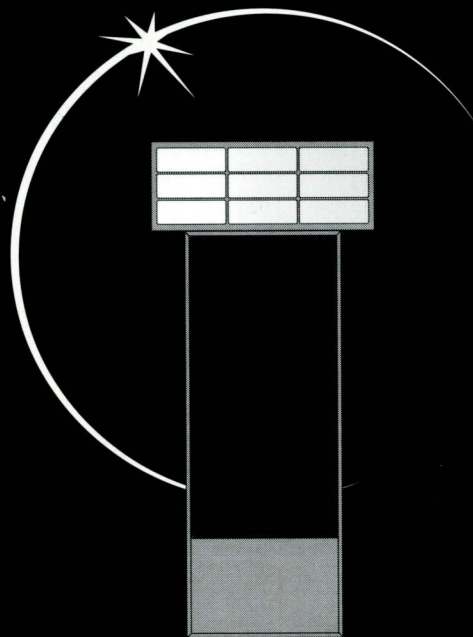


Audiophile



Audiophile Furniture Limited Telephone: 0342 826262

*You supply the left ear and right ear -
We'll supply the final frontier*

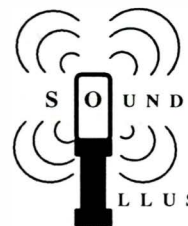


CADENCE · ES

hybrid electrostatic loudspeaker system

Phone 081-441 1650 for details of your nearest stockist

Mike Harvey's



Audio Engineering from . . .

Classé, Croft, DPA,

LFD, Linaeum,

Magnepan, Michell, Orelle,

Pink Triangle, Sonus Faber,

Van den Hul

. . . creating the Illusion of Reality

Phone or fax us any day until 10pm

Hampshire, 0252 377952

STATEMENTS

territory as I have heard (the Counterpoint arrived at my place hard on the heels of a Wadia 12 converter). This Counterpoint combination supplies bite and slam, with a superbly propulsive sense of timing and with rich, vibrant tonal colours. Imagery is excellent, and the UltraAnalogue/DA-10 implementation has a tremendous sense of scale and proportion.

The Crystal is the oddball in this comparison. Imagery here is superb too, but more sharply presented. In some senses this feels more explicit and accurate than the UltraAnalog, although the ability to recreate a sense of physical presence is inferior and lacks the UA's natural flow. Similar characteristics were noted in other

areas too. The Crystal has an ultra precise and highly detailed quality, but is also rather clipped and dry. It's as though transient leading edges are emphasised while the sense of sustain was being skimped. Tonally this DAC sounded lightweight, while both timing and dynamics had a rather relentless, unvarying feel which superimposed its character on the music, reducing expressiveness. The Crystal is ultimately a highly listenable converter, but the Analogue Devices is probably a better balanced, if less exciting choice.

A high-end mixer

As a flexible and fundamentally future-proof digital conversion device,

the Counterpoint DA-10 clearly has a great deal going for it. In the restless digital arena the value of achieving some immunity from the ravages of technical obsolescence cannot be overstated.

The sound quality clearly has the capability to mix it with other comparably priced high-end converters, but it must also be acknowledged that the technical performance of the well travelled demonstrator which we measured was uneven enough from one DACCard implementation to another to undermine our confidence a little.

MPI Electronic UK Ltd, Wood Lane, Manchester M31 4BP. ☎ 061-777 8522

At the heart of this box of tricks lies a Burr Brown DF1700 eight times oversampling filter which will feed any of four optional DACCards — mini PCBs that host a variety of multi-bit and Bit Stream technologies.

The basic AD20 DACCard employs a pair of 20-bit AD1862N's from Analogue Devices. These require both external trimming and a separate I-to-V conversion stage which is selected within the main analogue filter.

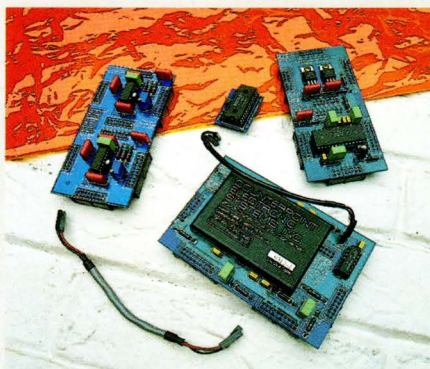
Once adjusted, the AD20 Card still achieves a poor 103dB signal to noise ratio (>112dB is possible with the AD1862N), a passable low-level error of +1.2dB and distortion ranging from 0.25-2.8 percent at -60dB to just 0.0047 per cent at peak level. The latter is visible as 2nd, 4th and 5th harmonics on the 3D plot. Otherwise, the cleanliness of this plot simply reflects the full rejection (-102dB) of stop-band images, a feature attributable to the DF1700 oversampling filter. The 3D plots for all four Cards differ only in the spread of harmonic distortions.

All four DACCards give different final analogue output levels. This will confuse any straightforward subjective comparison where the various DACCards are interchanged without regard to level-matching. Interestingly, the costly 'top-end' UltraAnalog Card has the highest 3.4V output.

Furthermore, the implementation of both Philips and Crystal Bit Stream Cards is rather clumsy. The designs are sound enough but the use of full-sized components is inappropriate. As a result the technical performance of both the Philips PH20 and Crystal CS18 Cards lag the standards achieved by 'equivalent' CD players. The poor 93dB signal to noise ratio (Crystal), uncommonly high +9.6dB noise modulation and droopy response (Philips) are specific examples, but

both suffer reduced dynamic range and impaired low-level distortion performance that's most clearly revealed on the -70dB plot shown on the right.

By contrast the Analogue Devices and UltraAnalog traces are quite typical of the

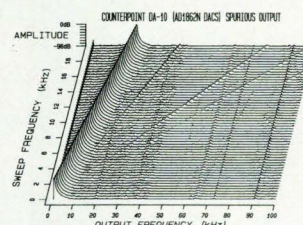


	Ultra Analog	Analog Device	Philips BS	Crystal
THD vs Level 1kHz/20kHz (dB)				
0dB	-91.0/-83.5	-86.5/-84.4	-85.2/-70.3	-97.0/-76.2
-30dB	-46.3/-51.5	-79.8/-62.6	-71.5/-47.5	-73.1/-63.7
-60dB	-40.1/-42.2	-51.8/-31.3	-43.0/-16.7	-38.7/-32.6
-80dB	-24.5/-20.1	-29.4/-11.7	-20.7/+2.10	-19.5/-11.3
-90dB	-14.5/-11.0	-19.5/-4.50	-12.5/+11.0	-10.4/+5.50
Dithered, -100dB	-9.50dB	-15.1dB	-6.20dB	-4.50dB
Dithered, -110dB	-2.50dB	-6.50dB	-1.50dB	-2.50dB
Resolution 1kHz/20kHz (dB)				
@ -60dB	-0.16/-0.20	0.00/+0.02	0.00/+0.02	0.00/-0.11
-80dB	-0.32/-0.22	-0.02/+0.12	-0.32/+0.38	-1.45/-1.51
-90dB	-0.83/-0.71	-0.02/+1.20	-0.12/+0.71	+2.08/-7.55
-100dB	-0.79/-0.50	+1.20/+0.90	-0.50/+2.50	+2.40/-4.70
Peak Output Level, L				
R	3.365V	2.116V	2.190V	1.372V
R	3.365V	2.115V	2.179V	1.374V
Relative Output Level				
Output Impedance	+4.52dB	+0.49dB	+0.77dB	-3.27dB
Output Impedance	114ohm	124ohm	120ohm	110ohm
1Hz Noise Modulation				
CCIR IMD, 0dB	+15.2dB	+3.8dB	+9.6dB	+2.7dB
Suppression of stop-band				
S/N Ratio (A-wtd), w emp, 0LSB	110.5dB	103.5dB	101.9dB	98.9dB
w/o emp, 0LSB	110.2dB	103.2dB	101.8dB	98.7dB
w/o emp, 1LSB	110.2dB	103.2dB	101.8dB	92.8dB
Serial Number				4D185

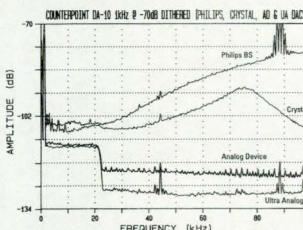
Technical report

breed, clearly demonstrating their superior dynamic range and reduced ultrasonic output.

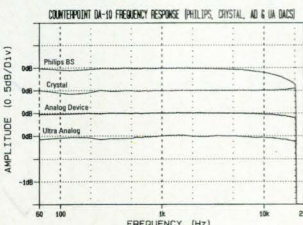
So, though intriguing though it is, Counterpoint's DA-10 is technically a very mixed bag. The unsympathetic Philips and Crystal Cards do these bitstream options no service while the UltraAnalog Card needs a more rigorous approach to its grounding. Which leaves the Analogue Devices Card as the safest option.



A Burr Brown eight times digital filter removes all stop-band noise.



High ultrasonic noise and reduced dynamic range in Philips and Crystal.



Only the Philips DAC shows a noticeable lack of treble.

Because we thought about it. Deeply. Our R&D people spend their lives immersed in speaker design – but never out of their depth.

Bathtime operatics may have inspired the SIXES concept, first seen in the original successful SIXES. You see, four-square walls generate standing waves which boost 'boom'. Fine for resonant renditions of 'Nessun Dorma', but fatal to accurate musical reproduction.

Similarly, since sharp edges cause sound diffractions, playing havoc with frequency response and believable stereo imaging, our six-sided cabinets adopt a more oblique approach.

The quest for colour-free sound is unceasing. The senior members of the new SIXES family feature our Dual Concentric sound sources, whilst all models incorporate contoured moulded bass cones, low-weight and stiff for agile yet powerful bass response. And tweeters with gold-anodised domes, ensuring treble clarity and smoothness.

To read more about the new SIXES – write today or phone 0236 420199. But for the absolute truth, all you have to do is to listen.



There's
just one reason
why the new
SIXES loudspeakers
look and sound
as they do.



NAME

ADDRESS

POSTCODE

Please send me further information on the new SIXES
 Please send me details of my nearest stockist

SUBSCRIBE NOW

TO THE WORLD'S FINEST HI-FI MAGAZINE

Hi-Fi Choice is not just your best choice... it's your only choice. Its rigorous blind test procedures are both revered and feared by hi-fi manufacturers everywhere. At the same time, no other hi-fi guide contains as many pages of invaluable hints, tips – and buying advice too. That's why it's such an essential read when the time comes for replacing, upgrading or expanding your hi-fi system.

Join the Hi-Fi Choice subscriber club – and see what you get!

HUGE SAVINGS!

A discount of up to 40% on the normal cover price (Each issue could cost you as little as £1.78)

SPECIAL DEALS!

10% off all mail order purchases, plus access to page after page of unique club member offers

DISCOUNT ENTRY!

To shows sponsored by Hi-Fi Choice, and preferred access to all Hi-Fi Choice demo areas

Direct debit is the easiest way to pay for your subscription. In response to readers' requests we are now offering direct debit as the hassle free way to pay for your Hi-Fi Choice subscription AND as a special introductory offer, all subscribers paying by direct debit will also get a free 5-pack of MGX C90 cassette tapes – worth £15.



HOW TO SUBSCRIBE

Complete the form, and return it to: Hi-Fi Choice Subscriptions, FREEPOST WD7, Market Harborough, Leicestershire, LE87 4AU. Postage is FREE if posted in the UK.

Overseas subscribers please send to: Hi-Fi Choice Subscriptions, Tower House, Sovereign Park, Market Harborough, Leicestershire, LE16 9PG

OR PHONE OUR CREDIT CARD HOTLINE ON 0858 468888

YES! I would like to take advantage of this special offer. Please start my subscription from the next available issue and send me my FREE gifts.

1 year UK £25.00 Europe £ 39.00 World £51.50
2 years UK £ 42.50 Europe £ 68.00 World £89.50

DETAILS

Name
Address

Postcode

Daytime Telephone Number

METHOD OF PAYMENT

I enclose a cheque for £ (sterling) made payable to: Dennis Publishing Ltd – HFC

Please charge my Visa Access/Mastercard

Credit Card Number

Expiry date Today's date

Signed

I would like to pay by direct debit and claim my FREE tapes

Name of account holder(s)

Bank sort code

Account number

Bank name

Branch

Address

Postcode

- I/we instruct you to pay Direct Debits from my/our account at the request of Dennis Publishing Ltd.
- The amounts are variable and may be debited on various dates.
- I/we understand that Dennis Publishing Ltd may change the amounts and dates only after giving prior notice.
- I/we will inform the Bank in writing if I/we wish to cancel this instruction.
- If any Direct Debit is paid which breaks the terms of these instructions the Bank will make a refund.

Your signature(s) Date:

Originator's identification number **724680**

NB Banks may refuse to accept instructions from some types of account.

SHF 11/93

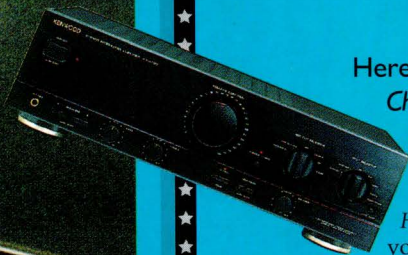
Please indicate here if you do not wish to receive details of further special offers or new products.

Reader Survey

HELP US

and win a prize!

Here's your opportunity to tell us what you think of *Hi-Fi Choice* and enter your name in a prize draw for a CD player, amplifier or pair of speakers at the same time.



Kenwood KA-4020 amplifier.

Hi-Fi Choice is just as much your magazine as it is ours, and we would like to know what you think of our current blend of news, reviews and features, and what you would like to see covered in future issues.

We'd be grateful, therefore, if you would spare a few minutes to fill in the questionnaire on the next two pages. As well as giving you the chance to say what you think about the magazine, it also

provides us with an insight into what you would like to see included in the months ahead so that we can produce the type of magazine you want to read.

In return for your time, we are offering you the chance to win one of three pieces of hi-fi equipment, kindly donated by our friends at Hyper-Fi, in a great prize draw. Everyone who completes and returns the form is automatically entered

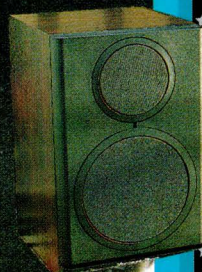
in the draw, and the first one out of the hat will win his (or her) choice of prize. Please remember to indicate at the end of the form which prize you would like to win.

The prizes on offer are a Sony CDP-597 CD player, a Kenwood KA-4020 amplifier or a pair of Mordaunt-Short MS 5.10 speakers. If you would like the chance to win that brand new bit of kit you thought you wouldn't be able to afford this year, just fill in the form, cut and fold it as shown and pop it in the post box. You don't even need a stamp!

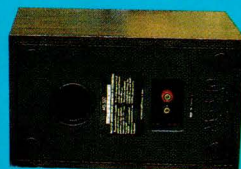
To qualify for inclusion in the free prize draw, please make sure your completed questionnaire is returned by first post Monday, 22nd November 1993.

Thanks for your help, and good luck!

Simon Davies



Mordaunt-Short MS 5.10 loudspeakers.



Sony CDP-597 CD player.

Tidy your CDs with the FREE On CD storage rack

Mounted on this month's cover is an exclusive gift from *Hi-Fi Choice*, a limited edition version of the On CD storage rack to help you tidy away your unruly collection of discs.

Is your CD collection getting out of hand, to the point where you must gingerly pick your way over a carpet of silver discs before you can even get to the CD player? If so, the great free gift on the cover of this month's issue should prove a life saver.

It's an exclusive *Hi-Fi Choice* version of the neat and stylish On CD storage rack distributed in the UK by the Path Group PLC. This simple fliptray can hold up to 12 CDs safely and securely, and allows you to browse

through the stored selection using your fingertips. It's just like looking for discs in a shop, as you can flip through your collection until you find your favourite CD.

What's more, your free rack, proudly sporting the *Choice* logo, can be built-up into a much bigger storage system as your CD collection grows. All you do is add further fliptrays to this one by locking them together with the tiny clips supplied with each pack of holders. The interlocking fliptrays are versatile, too, locking together



side by side or front to back.

The On CD fliptrays are sold in packs of two (holding up to 24 discs) or five (60 discs), with typical selling prices of £3.99 and £4.99 respectively. They are available through Dixons, HMV and other good accessory stores nationwide, or you can buy them through the *Hi-Fi Choice* special offer mail order scheme. See next

month's Reader Offers pages for details.

The limited edition On CD fliptray is free with the November issue of *Hi-Fi Choice*. If the fliptray was missing from the cover of this magazine, please speak to your newsagent. We regret that the free fliptray offer applies to UK readers only.

Save £5 on selected items at HYPER FI!



In the new look *Directory* pages starting on page 129, you will find a wide selection of dealers advertising their wares in what has already become a popular 'shopping zone' for readers.

In the first of what we hope will be a regular series of special *Hi-Fi Choice* reader offers, Hyper Fi is offering you the chance to save £5 off any items featured in this month's Hyper Fi advert on page 149. That's not just £5 off a single item. It's £5 off every individual item purchased. So if you are buying four separate pieces of kit, you will save £20!

Just cut out the coupon below and take it to the Hyper Fi superstore in Barking, Essex, or send it along with

Money Off Voucher £5

Save £5 off the purchase price of any items of equipment listed in the Hyper Fi advertisement starting on page 149 of the November issue of *Hi-Fi Choice*. Simply take this voucher to the Hyper Fi Superstore in Barking, Essex, or send it with the Hyper Fi mail order form, in order to receive a £5 discount on the price of any advertised item. This voucher has no cash value and is subject to the conditions detailed on page 37 of the November issue of *Hi-Fi Choice*. Valid until November 12, 1993.

your mail order coupon, and you will receive your special discount. Please note that you must use the coupon provided. Photocopies are not acceptable.

Remember, the offer only applies to products listed in the Hyper Fi advert that appears in this issue of *Hi-Fi Choice*. The offer also only applies to UK

readers. The voucher has no cash value. This offer is not open to employees of Dennis Publishing or Hyper Fi, their suppliers, agents or associates.

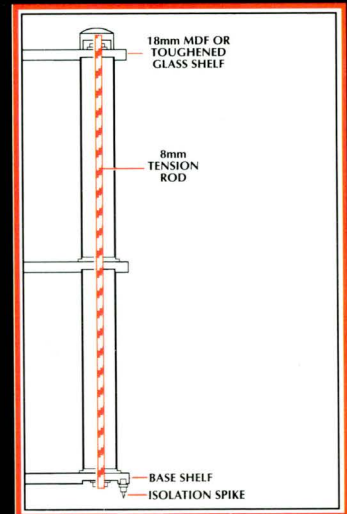
ALPHASON

WHAT'S IN AN ALPHASON RACK?



BETTER PERFORMANCE

THE UNIQUE TENSIONED ROD CONSTRUCTION INCREASES THE STRUCTURAL STIFFNESS OF THE SHELVES REDUCING VIBRATIONS AND ALLOWING THE HI-FI TO PERFORM AT ITS BEST.



THIS PROFESSIONAL ACOUSTIC DESIGN APPROACH TO THE CONSTRUCTION ALLOWS CLEAN REPRODUCTION OF BASS FREQUENCIES AND ACCURATE HARMONIC STRUCTURES, FREE FROM THE "MUDDYING" EFFECTS COMMONLY FOUND IN OTHER SO CALLED HI-FI FURNITURE.



TOTALLY MODULAR

ANY CONFIGURATION MAY BE SELECTED TO SUIT YOUR PARTICULAR REQUIREMENTS BY ADDING SHELF MODULES ON TO THE STANDARD 2, 3, 4 OR 5 SHELF CONFIGURATIONS.

THE DECISION TO INVEST IN AN ALPHASON SUPPORT SYSTEM WILL ENSURE THE BEST PERFORMANCE FROM YOUR HI-FI.

PLEASE COMPLETE AND RETURN THE COUPON TO RECEIVE OUR LATEST BROCHURE WHICH DETAILS OUR COMPREHENSIVE RANGE OF HIGH PERFORMANCE HI-FI, AUDIO VISUAL AND LOUDSPEAKER SUPPORTS.

Please send me full details of your latest brochure

Name _____

Address _____

Postcode _____ HC/11/93

PATH GROUP PLC, Unit 2, Desborough Industrial Park,
Desborough Park Road, High Wycomb, Bucks HP12 3BG
Alternatively Telephone (0494) 441 736

HELP!

OUR EXPERTS SOLVE YOUR HI-FI QUERIES

Every month we're giving away some Isoda interconnect cable to the writer of the most interesting letter. If you've got any queries send them to: *Hi-Fi Choice (Help!)* Dennis Publishing Ltd, 19 Bolsover Street, London W1P 7HJ.

Student systems

Q Despite being an undergraduate, I have built up a reasonable system in the past few years. At present it consists of Linn Axis turntable with Linn Akito arm and Audio-Technica AT-OC5 cartridge, Naim NAC 72 preamp and NAP 140 power amp, with K phono boards and Linn *Index II* loudspeakers on *Ku-Stone* stands.

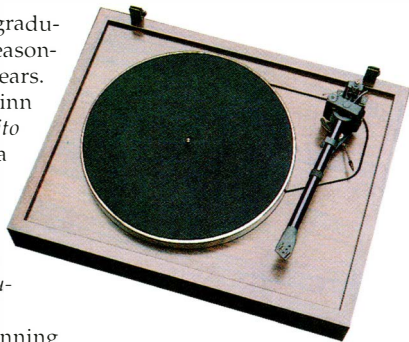
At the moment, I am running Naim NAC-A5 cable to the bass/midrange drive and Mission solid core to the tweeters. Is this advisable or even safe? Amplifier connection is with the Naim right-angled terminators, which makes for difficult bi-wiring, but I am disinclined to spend money on cables without first being sure that the sound will be improved. My system is housed on a Target TT3, although some experimentation with the turntable shelf is envisaged in the near future. Would a Mana replacement shelf be my best bet? As you can appreciate, funds are somewhat limited at the moment, so value for money is essential.

R J Helps
Wellington, Somerset.

A Technically, there shouldn't be a problem running hybrid solid core/stranded cables. However, Naim Audio does not recommend bi-wiring with its amplifiers at all, so the company would probably look down on hybrid cables. In such a system, it may be worth comparing your own cables with a set of Linn K400 bi-wired cables, but otherwise I would keep things as they are, wire-wise.

If you have neither the space nor the budget for a separate table for the turntable, a Mana shelf would be a good alternative, especially if you are

a Linn owner. Also, it may be worth swapping from K boards (which are designed specifically for the old Linn Karma and Troika cartridges) to a pair of S boards designed for standard moving coil cartridges. Ultimately however, it is better to save what's left of your student loan for a better turntable, such as a Roksan Xerxes, Towshend Rock, or Voyd.



Above student grant grade but the Xerxes is worth saving for.

More slam, less muddle

Q My current system consists of a Sony CDP-X339ES CD player, Linn Intek amplifier and Tannoy 611 speakers 1m from the side and rear walls. Cables are DNM interconnects and Linn K400 bi-wire speaker cables. My room measures 4m by 4m.

The soundstaging and detail with material like Mary Black and Tracy Chapman is fairly good, but with rock the treble becomes very harsh and the midband very muddled. I would also like the bass to be a bit tighter. Can you recommend improvements — up to £2,000 — which will give openness, transparency, detail and accurate soundstaging to acoustic material, but which will deliver the necessary slam to rock without sounding unforgiving.

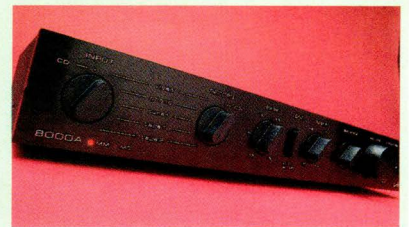
Graeme Finlayson,
Clacks, Scotland.

A Of the components in your system, the CD player is the only part that we found to be of significant merit, we were less than convinced by the performance of the amplifier and speakers. Why not change over

Query of the month

Digital surprises flat earther

Q My system consists of a Rega Planar 3 turntable with AT-OC5 cartridge, Marantz CD5211SE CD player, A&R Cambridge amplifier and Musical Fidelity MC2 loudspeakers which are bi-wired with Linn K20 cable.



Having been a vehement flat earther I have to admit I was pleasantly surprised with the addition of digital to my system. Unfortunately, this latest purchase has highlighted the lack of bass and general over brightness of my amplifier.

I also feel that I should be getting more from my turntable. To remedy this, I have been thinking of upgrading the amp, perhaps to a pre/power combination, in an attempt to wring the most from my two sources. I have a budget of up to £1,000.

Dominic Slade,
Birmingham.

A We never got around to testing the MF MC2s but I would be more inclined to blame them for any excess brightness than the amp, old A&Rs are pretty cosy sounding things on the whole. However, for maximum wringing purposes, a better amp would be a good idea.

On the amp front you want to listen to the Arcam Delta 290, Audio Innovations Series 300 and probably the new Cyrus 3, we haven't reviewed it yet but if it's a worthy successor to the 2 then it's going to warrant a try out.

Speakers worthy of your time and expense include Castle Chesters, Audio Note AN-Ks, Linn Keilidhs and possibly Mission 753s, but they may stretch the budget.

For starters have a go with some Isoda HC05 interconnect, not only is it excellent stuff, but to you at least, it's free.

the amplifier and speakers for an Audio Innovations Series 700 integrated amplifier and a pair of Audio Note AN-J loudspeakers. Partner this system with Audio Note cables and heavy stands made by JPW and you'll have a system that can rock with the best, yet still have the openness you crave.

Dealer difficulties

Q I've just listened to a Marantz CD10 CD player with my Pioneer A-400 amplifier and a pair of KEF 103/4 loudspeakers. As this is quite a step-up compared to my present system, I was expecting great things.

Unfortunately, this wasn't the case. In fact, it was hardly more satisfying than listening to vinyl

on my Rega turntable. The dealer then swapped my A-400 for a Musical Fidelity A120 which brought about a more relaxed sound and improved the stereo image, but the sound of the CD10 still wasn't as good as I had expected.

I then asked the dealer whether changing the Marantz CD player for a good turntable would give me the sound I was looking for. Once the dealer discovered I only had around 70 records, he dismissed the idea of a good turntable as a waste of money, and seemed to regard this as a bit of a joke.

Replacing my records for CDs would cost around £700 so I don't think spending around £1,000-

close your eyes and see



the new Arcam Alpha 5 system

Close your eyes and see the difference between Arcam's all new Alpha 5 system of hi-fi components and anything else in its price range.

Ignore the fact that the Alpha 5 amplifier is our best 'budget audiophile' amplifier ever. (No mean achievement as its predecessor, the Alpha 3, has outsold all competitors in the UK for more than 18 months.) Don't be tempted by its attractive styling or a price tag which looks too good to be true. Just listen, and discover for yourself a quality of sound that can only be described as exceptional.

Next, try the Alpha 5 tuner. Again, don't let its surprising

affordability seduce you. Instead, listen to broadcast sound that is natural, clear and dynamic, without annoying sibilance or harshness.

Finally, feast your ears on the Alpha 5 CD player - quite simply, the best value high performance CD player ever produced by a UK manufacturer. And, September's What Hi-Fi? agreed, calling it "the player to beat" and giving it a class leading 5 star rating. They concluded, "it's one remarkably transparent player, seeming to be at home with all genres of music, and equally enjoyable with all."

Just listen. Close your eyes, open your mind, and see the light.

ARCAM

For more information, including the nearest place you can listen to Arcam, complete the coupon and post it to: Arcam, Pembroke Avenue, Waterbeach, Cambridge CB5 9PB. Or telephone: (0223) 440964 (24 hours)

In Australia: Silver Australia Pty Ltd., 4 Rushdale St., Scoresby 3179, Victoria Tel: (613) 7630177 In Canada: Avalon Audio Ltd. Unit 17, 975 Frazer Drive, Burlington, Ontario L7L 4X8 Tel: (416) 333 4633 In New Zealand: Avalon Audio, PO Box 5373, 119 Wellesey St., Auckland Tel: (649) 779351 In South Africa: Hi Fi Installations, 134A Fox St., Johannesburg, 2001 Tel: (2711) 3312011 In the USA: Audio Influx Corporation, PO Box 381, Highland Lakes, New Jersey 07 422-0381 Tel: (201) 764 8958.

Please send me information about: (please tick box)

Arcam CD players **Arcam tuners** **Nicam TV tuner** **Arcam amplifiers** **Arcam speakers** **Arcam cassette deck**

Please send me a brochure with details of all your products

Title _____ First Name _____ Surname _____

Address _____ Postcode _____

HELP!

£2,000 on a good turntable would be as crazy an idea as the dealer thinks. I've listened to what a CD player sounds like and while it scores well in most areas, I always get the feeling that I'm listening to the CD player rather than the musicians.

Would adding a Linn LP12 or a Pink Triangle Export turntable and a pair of Linn Keilidh loudspeakers to my A-400 amplifier be a suitable match and give me the emotion and realism that my Rega hints at, or should I be spending my £2,000 in a different way?

**A G McKensie
Gedling, Nottingham.**

A Before you do anything else, change your dealer. Although you do not have a massive record collection, it is worth getting the best possible from your black discs, especially as there is still a healthy trade in second-hand vinyl.

Rather than make broad suggestions regarding turntable, CD player and speaker combinations, book demonstrations with Definitive Audio and a couple of the dealers listed under Nottinghamshire in the Dealer Directory. They should be more than able to suggest a suitable system.

That old busy muddle conundrum

Q My system comprises of a Cyrus 2 amp, Denon DCD-890 CD player and Heco Reflex 20 loudspeakers on Target stands, cables are Kelvin K2 and Audio Technica AT-6502.

I bought this on the advice of my local dealer, but feel that it lacks serious bass and sounds muddled when the going gets busy.

I would appreciate any advice you might be able to give me on getting around these limitations.

**Danny Lyden, Glasgow,
Scotland.**

A While your CD player isn't exactly squeaky clean; we found that it lacked subtlety and bass definition, your loudspeakers are more likely to be the weak link in the system.

Before you audition some alternatives, however, it may be fruitful to experiment with tweaking. Make sure the speakers are Blu-tacked to stands that are spiked into the floor, and fill them with sand and lead (assuming it's possible). Experiment with



Mordaunt-Short's 5.40s offer serious bass at a good price.

speaker placement as well, this can make a big difference to bass weight, and get a decent support for the electronics (see October's stand supplement for recommendations). If you haven't tried these already, they are the sort of things that can help the problems you mention.

If the absolute sound still evades you, consider alternative loudspeakers, but bare in mind that bass extension and coherence are expensive commodities in the speaker market. The sort of models that should do the trick include Linn's Index on its Kustone stand, Mordaunt-Short's 5.40 and Heybrook's HB1 S3.

Up against the wall

Q My system consists of a Pioneer A-400 amplifier, Marantz CD-52II SE CD player and Mission 760i speakers. This is all connected together by Cable Talk 3 speaker cables and DNM solid core CD interconnects.

I think my system deserves better speakers. I have auditioned a pair of Mission 751s which I like. The problem is these speakers need a lot more space than the 760is. I can arrange the space by placing the 751s 0.5m either side of my rack. Would this be wise?

If not, would using a cable with good treble and midrange with lightweight bass allow me to place them nearer a wall? If none of this can be done could you tell me what speakers may suit my system please.

Stuart, Liverpool.

A The jury is still out on the Mission 751. It may well be a fine match for the Pioneer A-400 amplifier — as most Mission speakers suit the amp well, it seems a logical assumption — but until we have tested the 751 further it will have to remain just an assumption.

It is possible to place the speakers close to the equipment rack, assum-

ing that the rack is good enough to prevent transmission of stray vibration. This would be better than using the 751s with solid core cable, as the speakers are designed to work about 0.3m from the rear wall, and will not give good results in other positions. However, placing the speakers about 0.5m from either side of the rack leaves

the 751s too close together, unless the rack is really wide. Ideally, the speakers need to be about 2-2.5m apart, otherwise the imagery falls apart. If this leads you away from the Mission speaker, try the Heybrook HB1 Mk III as a wall-mounting substitute.

Avenue schmavenue

Q I'm pulling my hair out trying to decide which separates to buy. I have bought a pair of Cyrus 780s and Apollo stands to go with a midi system but I want to get something better and am undecided as to which avenue to take.

I could go for a good deal at the likes of Richer sounds and buy a Rotel RCD-965BX CD player, Aiwa AD-F810 cassette deck, Denon TU-260L tuner, Pioneer A-400 amp and a turntable. Or go slightly more upmarket and get an Arcam Alpha Plus, Systemdek IIX/900 with Rega arm and an Audiolab 8000A amp. At present all my music is on LP and a few tapes.

**Colin Burt, Fife,
Scotland.**

A It really depends on your tastes and aspirations. The first step is to go listen to some of the alternatives and decide what level of fidelity you can live with. I would always recommend that you get a basic system made up of the best components you can afford, and add extra sources as you go along. If you are of the hi-fi bug inclination this is also the most economical approach.

Your shortlist would suggest you know where to start, particularly when it comes to turntables, so go forth and audition.

Rock and blues

Q I own a superb system consisting of the Naim CDI CD player, NAC72 preamp, HI-CAP power sup-

ply, NAP140 power amp and Epos ES11 loudspeakers on dedicated stands, bi-wired with NACA5.

I am looking to upgrade my speakers, I love the amazing imagery and musicality of the ES11s but would like to change to a speaker which combines these attributes with a little more presence and attack on rock and blues tracks, while offering a realistic portrayal of the subtleties of acoustic jazz. Am I asking the impossible?

**Anthony Edwards,
Chislehurst, Kent.**

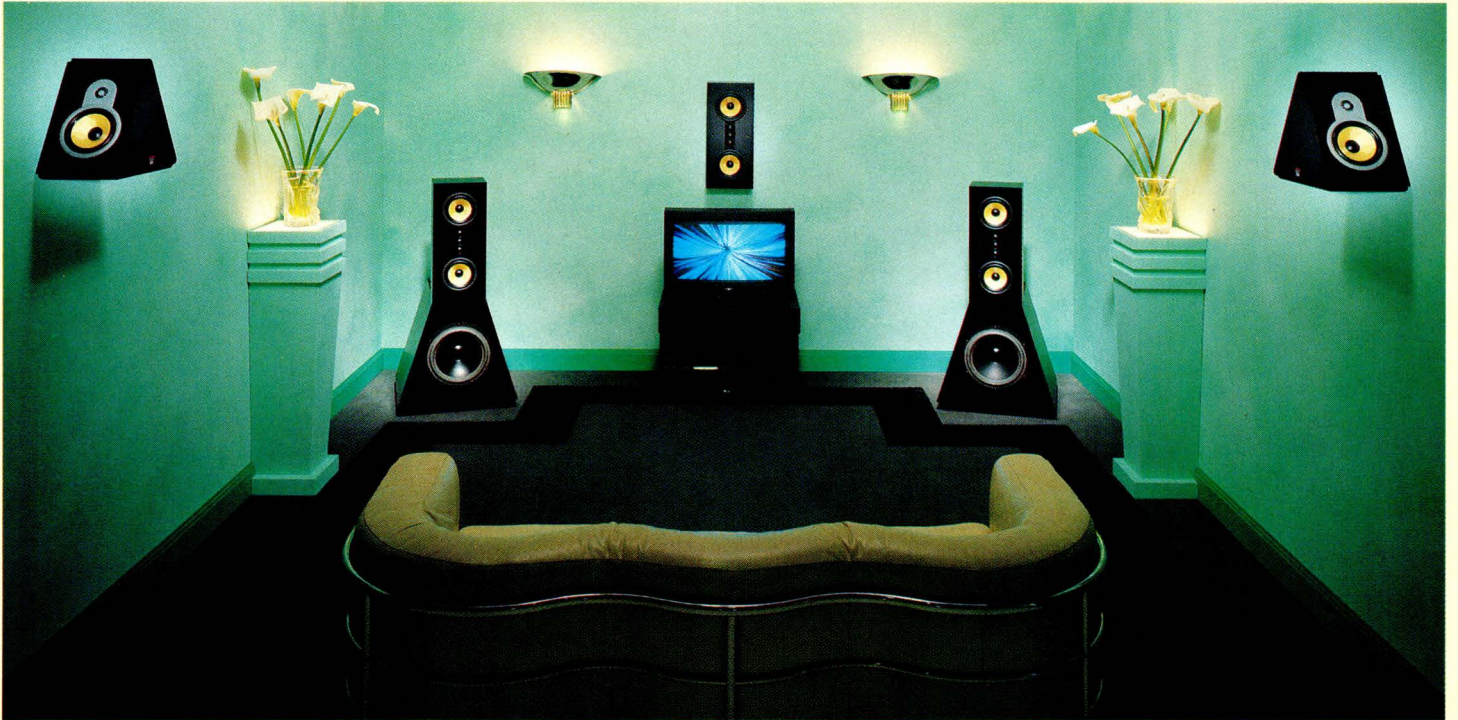
A It shouldn't be impossible but it will require a bit of effort. My first reaction on reading your letter was to recommend the Linn Keilidh, it has presence, attack and attractively good bass extension, but whether it has the imaging skills or the subtlety of the Epos I'm not sure. Another front runner has to be the 11's big brother the ES14, a speaker that with a couple of margaritas and the right company can be exceedingly entertaining.

Those are the traditional choices for a system like yours, if you fancied getting a bit more adventurous however consider Castle floorstanding Chesters. These have a little more subtlety than average and proved most rewarding hooked up to Paul Messenger's Naim amps and CDS disc player.



The Linn Keilidh should have the bass and balls to satisfy Anthony Edwards.

HOME MOVIES



(with Lucasfilm Home THX processing and B&W Audio technology
in full six channel Surround Sound)



Why go out to the cinema when B&W's Home Cinema brings the full moving-going experience home to you?

B&W Loudspeakers Virtual Acoustic Reality enables you to experience the same breadth, depth and clarity of movie sound in your living room as at the cinema.

So you see **and** hear all of the action where it happens, as it happens. Without the inconvenience of travelling.

B&W's Home Cinema is the best means currently available to explore **all** the sonic potential captured and stored on the modern laserdisk or video cassette.

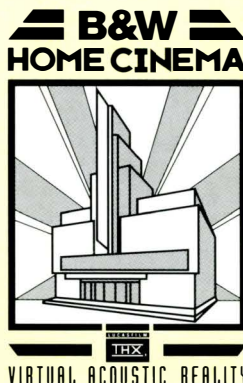
Using Lucasfilm's Home THX[®] electronic processing, the B&W Home Cinema system with identical left, centre and right front speakers, left and right surround speakers and single (or dual) mono subwoofer gives you lifelike, cinematic sound.

Whilst also conforming to the highest audiophile standards.

Of course, there are alternatives on the market.

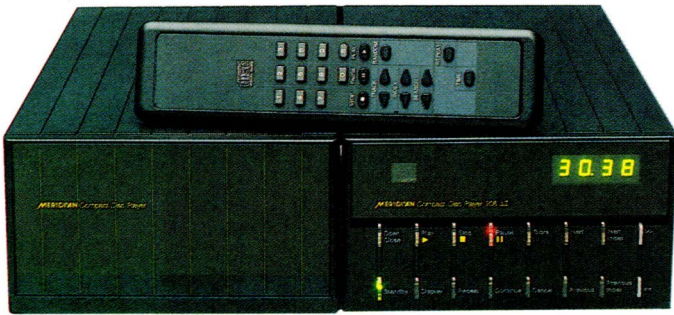
But they do not have the benefit of B&W Loudspeakers' unrivalled track history in acoustic technology.

Listen and you'll see.



B&W Loudspeakers (UK Sales) Ltd Marlborough Road Lancing West Sussex BN15 8TR
Tel (0903) 750750 Fax (0903) 750694

HELP!



Having trouble pinning down the exact system Amir? Try the Meridian 206ΔΣ CD player with a Delta 290 and some Keilidhs.

Dazed and Confused

Q Although you answered my question back in July 1993, I am still very confused about the whole system I would like to purchase shortly.

Which is generally the better amplifier; the Audiolab 8000A or the Arcam Delta 290 and what exactly the difference between the two? Is the Meridian 206ΔΣ better than the Rotel RCD-965 BX? And can any of them solve the problem of background noises on the disc, which is especially noticeable on old recordings?

Which is generally a better loudspeaker; the Linn Keilidh, the Epos ES14, the Audio Note AN-J or the Cabasse Bisquine? Finally, what is the best combination of all these options?

Amir Cohen, Hollon, Israel.

A Perhaps you have missed the point. Trying to determine which is the better amplifier, between two so closely matched products as the Arcam and the Audiolab, is like trying to say which is the better drink, whisky or vodka! Both products suit a wide variety of systems, but you may prefer the Arcam while someone else may favour the Audiolab. At this level, it's a question of taste, not absolutes.

If you are looking for a specific system from the components mentioned, we have had some success with a Meridian 206ΔΣ CD player, Arcam Delta 290 amplifier and Linn Keilidh speakers (on the optional Graphite stands), connected using Sonic Link Violet interconnect cables and Linn K400 speaker cables. Use this system simply as a starting point and experiment freely. After all, it's your money, and it's

you that has to live with the system.

Hopefully, the system you choose will not irradiate the background noise you speak of. As that is either analogue tape hiss or ambient information, the noise is a part of the recording itself, and any CD player that filters out such noise is likely to cut musical information at the same time.

Bright but not sibilant

Q Now that my Philips CD 104 CD player has come to the end of its useful life, I have decided to totally replace my ancient hi-fi system and start again from scratch.

I have just purchased a Rotel RCD-965 BX CD player and intend to base a new system around it. I can only afford £500 for amplifier and speakers, although this does not include the cost of speaker stands and wiring.

My music tastes are very varied, covering from opera and classical to folk and heavy rock. The system will be in a 3m x 4m room, with a solid, carpeted floor, and the speakers will be positioned against a outside wall, up to 0.3m out. I want a detailed sound with some brightness — but not to the extent that the treble sounds hissy

and sibilant — and a deep, tight bass which doesn't overpower the treble.

P R Gledhill, Havant, Hants.

A There are a variety of amplifier and speaker combinations which may prove to be a successful match to the Rotel at this price. On the amplifier front, models such as the new Arcam Alpha 5, the Aura VA-100 Evolution, NAD's 304, the Pioneer A-400 or Rotel's RA-960BX all warrant shortlisting.

Carefully combine one of these amps with one of the following pairs of speakers; Legend II, Linn Index II, Rogers LS2a/2 or Rega Kytes.

A-400 AV upgrade

Q I am writing to you for advice on improvements to my system, which currently consists of a Pioneer PD-S801 CD player, Pioneer A-400 amplifier and Tannoy 611 speakers, connected with Quad QLSCR4 speaker cable.

As it stands, I am very impressed with my system. It's transparent, builds a good sound stage and rocks away like a good 'un. But, unfortunately, I've got the hi-fi bug and I want to make it better.

I read your *Choice Session* on the Trichord A-400/GTE upgrade with jubilation — no I'm not an audiophile perv! I think that will be my next step. The review also mentioned the use of a preamp with the A-400. If it really can improve the sound quality, which ones work well with it, and how do I use the A-400 as a power amplifier? If you have any suggestions up to about £400 they will be gratefully appreciated.

Finally, if I want to add an AV set-up, can I incorporate it with my hi-fi or does it have to be a completely separate system?

Chris Collis, Great Yarmouth.

A If you are happy with the sound of your system, then don't change it dramatically. Although the hot-rodded A-400/GTE will smooth out the A-400's overall performance, adding a sub £400 preamplifier is unlikely to improve matters. To use the A-400 as a power amplifier, simply plug in the preamplifier into a line-level input and leave the volume control of the A-400 at full gain. With a budget of about £400, however, it would be better to put the money toward a GTE conversion.

Adding AV capacity to your system would not be a problem, as long as your video is of the stereo variety. Aside from simply plugging the video directly into a line input of the A-400, it is a simple task to connect an AV amplifier, like the Yamaha DSP-E200, to one of the A-400's line inputs, leaving the AV amplifier to drive the centre and effect channels.

Fire and tension

Q We've seen and heard Epos ES11 loudspeakers and we want to buy a pair.

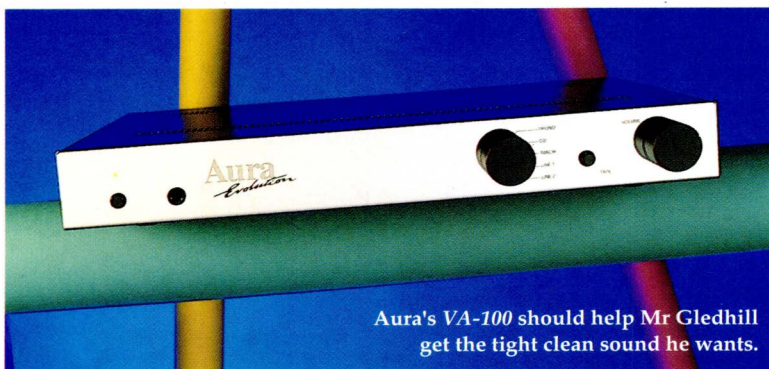
We heard them with a Rotel RCD-965BX LE CD player, RA-980BX amplifier and Linn L20 cable. We thought this was a good combination except that it sounded a little too quiet and calm, a little rippled, babbled, murmured, purred and restrained. We would like a bit more fire and tension, but not too much.

Under the circumstances and given that our musical tastes are varied what can you suggest?

Mrs A. Nollen, Ede, Nederland.

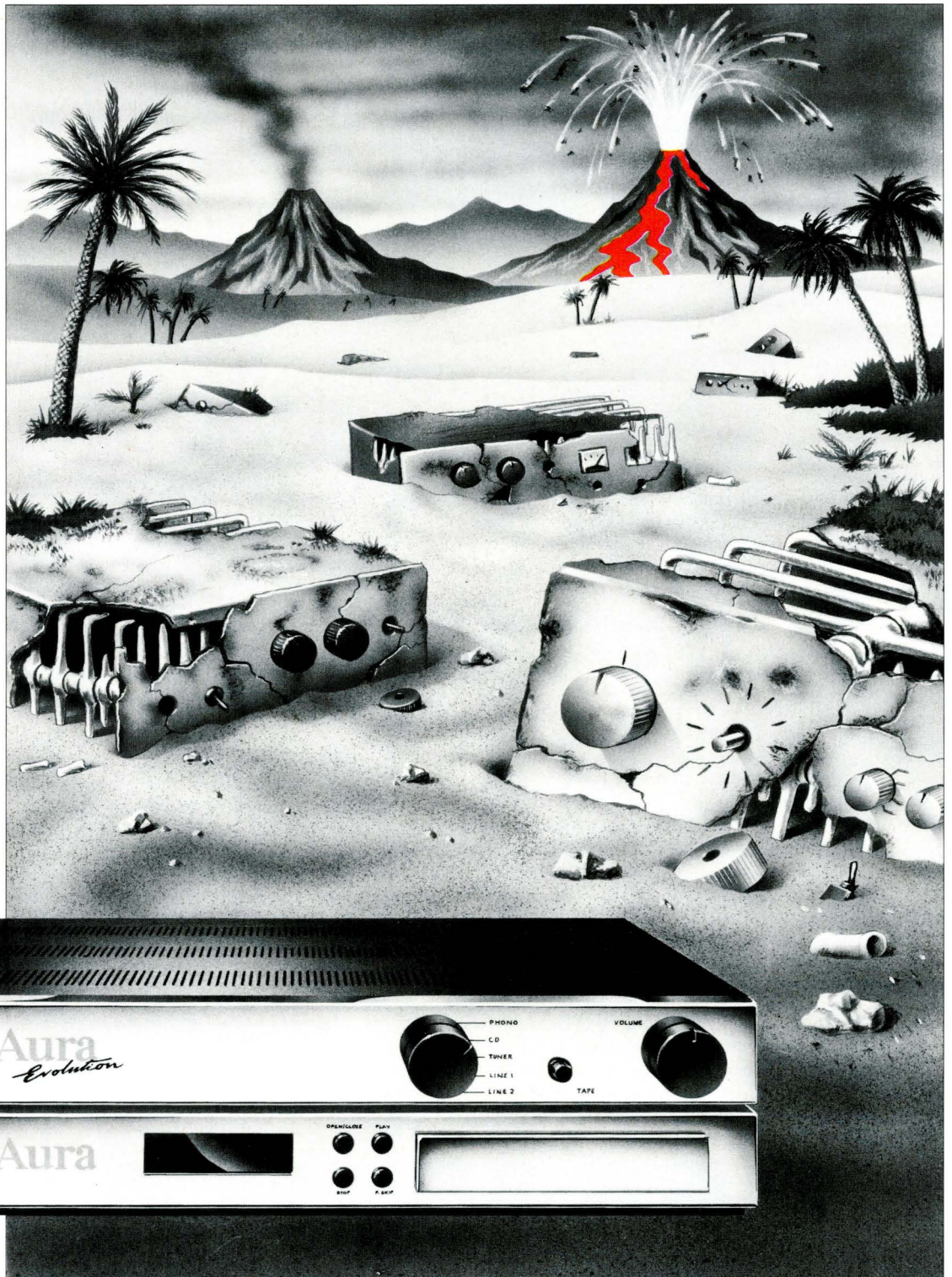
A Basically you want a system that sounds more lively than the one you heard, this can be achieved in a number of ways. You can either use more lively electronics with ES11s or go for a different pair of speakers.

As you fundamentally seem to like the speakers why not try listening to them with some alternative amplifiers, for instance the Pioneer A-400, Aura VA50 and the new Arcam Alpha 5. All three cost between two and three hundred pounds and have a more vibrant sound than the amp you heard.



Aura's VA-100 should help Mr Gledhill get the tight clean sound he wants.

Now we know what happened to the dinosaurs...



Aura

PERFORMANCE : ART

VA100 EVOLUTION AMPLIFIER
CD50 COMPACT DISC PLAYER

Evolution

For details and stockists of the Aura range of hi-fi, 'phone B&W (UK Sales) on 0903-750750

WRITE ON!

TELL US WHAT YOU THINK ABOUT HI-FI AND MUSIC

Each month we're giving away a fabulous *Hi-Fi Choice* sweatshirt to the writer of the most interesting letter.

Get scribbling and send in your views on anything to do with hi-fi to: The Editor, *Hi-Fi Choice*, 19 Bolsover Street, London W1P 7HJ, or send a fax on 071-323 3547.

Setting the standards

How many reviewers believe that all CD players should sound like good record decks? After all, there's no point in having a medium which is more convenient and durable than LP, but doesn't sound as good. A good vinyl sound is transparent, dynamic, musical, involving and free from any harshness or brightness.

I would like a CD player to at least equal the equivalently priced record deck. The original Arcam *Alpha*, for example, was once described as an entry-level CD player and proved popular with owners of Rega Planar 3 turntables. However, the Arcam was more expensive than the Rega and wasn't its equal in terms of transparency, lack of treble grain and all-round ability.

It's a sorry state of affairs, but one which can be remedied, I hope, if the manufacturers try a bit harder.

Julian Osborn
Westbury-on-Trym, Bristol.

Manufacturers often set themselves a reference based upon absolutes, aiming to improve the sound of a player rather than its appearance.

Instead of basing this reference



Rega's Planar 3 turntable — is there any CD player that sounds as good and still matches it for price?

Hands off DG

As a consumer of recorded music, I am always thankful when companies such as Deutsche Grammophon and Sony make an effort to improve the technical quality of their products. To witness Barry Fox mount his empty and malicious anti-DG attack in your publication (21st Century Fox, issue 122) is annoying and may well be against the best interests of your readers.

Furthermore, it is both asinine and disingenuous to call 'Tonmeister', the ordinary German word for a recording engineer, grandiloquent. One can do that only out of ignorance or with a reliance on the ignorance of one's readers.

I should think that contributions of people like Mr Fox, whose self-indulgent spite cannot but spoil the enjoyment of its readers, are the last thing a successful and otherwise delightful magazine is in dire need of.

I Berrer
Maastricht, The Netherlands.

DG is spending a lot of money to convince British record-buyers that 4D is something very special. I have been trying, through access to a few magazines, to counter the confusion risked by the literature that DG released to the UK press in March.

The good news is that DG seems now to have quietly modified at least some of its original claims. But there are still a lot of questions outstanding.

I have never known anyone who works in a British studio to describe themselves as a 'Tonmeister'. It may be the normal form of address in Germany, but over here it sounds as pretentious as calling myself Herr Doctor Professor Fox because I happen to have a MA degree from Oxford University. Barry Fox.

Audio-video nasties

I have become more and more interested in home cinema of late, partly because of the dire state of modern music, but also due to pressure from the rest of the family to watch *Indiana Jones* when I want to listen to Radio 3. Having decided to add good sound to my TV and video set-up, I felt that the best people to advise me were the

Letter of the month

Everything's coming up Rotels

Could you please publish this to warn other readers that all is not roses with the Rotel RCD-965BX CD player. If you turn the amplifier up before playing a disc, a high pitched tone emerges similar to that given off by a TV. Put a CD in and the tone becomes louder, whistling up and down as you press the open/close and track select buttons. Crucially, the tone is loudest when actually playing — try pausing and turning up the treble and/or the volume.

The music masks this when played at normal levels but, once discovered, it is especially irritating on quiet sections. I took the player back to the dealer who said it must be a fault. However, a new RCD-965BX did exactly the same.

For use in a music studio, the Rotel is a bad choice as the background tone is clearly audible when music is sampled and played more slowly (the tone comes down in pitch). However, many professional studios use domestic CD players with no such problems.

Tom Jankiewicz,
Slough, Berks.



Although it is almost impossible to detect under normal listening conditions, Hi-Fi Choice spotted this problem with the Rotel back in issue 100. The tone, at 7.35kHz, is a frequency used in the CD player's speed control electronics. It appears in all integrated CD players using Philips' SAA7323 DAC, but most especially the HQ300B Mk II board layout used by Rotel in its RCD-965BX series. It does vary between players, but it can compromise the signal-to-noise ratio by up to 5dB.

Using the Rotel in a studio to sample sounds, this 7.35kHz tone may become noticeable. In domestic use, however, the tone is effectively inaudible, unless you listen at extremely high levels. As such, it does not compromise the player's performance, and the RCD-965BX remains one of our strongest Best Buys. Paul Miller.

people who rent my telly to me. How wrong can you be.

The rental company had almost no idea about putting together a new surround sound system. Fortunately, I spoke to my hi-fi dealer about my plight, and he promptly demonstrated, supplied and installed a complete home cinema system. This system doesn't interfere with the regular hi-fi but it adds an extra dimension to the video set-up which really brings out the best from top notch films.

As home cinema is such a new subject, it seems as if the average high street shop lacks training in this specialised area. I have noticed that *Hi-Fi Choice* is increasing its coverage of home cinema equipment. Do you have plans to

include any more tests and articles on the subject, now that your sister magazine, *Home Entertainment*, is established?

G Tracey
Borehamwood, Herts.

Home Entertainment will look at the subject of AV in far greater detail, and cover a wider range of products, but Hi-Fi Choice has no intention of overlooking this exciting part of the market. In fact, next month, we will be looking at eight of the latest AV amplifiers.

Home Entertainment investigated the rental market, in its Autumn 1993 issue. Although most rental shops appear slow to respond to home cinema, AV is expected to become more widely available from rental shops in the near future. Ed.



SHE HAS A TOY
BOY, TRAVELS ON
CONCORDE AND
KEEPS A SUITE AT
THE ROYALTON. SHE
TOOK THE FERRARI
AND LEFT ME THE
LINN HI-FI. NOW SHE
SEES AN ANALYST
TWICE A WEEK.

Systems from £22,000 to £1,500. Available worldwide, only through Linn-authorized hi-fi specialists. Call Linn free on 0500 888 909 or fax 041 644 4262, for a full information pack.

Linn Products Limited, Floors Road, Waterfoot, G76 0EP, UK.

LINN HI-FI
music for life®

COMPETITION

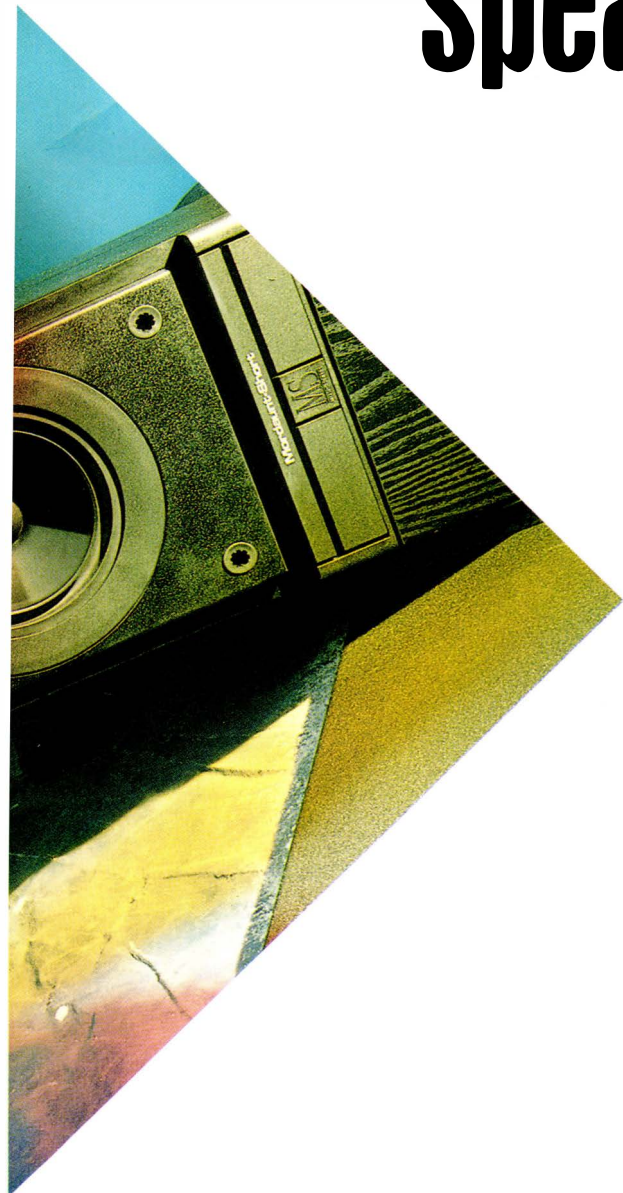
This month, you've a chance to win one of fourteen pairs of superb Mordaunt-Short loudspeakers in our fabulous competition — all for just the price of a stamp!

Answer just five easy questions and you could win one of the fourteen great Mordaunt-Short Music Series prizes pictured here.

The first lucky winner will receive a pair of Mordaunt-Short *MS50* speakers worth £500. The next winner receives a pair of the £380 *MS40* loudspeaker. Third prize is a pair of £250 *MS30* speakers, and the fourth prize is a pair of *MS20* loudspeakers, worth £180. Finally, the 10 runners-up will each receive a pair of £130 *MS10* loudspeakers, the baby of Mordaunt-Short's new range. The new models look set to complement M-S's Home Entertainment AV range.



Win Mordaunt-Short speaker prizes worth £2,600!



Questions

1. How much is the *MS40* loudspeaker?
a) £180 b) £250 c) £380 d) £500
2. What does 'MS' stand for in the new range?
a) Multiple Speaker b) Mordaunt-Short
c) Manuscript d) Music Series
3. What is the name of the baby of the new Mordaunt-Short range?
a) *MS-1* b) *MS10* c) *Mordaunt-Short Model One*
d) *Mordaunt-Short Minima*
4. Which Mordaunt-Short speaker did we find to have a 'beguiling mid transparency' in the *Choice Directory*?
a) *Classic 20* b) *MS20* c) *Classic 30* d) *MS30*
5. What is the name of Mordaunt-Short's home cinema range?
a) Home Entertainment b) Home Cinema Plus
c) That's Entertainment d) CinemaScope

How to enter

Write your answers to the five questions, along with your name and address, on the back of a postcard or sealed-down envelope. Please do not seal the answers within the envelope, however, as the entry will be automatically void.

Send your completed entries to Mordaunt-Short Competition (HFC/1193), *Hi-Fi Choice*, Computer Mailing Services, PO Box 249, London WC2H 0HS. Entries must be received by first post on Tuesday, 23rd November, 1993.

Competition rules

The Editor's decision is final and no correspondence will be entered into. Winners will be notified by post. The competition is not open to employees of Dennis Publishing Ltd, Mordaunt-Short, their suppliers, agents or associates. The competition is open to UK residents only. No cash alternative will be offered. Submission of entry will be taken as meaning acceptance of the rules. Proof of posting cannot be accepted as proof of receipt. Please notify us if you do not wish to be informed of any special offers or promotions.

Uxbridge

A U D I O

Bigger • Better • Brighter
We've rebuilt our Uxbridge showroom to be one of the finest in the country. The opening is on Saturday Sept. 4th. Come and see us.

- ACOUSTIC ENERGY ●
- ARCAM ●
- AUDIOLAB ●
- CASTLE ●
- CREEK ●
- CYRUS ●
- DENON ●
- EPOS ●
- EXPOSURE ●
- ION SYSTEMS ●
- JPW ●
- LINN PRODUCTS ●
- MARANTZ ●
- MERIDIAN ●
- MISSION ●
- MONITOR AUDIO ●
- NAIM AUDIO ●
- NAKAMICHI ●
- QED ●
- QUAD ●
- REVOLVER ●
- REVOX ●
- ROGERS ●
- ROTEL ●
- ROYD ●
- RUARK ●
- SHAHINIAN ●
- STAX ●
- TANNOY ●
- TARGET ●
- THORENS ●
- WHARFEDALE ●

Tony Kleiser
Uxbridge Audio
109 Chiswick High Road
Chiswick
London W4 2ED

Nigel Harradine
West London

22nd June 1993

Dear Sir,

I am writing to you, to inform you that I have recently purchased several items from your Chiswick shop.

The reason for this letter is that I have never had such freedom and pleasure buying anything in my life.

Your staff are all friendly and very helpful. One person in particular has put himself out to help me non stop. That person is Gordon, it is because of his help, that you can be assured of seeing me in your Chiswick shop very soon, ready to sit, listen and purchase any new items I may like the sound of.

I would also like to thank you for giving me the chance to improve my system without having to feel as though I'm being forced to buy because it's there.

Thank you once again for your help and staff. I would appreciate it if you showed Gordon this letter, as I'm looking forward to my next listening session and cup of coffee.

Yours gratefully,

Nigel Harradine

Nigel Harradine

UXBRIDGE

278 High Street
Uxbridge
Middlesex UB8 1LZ
0895 230404

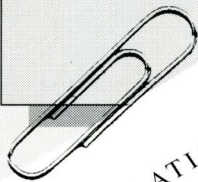
Open 10am till 6pm
Monday to Saturday

CHISWICK

109 Chiswick High Road
Chiswick

London W4 2ED
081-742 3444

Open 10am till 6pm
Monday to Saturday



- TWO DEMONSTRATION ROOMS
- 7 DAY EQUIPMENT EXCHANGE OR REFUND
- RECORD CLEANING SERVICE
- HOME INSTALLATION SERVICE
- WIDE CREDIT OPTIONS AVAILABLE
- 2 YEARS GUARANTEE
- PARTS AND LABOUR
- FULL SERVICE AND TURNTABLE SET UP FACILITIES
- PART EXCHANGE

DCC and MiniDisc tug-of support

Sony, Panasonic, Philips. They all complain of the recession and look for a way to make money again. All I can suggest is that they talk to the taxi driver who took me to Berlin airport from the IFA, the International Audio and Video Fair.

"All these new things", he said throwing up his hands from the wheel. "I will not buy any of them all until I know what is the good one". And he hadn't even been to see the show yet.

Philips and Sony admit that neither DCC nor MiniDisc has yet taken off. The key issue of format support in Europe is still up in the air. Although Sharp ignored the "international" label and held a press conference in German without translation, Toshikazu Mitsuda, Executive Director of Sharp, sat in on Sony's press conference to pledge commitment to MiniDisc. Grundig also held its press conference in German without translation, but without any pledge on DCC.



Thomson (French owner of Ferguson) is supposedly a supporter of DCC, but is now supposedly backing MiniDisc. Thomson held a press briefing with top man Alain Prestat but the invitation list was carefully tailored to protect him from awkward questions, like "why is Thomson not giving Philips the support it needs" and "why did Thomson buy Ferguson if it all it wanted to do was shut Ferguson's factories?"

JVC is hedging bets, and will start manufacturing its own record/playback MiniDisc portable this year

and its own DCC deck next year. JVC already presses MiniDiscs, at its CD pressing plant in Japan. Hiroki Shimizu, General Manager of JVC's audio division admits "Sales in Japan are still very small".

Shimizu makes an interesting point though, "MiniDisc could be very good for dictation recording or conference recording where you want fast access. It could also be good as a ROM carrier for games."

At Panasonic's press conference, the company reaffirmed commitment to DCC, but then cleared the room of journalists, and sent the remainder to sleep, by launching into an extraordinarily boring description of the "virtual battery operation" of Technics amplifiers. DCC seemed very low on Panasonic's priority list.

There is a growing feeling in the trade that the only thing that will pull DCC through to success is a radical re-think on price. Says Henk Bodt, Head of Philips Consumer Electronics Division, "DCC will always be more expensive. It needs more silicon and more complicated heads. When will the price differential between analogue and digital recorders give people sufficiently good reason to buy digital? We still think this is two years away. In the long run a price differential of between \$75 and \$100 is achievable."

The DCC partners fear a price pull in 1995 will be too late.



One Philips' prototype DCC personal that's yet to see the light of production let alone commercial success.

By then DCC will have missed the boat. Philips will very soon offer part-exchange on old cassette decks. But this will not please dealers who will have to take back the old gear.

Sony pretends differently. "MiniDisc is well on the way to becoming a world standard", said a panel of top brass including Norio Ohga, Sony's President, Michael Schulhof, Head of Sony Music, and Ron Sommer, head of Sony's operation in Europe.

They told us that, "in 1993 worldwide shipments of MiniDisc hardware have been 300,000 units, with 100,000 into Europe. Sony has produced three million discs, a million of them going to Europe", and predicted that "hardware sales will reach 10 million by the end of 1995." But Ohga ducked the question of how many of the players "shipped" have actually been sold for cash to customers.

Michael Schulhof then screened a lengthy selection of video music clips. The projected pictures were predictably poor, and the over-loud sound was raddled with distortion. All Schulhof had to do was say, "These are just some of the artists who are supporting MiniDisc, and of course the sound will be much better when you hear it on a MiniDisc player." But no. Schulhof had to gabble on; "You have just witnessed an amazing example of the power of technology . . . digital quality sound . . . the optical disc experience."

But as Sony sheepishly had to admit, what Schulhof thought was "digital quality sound" and the optical disc experience, was in fact the analogue sound you get from the Betacam SP video tape which Sony had used for the dem.

Does it matter? Yes. If the people running the hardware and software wings of Sony have cloth ears, cannot hear distortion, and do not stop to think about the source of what they are listening to, small wonder the hi-fi press have been so unhappy about MD sound quality. Sound quality is not something you sell like a chocolate bar, which is gone before you have time to think.

Philips whole pitch on DCC now is that sound quality can be improved, to 18 bit levels, while retaining compatibility. Demonstrations at Berlin were intended to show how DCC can already better DAT. Whether or not listeners found them conclusive, the key issue is upwards compatibility. The key question which should now be worrying us all is this. Can MD sound quality be improved without loss of compatibility?

With MiniDisc and DCC still struggling to get off the ground Bary Fox wonders when Philips and Sony will get it right

Some you win and some you *Linn*

A £4,000 Linn system arrives at the home of Choice's lucky competition winner, nestling on the edge of the New Forest. Paul Messenger attends the installation and assesses the system.

"I don't normally go in for competitions", this month's subject pointed out, "but when I saw this one was for a complete Linn system I decided to have a go. I still can't quite believe that we won." Michael C. wasn't the only hopeful to jam the Linn switchboard during Spring this year in order to establish the correct spelling of main man Ivor Tiefenbrun's name. But Michael's was the first correct card out of the hat, so he was the lucky recipient of a complete Linn system priced at over £4,000.

Michael isn't new to hi-fi, and fondly remembers the Quad amplified and LS3/5A loudspeaked system he'd used for years when living in London. He, his wife and young family only made the move out to the fringes of the New Forest a couple of years ago. These years have seen what was a shell of a house transformed into a home, while a bungalow was constructed elsewhere in the grounds for their elderly parents.

The further need to rectify serious subsidence problems, continue a now long distance career in management consultancy, and cope with two under-five children had left Anne and Michael little time for the niceties of hi-fi and home entertainment. But they had already got a modest system together, with rather a hodge podge of sources feeding a decent amplifier and speakers (Audiolab 8000A driving Origin Live OL2As), albeit with little serious attempt at system set-up.

Central to our Linn system competition prize was that the winner would be

contacted by the nearest Linn dealer, who would then carry out a proper installation job to the highest standards. This turned out to be Suttons of Bournemouth, represented by Chris Cloakie — whom, coincidentally, I first met five years previously while doing my last *Aspirations* feature for *Choice*.

This painstaking installation was, I believe, the key to the success of the whole operation.

Getting the small details right makes all the difference between an ordinary and a great hi-fi sound. The serious enthusiast who enjoys experimenting with component and accessory mixing and matching can maybe manage for himself. But for the music lover uninterested in entering into an emotional relationship with the hi-fi hardware, it's where the one-make system and careful installation by the trained dealer really scores.

Anne admitted she'd been very sceptical when Chris insisted on running a separate mains spur just to power the



hi-fi, but was quite dumbfounded by the improvement in sound quality which resulted — an experience which closely parallels my own partner's reaction, some years ago.

The house had an excellent external mains feed, being originally supplied with 440V, and Chris used fat 6mm cable for the hi-fi feed — hefty enough for Blackpool Illuminations, according to Michael. This was soldered to the cluster of unswitched MK double sockets, while each of the leads feeding the individual components was kept as short as possible, and soldered into the MK plugs. The net result was both visually neat and sonically effective.



The Linn crowd. Michael's professionally installed Linn electronics sit proud on Tripod's equipment stand.

Michael's comments

"Although I have fond memories of my old hi-fi, this modern Linn system is on a different plane. It breaks down barriers between performer and listener. The whole thing is so much more vivid and immediate, it's very tempting to just sit down and enjoy the radio instead of getting on with things around the house.

"We had my parents staying here recently, and they couldn't believe it either. They'd never lived in a house with a proper hi-fi system before, and were enchanted. The TV set didn't really get a look in."

Although the official competition prize was a *Karik*-driven CD based system, Michael and Anne are both radio enthusiasts first and foremost, so Linn was persuaded to supply a *Kremlin* tuner instead. Anne and Michael are enjoying the Proms season like never before. The Linn system acts as an open window onto previously unsuspected nuances of the broadcasts and performances.

I'm pretty familiar myself with most of the system components, and a particular fan of both *Kremlin* and *Keilidh*, and can happily confirm the excellence of the installation, even though the *LK100* power amps used don't have quite the bottom end grip of the much more expensive *Klout*. But the smaller amps do make cost effective sense in a *Keilidh* context, and Michael is already contemplating going active, a £495 conversion which involves

The system

The formal prize for our April competition was a complete CD-based Linn system, starting with the *Karik* CD player (£1,497). Originally conceived as a transport only mechanism, this now incorporates a 'budget' Crystal decoder, but can be subsequently improved by adding the *Numerik* external decoder.

However, radio fans Anne and Michael persuaded Linn to supply the superb *Kremlin* tuner (£1,779) as the source in place of the *Karik* CD player, feeding this initially from a three-element loft-mounted aerial via low loss satellite RF cable.

This feeds into the line level only *Kairn Pro* preamplifier (£998), a fully remote controllable device, with the added refinement of individually programmable input sensitivities, leaving no irritating volume jumps when switching between different sources. Power amplification is supplied by two *LK100* stereo power amplifiers (£498 each), making a simple £495 upgrade path to full *Aktiv* drive.

The speakers are the highly successful compact floorstanding *Keilidhs* (£579), complete with optional ceramic plinths (£92) which add extra mass and stability and connected via a hefty slug of *LK400* bi-wire/-amp cable.

They were also supplied with a *Tripod 4/125* (£125) in order to provide solid and very attractive support for the various electronic components, adding extra levels (£95 each) as the system expands.

the comparatively simple task of bypassing the speaker crossovers and inserting active filter cards into the power amps, and which should certainly add extra bottom end control.

A rather greater source of angst has been deciding whether to find the extra £400 for the vinyl input equipped *Kairn*, as distinct from the line level only *Kairn Pro* preamplifier. A decision needs to be made soon, as the phono stage is not retro-fittable, but £400 is a lot of money in the context of the twenty five year old Connoisseur *BD1* turntable currently in occasional use. One thing can easily lead to another here, and Michael has just called me up to say he's decided to go the whole hog, opting for the *Kairn* and spoiling himself by purchasing a *Sondek* at the same time. After all, the rest of the system did come for free. . .

**Now you can
turn a system
that raises
goosebumps
into one that
raises the roof.**



The Preamp and the Typhoon stereo power amplifier may be just what you want but you don't have to stop there. Bridge a second Typhoon into the system and you more than triple its power. Your Musical Fidelity stockist can demonstrate the effect but don't say you weren't warned.

MUSICAL FIDELITY

Oops, there goes the roof.



The Preamp and bridged Typhoons deliver 150 watts per channel into 4 ohms. Ask for a demonstration at your Musical Fidelity stockist. You'll get deeper bass, startling detail and plenty of extra headroom.

MUSICAL FIDELITY

FOR DETAILS OF YOUR NEAREST STOCKIST WRITE TO MUSICAL FIDELITY, 15/16 OLYMPIC TRADING ESTATE, FULTON ROAD, WEMBLEY, MIDDLESEX HA9 0TF OR TELEPHONE 081-900 2866.

On test: Integrated CD players

Paul Miller lines up 20 of the latest integrated CD players face to ears with our blind listening panel and puts each one through the terrors of his test bench to discover the best binary bashers.

One decade on and the little silver disc continues to supplant both the vinyl LP and, increasingly, the flexible Compact Cassette. Unfortunately, the high cost of CDs has hardly budged though the price of the players continues to tumble ever closer to a rock-bottom £100.

It's now possible to choose from a clutch of perfectly adequate players priced at less than the cost of a dozen discs. The budget players offer advanced features alongside the latest in digital technology.

Full remote control supplements a broad range of facilities already incorporated on most

budget players. Basic track location, fast music search, repeat and program options can be taken for granted on all sub-£200 players.

Other features like tape edit (fitting selected tracks onto predetermined lengths of tape), peak search (invaluable when setting the record level), a ten-second intro-scan, random and A-B repeat, index search, variable output and display options, only start to creep-in on players between £200-£250.

Ratings	
Excellent	■ ■ ■ ■ ■
Very good	■ ■ ■ ■ □
Good	■ ■ □ □ □
Average	■ ■ □ □ □
Poor	■ □ □ □ □

These ratings are a simple guide to the sound quality and value for money of each loudspeaker.

This middle category is sparsely populated but here you can expect an upturn in build quality as plastic mouldings are replaced by alloy facias and chassis are reinforced with extra struts and substantial metalwork. These factors, along with the separate mains transformers for the digital and analogue sections, and the beefier CD transport mechanisms of the over £500 brigade, can increase the player's weight considerably.

Such flagships feel like good value even if the lighter players are actually no less reliable.

You might expect that paying more will take you further down the technological path. In fact, the last several years have witnessed such profound changes in the digital gubbins at the heart of the CD player that almost every new player — regardless of cost — will have been touched.

This technological innovation came under the heading of 'bitstream', a mini revolution of the Nineties that brought about the most fundamental change in the way CD players processed the digital data since the

What the tests mean:

In addition to blind listening tests, this comprehensive survey includes a rigorous set of objective measurements, which allows a technical assessment of all 20 CD players by comparing a series of graphs and figures.

In the frequency response plots the upper and lower responses (run at an ideal 0dB and at -60dB respectively) should match one another. Any increase in noise or deviation in linearity is immediately revealed by a change in the smoothness and extension of the -60dB trace.

Ripples in either response are often due to the oversampling filter. Advanced digital filters suffer little in-band rippling though the use of budget oversampling filters can result in fairly bold wobbles. Look out for blips in the lower response which can indicate undesirable digital/analogue cross-coupling in the CD player.

The plot of a dithered 1kHz tone reveals the spread of distortion, noise and sampling images associated with a low -70dB signal. Dither is a special type of noise added to the digital signal to smear or randomise quantisation errors, trading distortion harmonics for a slight increase in noise, look at the JVC and Sony players in this test — much of the competition still suffer a hint of 3rd, 5th or 7th harmonic distortion.

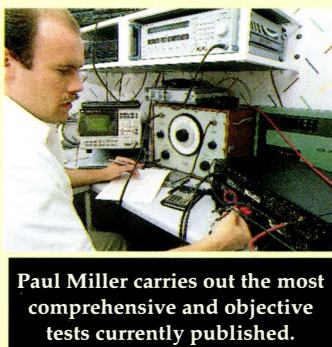
The numerical test data also reflects the increase in distortion and deviation in linearity that occurs as signal levels are decreased. CD uses a linear 16-bit quantisation scale. Quiet signals occupy a relatively small portion of this range and so, with less quantisation numbers available,

distortion mounts up. Once again, some players make better use of the 16-bit code than others — look for low errors in resolution (linearity) and low distortion at -30dB, -60dB and -80dB for examples of technical excellence.

Returning to the -70dB plots, look out for any accumulation of ultrasonic noise beyond 20kHz. This is a feature of many bitstream-style DACs whose noise-shapers are used to re-distribute huge levels of re-quantisation noise. Traditional 16, 18 or 20-bit converters are often cleaner above 20kHz and, as a result, perform more consistently with different amplifiers.

Distortion and sampling images are illustrated on the 3D plots. These use an audio frequency sweep (20Hz-20kHz) to reveal changes in performance across the board, rather than at one frequency. Distortion harmonics may be seen radiating out to the right of the main sweep while sampling or stop-band images are represented as whole or partial V-shaped patterns. The best digital filters get rid of these images altogether, and few players still suffer the problem of audible stop-band noise.

The level of banishment is found under 'suppression of stop-band IMD' in the numerical test results where higher figures should tally with cleaner-looking 3D plots. These amount to the most comprehensive test figures currently published on CD player performance. However, they are only part of a complex jigsaw which also includes AC mains purity, susceptibility to RF interference, amplifier and cable sensitivity. The final judgement of the blind listening panel must always hold sway.



Paul Miller carries out the most comprehensive and objective tests currently published.

The cast list

DENON DCD-695	£200
GENEXXA CD-4900	£130
GOODMANS GCD-6501I	£110
JVC XL-Z464	£200
KENWOOD DP-3050	£200
PHILIPS CD690	£130
ROTEL RCD-945AX	£230
SHERWOOD CD-5010R	£160
TECHNICS SL-PG440	£170
AMC CD6	£350
NAKAMICHI CD-4	£380
PIONEER PD-S802	£350
YAMAHA CDX-670	£290
ADCOM GCD-600	£699
ARCAM DELTA 270	£800
HARMAN KARDON HK7725	£800
ORELLE CD-160.2	£750
QUAD 67	£790
SANSUI CD-ALPHA 717DR	£1560
SONY CDP-X303ES	£550



The digital line-up of talent in our monster CD player test: the good, the bad and the super-terrific.

format was originally introduced.

Bitstream is all about converting the CD's digital data back into recognisable music. Earlier CD players used multi-bit Digital-to-Analogue Converters (DACs) to do the job but these chips were often rather inaccurate at low-levels. The new generation of bitstream DACs overcome former problems by reducing the large 16-bit digital numbers into smaller packets of 4-bits or less.

Smaller chunks of data are processed at an appropriately higher speed to avoid glitches and distortions. Of course, these bitstream players are not perfect, they can be more sensitive to digital jitter and RF interference, and also kick out lots of (inaudible) noise that can place added stress on some amplifiers. So bitstream is certainly progress but it's no panacea.

Most importantly, however, you need not fret over the relative compatibility of different CD players. All must still conform to certain agreed standards. Every CD player will play the standard 12cm silver (or gold) disc, will offer the same basic track skip, pause and stop facilities and will require the services of a line input on your amplifier. Never connect a CD player to an input marked 'phono' or 'disc' on your amp, but use any line-level connection such as aux, tuner, tape or one marked specifically for CD.

So, CD compatibility is assured. But sound quality? Ah well, that's another matter altogether...

The ins and outs of oversampling:

The frequency range currently reproduced by all CD players is limited by the sampling frequency chosen for the format. That sampling frequency is 44.1kHz, yet only half this frequency range (ie 0-22.05kHz) is available to reproduce musical signals. Above 22.05kHz we find images of the audio signals reflected off this 44.1kHz sampling point, and these are distortions.

Initially, an analogue filter isolated the music below 22.05kHz, yet the severity of this filter had subjective

repercussions. Enter oversampling. This artificially multiplies the 44.1kHz sample rate by two, four, eight or even as much as 384 times with some bitstream players.

The idea is simple; create new samples between the existing 16-bit numbers so that the images of the musical signals appear at far higher frequencies.

Naturally, these must still be irradiated, but as they lie further from the audio range a gentler analogue filter can be deployed with great success.



How the listening was done:

Each of the CD players was auditioned under strict, blind conditions. A broad selection of music was used for the listening test, with each track adjusted to a predetermined level. This level-matching is crucial for a fair test as some manufacturers hike-up the output level of players above the nominal 2V standard.

The hi-fi system used in the test comprised DPA

100S pre and power amps driving Audio Note AN-J loudspeakers on heavyweight Pirate stands. Silver Sounds cable (Recommended in issue 108) was also used.



Making the right connections:

A CD player often has four different connections two analogue and two digital. The analogue phono outputs hook directly into your amplifier; the fixed 2V output feeding either a pre or integrated amp, while the variable 0-2V output gives you direct control over a standalone power amplifier. Use the player's variable output like a volume control and you avoid extra electronics.

By contrast the digital output(s) will bypass the player's own DAC stage in favour of an external DAC reducing the CD player to a CD transport. This allows an older design to be upgraded by simply adding a separate DAC — just look for the single coaxial electrical output or plastic Toslink socket of an optical digital output.

An increasing number of high-end two-box CD players feature up-market connectors, like balanced XLR digital and analogue lines and AT&T optical digital connections which are roughly like phono or Toslink plugs and sockets but more refined. Incidentally, different digital interconnections all carry the same signal whether optical or coaxial.

GIANT KILLERS

Vivanco
SR808



Vivanco may not be the biggest name in headphones but it's one you're certainly going to be hearing a lot more of in the future.

At just £54.99*, our SR808's were recently described by Hi-Fi Choice as an "outstanding find" and voted best buy under £100.

Discover the Vivanco sound secret for yourself at any good Hi-Fi dealer.

Or return the coupon for more information.

* MANUFACTURER'S SUGGESTED SELLING PRICE

Name _____

Address _____

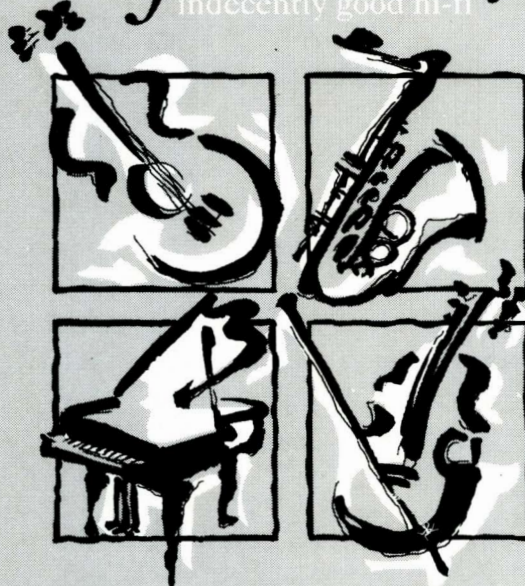
Postcode _____

vivanco

Vivanco UK Ltd., Unit C Boundary Way,
Hemel Hempstead, Herts. HP2 7SS

Infidelity

indecently good hi-fi



Buying hi-fi should be fun, we guarantee to make it so. Listen to a well chosen selection of quality hi-fi equipment in our comfortable and relaxed listening room. Bring along your own records or CDs, we'll provide the coffee, and hear the difference we can make to your enjoyment of music.

ARCAM, EPOS, HEYBROOK, MICROMEGA, NAIM, NAKAMICHI, NEAT, REGA, ROKSAN, ROTEL, ROYD, TEAC and YAMAHA

9 High Street, Hampton Wick, Kingston upon Thames, Surrey KT1 4DA
Telephone: 081-943 3530. Open: Tues - Fri 10.30am - 7pm, Saturday 10am - 6pm.

V'AUDIO

36 Druid Hill, Stoke Bishop, Bristol BS9 1EJ
0272 686005

BARGAINS GALORE

We are always trying to bring outstanding bargains to the attention of customers, and are pleased to point out the **Project I Turntable**, which comes complete with an **Ortophon 510 MM** cartridge for a mere £170. Even after living with the **SME 20A** and a number of MC cartridges (costing more than the **Project I package alone**) for some weeks now, the Project I is a real bargain. But then everything we sell in the end is a bargain, as we invariably ensure that any item bought is to the customers liking and that we are also satisfied that it interfaces properly. We come across so many dissatisfied people who have gone along to the shop and bought what they or the magazines rave about. We are amazingly patient; it can take six months to sort some people out and we cover the whole of England south of Liverpool.

One bargain becoming increasingly popular is the **ATC SCM 50A**, which may seem expensive at around £4.5K, but with 350 watts of power in each speaker, actually is quite cheap. Customers can then sit back knowing they have nowhere else to go and can save a fortune in the long term.

Denon DCD-695



This latest release from Denon is less fanciful, from a technological viewpoint, than many of its past offerings. Sure enough, its black alloy fascia carries the obligatory Lambda Super Linear Converter logo but the adjacent reference to '20-bit eight times' alludes to the resolution of NPC's new oversampling filter and not the DAC itself. In practice Denon has retained the two 18-bit Burr-Brown DACs found in earlier players like the DCD-890 (issue 112).

Featurewise too, the DCD-695 emulates its bigger brother with options that include a 12-step digital volume control, program and track access plus auto edit and auto space. And for the practising musician there's even a digital pitch control which, in tandem with its A-B repeat

facility, can be used to replay bite-size snatches of music at a variety of speeds.

Sound quality

In accordance with Denon's tradition for producing lively and up-beat CD players, the DCD-695 has a snappy, dynamic but well-rounded performance. Bass is particularly firm, driving the music along at a fair lick without artificially forcing its pace. Sure enough, there's a slight loss of substance compared with the beefiest players, yet the sense of electricity is sufficiently well-judged that any loss in momentum passes unnoticed.

Unfortunately, there is a feeling of bottled-up enthusiasm if the going gets too tough. So our jazz selection sounded exciting but lacked a little sparkle or pizzaz

in the high treble. Similarly, the busiest rock tracks can sound slightly relentless and compressed but this simply reflects a lack of sophistication rather than any lack of gusto on the part of the player.

Conclusion

This player strides confidently through a variety of musical styles but struggles quite audibly with more taxing recordings. Otherwise, its well-rounded dynamics are refreshing, and at the same time its novel digital pitch control should attract any musician who dares take a walk on the Denon side.

Hayden Laboratories, Chiltern Hill, Chalfont St Peter, Gerrards Cross, Bucks SL9 9UG. ☎ (0753) 888 447

Verdict

- ▲ Lively, dynamic and engaging player; well equipped and well built for the price.
- ▼ Audible compression with heavy rock and classical music; Hard to view display.
- ▶ **£199.99 RRP**

SOUND QUALITY
 ■■■■■ □
VALUE FOR MONEY
 ■■■■■ □

Laboratory Report

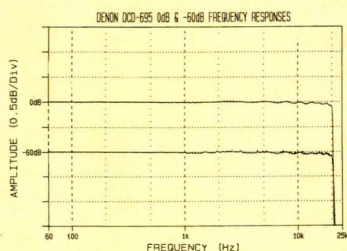
In reality Denon's choice of 18-bit DACs are no more 'Super Linear' than anything else at this price point. In fact the error of -2dB at 20kHz/-90dB is readily seen off by most budget bitstreamers from Sony, Pioneer, JVC or Technics. On the other hand the jump in distortion from 0.0026 to 0.016 per cent between 0dB and -30dB is not as severe as that encountered with earlier multi-bit machines. The wide 109dB signal to noise ratio is impressive too.

Sadly NPC's SM5841 oversampling filter does not appear to suppress stopband noise (V-patterns on the 3D plot) quite as effectively as the SM5840 used in Denon's DCD-890 (issue 112). The pitch control, meanwhile, is very effective. This offers a +/-11.9 per cent variation in replay speed, equivalent to a range of 17625-22375Hz either side of 20kHz (or two semitones), extending the first stopband product from 24.1kHz to 27kHz with no increase in distortion.

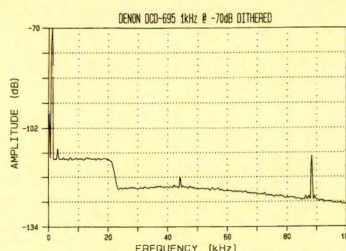
	20Hz	1kHz	20kHz
Channel Balance	0.02dB	0.03dB	0.02dB
Channel Separation	117.0dB	111.3dB	85.9dB
THD vs Level, 0dB	-101.4dB	-91.6dB	-73.7dB
-30dB	-84.2dB	-75.7dB	-62.9dB
-60dB	-49.1dB	-45.7dB	-53.6dB
-90dB	-24.6dB	-29.3dB	-32.9dB
Dithered, -90dB	-15.2dB	-20.3dB	-23.1dB
Dithered, -100dB	-17.5dB	-	-
Dithered, -110dB	-8.50dB	-	-
Resolution @ -60dB	-0.03dB	-0.03dB	-
-80dB	-0.30dB	-0.32dB	-
-90dB	-1.75dB	-2.07dB	-
-100dB	-1.60dB	-0.80dB	-
Peak Output Level, L	1.885V	-	-
R	1.879V	-	-
Relative Output Level	-0.53dB	-	-

TEST RESULTS

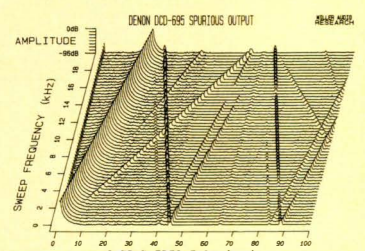
Output Impedance	686ohm
Radio Frequency Spurious	5mV broadband
1Hz Noise Modulation	+7.4dB
CCIR IMD, 0dB	-101.5dB
Suppression of stop-band IMD	53.7dB
De-emphasis Accuracy, 1kHz	-0.09dB
5kHz	+0.01dB
16kHz	-0.10dB
S/N Ratio (A-wtd), w emp, 0LSB	108.3dB
w/o emp, 0LSB	108.5dB
Digital Output	Coaxial
Crystal Clock Accuracy	-24.5ppm
Track Access Time (99)	3secs
Serial Number	3054501282
Typical Retail Price	£200



Flat response; inaudible rippling from the eight times oversampling filter.



A clean plot and wide dynamic range spoiled by a lone 3rd harmonic spike.



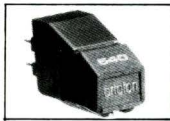
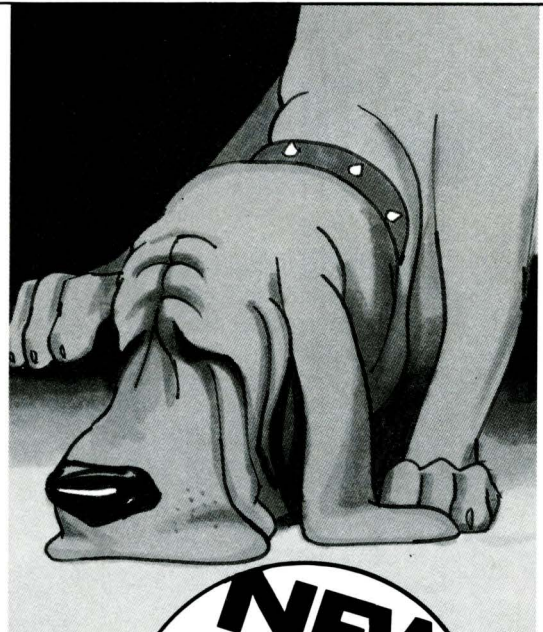
3rd harmonic distortion; stopband images (V-patterns) escape digital filter.

Great tracking

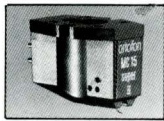
Ortofon is famed the world over for the tracking capability of its cartridges. Cartridges which will breathe new life into a cherished LP collection, divulging detail as never before.

The cartridge is always the key factor in the reproduction of music from records and Ortofon has dedicated nearly 50 years to the manufacture of the finest pick-ups possible. Enjoying constant critical acclaim along the way.

So if you want to bring more out of your records than ever imagined, an Ortofon Cartridge will have you hot on the scent.



500 Series
Moving magnet
cartridges from £30-£100



MC Series
Moving coil cartridges
from £60-£110



Q Series
Moving coil cartridges
from £140-£500



1000 Series
Moving coil cartridges
from £600-£1500

ortofon

Ortofon (UK) Limited, Chiltern Hill, Chalfont St Peter, Bucks SL9 9UG.
Tel: 0753 889949.



Why do we win these awards?

F.B.A. PUBLIC ACCLAIM DEALER OF THE YEAR 1985	SONY HI-FI NEWS DEALER AWARDS 1989 WINNER GREATER LONDON	SONY HI-FI NEWS DEALER AWARDS 1990 NATIONAL DEALER OF THE YEAR
SONY HI-FI NEWS DEALER AWARDS 1986 WINNER GREATER LONDON	SONY HI-FI NEWS DEALER AWARDS 1990 WINNER GREATER LONDON	One of the 5 best Hi-Fi shops in the world. High Fidelity mag. May 1990

Come and ^{hear} see why!



Satisfied customers are so impressed by the friendly service, professional advice and ultimate quality of our hi-fi that they recommend their friends and nominate Grahams for awards. Four air-conditioned dem rooms, probably the finest hi-fi facilities in Europe (most people are amazed when they visit us for the first time), lots of FREE parking, helpful, trained staff, 60 years trading, systems from £500 upwards. Ring for a chat, an appointment and a map!

GRAHAMS HI-FI

Canonbury Yard 190A New North Road
London N1 7BS ☎ 071-226 5500

Genexxa CD-4900



Producing branded CD players for other manufacturers is big business these days, whether they come as a kit of parts from Philips or a complete chassis from Taiwan or China. The giant Tandy Corporation (Intertan) is just as eager to accept such services as the likes of Goodmans (page 63) and as a consequence both Tandy's house brand Genexxa CD-4900 and Goodmans' GCD-650II share a common heritage.

In practice the Genexxa player is sold beneath mainstream players at most Tandy stores. It scores extra brownie points too, particularly for its superior display and remote control which carries track access, program, tape edit, intro scan, random and repeat play facilities. Sadly, the true age of the machine is reflected in its

inability to accept direct track access commands with the drawer open.

Sound quality

In keeping with its status as a freshman among CD players, the CD-4900 sounds both self-conscious and free of embellishment but also lacks the spirit and confidence necessary to bring the music to life. But rather like the Goodmans GCD-650II, the CD-4900 retains an economic view of the information to hand, treading carefully through tricky pieces of music rather than tackling them head on.

Although it won't grate on your nerves, neither will it spawn great surges of enthusiasm for grand classical or punchy rock and pop CDs. Nor is there a surfeit of bass to tickle the rib-cage; instead the music's

rhythm is sustained by a harder-hitting but rather cardboard upper bass. However, the midband has a delicacy that's rewarding despite this loss of drama.

Conclusion

In spite of the common ground between the Genexxa and Goodmans players they have very different musical styles. The CD-4900 sounds dry, quick and surprisingly sure-footed, if rather sparse and unsophisticated compared with the best at £160. Nevertheless, it represents another toe-hold on the CD ladder and is thoroughly deserving of a Hi-Fi Choice swingtag.

*Intertan UK Ltd, Tandy Centre, Leamore Lane, Walsall, West Midlands WS2 7PS.
☎ (0922) 434 000*

Verdict

- ▲ Refreshing and quite lively; hides its indiscretions very tactfully indeed.
- ▼ Unfortunately, the CD-4900 fails to get to grips with the meat of the music.
- ▶ **£129.95 RRP**

SOUND QUALITY
■ ■ ■ □ □
VALUE FOR MONEY
■ ■ ■ ■ ■

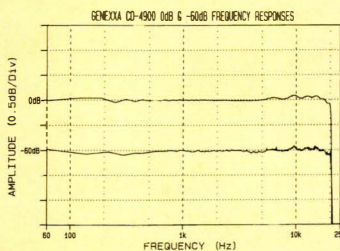
Laboratory Report

Tandy's CD-4900 employs the same transport mechanism and budget MN6475A MASH/PWM DAC as Goodmans GCD-650II though various support chips, including the servo, micro and signal processors, are different. There's an extra power supply regulator too. Nevertheless it's obvious that both players have run off parallel production lines in their Chinese homeland, each packaged according to the wishes of the client.

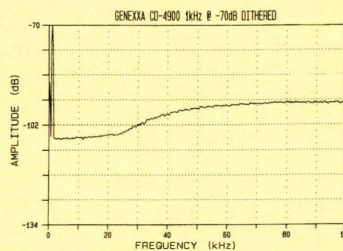
As a consequence the three plots are all but indistinguishable from Goodmans' GCD-650II (page 63). However, the Genexxa version does benefit from a stronger bass response and a fractional increase in dynamic range, though other quirks remain. Of these the low 1.87V output will put both players at a disadvantage in quick A-B dems while the weak 77dB channel separation (at 20Hz) implies a degree of cross-modulation via the power supply. This is just one source of muddling in the music.

TEST RESULTS

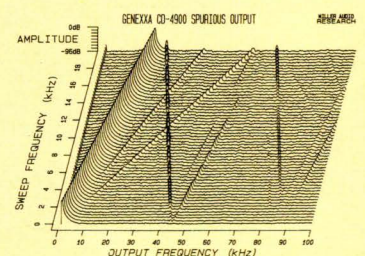
Channel Balance	0.03dB	0.00dB	0.20dB	Output Impedance	840ohm
Channel Separation	76.5dB	106.9dB	80.7dB	Radio Frequency Spurious	6mV @ 28MHz
THD vs Level, 0dB	-93.7dB	-92.8dB	-72.2dB	1Hz Noise Modulation	+7.2dB
-30dB	-62.6dB	-76.3dB	-57.6dB	CCIRIMD, 0LSB	-96.1dB
-60dB	-28.5dB	-46.5dB	-29.9dB	Suppression of stop-band IMD	63.4dB
-80dB	-14.8dB	-25.1dB	-9.65dB	De-emphasis Accuracy, 1kHz	-0.05dB
Dithered, -90dB	-14.9dB	-16.9dB	-1.50dB	5kHz	+0.35dB
Dithered, -100dB		-10.2dB		16kHz	-0.16dB
Dithered, -110dB		-5.50dB		S/N Ratio (A-wtd), w emp, 0LSB	103.7dB
Resolution @ -60dB		+0.06dB	+0.06dB	w/o emp, 0LSB	103.5dB
-80dB		+0.06dB	+0.11dB	Digital Output	94.4dB
-90dB		+0.45dB	+0.65dB	Crystal Clock Accuracy	+38.6ppm
-100dB		+0.30dB	-2.00dB	Track Access Time (99)	4secs
Peak Output Level, L		1.867V		Serial Number	723040488
R		1.867V		Typical Retail Price	£130
Relative Output Level		-0.60dB			



Flatter and more extended than the Goodmans; has the same filter ripples.



Excess noise suggests 3rd-order noise-shapers are not terribly sophisticated.



Tandy uses the same MASH/PWM DAC as Goodmans, and it shows.

Don't trip up on your speaker cable!



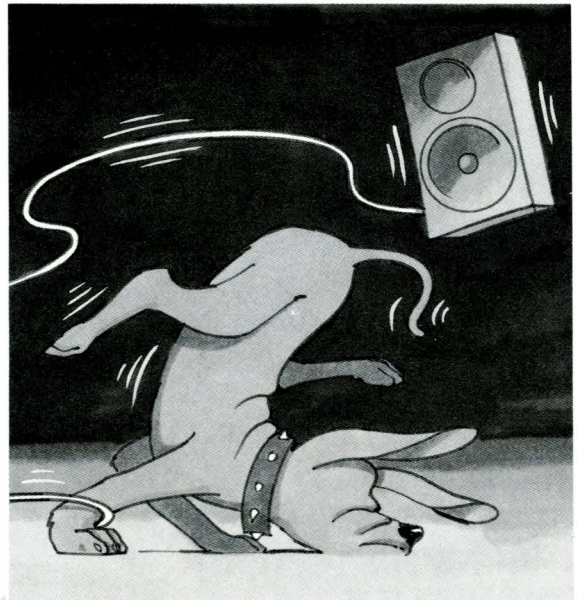
When you invest in good quality hi-fi equipment, why skimp on the cable?
 Especially now that Ortofon can offer 3 types of top-quality cable for under £10.
 Each cable is made up of very fine core copper strands rated at 6-Nines (that's a copper purity of 99.9999% - it doesn't come much better), is flat and flexible for easy installation and features a 'tack-rack' for panel-pin fixing.

Cable Type	Description
SPK 100	Twin-core white cable, each core with 130 copper strands (total 260 strands).
SPK 200	Triple-core grey cable for bi-wiring with twin-core treble (260 strands) and 3-core bass (390 strands).
SPK 300	7-core blue cable having 13 strands per core (each strand laminated). Requires soldering.

You'd better hound us for the name of your nearest stockist.

ortofon

Ortofon (UK) Limited, Chiltern Hill, Chalfont St Peter, Bucks SL9 9UG. Tel: 0753 889949.

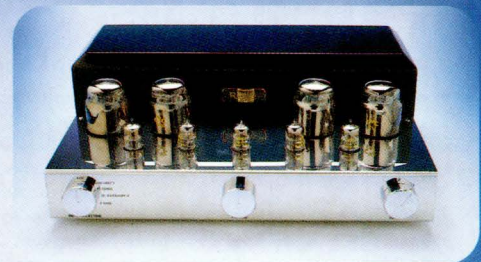


KALYPSO BY C.R. Developments Ltd.

At last the warmth and clarity of valves at a realistic price. The CR range starts with KALYPSO at £468 including vat and carriage. Call or write for a brochure covering our full range



ROMULUS
 £907



REMUS
 £1890

KALYPSO
 £468



C.R. Developments Ltd.
 8 Craftsman Square Temple Farm Industrial Estate, Sutton Road, Southend on Sea, Essex SS2 5RH
 Tel 0702 469055, Fax 0702 601883
 (Demonstrations by appointment.) U.K. dealer enquiries welcome

U.K. Dealers:-
 CHANTRY AUDIO
 0777 870372
 HERTFORD MUSIC

Goodmans GCD-650II



Thanks to Goodmans, that first rung on the CD ladder is now entirely accessible. After all the GCD-650II costs no more than just eight or nine CD's, so if you can afford a clutch of discs you can afford the player itself. Naturally, you're obliged to accept the odd concession in build quality and features, but the internal building blocks of the player (the CD transport power supply and bitstream DAC circuitry) are all sound enough.

Its moulded plastic fascia is dotted with basic track skip, search, intro scan, a 20-track memory, random and repeat play facilities, many of which are duplicated on its slender remote control. What you lack is fast track access and anything other than the most basic display. But it works, and works well.

Sound quality

This player was instantly identified as 'small and cute' by our astute band of blind listeners who appreciated its modest, neat and tidy sound. There's a suggestion of fuzziness with pop and rock but our jazz selection was handled with aplomb; detailed, clear and involving if not quite as meaty or contrasting as possible.

Rather like taking a knife to smooth the icing from a cake, the GCD-650II reveals much of the basic structure of the music while leaving the fine textural detail to the imagination. As a result rock tracks may lack the momentum and fierce dynamics sustained by costlier players.

Similarly, a light orchestral piece may sound as if it's played too close to the chest, lacking the confidence and flair to

really break its bonds. But for all this the GCD-650II still plays music with genuine passion, sustaining a degree of emotion and simple humanity missed by players at fifteen times its price.

Conclusion

The sheer fact this player lights up and spins CDs is a blessed relief, bearing in mind its ludicrous price. Furthermore, that our listeners pitched it at £250-£300 by dint of sound quality alone suggests something miraculous has occurred at Goodmans. It's damn good, damn cheap and an obvious candidate for a Best Buy swingtag.

Goodmans Industries Ltd, Units 2 & 3 Mitchell Way, Portsmouth, Hants PO3 5PR.

☎ (0705) 673 763

Verdict

- ▲ Neat and attractive performer that will embarrass many far costlier machines.
- ▼ Lacks dynamic scale, contrast and weight. But what can you expect for the price?

▶ **£109.99 RRP**

SOUND QUALITY

■ ■ ■ ■ □

VALUE FOR MONEY

■ ■ ■ ■ ■

Laboratory Report

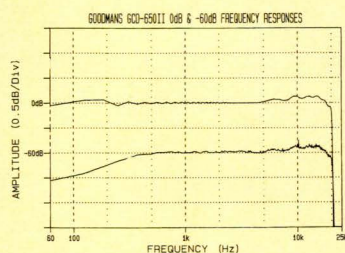
Built by RCT in China, this budding bitstream player deploys the same budget MASH/PWM DAC used by Genexxa (page 61) and Technics in the SL-PG320A (issue 112), players that also boast Hi-Fi Choice swingtags. This is the MN6475A which encompasses a total of 32 times oversampling and 3rd-order noise-shaping as part of the bitstream process. These oversamplers lie behind the mild resonance rippling and characteristic V-shaped stopband images (-63dB) on the 3D plot.

Then again it's the noise-shapers and final analogue filter that determine the relatively bold splurge of ultrasonic noise visible on the -70dB plot. Otherwise the most disappointing areas of performance include its meagre 94dB A-wtd signal to noise ratio, the sub-16 bit dynamic range and weak bass (-0.85dB at 20Hz).

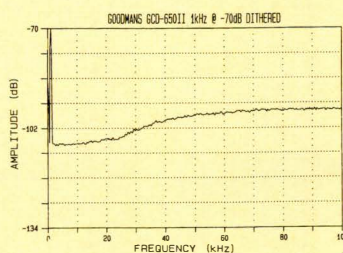
	1kHz	20kHz	
20Hz	0.15dB	0.16dB	0.02dB
Channel Balance	77.5dB	100.4dB	71.2dB
Channel Separation	-91.8dB	-95.8dB	-75.8dB
THD vs Level, 0dB	-30dB	-60.6dB	-77.1dB
-30dB	-60dB	-28.3dB	-44.2dB
-60dB	-80dB	-14.4dB	-25.8dB
-80dB	-100dB	-14.9dB	-18.5dB
Dithered, -90dB			-9.25dB
Dithered, -100dB			No signal
Dithered, -110dB			+0.07dB
Resolution@-60dB			+0.08dB
-80dB			+0.40dB
-90dB			+0.50dB
-100dB			1.908V
Peak Output Level, L			1.876V
R			-0.48dB
Relative Output Level			

TEST RESULTS

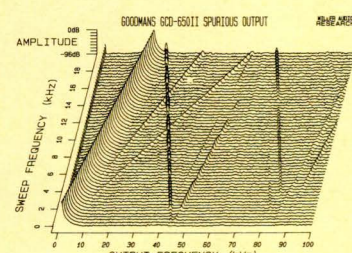
Output Impedance	848ohm
Radio Frequency Spurious	9mV @ 28.2MHz
1Hz Noise Modulation	+1.9dB
CCIRIMD, 0dB	-95.6dB
Suppression of stop-band IMD	63.3dB
De-emphasis Accuracy, 1kHz	-0.05dB
5kHz	+0.36dB
16kHz	-0.12dB
S/N Ratio (A-wtd), w/emp, 0LSB	103.5dB
w/oemp, 0LSB	103.6dB
w/oemp, 1LSB	93.7dB
None	
Digital Output	
Crystal Clock Accuracy	+42.3ppm
Track Access Time (99)	7secs
Serial Number	723040538
Typical Retail Price	£110



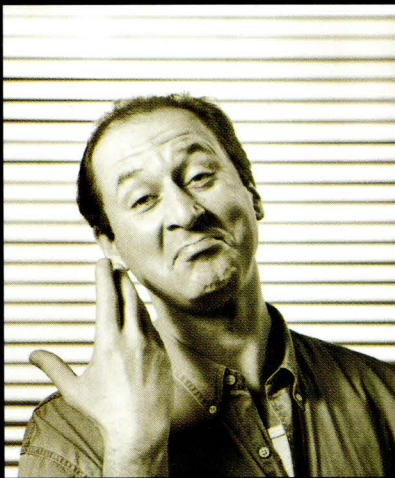
This loss of bass output at low signal levels could 'thin out' its sound.



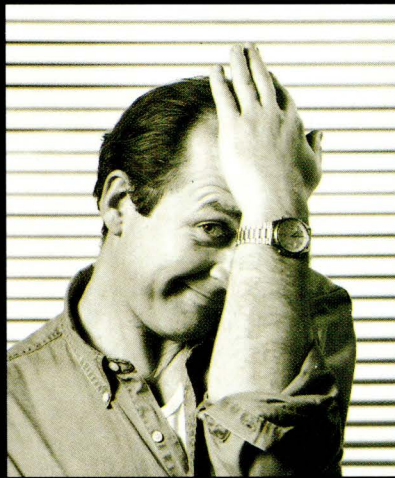
Dynamic range is 6dB short of the costlier MASH/PWM bitstream DACs.



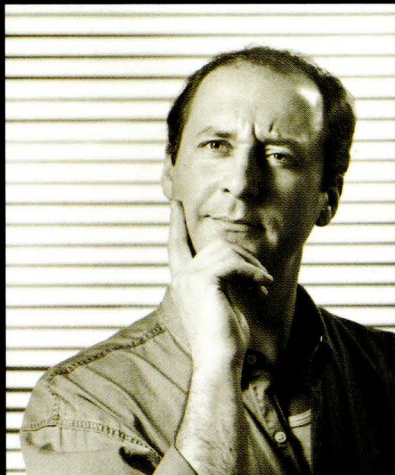
Distortion and stopband noise typical of Technics' budget MASH/PWM DAC.



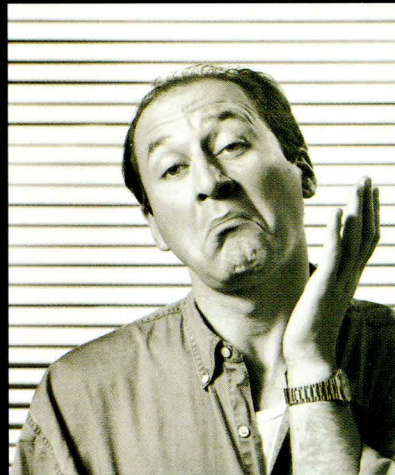
"I've got a pretty good hi-fi system"



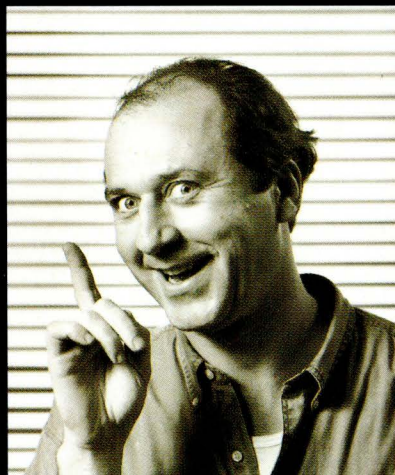
"Friends tell me all the time"



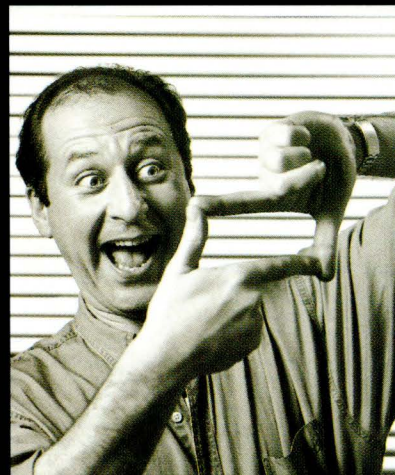
"Sure I'd like a Naim CD player"



"But it would cost me thousands to buy one"



"The CDI costs how much?"



"It'll look great over there!"

Put the expression back into your music with the Naim CDI. You can listen to our integrated CD player, incorporating all the technological innovation and expertise you'd expect from one of the world's leading hi-fi manufacturers, at any of the specialist retailers listed here.

What's more, it's so reasonably priced, you won't even need the brave face.

Now you know what's in a Naim



NA naim audio

Naim Audio, Southampton Road, Salisbury SP1 2LN, England. Tel: (0722) 332266

LONDON

Audio Venue
24 Church Rd, Crystal Palace, SE1. Tel: 081771 7787
Billy Vee Sound Systems
248 Lee High Rd, Lewisham SE13. Tel: 081 318 5755
Doug Brady Hi-Fi
18 Monmouth St, Covent Gdn WC2. Tel: 071 379 4010
The Cornflake Shop
37 Windmill St, W1. Tel: 071 631 0472
Graems Hi-Fi
Canonbury Yard, 190a New North Rd, N1. Tel: 071 226 5500
Son et Lumiere
67 Tottenham Court Rd, W1. Tel: 071 590 9059
The Sound Organisation London
4 Pickfords Wharf, Clink St, SE1. Tel: 071 403 2255
Studio 99
79-81 Fairfax Road, NW6. Tel: 071 624 8855
Uxbridge Audio
109 Chiswick High Rd, W4. Tel: 081 742 3444

NEAR LONDON

Infidelity Hi-Fi
9 High St, Hampton Wick, Kingston-upon-Thames.
Tel: 081 943 3530
Radford Hi-Fi
43 King Edward Court, Windsor, Berks. Tel: 0753 856931
The Sound Gallery
65 Castle St, High Wycombe, Bucks. Tel: 0494 531682
Spaldings
352-354 Lower Addiscombe Rd, Croydon, Surrey.
Tel: 081 654 1231
Studio 99
82 High St, Harpenden, Hertfordshire. Tel: 0582 764246
Unilet Products
35 High St, New Malden, Surrey. Tel: 081 942 9567
Uxbridge Audio
278 High St, Uxbridge, Middlesex. Tel: 0895 230404

SOUTH

Audio Designs
26 High St, East Grinstead, W Sussex. Tel: 0342 314569
Chichester Hi-Fidelity
7 St Pancras, Chichester, Sussex. Tel: 0243 776402
Jeffries Hi-Fi
69 London Road, Brighton, E Sussex. Tel: 0273 609431
Jeffries Hi-Fi
4 Albert Parade, Green St, Eastbourne, E Sussex.
Tel: 0232 31336
Jeffries Hi-Fi
29 London Road, Portsmouth, Hampshire. Tel: 0705 663604
Soundcraft
40 High Street, Ashford, Kent. Tel: 0233 624441
Sound Waves
1 Hobury Grove, Precent, Holbury, Hampshire.
Tel: 0703 899131
Worthing Audio
20 Teville Gate, Worthing, W. Sussex. Tel: 0903 212133

EAST

The Audio File
27 Hocknell St, Bishops Cleeve, Herts. Tel: 0279 506576
The Audio File
No.2 Foundry Walk, St. Ives, Cambridgeshire. Tel: 0460 66123
Basically Sound
The Old School, School Rd, Bracon Ash, Nr. Norwich, Norfolk.
Tel: 050870889
Cam Audio
110 Mill Road, Cambridge. Tel: 0223 60442
Pro-Musica
6 Vineyard St, Colchester, Essex. Tel: 0206 577519
Rayleigh Hi-Fi
216 Moulsham St, Chelmsford, Essex. Tel: 0245 265245
Rayleigh Hi-Fi
132-4 London Rd, Southend-on-Sea, Essex. Tel: 0702 435255
Rayleigh Hi-Fi
44A High St, Rayleigh, Essex. Tel: 0268 779762

WEST

Audio Excellence
58 Bristol Rd, Gloucester. Tel: 0452 300046
Audio Excellence
65 Park St, Bristol, Avon. Tel: 0272 264975
Radford Hi-Fi
6 Fore St, St. Marychurch, Torquay, Devon. Tel: 0803 326723
Radford Hi-Fi
28 Cowick St, St. Thomas, Exeter, Devon. Tel: 0392 218895
Radford Hi-Fi
12 James Street West, Bath, Avon. Tel: 0225 446245
Radford Hi-Fi
107 Cornwall St, Plymouth, Devon. Tel: 0752 226011
Radford Hi-Fi
52/54 Gloucester Road, Bristol, Avon. Tel: 0272 428248
Mike Manning Audio
110 Middle Street, Yeovil, Somerset. Tel: 0935 79361

WALES

Audio Excellence
134 Cwys Rd, Cardiff, South Glamorgan. Tel: 0222 228565
Audio Excellence
9 High St, Swansea, West Glamorgan. Tel: 0792 474808

MIDLANDS

Creative Audio
9 Dogpole, Shrewsbury, Shropshire. Tel: 0743 241924
Griffin Audio
84 Bristol St, Birmingham 5, West Midlands. Tel: 021 692 1359
Listen Inn
32 Gold St, Northampton. Tel: 0604 37871
Sound Advice
The Sound Factory, Duke St, Loughborough, Leicestershire.
Tel: 0509 218254
West Midlands Audio
155 Ombersley Road, Worcester. Tel: 0905 58046
Overture
3 Church Lane, Banbury, Oxfordshire. Tel: 0295 27158
Westwood & Mason (Oxford) Limited
46 George Street, Oxford. Tel: 0865 247783

NORTH

Audio Projects
45 Headingley Lane, Leeds, West Yorkshire. Tel: 0532 304565
Better Hi-Fi
16 Cook Street, Liverpool 2, Merseyside. Tel: 051 227 5007
Doug Brady Hi-Fi
The Forge Cottage, 19 Crossgate, Otley, Leeds, West Yorkshire.
Tel: 0943 467689
Doug Brady Hi-Fi
401, Smithdown Rd, Liverpool 15, Merseyside. Tel: 051 733 8659
Doug Brady Hi-Fi
Tel: 0925 828009
Lintone Audio
8 The Arcade, Metro Centre, Gateshead, Tyne & Wear.
Tel: 091 460 0999
Lintone Audio
7-11 Park Lane, Gateshead B. Tyne & Wear. Tel: 091 477 4167
Lintone Audio
20-22 Monument Mall, Newcastle-upon-Tyne, Tyne & Wear.
Tel: 091 232 3994
Lintone Audio
242 Park View, Whitley Bay, Tyne & Wear. Tel: 091 252 4665
Moorgate Acoustics
184 Fitzwilliam St, Sheffield, S. Yorkshire. Tel: 0742 756048
Moorgate Acoustics
8 Westgate Chambers, Westgate, Rotherham, S. Yorkshire.
Tel: 0709 370666
Murray Hi-Fi
58a Wilmslow Rd, Handforth, Cheshire. Tel: 0625 549277
Murray Hi-Fi
East Anglian Buildings, Princes Dock St, Hull, Humberside.
Tel: 0482 227867
Sound with Style
81 Nether Hall Rd, Doncaster, S. Yorkshire.
Tel: 0302 321421
Sound with Style
284 Glossop Rd, Sheffield, S. Yorkshire. Tel: 0742 737893
The Sound Organisation
28 Gillygate, York. Tel: 0904 627108

SCOTLAND

Stereo Stereo
278 St. Vincent Street, Glasgow, Strathclyde. Tel: 041 248 4079
Robert Ritchie
102 Murray St, Montrose, Tayside. Tel: 0674 73765

NORTHERN IRELAND

Lyric Hi-Fi
163 Stranmillis Road, Belfast. Tel: 0232 381296
Lyric Hi-Fi
84 Bridge St, Portadown, Co. Armagh. Tel: 0762 358059

JVC XL-Z464



It's not unknown for JVC to execute a token cosmetic revision in order to re-launch last season's CD player as this year's hot favourite. JVC openly admits to this subterfuge, especially as the XL-Z452 (issue 112) revived our opinions of the XL-Z441 (issue 107). Nevertheless, its honesty in suggesting the new XL-Z464 is little more than a tarted-up XL-Z452 is somewhat misplaced.

In reality this £200 bitstreamer employs entirely new servo electronics (almost halving its track access time) with new oversampling and PEM DAC chips to boot. The Z464's similarity to the Z452 lies in the wide range of facilities which include comprehensive track, index and program selection, motorised volume control (via remote) and one-touch DDRP.

This Dynamic Detection Recording Processor will scan the CD looking for its loudest section. Once located, the output level of the player is synchronised with the recording level of a compatible (JVC) cassette deck, simplifying the process.

Sound quality

This is the open, atmospheric and fresh-sounding alternative to Denon's DCD-695, it's a player that's neither as immediate nor punchy but is better integrated, and smoother in tone. Instead of grabbing you by the ears, the XL-Z464 takes a more accommodating view. It has a natural balance; strings, piano, guitar and percussion all sound remarkably life-like, though vocals can sound a little strained and artificial.

Nevertheless, it's the easy-going char-

acter of the player that's most attractive, giving a performance that's smooth, undemanding and yet highly detailed. It handles everything with such panache that the parched vocal quality is surprising, reducing its emotive impact at the last hurdle.

Conclusion

Put next to Denon's DCD-695 our panel plumped for JVC's elegant sound, though the margin is very close. Many £200 CD players will sound different but few will sound this good. An important distinction that extends JVC's reign of Recommendations to a third generation.

JVC UK Ltd, JVC House, JVC Business Park, Priestly Way, London NW2 7BA.
☎ 081-450 3282

Verdict

- ▲ Great features and performance. Expensive-sounding budget player.
- ▼ Vocals are a tad dry on occasion, otherwise very little else to whinge about.
- ▶ **£199.99 RRP**

SOUND QUALITY
■■■■■□
VALUE FOR MONEY
■■■■■

Laboratory Report

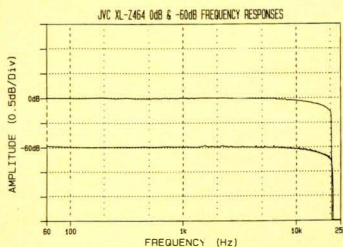
This latest £200 player is equipped with a replacement DAC, the MN35500. To all intents and purposes it uses the same technology, including the variable 2nd-4th order noise-shaping (VANS), 64 times oversampling and 'Pulse Edge Modulation' output used in the earlier JCE450I. Once again the 110dB signal to noise ratio is the widest available from any bitstream player just as the -70dB plot promises a dynamic range equal to the most sophisticated technology — just compare with Sony's CDP-X303ES (page 97).

Its low-level linearity is also mightily impressive with errors of just -0.37dB over a full 100dB range. Meanwhile distortion is held to a low 0.0013-0.01 per cent even at -30dB where most of the musical action takes place. The differences between this XL-Z464 and the XL-Z452 (issue 112) lie in the improved oversampling filter — hence the ripple free response and absence of stopband noise on the 3D plot.

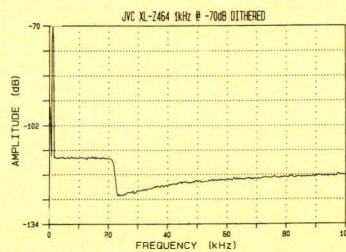
	20Hz	1kHz	20kHz
Channel Balance	0.06dB	0.07dB	0.04dB
Channel Separation	124.1dB	122.1dB	98.7dB
THD vs Level, 0dB	-106.5dB	-103.6dB	-86.7dB
-30dB	-98.4dB	-82.9dB	-79.6dB
-60dB	-60.8dB	-55.1dB	-54.2dB
-80dB	-28.3dB	-31.5dB	-33.6dB
Dithered, -90dB	-18.3dB	-24.1dB	-23.8dB
Dithered, -100dB		-21.9dB	
Dithered, -110dB		-7.50dB	
Resolution@-60dB		-0.01dB	+0.01dB
-80dB		-0.06dB	-0.04dB
-90dB		-0.37dB	-0.37dB
-100dB		0.00dB	+0.10dB
Peak Output Level, L	2.211V		
R	2.228V		
Relative Output Level		+0.90dB	

TEST RESULTS

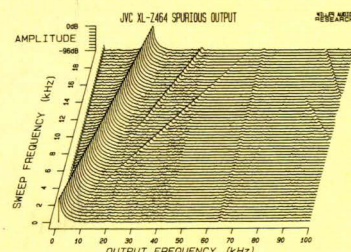
Output Impedance	278ohm
Radio Frequency Spurious	1mV/broadband
1Hz Noise Modulation	+9.5dB
CCIR IMD, 0dB	-100.6dB
Suppression of stop-band IMD	101.7dB
De-emphasis Accuracy, 1kHz	+0.01dB
5kHz	0.00dB
16kHz	-0.19dB
S/N Ratio (A-wrt'd), w/emp, 0LSB	110.7dB
w/oemp, 0LSB	110.8dB
Digital Output	109.8dB
Optical	
Crystal Clock Accuracy	+161.5ppm
Track Access Time (99)	3secs
Serial Number	088V1190
Typical Retail Price	£200



The mild treble cut is not audible.



A perfect result as all distortion harmonics are converted to pure noise.



JVC's oversampling filter reduces stopband noise from -61dB to -102dB.

An Invitation & Free Offer



NO RECORD **CLUB WOULD** **HAVE ME AS** **A MEMBER**

Hello! I'm Bill Wilson. I love music — all kinds of music — classical, popular and jazz. I also love collecting recordings — especially CDs.

When I first started my collection, I soon realised I'd have to be a millionaire to be able to afford all the recordings I wanted. Record shops were too expensive. So I looked around for a record club that would help me in three ways:

- Make my money go further by giving me large discounts on the recordings I bought;
- Keep me fully informed about the best of the new recordings being released;
- Most important of all — allow me to try out recordings in my own home without any obligation to buy.



Well I looked at the various clubs and I didn't care much for any of them. And when I told them I'd only join if they gave me the three benefits I wanted, none of them would agree.

So I formed my own club. I called it The Wilson Stereo Library, because I wanted to give the personal service I could not find anywhere else.

Actually, that was more than 30 years ago. Now thousands of price conscious members enjoy all the benefits of the best CD club in the world.

That's why I invite you to contact me for the full details of The Wilson Stereo Library CD Service plus a special catalogue of the 100 Best Classical and Popular CDs *absolutely free of charge*.

OK Bill Wilson! Tell me about the WSL CD Service and the benefits I can get from it. And send me the Free catalogue of the 100 Best Classical & Popular CDs. Without obligation. (I enclose two first class stamps for speedy reply).

Name: _____

Address: _____

Postcode: _____

**WILSON
STEREO
LIBRARY**

To: Bill Wilson Wilson Stereo Library PO Box 32
St. Leonards-on-Sea East Sussex TN38 0UZ
Telephone: (0424) 718254 Fax: (0424) 718262

HFC11/93



Francinstien STEREO ENHANCEMENT SYSTEM

*"Its a gentle elegant effect - and a very even one.....
Nothing stands out unnecessarily..... One simply
becomes more aware of the music."*

Eric Braithwaite - Hi-Fi World

*"CD's sounded better defined, the soundstage having a
more definite shape. It was as if there was more air
around each strand in the mix, allowing you to hear it
more distinctly, more separately."*

Andrew Cartmel - Hi-Fi Choice

*"If you want an analogue pickup cartridge sound from
your CD, then this equaliser - crossfeed does the
trick."*

Martin Colloms - Hi-Fi News

For further information contact:

**Select Systems Ltd, Hanworth Trading Estate,
Hampton Road West, Feltham, Middx TW13 6DH
Tel: 081-893 8662 Fax: 081-893 4318**

Listen inn

LESS HI-FI . . . MORE MUSIC

Arcam, Audiolab, Creek, Cyrus, Denon,
Epos, Heybrook, Linn, Marantz, Mission,
NAD, Naim, Nakamichi, Rega, Rotel
. . . plus other selected brands.

Not all brands stocked at both shops.

**6 HOTEL STREET,
LEICESTER**

TEL: 0533 623754

**32 GOLD STREET,
NORTHAMPTON**

TEL: 0604 37871

Kenwood DP-3050



Kenwood's DP-3050 is, to all intents and purposes, a slightly over-cooked version of its earlier DP-3040 (issue 112). It has the same elegantly curved facia and busy looking display with music calendar and five-step level meter.

Although the direct access keys have been shifted stage right and the continuous, program, time and repeat play facilities now lie under the display, the facilities remain quite unchanged. The matching handset still features additional tape edit, peak search and random play options.

Inside there is everything that once made the DP-3040 and DP-4030 great (issues 95 and 112), including Kenwood's discrete Master Clock circuit, the beefed-up laser-pickup and cascode analogue filter stage. Yet, as we were about to

discover, Kenwood has not entirely left well alone.

Sound quality

In a manner entirely typical of Kenwood's recent amplifiers and CD players, the DP-3050 has a measured and warm tonal balance. This dulls the immediacy, if not the real brightness of the music, and slows the attack of strings or percussion.

The Kenwoodsounded relatively quiet, and failed to reflect the dynamic contrasts in our classical CDs. Sure enough, its smooth top-end is a strong asset in a world of bright speakers and amplifiers. But for most of our panel, the DP-3050 sounded sedate rather than seductive.

There's no doubt it can sound remarkably calm and sophisticated with an acous-

tic recording but otherwise its overwhelming restraint will mute the vital dynamics of rock and pop — squandering the excitement at the heart of passionate music.

Conclusion

In an effort to escape the ragged exuberance of older budget players, Kenwood has unfortunately travelled too far down the road of civility and self-control. It hit upon a sensible balance in the £180 DP-3040 (issue 112) but this £200 version, however well built, evidently lacks the guts and drive required to fire the imagination of our hard-bitten listeners.

Trio KenwoodUK Ltd, Kenwood House, Dwight Road, Watford, Herts WD1 8EB.
☎ (0923) 816 444

Verdict

- ▲ Inoffensive, smooth-sounding treble unlikely to upset bright budget speakers.
- ▼ Woolly bass, limited dynamics and colourless midrange are big drawbacks.
- ▶ **£200.00 RRP**

SOUND QUALITY
■ ■ □ □ □ □
VALUE FOR MONEY
■ ■ ■ □ □ □

Laboratory Report

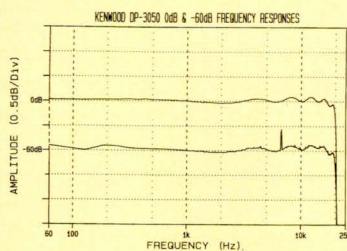
So what real differences exist between the old DP-3040 and the new DP-3050? In practice Kenwood has taken the opportunity to update NPC's earlier SM5870 bitstream DAC with its more recent SM5871AS. As before the noise-shapers employed by NPC are responsible for the Philips-like splurge of ultrasonic noise visible on the -70dB plot (see the CD930 and CD950 in issue 112).

Such is the strength of this noise it partly masks the bold stop-band images seen just 31dB down on the 3D plot. Incidentally both these images and the wealth of noise itself are more than capable of upsetting some amplifier/loudspeaker combinations, prompting high levels of intermodulation distortion to fold back into the audio range.

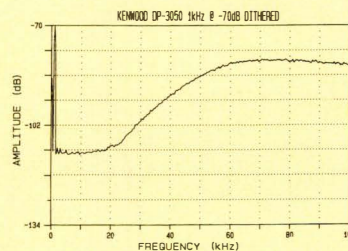
Otherwise this new chip offers a fractionally wider dynamic range, a wider (101dB) signal to noise ratio, no real change in distortion but a significant deterioration in low-level resolution.

TEST RESULTS

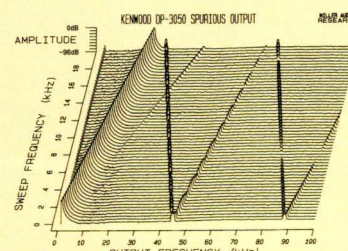
Channel Balance	0.00dB	0.00dB	0.06dB	Output Impedance	585ohm
Channel Separation	97.5dB	96.6dB	78.2dB	Radio Frequency Spurious	8mV @ 84MHz
THD vs Level, 0dB	-102.7dB	-104.1dB	-71.3dB	1Hz Noise Modulation	+3.7dB
-30dB	-93.6dB	-79.4dB	-48.1dB	CCIR IMD, 0dB	-100.5dB
-60dB	-58.0dB	-43.9dB	-16.7dB	Suppression of stop-band IMD	31.4dB
-80dB	-23.9dB	-25.7dB	+3.50dB	De-emphasis Accuracy, 1kHz	0.00dB
Dithered, -90dB	-9.80dB	-16.5dB	+13.5dB	5kHz	+0.01dB
Dithered, -100dB		-13.5dB		16kHz	-0.06dB
Dithered, -110dB		-6.50dB		S/N Ratio (A-wtd), wemp, 0LSB	121.6dB
Resolution @ -60dB		0.00dB	+0.01dB	w/o oemp, 0LSB	121.6dB
-80dB		-0.54dB	-0.35dB	w/o oemp, 1LSB	101.2dB
-90dB		-2.80dB	-2.05dB	Digital Output	Optical
-100dB		-2.70dB	-1.00dB	Crystal Clock Accuracy	+12.2ppm
Peak Output Level, L		2.128V		Track Access Time (99)	45secs
R		2.128V		Serial Number	30140479
Relative Output Level		+0.54dB		Typical Retail Price	£200



The digital filter leaves a strong ripple while cutting treble by 0.5dB at 20kHz.



Obvious noise-shaper 'wave' suggests the DP-3050 may trouble some amps.



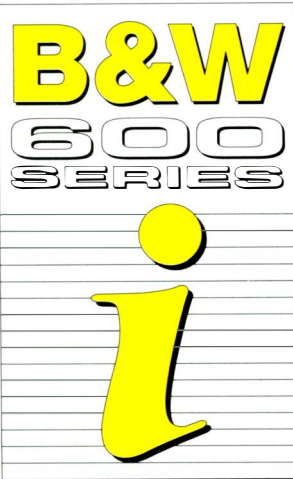
Strong stopband images partly submerged beneath ultrasonic noise.



Talking Speakers

At B&W we believe in evolution. For almost thirty years we have been making some of the world's finest domestic and professional monitors, developing our skills and products to meet the needs of the most discerning listener. You.

To achieve such a high standard of reproduction, our designers spend a lot of time listening to feedback. Not from our loudspeakers, but from our professional clients, reviewers and, most importantly, our customers. The result is that we don't release a new range every year or so, but incorporate improved features as the public demands and our



world-renowned R&D department allows.

The 600 series has evolved significantly over the past three years (although considering the reviews on their release, it seemed hardly possible at the time). All of the new series have improved crossovers and ferro-fluid cooled tweeters (metal domed, of course), and the larger models now have one piece moulded bass drivers. The only thing that we haven't been able to improve upon is the classic modern styling by Kenneth Grange.

We'd go so far as to say that the 600 series has evolved to the point where it can speak for itself.

'Phone 0903-750750 for stockists of the new 600i range

Philips CD690



Don't be fooled by the lightweight construction and tacky plastic fascia of this budget wonder, the CD690 matches the authority and stamina of far costlier creations. It's actually the last player to utilise Philips' old 600 Series casework.

The bare bones of the CD690 are also those of the posh-looking CD920 we reviewed in issue 119. This cosmetic variation offers a similar array of direct track access, intro scan, tape edit, random and repeat play facilities but lacks the remote control and digital output that distinguish the CD692II and CD920.

This bargain-basement Bit Stream player is, however, equipped with Philips' new swing-arm CDM9 transport mechanism, a marked improvement over the

budget linear-tracking CDM12 laser-pickup used in the CD920. So could this cheap CD690 offer a superior performance?

Sound quality

Auditioned immediately after the indifference of Kenwood's DP-3050, the solidity, openness and drive of the CD690 made a startling contrast. Sure enough there's a hint of roughness about the music but there's no mistaking its youthful enthusiasm for rock, pop and jazz.

For once the deep and resonant bass line running through Chris Rea's *Daytona* thudded convincingly across the listening room though, for all its weight, there was still the suggestion of ponderousness.

Similarly, there was a feeling of restraint with our ambient jazz selection,

lending brass instruments a rounded character rather than one that emphasised their metallic rasp. So the music is vivid enough, it just lacks a little subtlety and colour for a truly realistic picture.

Conclusion

Philips has succeeded in creating a series of budget players riddled with engaging rather than irritating distortions. The CD690 is certainly no model of neutrality but what it does, it does with panache and abandon. A gamble then, but one that's paid off for Philips, which now sells its budget technology on to other parties.

Philips Consumer Electronics Ltd, City House, 420-430 London Road, Croyden, Surrey CR9 3QR ☎ 081-689 2166

Verdict

- ▲ Very rich and robust sound that contrasts markedly with its appearance!
- ▼ Technically shabby; no remote control; slightly lacking in subtlety and colour.
- ▶ **£130.00 RRP**

SOUND QUALITY
 ■■■■■□
VALUE FOR MONEY
 ■■■■■□

Laboratory Report

Condensing decoder, oversampling filters, noise-shapers and PDM Bit Stream DAC onto a single substrate is an obvious step towards an integrated CD-player-on-a-chip. Yet increasing integration brings increasing cross-modulation and interference, the cause of these relatively poor measurements.

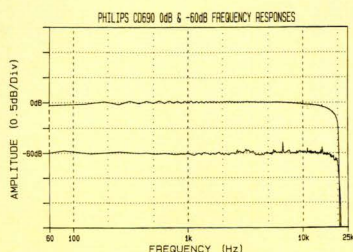
In common with the CD920 from issue 119, this CD690 is hamstrung by a meagre 93dB signal to noise ratio and high 0.01 I-0.06 per cent distortion which remains unchanged through the first 30-40dB of its dynamic range. Strong 2nd, 3rd and characterful 5th harmonics march boldly across the 3D plot, intersected by swarths of (V-shaped) stop-band noise (just 16dB down) and a thumping great sampling tone at 88.2kHz.

This 'leaky' tone is equally obvious from the -70dB plot which highlights the player's sub-16 bit dynamic range. Low-level linearity is also poor with frequency response errors up to 8dB occurring between 1kHz-20kHz at -100dB.

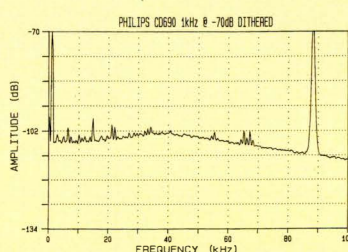
	20Hz	1kHz	20kHz
Channel Balance	0.00dB	0.00dB	0.20dB
Channel Separation	67.0dB	107.2dB	78.1dB
+THD vs Level, 0dB	-30dB	-74.0dB	-64.2dB
-30dB	-79.5dB	-73.4dB	-70.4dB
-60dB	-48.0dB	-43.4dB	-41.2dB
-80dB	-21.6dB	-20.4dB	-19.9dB
Dithered, -90dB	-11.3dB	-5.50dB	-14.5dB
Dithered, -100dB		-2.75dB	
Dithered, -110dB		-1.50dB	
Resolution @ -60dB		-0.07dB	+0.12dB
-80dB		-0.82dB	+1.03dB
-90dB		-3.90dB	+2.75dB
-100dB		-3.05dB	+5.00dB
Peak Output Level, L		2.182V	
R		2.181V	
Relative Output Level		+0.76dB	

TEST RESULTS

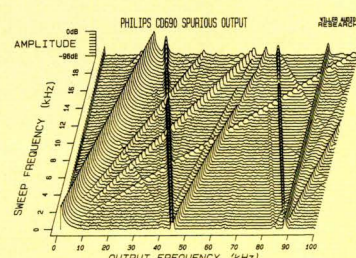
Output Impedance	1.04kohm
Radio Frequency Spurious	7mV spikes >1GHz
1Hz Noise Modulation	+3.2dB
CCIR IMD, 0dB	-75.3dB
Suppression of stop-band IMD	15.7dB
De-emphasis Accuracy, 1kHz	+0.06dB
5kHz	+0.70dB
16kHz	+0.91dB
S/N Ratio (A-wtd), w emp, 0LSB	97.3dB
w/o emp, 0LSB	94.6dB
w/o emp, 1LSB	93.1dB
Digital Output	None
Crystal Clock Accuracy	-82.0ppm
Track Access Time (99)	4.5secs
Serial Number	009229-002136
Typical Retail Price	£130



Noisy-looking response at low (-60dB) levels. Bass drops by 1.4dB at 20Hz.



Little improvement with dithered signals; strong two times oversampling tone.



Crude oversampling technology causes huge stop-band images.

WINNING COMBINATION

The TEAC P-700 CD Transport and D-700 DAC



The P-700 CD Drive Unit features TEAC's Vibration-free Rigid Disc-clamping system (VRDS) as utilised in our popular range of VRDS integrated players. This system stabilizes the whole of the CD, reducing errors and distortions in the digital datastream which lesser transport systems can introduce.

Perfectly matched with the Drive Unit, the D-700 Multi input DAC features four 20-bit DAC's and TEAC's exclusive ZD-II circuitry to eliminate distortion and extraneous signal noise.

Both the P-700 and D-700 offer the rigorous standards of build quality and reliability that TEAC are famous for. Together they combine to produce sound quality of incredible accuracy and fidelity to the original recording – a combination that earned the P-700/D-700 Best Buy in July 1993's issue of Hi-Fi Choice.

For further information on these and other TEAC products please phone or write to the address below:

TEAC

TEAC UK Limited
5 Marlin House, The Croxley Centre
Watford, Herts WD1 8YA
Tel: 0923 819630, Fax: 0923 236290

Rotel RCD-945AX



The launch of a genuinely new CD player has long been awaited from Rotel, and the £230 RCD-945AX is it. At first glance it looks little different from either the RCD-955AX or RCD-965BX. After all it shares the same 900 series livery, the same Philips CDM4 transport mechanism and is underlined by a familiar set of track access keys.

Look a little closer and a new back-lit LC display looms large, along with a modest battery of program, intro scan, random, A-B and all-repeat options. The useful index scan facility has evidently been dropped though direct track access is still available via remote control.

Inside, however, it's all change with Rotel's own Signetics-based analogue filter complementing Philips' latest budget

PDM DAC. So this is by no means an RCD-965BX on the cheap.

Sound quality

Wise to the technical heritage of this player, I put it back-to-back with the Philips CD690 in our first blind listening session. Obvious to this hidden agenda, our panel found the 945 smoother and more open than the Philips.

Yet there are common musical threads that bind the two. The tidy treble quality and slightly veiled upper bass are two such hallmarks. These cause players a sense of compression, restraining Hubbard's double bass while introducing the same fruity slant to brass and woodwind.

Fortunately, the RCD-945AX sounds cleaner, trading the impulsive nature of

the CD690 for something altogether more contemplative. So vocals will sound expressive and forceful when required though voices that are pitched further back into the mix are typically less distinct.

Conclusion

Paying a £100 more than Philips' CD690 gives extra flexibility, superior build quality and added pizzazz, as Rotel's RCD-945AX executes what can only be described as a 'disciplined romp'. Either way this alternative shade of Philips' rose-tinted spectacles remains sufficiently colourful to sustain the Recommendation awarded to its cheaper cousin.

Gamepath, 25 Heathfield, Stacey Bushes, Milton Keynes MK12 6HR.
☎ (0908) 317 707

Verdict

- ▲ The party version of Philips CD690; characterful and entertaining sound.
- ▼ A little tart; Audition the CD690 before splashing out an extra £100.
- ▶ **£229.95 RRP**

SOUND QUALITY
■■■■□
VALUE FOR MONEY
■■■■□

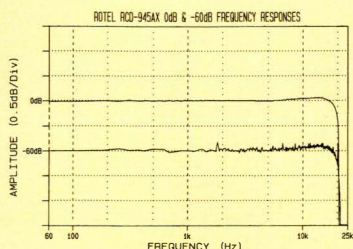
Laboratory Report

A recent review of the RCD-945AX compared its innards with Rotel's award-winning RCD-965BX which, with hindsight, seems curiously irrelevant. In practice Rotel has abandoned the SAA7310 decoder and SAA7323 DAC used in the 965BX for the same CD-player-on-a-chip found in Philips' CD690/692/910 and CD920 (issue 119). And it's very hard indeed to disguise the pungent flavour of Philips SAA7341 DAC.

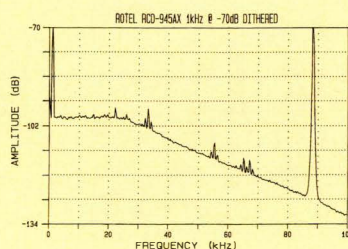
So, for its RCD-945AX, Rotel has introduced a more severe analogue filter, evident from the cut in ultrasonic noise on the -70dB plot and abrupt end to distortion above 40kHz on the 3D plot. Unfortunately, its signal to noise ratio has been squeezed from a poor 93dB to an even worse 86dB even though the split analogue/digital power supply has vastly improved its low-level linearity. Then again, the poor 74dB separation (at 20Hz) suggests that cross-coupling via the power supply is far from eliminated.

TEST RESULTS

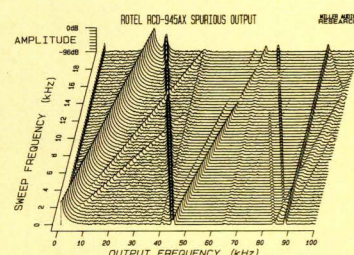
	20Hz	1kHz	20kHz		
Channel Balance	0.02dB	0.02dB	0.10dB	Output Impedance	456ohm
Channel Separation	73.7dB	106.7dB	97.2dB	Radio Frequency Spuriae	5mV spikes >1GHz
THD vs Level, 0dB	-76.4dB	-72.1dB	-90.0dB	1Hz Noise Modulation	+0.95dB
-30dB	-81.3dB	-68.2dB	-76.1dB	CCIR IMD, 0dB	-79.5dB
-60dB	-49.9dB	-38.1dB	-45.0dB	Suppression of stop-band IMD	16.2dB
-80dB	-24.0dB	-17.1dB	-26.5dB	De-emphasis Accuracy, 1kHz	+0.03dB
Dithered, -90dB	-17.8dB	-9.50dB	-15.7dB	5kHz	+0.35dB
Dithered, -100dB		+2.75dB		16kHz	+0.76dB
Dithered, -110dB		No Signal		S/N Ratio (A-wtd), w emp, 0LSB	90.0dB
Resolution @ -60dB		-0.05dB	+0.01dB	w/o emp, 0LSB	86.5dB
-80dB		-0.67dB	+0.18dB	w/o emp, 1LSB	85.8dB
-90dB		-0.32dB	-0.22dB	Digital Output	Coaxial
-100dB		+1.40dB	+3.90dB	Crystal Clock Accuracy	-191.7ppm
Peak Output Level, L		2.010V		Track Access Time (99)	4secs
R		2.006V		Serial Number	50623-312
Relative Output Level		+0.04dB		Typical Retail Price	£230



Very noisy low-level response and abrupt HF cut-off are visible here.



Filter gobbles-up ultrasonic noise but leaves the two times sampling tone.



Analogue filter limits high frequency distortion and stop-band images.

THE FACIAL EXPRESSIONS OF THE CHIMPANZEE

Aggressive

The chimp is unhappy with his far-eastern stack system

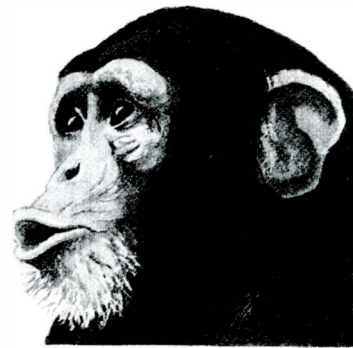


Passive

The chimpanzee, at ease and calm, hears a basic Hi-Fi system demonstrated by **THE AUDIO FILE**.

Excited

The chimp is shown the benefits of a clear upgrade path for the future.



Pleased Expression

The smile conveys the pleasure of hearing a carefully chosen Hi-Fi system meticulously installed by **THE AUDIO FILE**.



The Audio File

...SIMPLY THE BEAST

27 HOCKERILL STREET, BISHOP'S STORTFORD
HERTS CM23 2DH

TEL: (0279) 506576 FAX: (0279) 506638

Sherwood CD-5010R



Welcome to high-end audio Richer Sounds style. I jest of course, yet Sherwood's £160 CD-5010R is the costliest single-disc player available through Richer's shops and Hi-Fi Direct mail order operation. Featurewise it's a development on the ultra-budget CD-3020R (issue 119), adding index skip, tape edit and display off to the matching remote control.

The player itself is uniformly larger but clearly struck from a similar mould, its fluorescent display flanked by the same track access, program, intro scan, random and repeat play options. However, in common with the CD-3020R, track access remains as sluggish as ever, even though the Philips Bit Stream logo hints at more interesting technology within.

Sound quality

Fortunately, any fiscal disadvantage suffered by Sherwood's flagship player is more than offset by the encouragingly warm balance of its music, a slightly soft but mellifluous quality that carries through from rock, pop, jazz to classical CDs.

There's nothing nasty or edgy about this sound; instead it has an inviting and relaxing perspective that's a little veiled but still foot-tapping. So the trumpet and sax from our jazz selection bit through the soundstage with confidence, yet there were other times when percussion, for example, would sound a little clothly and indistinct. To experienced ears this is typical of a budget CD player trying, with considerable success, to cover its tracks.

Our classical CDs prompted a very

similar reaction, the music sounding lively and enjoyable but lacking transparency and sharp stereo focus. Once again there's no unpleasant edginess but nor is there the ultimate refinement or subtlety.

Conclusion

The CD-5010R was identified by our panel as a £200 bitstream player, which with the benefit of hindsight is neither an inaccurate nor insulting appraisal. Its very mellow and streamlined bass with an ambient and unflagging balance generally give the game away. This, plus a generous gaggle of widgets, ensures Sherwood yet another Hi-Fi Choice swingtag.

Hi-Fi Direct Ltd, 202 Long Lane, London SE1 4QB. ☎ 071-827 9827

Verdict

- ▲ A little light on its feet but fun nonetheless; has plenty of features.
- ▼ Occasional thickness obscures vocal and percussive detail.
- ▶ **£159.95 RRP**

SOUND QUALITY
 ■ ■ ■ □ □ □
VALUE FOR MONEY
 ■ ■ ■ ■ □

Laboratory Report

The 'High Density 1-Bit D/A Converter System' referred to by Sherwood turns out to be an SAA7350 Bit Stream DAC, sourced from Philips. This is obvious enough from the -70dB plot which reveals a characteristic pattern of digital distortions between 30-100kHz. Just compare with TEAC's CD-P3500 (issue 112) or Aiwa's XC-750 (issue 119) and you'll see the unmistakable trend.

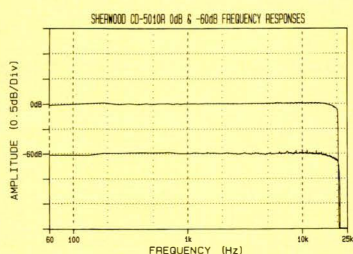
The 3D plots are rather different, however, because Sherwood has married the SAA7350 to one of Yamaha's YM3433 eight times oversampling filters (instead of the more popular NPC filter). Here the stopband rejection has improved from the typical 61dB to 74dB, visible as a streak on the 3D plot.

Otherwise it's Sherwood's analogue filter that bumps peak-level distortion up to 0.004-0.016 per cent, leaving a spurious frame tone signal to compromise the overall 102dB signal to noise ratio by a good 2-3dB. A good overall performance, but weak at the extremes.

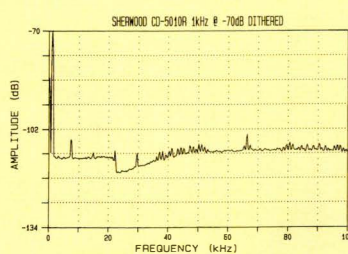
	20Hz	1kHz	20kHz
Channel Balance	0.16dB	0.13dB	0.08dB
Channel Separation	113.5dB	113.4dB	73.1dB
THD vs Level, 0dB	-88.3dB	-86.4dB	-76.3dB
-30dB	-79.7dB	-78.5dB	-71.9dB
-60dB	-50.9dB	-51.2dB	-43.0dB
-80dB	-23.0dB	-29.1dB	-23.1dB
Dithered, -90dB	-17.7dB	-21.5dB	-13.5dB
Dithered, -100dB		-16.4dB	
Dithered, -110dB		-6.50dB	
Resolution @ -60dB		+0.01dB	-0.01dB
-80dB		+0.16dB	-0.10dB
-90dB		+0.98dB	-0.60dB
-100dB		+1.35dB	+1.20dB
Peak Output Level, L		2.017V	
R		2.048V	
Relative Output Level		+0.14dB	

TEST RESULTS

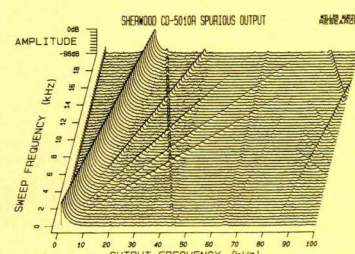
Output Impedance	262ohm
Radio Frequency Spurie	3mV broadband
1Hz Noise Modulation	+4.5dB
CCIR IMD, 0dB	-96.1dB
Suppression of stop-band IMD	73.5dB
De-emphasis Accuracy, 1kHz	-0.04dB
5kHz	-0.39dB
16kHz	-0.81dB
S/N Ratio (A-wtd), w emp, 0LSB	106.3dB
w/o emp, 0LSB	101.6dB
w/o emp, 1LSB	101.8dB
Digital Output	None
Crystal Clock Accuracy	+107.5ppm
Track Access Time (99)	8secs
Serial Number	C064A01009680
Typical Retail Price	£160



Yamaha's oversampling filter delivers a flat, ripple-free frequency response.



Consistent with a Philips BS DAC running at a high 16.9MHz clock rate.



A spray of 2nd, 3rd, 4th and 5th harmonics via Sherwood's analogue stage.

SOLUTIONS

A 50 unique switching and control products



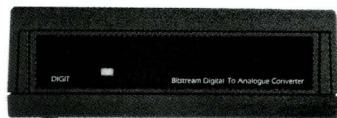
B Remote control Multiroom systems



C Award Winning Loudspeaker and interconnect cables



D Digital Processing & Amplification Products



Please send me your new 32 page catalogue. I am interested in the following Products
 A B C D
 I enclose a 1st class stamp

NAME: _____
 ADDRESS: _____

 POSTCODE _____

QED

QED AUDIO PRODUCTS LTD, RIDGEWAY HOUSE, RIDGEWAY CLOSE, LIGHTWATER, SURREY, GU18 5XU, ENGLAND



To obtain the best from any hi-fi the connections between the components play an important part. We specialise in Hi-Fi and Audio Visual connections. We can also tailor-make any cable to your requirements. Our products are British made – hand built – to a high standard – fully guaranteed – reliable – using quality components. We are consistently recommended

Well, that's partly true, it is one of the best products around but as for expensive, well – that's just not us. At the Chord Company we like to offer value for money and that means not bumping up the price to cover slinky packs and expensive marketing. We believe in quality and service and by quality we mean something that SOUNDS right, not something that just looks expensive. That's why – we didn't wait for the single European market, we've sold to the single world market for the past seven years exporting worldwide. Send off the coupon below for a full list of suppliers or call us, you will find us helpful and receptive.

and used by leading British manufacturers and Hi-Fi dealers. All these things imply that it is the best product around and the most expensive.

Recommended and endorsed by
AUDIOLAB : NAIM AUDIO
NAKAMICHI : MISSION CYRUS
REGA RESEARCH

THE CHORD COMPANY, 30A SARUM BUSINESS PARK, PORTWAY, SALISBURY SP4 6EA
 Tel: 0722 331674 Fax: 0722 411388

Please send UK Dealer list and more information

Name:
 Address:

 Post Code:
 Tel:

Technics SL-PG440



Being obliged to provide new models for every season is a tricky business, doubly so when you've already got an established and popular range of players. Technics' overcomes this dilemma by reverting to cosmetic rather than profound internal revisions.

This commonsense approach is slightly muddled in the new £170 SL-PG440A which is based partly on the old SL-PG420A and partly on the costlier SL-PG520A. Still, there's nothing confusing about its selection of track access, random, repeat and program play, auto cue, peak search and comprehensive 'synchro edit' facilities. Even the new chamfered fascia offers up various controls at a more convenient angle while the 'curvilinear' remote handset brings an added touch of luxury.

Sound quality

Our initial sample delivered the music with a considerable lack of humour. We had difficulty characterising the player, which can sometimes turn out to be a good thing, but not when, as in this case, the music is just too damn boring.

In a purely technical sense, however, the music was well represented, showing firm bass and a detailed, articulate but slightly glassy mid, all tied down with solid stereofocus. A second SL-PG440A boasted a little extra vibrancy and energy to colour the music but the harpsichord from Handel's *Water Music* still sounded oddly two-dimensional.

Memories of the SL-PG420A are immediately recalled by the delicacy, finesse and detail of the SL-PG440A, but this is a

player where effervescence is traded for an oppressive decorum.

Conclusion

Digitally speaking the SL-PG440A bears a strong allegiance to Technics' older and pricier SL-PG520A. However, the toll of cost over analogue engineering ensures its sound remains very much closer to the original SL-PG420A — detailed but emotively flat. On the other hand, its ticket remains fixed at a generous £170, permitting entry to the corral of Recommended players an instant before the gate is slammed shut.

Panasonic Consumer Electronics, Panasonic House, Willoughby Road, Bracknell, Berks RG12 8FP. ☎ (0344) 853 943

Verdict

- ▲ Plenty of dynamics, bass weight and detail; slick and versatile.
- ▼ Occasionally loud-sounding; music is mildly uninteresting.
- ▶ **£170.00 RRP**

SOUND QUALITY
 ■■■□□
VALUE FOR MONEY
 ■■■■□

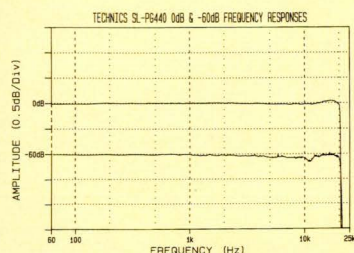
Laboratory Report

Technics has retained Philips' CDM4 mechanism but swapped the budget MN6475A MASH/PWM DAC for its superior MN6474E (used in the SL-PG520A, issue 107). The measurements all reflect this change with distortion improving from 0.0014 to 0.0011 per cent, stopband rejection from 64dB to 81dB and, importantly, the signal to noise ratio from 98.4dB to 104dB. Even the -2dB glitch in linearity (20kHz/-100dB) remains a hallmark of the MN6474.

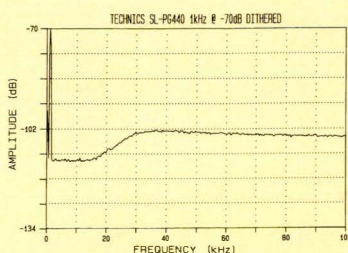
Unfortunately, our first sample betrayed a rare fault. Here all peak-level signals were accompanied by a momentary burst of THD before settling to the 0.001-0.018 per cent recorded in the lab tests. This is caused by a digital overflow in the accumulator of the DAC's MASH/oversampling loop. Fortunately, a second sample was free of this digital blight but was otherwise identical in its measured performance. Oh yes, THD still increases to 0.05 per cent (5kHz) and 0.11 per cent (16kHz) with de-emphasis engaged.

TEST RESULTS

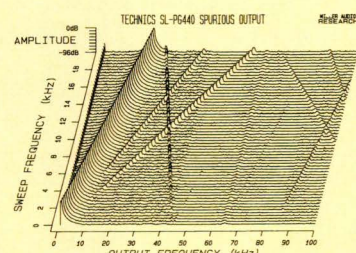
Channel Balance	0.22dB	0.22dB	0.17dB	Output Impedance	581ohm
Channel Separation	102.4dB	100.9dB	62.1dB	Radio Frequency Spurious	8mV @ 34MHz
THD vs Level, 0dB	-30dB	-99.0dB	-99.5dB	1Hz Noise Modulation	+5.3dB
	-60dB	-86.8dB	-81.2dB	CCIR IMD, 0dB	-95.3dB
	-80dB	-62.0dB	-53.1dB	Suppression of stop-band IMD	80.6dB
Dithered, -90dB	-28.5dB	-30.5dB	-18.8dB	De-emphasis Accuracy, 1kHz	0.00dB
Dithered, -100dB	-18.1dB	-22.1dB	-9.50dB	5kHz	+0.01dB
Dithered, -110dB		-17.2dB		16kHz	+0.10dB
Resolution @ -60dB		+0.01dB	+0.14dB	S/N Ratio (A-wtd), w emp, 0LSB	111.8dB
-80dB		+0.03dB	+0.03dB	w/o emp, 0LSB	108.9dB
-90dB		-0.25dB	-0.47dB	w/o emp, 1LSB	104.0dB
-100dB		-0.05dB	-2.05dB	Digital Output	None
Peak Output Level, L		2.103V		Crystal Clock Accuracy	+3.2ppm
R		2.159V		Track Access Time (99)	2.0secs
Relative Output Level		+0.55dB		Serial Number	VT3CA01268
				Typical Retail Price	£170



Dip at 11kHz on the -60dB response is a fingerprint of MN6474 DAC.



Ultrasonic noise produced by MASH DAC is filtered above 35kHz.

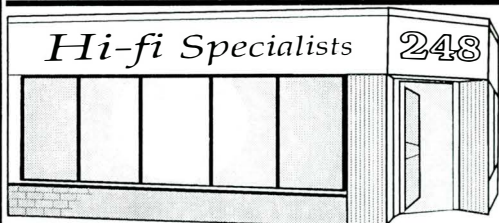


Pure 2nd/3rd harmonic distortion plus a trickle of stop-band noise.

Billy Vee

SOUND SYSTEMS

248 Lee High Road
Lewisham London SE13 5PL
Tel: 081 318 5755 & 081 852 1321
Fax: 081 318 0909



- > Two comfortable listening lounges
- > Part Exchange service
- > Installation Service
- > Flexible finance options (6 months to 2 years)

Superb Value

INTEREST FREE CREDIT

10% Dep.6 - 9 Months
Please see panel below

Now on Demonstration

Linn Majik Amplifier & Mimik CD

Naim Nait 3 & Mission 751 Speaker

Cassette

Aiwa ADF 810	£199.00
Aiwa ADWX 929	£229.00
Arcam Delta 100	£849.00
Denon DRM540 (NEW)	£159.00
Denon DRS610	£199.00
Denon DRW760	£249.00
NAD 602 (NEW)	£199.00
Nakamichi DR 3	£349.00
Nakamichi DR 2	£549.00
Nakamichi DR 1	£729.00
Yamaha KX 260	£159.00
Yamaha KX 360	£189.00

Loudspeaker

Heybrook Prima	£119.00
Linn Keilidh	£579.00
Mission 760se	£149.00
Mission 751 (NEW)	£299.00
Mission 753	£699.00
Rega Kyte	£198.00
Roger LS2a/2	£219.00
Tannoy 605/2	£169.00
Tannoy 607	£219.00



THE CHOICE IS YOURS

We demonstrate everything we sell so you can be sure that any of the products you see advertised here are on display and available for audition.

Our helpful and experienced staff are on hand every day (except Thursday and Sunday) to help explore the possibilities open to you. We welcome your visit.

- Two listening rooms
- Two year minimum guarantee
- Free 24hr delivery service
- 0% Finance available, see below
- Part exchange service available
- Outstanding product range from:

AIWA - ARCAM - AUDIO TECHNICA - CYRUS
DENON - HEYBROOK - JPW - MARANTZ - LINN
PRODUCTS - MISSION - NAD - NAIM AUDIO
NAKAMICHI - QUAD - ROTEL - REGA - RUARK
ROGERS - SOUND ORG - SPENDOR - TARGET
TANNOY - TDL - WOODSIDE - YAMAHA

Firm Favourites

FREE 24HR DELIVERY

For most stock items
Please call for details

Source

Arcam Alpha 5	£449.00
Denon DCD 695	£199.00
Marantz CD 52/2	£229.00
Marantz CD 52/2se	£299.00
Rotel RCD 965BX	£299.00
Rotel RCD 965BX Discrete	£349.00
Rega Planar 2	£185.00
Rega Planar 3	£249.00

Amplifier

Arcam Alpha 5	£229.00
Arcam Alpha 6	£329.00
Creek 4040s3	£219.00
Denon PMA250/3	£159.00
Marantz PM44se	£199.00
NAD 302	£169.00
Rega Elex	£298.00
Rotel RA935BX	£199.00
Linn Majik	£ P.O.A.
Naim Nait 3	£499.00

Tuner

Arcam Alpha 5	£219.00
Denon TU260L	£119.00
NAD 402 (NEW)	£159.00
Naim NAT 03	£499.00
Rotel RT930AX	£159.00
Rotel RT950BX	£199.00

0% INTEREST FREE CREDIT

Up to £1000 Instant Credit available to personal Callers

10% Deposit, Balance over 6 or 9 months. (£350 min)

0% A.P.R. Please telephone for details. Written details supplied on request

(e.g. System: Marantz CD52se / Marantz PM 44se / Mission 780. Total Price £595.00

Deposit: £59.50. Plus 9 equal payments of £59.50. Price includes VAT and all leads.



➔ Tel: 081 318 5755 & 081 852 1321 ➔

Opening times : 10.00am to 6.30pm Monday to Saturday (Closed Thursday)



AMC CD6



AMC launched itself onto an unsuspecting market with the CVT3030 amplifier, a partly successful attempt to marry transistors and valves without busting the bank (issue 116). The CD6 is altogether different, a back-to-basics CD player whose spartan NAD-like controls betray something of the heritage of AMC if not the player itself.

The entire CDM4 transport mechanism and digital/analogue mother board is culled from the same source as Musical Fidelity's £400 CD1 (issue 107) which in turn was a simplified version of Rotel's RCD-965BX board without the fancy op-amps, Panasonic HFS and Rubycon Black Gate capacitors. So any suggestion that the CD6 is a unique AMC design should be treated with a truckload of salt.

Sound quality

Never backward in coming forward, the CD6 is one CD player that's always prepared to tackle the musical bull by the horns. Its hearty character is unmistakable, the rich bass guitar and powerful beat of Chris Rea's *Daytona* ripping energetically from the speakers without smothering the gravely quality of his voice.

Like Harman Kardon's HD7725, this is another rock 'n' roller, though it can sound a little ham-fisted when a hint of delicacy or finesse is required. The alto sax from our jazz selection sounded insistent rather than polished, for example, while the brassy ring of cymbals was replaced by a somewhat drowsy 'click'.

Otherwise, this cavalier vulgarity prompted little but applause, leaving

Handel's *Water Music* sounding as if the Berlin Philharmonic were at the reins. Gutsy dynamics, if nothing else, will be the key to its popularity.

Conclusion

Unlike many bold-looking CD players, the agricultural CD6 offers a sound that remains in perfect accord with its Massey-Ferguson aesthetics. Sure enough it's still possible to purchase the real thing (Rotel's RCD-965BX) and save yourself £70 into the bargain. However, AMC has successfully produced a more characterful alternative, which may look positively grim but sounds just great. Recommended.

Campus International Ltd, P.O. Box 496, Amersham HP7 0SA. ☎ (0494) 431 290

Verdict

- ▲ Solid and powerful sound without a fierce treble to mar the brew.
- ▼ Lacks a degree of finesse; Appearance is rather cumbersome.

▶ **£349.95 RRP**

SOUND QUALITY
 ■■■■■ □
VALUE FOR MONEY
 ■■■■■ □

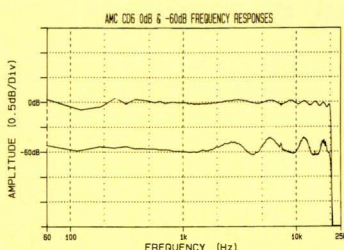
Laboratory Report

We've already established that the CD6 uses the same mechanism and PDM Bit Stream board as Musical Fidelity's CD1 (the HQ300B mkII), without the choice components that were selected by Rotel in its RCD-965BX. And, sure enough, many of its hallmarks are retained. Hallmarks that include the unwanted CLV frame tone at 7.35kHz (see -70dB plot), which in turn reduces the overall signal to noise ratio from some 103dB to just 95dB. Only Philips' SAA7323 PDM DAC suffers this blight.

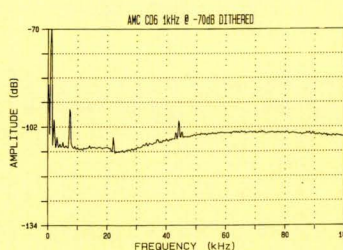
The 3D plot also demonstrates the characteristic 3rd and 5th harmonic distortions of Philips' single-ended SAA7320-series in addition to its customary V-shaped stopband images (at -54dB). However, in AMC's case there's also a marked deterioration in distortion below -60dB (0.6-1.3 per cent instead of 0.28-0.89 per cent) which is clearly reflected on both the -70dB and frequency response plots. This is unusual and more than sufficient to colour its sound.

TEST RESULTS

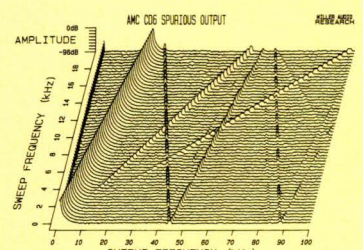
Channel Balance	0.10dB	0.09dB	0.08dB	Output Impedance	202ohm
Channel Separation	93.4dB	92.2dB	92.3dB	Radio Frequency Spurious	22mV @ 142MHz every 2.8MHz
THD vs Level, 0dB	-97.1dB	-92.0dB	-65.2dB	1Hz Noise Modulation	+1.4dB
-30dB	-71.7dB	-71.2dB	-65.3dB	CCIR IMD, 0dB	-95.4dB
-60dB	-44.6dB	-38.8dB	-37.5dB	Suppression of stop-band IMD	54.3dB
-80dB	-16.3dB	-18.3dB	-17.2dB	De-emphasis Accuracy, 1kHz	-0.05dB
Dithered, -90dB	-6.50dB	-10.4dB	-4.50dB	5kHz	-0.06dB
Dithered, -100dB		-9.50dB		16kHz	-0.04dB
Dithered, -110dB		-3.50dB		S/N Ratio (A-wtd), w emp, 0LSB	98.4dB
Resolution @ -60dB		0.00dB	-0.13dB	w/o emp, 0LSB	95.5dB
-80dB		+0.04dB	-1.52dB	w/o emp, 1LSB	94.6dB
-90dB		+0.90dB	-3.55dB	Digital Output	Coaxial and Optical
-100dB		+2.00dB	+1.70dB	Crystal Clock Accuracy	+14.4ppm
Peak Output Level, L		2.313V		Track Access Time (99)	3secs
R		2.337V		Serial Number	TCD6000603
Relative Output Level		+1.3dB		Typical Retail Price	£350



Some crosscoupling boosts distortion and response ripples at low levels.



AMC exposed by characteristic spike at 7.35kHz (see issues 100 and 107).



3rd and 5th harmonic distortion; stopband images from four times filter.

dpa

EXPERIENCE MUSICAL TRUTH



NEW 200S PRE POWER £1250

analogue audio

Diss, Norfolk
Tel: 0850 983233
or
0379 740227

Doug Brady Hi-Fi

Kingsway Studios
Kingsway North
Warrington
Tel: 0925 828009
(Also at Liverpool,
London and Otley, Nr
Leeds)

SOUND ILLUSION

80 Rectory Road,
Farnborough,
Hants GU14 7HU
Tel/Fax: 0252 377952

MIDLAND STUDIO

Royal Garden Buildings
Wulfruna Street
Wolverhampton
Tel: 0902 771774

Chantry Audio

Chantry Walk
18A Eldon Street
Twyford, Nr Newark
Notts NG22 0LH
Tel: 0777 870372



T/A Sound Academy
152A High Street
Bloxwich
West Midlands
Tel: 0922 493499

Hi-Fi

3 Bridge Street
Guildford
Surrey
Tel: 0483 504801

SHROPSHIRE HI-FI

St. Michael's Street
Shrewsbury
Shropshire SY1 2ES
Tel: 0743 232317



41 Victoria Road
Cambridge
CB4 3BW
Tel: 0223 68305

ZEUS AUDIO

Unit 7
Hope Street
Belfast
Northern Ireland
Tel: 0232 332522



KJ WEST ONE

26 New Cavendish
Street
London
W1M 7LH
Tel: 071 486 8262

AT OUR KEY DEALERS

dpa digital ltd

Unit 7, Willowbrook Technical Units,
Crickhowell Road, St. Mellons, Cardiff CF3 OE1, Wales, UK
Phone: 0222 795621 Fax: 0222 794267

Nakamichi CD-4



Who-one doubts Nakamichi's ability to produce some of the world's finest cassette decks, but are its CD players just as impressive? The CD-4 certainly looks distinctive enough with its central bank of transport controls, repeat and 24-track program facilities. These are flanked by the transport mechanism itself and an attractive orange, fluorescent display. Fine so far, only there's no index cueing, tape edit, variable output, random or single repeat options to ease the £380 burden.

Look closer still and the CD-4 appears less innovative by the second. Sure enough its internal design is culled directly from the less than successful CD Player 4 (see issue 95) while the remote handset is nigh-on identical.

Sound quality

In common with a number of other players in this test, the CD-4 was initially applauded for its strength of character, its purposeful and driving bass, clean mid and bright, clear treble. Yet, once again, everything seemed so very matter-of-fact that whatever its technical strengths, the picture it painted was emotionally cold.

After several tracks its music became relentless and intrusive, leaving our jazz selection sounding like a group of session musicians, each doing his bit with little regard to the harmony of the music as a whole. The mute trumpet was very mute while the acoustic double bass lacked scale and depth, its natural resonance traded for something altogether flatter.

Meanwhile, the edginess and bite of

Chris Rea's guitar, normally gleaming with teeth, was strangely muffled. Almost as if its rhythm and direction were confused.

Conclusion

The correlation between these results and those obtained with the original CD Player 4 is quite uncanny. On the one hand it serves to demonstrate the consistency of our blind listening procedure, while it implies Nakamichi is rather less keen to pursue state-of-the-art digits than its literature suggests. Either way the CD-4 emerges as a player more likely to fatigue than relax in the long term.

B&W Loudspeakers UK Ltd, Marlborough Road, Churchill Industrial Estate, Lancing, W. Sussex BN15 8TR. ☎ (0903) 750 750

Verdict

- ▶ Best suited to simple rock and pop; interesting choice of DAC technology.
- ▼ Fatiguing and confusing sound; no real advance on CD player 4.
- ▶ **£379.95 RRP**

SOUND QUALITY
 ■ ■ ■ ■ ■
VALUE FOR MONEY
 ■ ■ ■ ■ ■

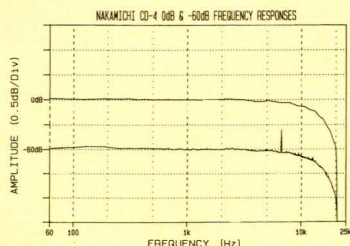
Laboratory Report

Broadly speaking Nakamichi has retained the building blocks of its CD Player 4 (issue 95) while exchanging the older AD1864 DAC for Analogue Devices' latest AD1865N. Both are dual channel 18-bit DACs but this most recent version does not require external adjustment. Consequently, the CD-4 now benefits from a smooth 0.0014-0.010-0.27 per cent transition in distortion from 0dB to -30dB through to -60dB. The older CD Player 4 suffered a mighty 0.022-0.66-0.67 per cent lurch over this same dynamic range (just compare the -70dB plots).

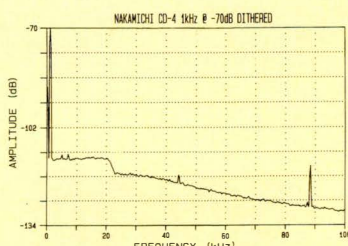
The overall linearity and signal to noise ratio has also improved (103dB to 107dB) though the 58dB stop-band rejection remains fixed thanks to the same NPC SM5840 eight times oversampling filter (compare 3D plots). Furthermore, Nakamichi's analogue electronics continue to force a 1dB droop at 20kHz while labouring under a high 1.15kohm output impedance. In all likelihood this is the source of the CD-4's misery, rather than in the digital domain.

TEST RESULTS

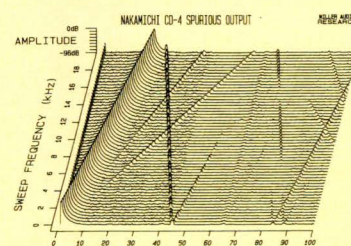
	20Hz	1kHz	20kHz		
Channel Balance	0.02dB	0.01dB	0.00dB	Output Impedance	1.15kohm
Channel Separation	122.5dB	98.8dB	73.3dB	Radio Frequency Spurious	12mV @ 84.5MHz
THD vs Level, 0dB	-99.7dB	-97.0dB	-84.6dB	1Hz Noise Modulation	+6.4dB
-30dB	-89.3dB	-79.7dB	-75.7dB	CCIR IMD, 0dB	-99.3dB
-60dB	-55.6dB	-51.3dB	-55.2dB	Suppression of stop-band IMD	57.8dB
-80dB	-28.2dB	-30.3dB	-33.6dB	De-emphasis Accuracy, 1kHz	-0.01dB
Dithered, -90dB	-16.9dB	-20.9dB	-24.4dB	5kHz	-0.15dB
Dithered, -100dB		-20.1dB		16kHz	+0.04dB
Dithered, -110dB		-6.50dB		S/N Ratio (A-wtd), w emp, 0LSB	109.3dB
Resolution @ -60dB		0.00dB	0.00dB	w/o emp, 0LSB	107.8dB
-80dB		-0.13dB	-0.12dB	w/o emp, 1LSB	106.9dB
-90dB		-0.95dB	-1.00dB	Digital Output	Coaxial
-100dB		-0.70dB	-0.70dB	Crystal Clock Accuracy	+18.4ppm
Peak Output Level, L		2.024V		Track Access Time (99)	4.5secs
R		2.028V		Serial Number	V32750502
Relative Output Level		+0.11dB		Typical Retail Price	£380



Still the same droopy treble thanks to Nakamichi's analogue filter.



Analogue Devices' latest 18-bit DAC reduces distortion at lower levels.



Stop-band pattern is characteristic of NPC's eight times oversampling filter.

On July 15th 1993 Jamie Garven walked out!



Not for the first time.

JAMIE GARVEN IS A FREELANCE THEATRE director so he believes in getting things right.

"I first came in almost ten years ago and the reason I keep coming back is that they're different from other shops. Most shops treat you like you're in the way but here the service is a bit old fashioned.

"You get to know the staff as people. They make time for you and you never feel like you are being sold to. However much I'm spending the quality of service is always the same. I can listen before I buy, even in my own home, and the products they sell are picked for what's in the box

and not because they look flash.

"I've got a great system now but I'm still buying because they keep showing me things that are better!"

So if you're thinking of buying hi-fi come and talk to the people at Audio T and Audio Excellence. Our demonstrations speak a thousand words. You'll learn more from them than you ever will from reading a price list or a magazine. And the odds are, you'll want to come back again.

Audio Excellence and Audio T—two like-minded BADA dealers who offer the very best in customer service including:

- Transferable BADA guarantees
- BADA deposit bonding
- 3 year guarantee on hi-fi separates
- 7 day exchange of goods (see BADA Charter)
- 30 day, no penalty, upgrades
- Single speaker listening rooms
- Home demonstrations
- Free delivery and installation
- Part Exchange
- Full range of accessories and cables
- Interest Free Credit (0% APR) on selected items
- Record cleaning service



audio excellence

HOME
CINEMA
SPECIALIST

BRITISH AUDIO
DEALERS ASSOCIATION
BADA
THE ULTIMATE IN
SOUND ADVICE

BRISTOL 65 Park Street. Tel (0272) 264975 CARDIFF 134/6 Crwys Road. Tel (0222) 228565 GLOUCESTER 58 Bristol Road. Tel (0452) 300046 SWANSEA 9 High Street. Tel (0792) 474608

audio T

BASINGSTOKE 4 Feathers Lane. Tel (0256) 24311 CHELTENHAM 40/42 Albion Street. Tel (0242) 583960

ENFIELD 159a Chase Side. Tel 081-367 3132 HAMPSTEAD 190 West End Lane, NW6. Tel 071-794 7848 ILFORD 442/4 Cranbrook Road, Gants Hill. Tel 081-518 0915 OXFORD 19 Old High Street, Headington. Tel (0865) 65961 SWINDON 60 Fleet Street. Tel (0793) 538222

Pioneer PD-S802



A little over one year ago Pioneer launched its Legato Link Conversion technology. The premise, that frequencies beyond audibility are still musically relevant, is sound enough. But its implementation, by merging digital distortion with the audio band, is not.

Either way the technology that was christened in the PD-S801 (issue 112) is re-born once more in this £350 PD-S802. Same remote control, same inverted stable platter mechanism, fluorescent display and features, including index search, peak search, time fade edit, memory, repeat and random play. Only the look has changed. So everything that once made the PD-S801 contentious is now available in a sexier-looking package. Plus, lest we forget, a genuine coaxial digital output!

Sound quality

Chameleon-like the PD-S802 switches from one musical style to another reflecting its tempo and atmosphere. By majority verdict it succeeds in capturing the lighthearted 'pop' of Fagen's *Trans-Island Skyway* as effectively as the interplay between double bass, mute trumpet and percussion from Hubbard's *Caravan*.

The bigger and bolder soundstaging of Chris Rea's *Daytona* is reflected with equal ease, though as with so many other modern players the overall effect was not always sufficient to maintain both the interest and attention of our panel.

This is where the detractors of Pioneer's Legato Link would focus their attention. A number of our panellists suggested the music was a wash of sound,

appearing forced and grey where a greater contrast was anticipated. Once again, by straying from the path of convention, Pioneer continues to polarise opinion.

Conclusion

For many listeners this player will sound exciting, crisp and detailed. But for just as many others it's all top, bottom without enough substance to justify its existence. This odd result for an unusual player is entirely consistent with our blind consensus on Pioneer's earlier PD-S801. As before, we'll leave you to sort this one out in your own hi-fi emporium.

Pioneer GB Ltd, Pioneer House, Hollybush Hill, Stoke Poges, Slough SL2 4QP.
☎ (0753) 789 789

Verdict

- ▲ Responds well to pop, rock and jazz thanks to its lively nature.
- ▼ Poor on intimate detailing; some people love it while others loathe it.
- ▶ **£350.00 RRP**

SOUND QUALITY
■ ■ ■ □ □ □

VALUE FOR MONEY
■ ■ ■ □ □ □

Laboratory Report

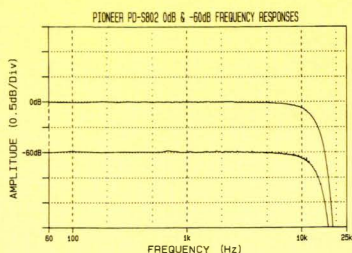
Legato Link Conversion (LLC) has nothing to do with Pioneer's PD20288 PulseFlow bitstream DACs but refers instead to the antics of its PD0116A eight times oversampling filter. A thorough overview is available in issue 113 where the concept is explored along with Wadia's DigiMaster program, an expensive variation on an identical theme.

Either way its effects are most obvious from the 3D plot which demonstrates how Pioneer is attempting to combine genuine audio data with its image. The audio band frequency response is also tailored (-3.7dB at 20kHz) so that both audio and image signals knit together seamlessly at 22.05kHz.

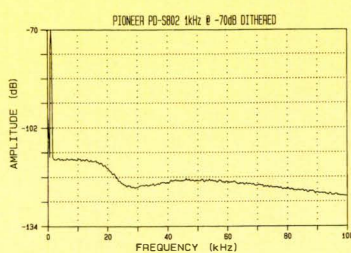
Otherwise the PD-S802 is nominally identical to the PD-S801 (issue 112) save for reduced peak-level distortion, down from 0.0028-0.007 per cent to 0.0006-0.0028 per cent. Low-level distortion, resolution and the 108dB signal to noise ratio are all superb.

TEST RESULTS

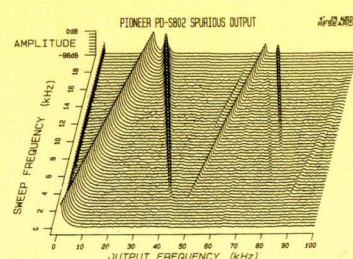
	20Hz	1kHz	20kHz		
Channel Balance	0.07dB	0.07dB	0.08dB	Output Impedance	480ohm
Channel Separation	148.3dB	133.1dB	117.1dB	Radio Frequency Spurious	9mV @ 33.9MHz
-30dB	-97.9dB	-82.1dB	-77.8dB	1Hz Noise Modulation	+7.8dB
THD vs Level, 0dB	-103.7dB	-100.0dB	-90.9dB	CCIR IMD, 0dB	-101.5dB
-60dB	-64.7dB	-55.5dB	-52.0dB	Suppression of stop-band IMD	6.6dB
-80dB	-28.3dB	-31.2dB	-32.8dB	De-emphasis Accuracy, 1kHz	+0.02dB
Dithered, -90dB	-18.1dB	-22.5dB	-22.5dB	5kHz	+0.08dB
Dithered, -100dB		-19.3dB		16kHz	-1.03dB
Dithered, -110dB		-8.75dB		S/N Ratio (A-wtd), w emp, 0LSB	116.5dB
Resolution @ -60dB		-0.01dB	0.00dB	w/o emp, 0LSB	113.7dB
-80dB		-0.04dB	-0.03dB	w/o emp, 1LSB	108.3dB
-90dB		-0.37dB	-0.24dB	Digital Output	Coaxial and Optical
-100dB		-0.30dB	+0.20dB	Crystal Clock Accuracy	+4.2ppm
Peak Output Level, L		2.371V		Track Access Time (99)	4secs
R		2.392V		Serial Number	ND8503080
Relative Output Level		+1.5dB		Typical Retail Price	£350



The LLC digital filter prompts a roll-off that begins well inside the audio range.

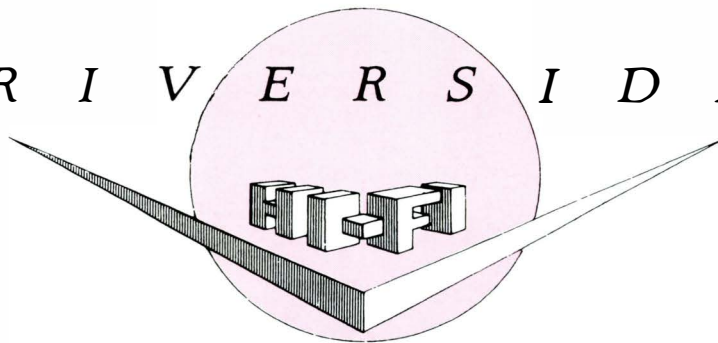


A textbook result — contoured in accordance with Pioneer's LLC filter.



Vast swaths of digital stopband noise rise up to merge with the audio band.

R I V E R S I D E



Plug into Riverside Hi-Fi...

When you drop in at **RIVERSIDE HI-FI**, East Twickenham, you'll soon know that you are at the home of hi-fi professionalism. We are aware how mind-blowing it is looking for a hi-fi system or just upgrading a component and so we offer you a friendly atmosphere in which you are welcome to browse and chat. We are open 6 days a week Monday to Saturday 10am-5.30pm, Thursday till 7pm.



AUDIOLAB 8000A
£450

Our staff are **EXPERIENCED** and interested in the products that we stock and in ensuring that our customers receive a personal service.

We have a **LARGE DISPLAY** area where you can see selected products from most of the better hi-fi manufacturers. We also have **FIVE COMFORTABLE DEMONSTRATION ROOMS**, of which three are devoted to **AUDIO** as well as **VIDEO** and two other rooms that are for hi-fi listening in private where you can **JUDGE FOR YOURSELF** which sounds best. (Early booking is recommended particularly on Saturdays.) Customers are encouraged to bring pieces of equipment they may wish to retain or upgrade and also music of their own preference.

The magazines only give guidelines, the best judge of your system is you, not a reviewer or even us. Our job as a dealer is to **DEMONSTRATE** the **DIFFERENCE** between products in order to help you make your buying decision, to present you the customer with products that are different not only in sound quality but also in build and finish, e.g. different wood finish speakers that may better suit your individual environment and personal taste. Not only do we supply the hi-fi equipment but also all the necessary accessories needed to achieve the best from your system.

We offer a **FULL INSTALLATION** service and can also advise about **MULTI-ROOM LINKING**.

We welcome **PERSONAL EXPORT** enquires as well as other **TELEPHONE** and **MAIL ORDER** requests. Deliveries to the UK mainland can normally be made next working day. Please call or fax for details.

We of course accept all **MAJOR CREDIT CARDS** as well as offering **0% INTEREST FREE CREDIT** (subject to status).

...Plug into total support.

Come along and see our showpiece. We now have a Ford Popular in our showroom that lets YOU take the driving seat whilst listening to the very best of In Car Hi-fi.



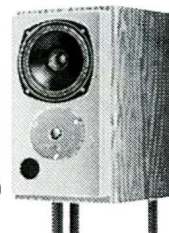
- Acoustic Research
- Arcam
- Audio Innovations
- Audiolab
- Aura
- B&W
- Bang & Olufsen
- Bose
- Conrad Johnson
- Castle
- Dali
- Denon
- Dual
- Exposure
- JPW
- KEF
- Meridian
- Marantz
- Michell
- Micromega
- Mission
- Monitor Audio
- Musical Fidelity
- NAD
- Nakamichi
- Pioneer
- QED
- Quad
- Revox
- Rogers
- Rotel
- Spendor
- Snell
- Systemdek
- Tannoy
- TDL
- Wharfdale
- Yamaha



MICHELL GYRODEC £922
Bronze with RB-300 (Arm)



QUAD 67CD £790



MISSION 760iSE £150

☎ **081-892 7613** ☎

or Fax us on: 081-892 7749

RIVERSIDE HI-FI

422 Richmond Rd, East Twickenham, Middlesex TW1 2EB.

Yamaha CDX-670



Times are tough. So tough that Yamaha has opted to retain the control panel, fluorescent display, composite ART-chassis, CD mechanism and infra-red handset of the older CDX-660 while boosting the price from £250 to £290. The new CDX-670 not only looks identical to its predecessor (issue 119) but offers exactly the same array of track access, program, repeat and random play facilities, as well as motorised volume control — though Yamaha's original program 'clear' button is replaced by 'peak search'. However, beneath the surface of the CDX-670 are some very real differences indeed.

Gone are the eight times oversampling filter, the YAC507 noise-shaper, I-PDM DACs and any number of support chips. All are replaced in this instance by Yama-

ha's CD player-on-a-chip — the YDC103 — which houses full CD transport and laser servo control, the digital decoder, error correction, digital output, eight times oversampling filter and bitstream DAC with 3rd-order noise-shaping.

Sound quality

The 670's sound is generally rather bland and its sense of stereo focus and positioning questionable. Nevertheless, it retains a bouncy, almost elastic bass quality that held our attention despite any congestion or vagueness. There's also an inkling of dirty ambience, something heard with other players suffering either from high levels of jitter or unwanted cross-coupling.

However, the CDX-670 still won friends thanks to the rich variation in tonal colour

revealed by harpsichord and woodwind in our classical selection. Here, the player sounded confident but never strident or hard, a quality it sustained with most acoustic if not electronic styles of music.

Conclusion

Yamaha's attempt to cut the costs of manufacture without slashing build or feature quality has resulted in a variable if rarely unattractive performance.

Nevertheless, I'm nervous about any CD player harbouring chips that are not yet fully de-bugged technically, so a hesitant try-it-for-yourself seems appropriate.

Yamaha Electronics UK Ltd, Yamaha House, 200 Rickmansworth Road, Watford, Hertfordshire WD1 7JL. ☎ (0923) 233 166

Verdict

- ▲ A distinctive performer that sounds relaxing rather than taxing.
- ▼ Lacks ultimate clarity, stereo depth and true solidity.

▶ **£289.95 RRP**

SOUND QUALITY

■ ■ ■ □ □
VALUE FOR MONEY
 ■ ■ ■ □ □

Laboratory Report

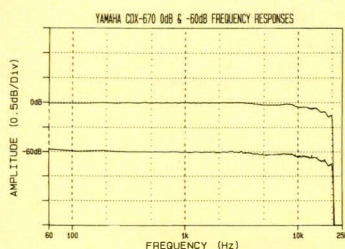
Generally, Yamaha has exceeded the performance of Philips SAA7341 chip (see CD690 review) even if the YDC103 just fails to match the overall spec of the YM3433/YAC507 combination used in its CDX-660 (issue 119). Distortion is equally impressive at 0.0016-0.02 per cent (0dB) as is the -0.5/+0.5dB margin in linearity, for example.

Despite this the signal to noise ratio has deteriorated by 8dB to 102dB just as the new eight times digital filter has muddied both its response and stopband noise. The -70dB plot also indicates an increase in the output of spurious ultrasonic noise.

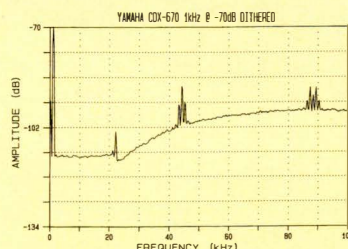
Most importantly, however, under certain conditions the YDC103's internal noise-shapers are rendered temporarily unstable. This, in turn, results in the +12dB 'bumps' visible at 8.3kHz, 11.5kHz, 14.3kHz, 17kHz and 19.5kHz on the 3D plot. Yamaha may need to re-mask the entire IC to cure this indiscretion.

TEST RESULTS

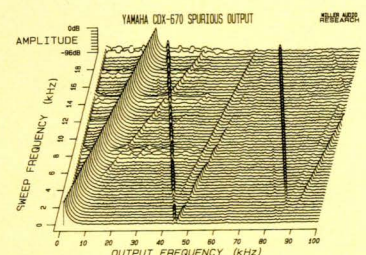
Channel Balance	20Hz	1kHz	20kHz	Output Impedance	663ohm
Channel Separation	0.04dB	0.04dB	0.02dB	Radio Frequency Spuria	9mV @ 27MHz
THD vs Level, 0dB	112.3dB	101.1dB	75.6dB	1Hz Noise Modulation	+3.5dB
-30dB	-96.2dB	-94.4dB	-74.0dB	CCIR IMD, 0dB	-95.9dB
-60dB	-98.3dB	-78.9dB	-58.0dB	Suppression of stop-band IMD	75.6dB
-80dB	-56.8dB	-52.8dB	-28.0dB	De-emphasis Accuracy, 1kHz	0.00dB
-80dB	-28.2dB	-30.3dB	-9.50dB	5kHz	+0.03dB
Dithered, -90dB	-18.0dB	-21.4dB	-2.75dB	16kHz	-0.25dB
Dithered, -100dB		-16.8dB		S/N Ratio (A-wtd), w emp, 0LSB	122.8dB
Dithered, -110dB		-5.50dB		w/o emp, 0LSB	122.6dB
Resolution @ -60dB		0.00dB	0.00dB	w/o emp, 1LSB	101.8dB
-80dB		-0.06dB	-0.06dB	Digital Output	Coaxial
-90dB		-0.36dB	-0.46dB	Crystal Clock Accuracy	+11.8ppm
-100dB		-0.35dB	+0.50dB	Track Access Time (99)	5.5secs
Peak Output Level, L		2.061V		Serial Number	B0394330S
R		2.052V		Typical Retail Price	£290
Relative Output Level		+0.24dB			



Gentle treble roll-off gives a mild and inaudible 0.3dB cut at 20kHz.



Ultrasonic output is much higher than with the older Yamaha CDX-660.



Audible interference, from overload is seen as a series of bumps.

TAKING THE INDUSTRY BY STORM!

Since its launch just months ago, Hi-Fi Direct and its exclusive Sherwood, JPW and Ariston products have all received wide acclaim by the distinguished hi-fi press. Hi-Fi Direct is a distribution company set up by Richer Sounds, the UK's biggest hi-fi retailer, dedicated to saving the customer money, by buying and importing direct from manufacturers and selling at the lowest possible prices by mail order and through their own stores nationwide.

The Sherwood CD player line up has received wide praise against fierce competition, Hi-Fi Choice's "Best Buy" tags and What Hi-Fi?'s 5-stars have been commonplace. The JPW Mini Monitors have also been tremendously well received, together with no less than four great reviews on the latest £200 6-speaker Pro-logic sub-sat system too! Ariston's Elite is a turntable boasting "brilliant value" and the PRO1200 brings a quality quick-start DJ turntable to the market at just £160. Watch this space!



The acclaimed CD lineup from



CD2010c £99.95

"A bargain of enormous proportions... amazing musical ability at a price you'll find hard to believe" **WHAT HI-FI?**

Verdict ★★★★★

CD3020R £119.95 complete with remote control
"Delightfully upbeat and unconfined sound... stunning value" **HI-FI CHOICE**



"Ridiculously good sound and value" **WHAT HI-FI?**
Verdict ★★★★★

WARNING

We are the exclusive distributors of Sherwood hi-fi equipment in the U.K and Eire. Please be aware that any "european imported" stock offered by other dealers carries no manufacturer's/distributor's guarantee in this country and may also not meet full U.K specifications.

WHAT HI-FI'S "£280 killer system"

"staggering value...you could spend a lot more cash and still not receive the same overall performance" **WHAT HI-FI?**

Verdict ★★★★★

All for just £279.85:

- CD2010 (CD) see above
- RX1010 (tuner amplifier)
- Mini Monitors (pr. spks) see below

"staggering value"

The central component of this stunning system; Sherwood's RX1010 budget receiver



ELITE
£169.95

PRO1200
£149.95
in pairs



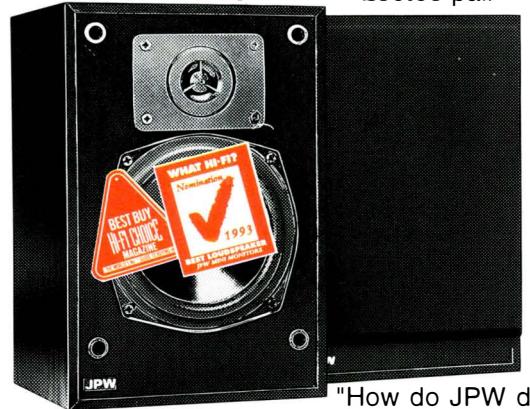
£159.95
singly

"No complaints at the price"
WHAT HI-FI?

"At last a quality mixing turntable at half the price of Technics' SL1200-don't consider anything else"

Generator DJ Magazine

JPW MINI MONITORS
£59.95 pair



"How do JPW do it for the money?... Among the bargains of the year" **WHAT HI-FI?**

Verdict ★★★★★

Also, 6-speaker sub/sat Pro logic package "stupendous value" **WHAT HI-FI?** £199.95

Verdict ★★★★★

hi-fi direct



071 827 9 827



POSTAGE & PACKING £7 PER ITEM (£6/2; £5/3)
Review reprints available, ask for free copies

HI-FI DIRECT PRODUCTS ARE AVAILABLE MAIL-ORDER AND FROM ALL BRANCHES OF RICHER SOUNDS

Adcom GCD-600



Having spent considerable time developing its GCD-575 CD player, Adcom subsequently decided to make it more flexible. Out went the conventional single-disc mechanism, the intro scan and novel 'phase contour' analogue filter to be replaced by a five disc carousel loader and additional 50-step volume control. And so the £700 GCD-600 was born.

In common with Yamaha's multi-play carousels the GCD-600 allows four CDs to be changed while one remains in play. Clockwise and counterclockwise carousel rotation helps speed up disc access while the program and repeat facilities cover single tracks, single discs or all discs.

Inside Adcom has retained the same brand of op-amps and circuit topology utilised in its range of amplifiers, though its

digital hardware is less conventional. Incidentally, the phase invert facility is the digital equivalent of swapping over your red and black speaker cables.

Sound quality

Having been exposed to the Adcom experience in one form or another over the last few months, a distinctive house style has emerged. It's therefore no surprise that the CD player shares the same slightly cold but firm and articulate quality first encountered with its amplifiers.

Busy-sounding rock discs, including Chris Rea's *Highway to Hell*, can seem harsh at times but the bass punch drives the music thrillingly into the room. Indeed, this sense of confidence and control is in perfect accord with the tidy, occasionally

sterile, quality of its mid and treble.

It's worth noting that some listeners were a trifle distracted by the sheer tautness of its sound, a feeling of constraint that soured what was otherwise a refreshingly spirited and vivid performance.

Conclusion

Adcom was confident that its carousel player would stand up to any single-disc competitor, a faith partially vindicated in our listening room. The icy-fresh, powerful sound may lack a little warmth and humanity but the flexibility afforded by multi-disc operation gives it an edge. Recommended by the skin of its digits.

Celestion International Ltd, Foxhall Road, Ipswich IP3 8JP. ☎ (0473) 723 131

Verdict

- ▲ Sound quality unimpaired by the carousel facility. A nimble contender.
- ▼ A hint of restraint and loss of richness prevents music from truly blossoming.

▶ **£699.00 RRP**

SOUND QUALITY
 ■ ■ ■ □ □
VALUE FOR MONEY
 ■ ■ ■ □ □

Laboratory Report

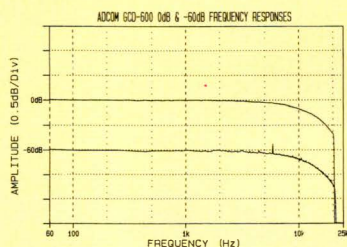
You'd never guess it, but Adcom's GCD-600 employs the same dual-channel 16-bit DAC as Orelle's ill-fated CD-160.2. This is Philips' early TDA1541A whose multi-bit origins are merely hinted at by the low ultrasonic noise seen on the -70dB plot (bitstream DACs invariably kick-out more rubbish above 20kHz).

Otherwise, its entire performance is dominated by Sony's CXD1244 oversampling filter, reduced from eight to four times operation for communication in Philips' I2S mode. Hence the ripple-free frequency response and total absence of stopband images on the 3D plot. This digital filter even 'improves' the DAC's typical low-level resolution by a factor of ten.

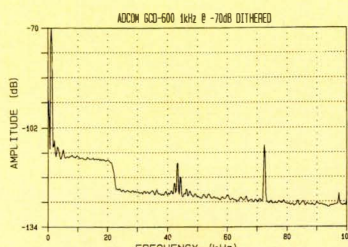
Distortion still suffers the 30 times 'multi-bit lurch' from 0dB to -30dB but fails to reflect the population of spurious digital artefacts that modulate the noise floor at very low levels. Meanwhile, Adcom's huge clock error is equivalent to a +11.5Hz shift at 20kHz, squeezing 60-minutes of music into 59mins 58secs.

TEST RESULTS

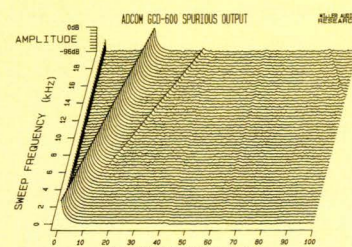
Channel Balance	20Hz	1kHz	20kHz	Output Impedance	110ohm
Channel Separation	108.4dB	109.6dB	90.3dB	Radio Frequency Spurious	11mV @ 33.8MHz
THD vs Level, 0dB	-115.0dB	-101.0dB	-76.5dB	1Hz Noise Modulation	+6.5dB
-30dB	-73.9dB	-70.3dB	-64.4dB	CCIR IMD, 0dB	-98.5dB
-60dB	-44.1dB	-46.1dB	-48.5dB	Suppression of stop-band IMD	101.5dB
-80dB	-25.3dB	-29.5dB	-36.0dB	De-emphasis Accuracy, 1kHz	-0.01dB
Dithered, -90dB	-15.8dB	-20.0dB	-26.9dB	5kHz	-0.15dB
Dithered, -100dB		-14.5dB		16kHz	-0.75dB
Dithered, -110dB		-4.50dB		S/N Ratio (A-wtd), w emp, 0LSB	103.1dB
Resolution @ -60dB		+0.02dB	-0.01dB	w/o emp, 0LSB	103.0dB
-80dB		+0.07dB	+0.10dB	w/o emp, 1LSB	103.0dB
-90dB		-0.42dB	+0.47dB	Digital Output	Coaxial
-100dB		-0.20dB	-4.30dB	Crystal Clock Accuracy	+577ppm
Peak Output Level, L		2.467V		Track Access Time (99)	4secs
R		2.508V		Serial Number	304027760
Relative Output Level		+1.9dB		Typical Retail Price	£699



Adcom's own analogue filter provides a severe-looking but inaudible droop.

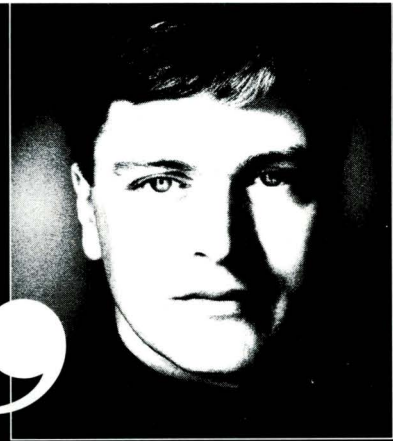


Some (multi-bit) distortion remains even with a dithered signal.



All stopband noise removed; the DAC provides a hint of 2nd harmonic.

“ We stock only
one hi-fi that
will suit you. ”



COLIN WELFORD

At Son et Lumière, we hold what we believe is the best audio solution at every price level from £800 to over £25,000.

So, you won't find us trying to confuse you with numerous hi-fi solutions. As far as we're concerned, we've only got one answer to your requirements.

And with our purpose built listening rooms, we make a point of inspiring you with a musical solution that will give unbridled listening pleasure.

Whatever your aspirations.

SON ET LUMIÈRE, 67 TOTTENHAM COURT ROAD, LONDON W1P 9PA. TEL 071 580 9059.

“ look, believe me, a good Hi-Fi shop is not that hard to find. ”



mike manning
the hi-fi specialists **audio**

- our wide range includes -

**Naim Audio - Audiolab - Arcam - AVI - Rega - Roksan - ATC - Rotel
Pink Triangle - Audio Alchemy - Mission - Heybrook - Marantz
Micromega - Epos - Shahinian - LYRA - Acoustic Energy - JPW
Nakamichi - Denon - Aura - NAD - Pioneer**

Listening Lounge - Home Installations - 2 Year Guarantees - Full Servicing Facilities

110 Middle Street, Yeovil, Somerset. Telephone (0935) 79361 (Closed Mondays)

0% - INTEREST FREE CREDIT- PLEASE PHONE FOR DETAILS - 0%

Arcam Delta 270



Arcam's stylists have finally awoken to decorate a new range of separates. This is the Delta 200 series which includes various amplifiers (this and issue 116), a CD transport/DAC combination and, last but not least, the Delta 270 integrated CD player.

The latter replaces its original Delta 70.3 bitstreamer, employing a new hybrid DAC and an equally new eight times oversampling filter. Almost inevitably the old CDM1mkII transport has been usurped by Philips' CD Engine package though the amber/green-tinted fluorescent display (another Philips part) and its silky brushed-alloy front panel are a real bonus.

Otherwise, its complement of track access, search, program and repeat facilities remain broadly unchanged. Sadly, the

archaic infra-red handset has obviously eluded the stylists' grasp.

Sound quality

If the bold and breezy sound of the D270 is any guide, then Arcam is clearly trying to engineer a little extra zest into its latest breed of hi-fi separates. Not that the D270 is ragged or spitty, simply very open, and bristling with high-voltage excitement. Just the sort of energy which draws different reactions from different listeners.

Initially, the D270's very dry and measured delivery was interpreted as both neat and agile with our less demanding pop and jazz selections. Sadly, further listening soured this impression as the harsh cymbal crashes of our rock CD grated on the panel's collective nerves.

Another group of listeners applauded this same player for its gripping and weighty bass. They were similarly appreciative of Chris Rea's voice which was bold without a glassy sibilance and the crisp treble raised not even a whisper of protest.

Conclusion

Put bluntly, the entire presentation of Arcam's D270 is slightly hyped-up by an emphasis of both bass and treble. Some listeners will find this irritating while others will thrill to its expressiveness. In fact, we reached a similar conclusion with the Delta 70.3 over two and a half years ago.

A&R Cambridge Ltd, Pembroke Ave, Denny Industrial Centre, Waterbeach, Cambridge CB5 9PB. ☎ (0473) 723 131

Verdict

- ▲ Its firm but open character will stir new life into the feeblest of systems.
- ▼ Unfortunately, it may also stir the nerves of unappreciative listeners.
- ▶ **£799.90 RRP**

SOUND QUALITY
 ■ ■ ■ □ □
VALUE FOR MONEY
 ■ ■ ■ □ □

Laboratory Report

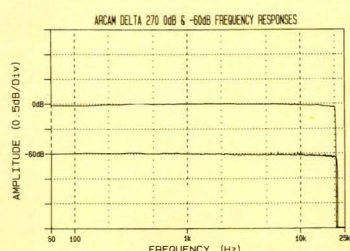
The D270's predecessor, Arcam's D70.3 (issue 95), employed a combination of Philips' SAA7321 (as four times oversampling filter) and SAA7350 BS DAC, a partnership replaced in the D270 by Yamaha's new YSF-201B eight times oversampling filter and Burr Brown's latest hybrid DAC, the PCM69.

This DAC marries a 10-bit multi-bit portion (with analogue correction) with an 8-bit bitstream output stage (including 1st-order noise shaping). Nevertheless, the very much lower -30dB distortion achieved by Arcam (0.02-0.04 per cent instead of Yamaha's 0.04-0.14 per cent) closely parallels the performance of its older Black Box 5 converter (issue 113).

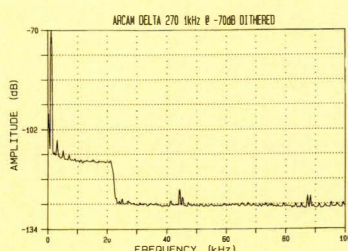
Sadly the D270's low level linearity is inferior to either the CDX-560 or BB5, though its 102dB signal to noise ratio falls midway between. Only at high levels/high frequencies do problems emerge where odd-order THD and IMD climb alarmingly (typically 0.08 per cent, see 3D plot).

TEST RESULTS

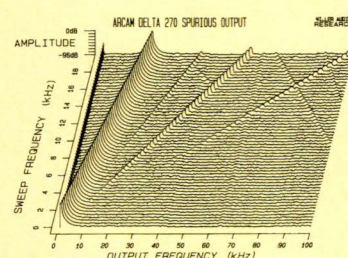
Channel Balance	0.04dB	0.04dB	0.04dB	Output Impedance	21ohm
Channel Separation	90.4dB	95.3dB	107.8dB	Radio Frequency Spurious	<1mV broadband
THD vs Level, 0dB	-94.3dB	-96.0dB	-62.3dB	1Hz Noise Modulation	+3.5dB
-30dB	-74.0dB	-72.5dB	-68.4dB	CCIR IMD, 0dB	-95.6dB
-60dB	-45.1dB	-45.1dB	-39.6dB	Suppression of stop-band IMD	96.8dB
-80dB	-24.7dB	-26.4dB	-21.5dB	De-emphasis Accuracy, 1kHz	-0.01dB
Dithered, -90dB	-14.7dB	-19.7dB	-16.1dB	5kHz	-0.07dB
Dithered, -100dB		-14.5dB		16kHz	-0.19dB
Dithered, -110dB		-1.90dB		S/N Ratio (A-wrtd), wemp, 0LSB	103.5dB
Resolution @ -60dB		+0.13dB	+0.13dB	w/oemp, 0LSB	101.8dB
-80dB		+1.03dB	+1.02dB	w/oemp, 1LSB	101.7dB
-100dB		+2.48dB	+2.70dB	Digital Output	Coaxial
-100dB		+2.70dB	+0.62dB	Crystal Clock Accuracy	+5.6ppm
Peak Output Level, L		2.350V		Track Access Time (99)	4secs
R		2.360V		Serial Number	D27-000048
Relative Output Level		+1.4dB		Typical Retail Price	£800



Flat and ripple-free response courtesy of Yamaha's eight times digital filter.



Odd-order distortions crop up here, just as they did in the BB5 (issue 113).



Traces of stop-band noise; strong 3rd and 5th order harmonic distortions.

“ We don't offer comparisons. Only absolutes. ”



COLIN WELFORD

At Son et Lumière, you won't find us trying to confuse you with numerous hi-fi solutions. As far as we're concerned, we've only got one answer to your requirements.

We hold what we believe is the best audio solution at every price level from £800 to over £25,000.

With our purpose built listening rooms, we make a point of inspiring you with a musical solution that will give unbridled listening pleasure.

Whatever your aspirations.



SON ET LUMIÈRE, 67 TOTTENHAM COURT ROAD, LONDON W1P 9PA. TEL 071 580 9059.

TEAC • TARGET • EPOS • NAD • ROTEL • MARANTZ • HEYBROOK • CASTEL • ROYD • PRO-AC • AUDIOCLAB • SME • NAIM AUDIO • ARCAM • MERIDIAN • ROKSAN • PINK TRIANGLE • NAKAMICHI • MISSION • MICHELL • DPA • PROJECT • RUARK • LYRA • KRELL • ALBARRY • TEAC • TARGET • EPOS • NAD • ROTEL • MARANTZ • HEYBROOK • CASTEL • ROYD • PRO-AC • AUDIOCLAB • SME

Making friends at

DOUG BRADY HI-FI

NEW TO HI-FI OR JUST UPGRADING?

Either way, I think you could do with a friend in the trade

We continue to offer the finest equipment from the most dependable manufacturers, and rely on fair demonstrations, unbiased advice and offer patient and friendly service.

We're a family firm, much more concerned about a fruitful, long term relationship with our customers than with hard selling.

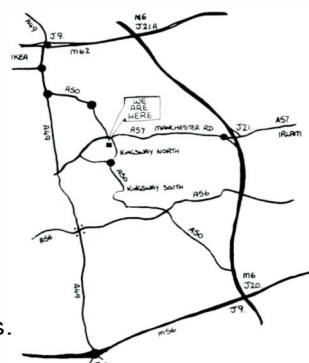
The specification is irrelevant if the music doesn't thrill you. What matters is how well the illusion of the original recorded performance can be recreated.

So close your eyes, open your ears and make your hi fi choice at Doug Brady Hi-Fi. Our best advertisements are our happy customers.

Anything else?

Yes, a two year, no quibble guarantee, and although we are enthusiastic we won't talk technical jargon at you!

Oh! And free parking at Warrington & Otley.



Kingsway Studios
Kingsway North
Warrington
Cheshire
(0925) 828009
Open six days
Fax: (0925) 825773

401 Smithdown Road
Liverpool L15 3JJ
Merseyside
(051) 733 6859
Closed on
Wednesday

14/18 Monmouth Street
Covent Garden
London WC2H 9HB
(071) 379 4010
(071) 497 1346
Closed Sunday and Monday
Fax: (071) 4979205

The Forge Cottage
19 Crossgate
Otley, Leeds, West Yorks
LS21 1AA
(0943) 467689
Closed Sunday
and Monday

• NAIM AUDIO • ARCAM • MERIDIAN • ROKSAN • PINK TRIANGLE • NAKAMICHI • MISSION • MICHELL • DPA • PROJECT • RUARK • LYRA • KRELL • ALBARRY •

Harman Kardon HD7725



First impressions can be deceptive, after all the HD7725 shares the same double-skinned casework, contoured display area and range of facilities as the HD7600II (issue 100). However, it costs twice as much as its predecessor.

The reason is RLS or Realtime Linear Smoothing, a technique adopted by Harman to reduce the severity of its analogue filtering. Two identical 18-bit DACs are deployed in each channel, a 'reference' DAC which is fed directly from the eight times oversampling filter and a 'working' DAC which lags behind by one eighth of a sample period.

After D/A conversion a comparator effectively 'joins the dots' between successive delayed and non-delayed samples using the reference DAC as its view of the

future. It's a neat idea and one that's solidly engineered in this flagship player.

Sound quality

The pungent sound of the HD7725 player made an immediate impact on our panel who were clearly taken aback by the strong bass, fresh midrange and parched but articulate treble. This is a genuine rock 'n' roller, a player with a confident sound, that retains a sense of class to sound rugged without appearing ragged.

This last point is crucial as the HD7725 was virtually alone in drawing the weight from Chris Rea's bass, the texture from his voice and the incisive bite of percussion, without sibilance or harshness.

Although this Flash Harry style of music-making is certainly very entertaining, it

evades the subtlety and depth available from some more refined players. It all boils down to taste, but against the HD7725 'refined' can sound positively boring.

Conclusion

Unlike HK's cheaper and less successful implementations of RLS, the top-flight HD7725 snaps its music into sharp focus, delivering a robust and catchy sound. This clear and sure-footed performance is highly distinctive but more akin to a high precision studio monitor than a euphonic electrostatic, for example. Powerful stuff, but is your system man enough for the job?

Harman Audio, Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood, Herts WD6 5PZ. ☎ 081-207 5050

Verdict

- ▲ Exciting, detailed, punchy, dynamic, entertaining and powerful!
- ▼ Has this player got more energy than your system can handle?
- ▶ **£799.99 RRP**

SOUND QUALITY
 ■ ■ ■ ■ □
VALUE FOR MONEY
 ■ ■ ■ □ □

Laboratory Report

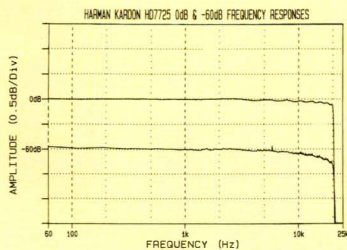
So does Realtime Linear Smoothing work in practice? Er well, yes and no. You see its ultimate success is linked to the precise matching of both 'reference' and 'working' DACs. Any mis-match in linearity at this stage will waylay individual sample 'dots' and so misguide the analogue interpolation. High frequency and low-level waveforms, in particular, will deviate from the original as these errors become more significant.

Even with the top K-grade PCM61P DACs used in this HD7725 the composite linearity of the RLS stage remains very poor indeed with errors amounting to -10dB at -100dB. This mis-match is even visible between the 0dB and -60dB frequency responses where high frequency distortion also leaps by a factor of 40x (0.09 per cent at -30dB climbs to 3.5 per cent at -60dB). On the other hand, HK has succeeded in using a simple first-order analogue filter, reducing any group delay in the audioband.

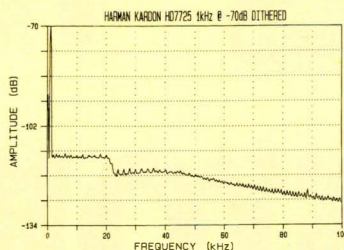
	20Hz	1kHz	20kHz
Channel Balance	0.07dB	0.07dB	0.05dB
Channel Separation	105.0dB	102.1dB	89.9dB
THD vs Level, 0dB	-101.2dB	-103.6dB	-77.0dB
-30dB	-90.5dB	-79.7dB	-60.8dB
-60dB	-57.7dB	-48.0dB	-29.1dB
-80dB	-27.8dB	-27.8dB	-7.25dB
Dithered, -90dB	-17.7dB	-18.4dB	+4.50dB
Dithered, -100dB		-16.5dB	
Dithered, -110dB		-2.50dB	
Resolution @ -60dB			
-80dB		-0.01dB	-0.18dB
-90dB		+0.01dB	-1.60dB
-100dB		-0.16dB	-5.85dB
Peak Output Level, L		+0.10dB	-10.3dB
R		2.291V	2.270V
Relative Output Level		2.270V	+1.1dB

TEST RESULTS

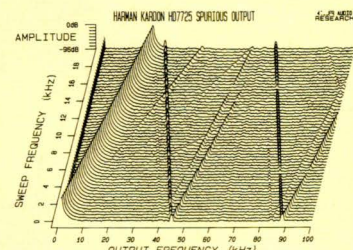
Output Impedance	158ohm
Radio Frequency Spurious	16mV @ 24.3MHz
1Hz Noise Modulation	+6.8dB
CCIR IMD, 0dB	-98.9dB
Suppression of stop-band IMD	60.6dB
De-emphasis Accuracy, 1kHz	+0.01dB
5kHz	+0.01dB
16kHz	-0.08dB
S/N Ratio (A-wtd), w emp, 0LSB	107.3dB
w/o emp, 0LSB	107.2dB
w/o emp, 1LSB	106.6dB
Digital Output	Coaxial and Optical
Crystal Clock Accuracy	-247.0ppm
Track Access Time (99)	6.5secs
Serial Number	S22701265
Typical Retail Price	£800



Low-level linearity deviation causes a shift between 0dB and -60dB responses.

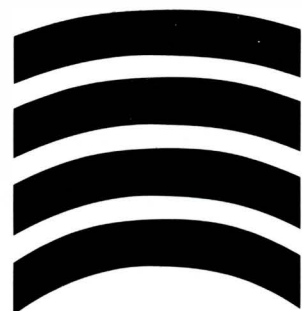


Odd-order distortions from a residual mismatch between HK's RLS DACs.



Stop-band noise (V-patterns) due to NPC's eight times oversampling filter.

THE DT 311



CRUSHES THE PREHISTORICS!

beyerdynamic

beyerdynamic, Unit 14, Cliffe Industrial Estate, Lewes, East Sussex BN8 6JL
Telephone: (0273) 479411 Fax: (0273) 471825

Orelle CD-160.2



Minority opinion has it that CD's digital-to-analogue conversion technology reached a high point with Philips original 16-bit chip, the revered TDA1541. The Dutch giant ceased using this popular slab of silicon some years ago. Yet Orelle remains confident enough not only to retain the 16-bit DAC but also the decoder, four times oversampling filter and servo electronics intended for players of yesteryear.

Orelle has simply added its own analogue board and power supply to complete the job. Therefore, the 160.2 remains a bulky affair, its rounded alloy fascia hosting a smattering of basic facilities. Extra widgets are available via the remote control, which turns out to be another refuge from the Philips parts cupboard.

Sound quality

Let's be frank. To suggest the CD-160.2 acquitted itself poorly in our listening tests would be something of an understatement. 'Bombed' is more appropriate.

The boomy and tizzy balance came high on our list of reservations, over a sound that was judged to be old-fashioned by the standards of other players in this survey. Moreover, despite its overly full bass and lively treble there's simply not the expansive acoustic to realise the true scale and dynamics possible.

Our pop selection sounded oddly metallic, with Donald Fagen's voice adopting an unnaturally twangy character. The accompanying instruments seemed to stumble over themselves in an effort to impress. The drone of mute-trumpet from

Hubbard's jazz CD was likened to a sick bumblebee, while the double bass sounded altogether peculiar, appearing to arrive behind the rest of the music.

Conclusion

Although the Philips' 16-bit chipset is a vintage brew there's no disputing the excellent sound that has been and may still be achieved by its implementation. Sadly the CD-160.2 falls well short of the mark, prompting our blind listeners to criticise those very areas of performance that Orelle and its protagonists hold dear. The £750 ticket is simply the final nail in an unnecessarily voluminous coffin.

Orelle Hi-Fi, 58 The Broadway, Mill Hill, London NW7 3TE. ☎ 081-810 9388

Verdict

- ▲ Can sound crisp, lively and dynamic with simple pop and rock CDs.
- ▼ Equally it can sound overblown, clumsy, bass-heavy and out of step.

▶ **£749.00 RRP**

SOUND QUALITY

VALUE FOR MONEY

Laboratory Report

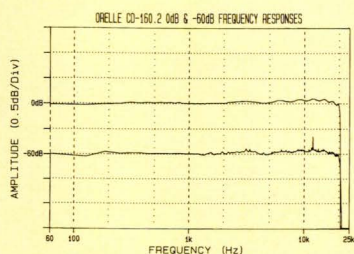
Feast your eyes upon these graphs for, in all probability, we may never see their like again. The ripples superimposed on the frequency response and bold stopband images (V-shaped patterns on 3D plot) are both hallmarks of Philips' old-time SAA7220P/B four times oversampling filter.

These inescapable quirks were shared by similar designs including the Marantz CD-80 and Radford WS2 (issue 95), though few of these 16-bit predecessors incurred the strong odd-order distortions (typ 0.08 per cent) visible on the 3D plot. Orelle's proprietary I-to-V stage is the likely culprit.

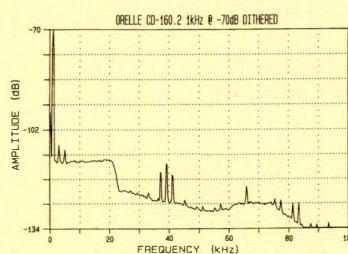
Meanwhile, the -4.5dB twitch in linearity (at -90dB) and substantial 0.0009-0.034 per cent lurch in distortion (between 0dB and -30dB) are both hallmarks of Philips' equally aged TDA1541A 16-bit DAC. The huge 112dB signal to noise ratio is one benefit of the multi-bit process, but this is offset by a thumping +13dB noise modulation.

TEST RESULTS

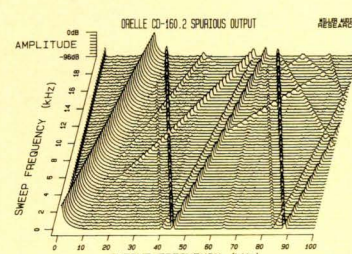
Channel Balance	0.02dB	0.03dB	0.24dB	Output Impedance	82ohm
Channel Separation	132.5dB	105.4dB	79.2dB	Radio Frequency Spurious	15mV @ 67.8MHz
THD vs Level, 0dB	-102.7dB	-101.4dB	-61.5dB	1Hz Noise Modulation	+12.9dB
-30dB	-75.9dB	-69.4dB	-61.8dB	CCIR IMD, 0dB	-75.1dB
-60dB	-52.9dB	-49.7dB	-36.7dB	Suppression of stop-band IMD	+0.9dB
-80dB	-20.1dB	-27.2dB	-42.0dB	De-emphasis Accuracy, 1kHz	+0.31dB
Dithered, -90dB	-7.80dB	-17.5dB	-33.6dB	5kHz	-0.12dB
Dithered, -100dB		-14.7dB		16kHz	112.9dB
Dithered, -110dB		+1.50dB		S/N Ratio (A-wtd), w emp, 0LSB	111.9dB
Resolution @ -60dB		+0.01dB	+0.19dB	w/o emp, 0LSB	112.1dB
-80dB		-0.26dB	-0.04dB	w/o emp, 1LSB	112.1dB
-90dB		-4.45dB	-0.47dB	Digital Output	Coaxial
-100dB		-2.05dB	+4.70dB	Crystal Clock Accuracy	+15.9ppm
Peak Output Level, L		2.001V		Track Access Time (99)	5secs
R		1.991V		Serial Number	0155
Relative Output Level		-0.02dB		Typical Retail Price	£750



Mild response ripples are caused by the four times oversampling filter.



3rd and 5th harmonic distortions come courtesy of Philips' historic 16-bit DAC.



Bold stopband images (V patterns) after four times oversampling.

QUAD 67



It took Quad six years to stagger from the digital starting blocks and even then its choice of technology was far from adventurous. Four years on and the tide has turned firmly in Quad's favour with a new bitstream player described as 'ergonomically accessible'. In practice the £790 67 is almost buttonless, its CDM9 drawer mechanism activated by a cunningly disguised pad which also contains the infra-red remote control sensor.

A small back-lit fluorescent display lies alongside, providing basic track, index and remaining (rather than elapsed) track time information. Fortunately, Quad has the good sense to provide a matching handset with additional direct access, fast search, index, random and program play facilities. So the 67 is elegant in the extreme, only

lacking such options as repeat play or a variable output to soften its £790 blow.

Sound quality

Auditioned immediately after Harman's HD7725, the Quad 67 proved to be more refined and realistic rather than overtly supercharged. Sure enough the Quad is less dramatic, but the subtlety and spaciousness gained is generous recompense. A near perfect balance is struck between the edge-of-the-seat excitement required for up-beat rock and the transparency, poise and resolution demanded by a sober string quartet.

In practice it retains the exuberance and exhilaration of players like the HD7725 but simply dissipates any forwardness into a grander, more spacious acoustic. Low-

level detail is expertly resolved, the 67 retrieving backing vocals from Chris Rea's *Daytona* that were generally smothered by other players in this test. And it's this ability to reveal fragile minutiae within a powerful framework that marks out the 67 as a true thoroughbred.

Conclusion

An unexpected result? Perhaps not, particularly when you consider the 67's similarity to Meridian's 206 (issue 119). Both use a Philips CD mechanism and sympathetic implementations of Crystal's Bit Stream DAC. A Best Buy then for the 67 which now undercuts the 206 by £200.

Quad, St Peters Rd, Huntingdon, Cambridgeshire PE18 7DB. ☎ (0480) 52561

Verdict

- ▲ The best in the test; dynamic sound, yet also exceedingly subtle.
- ▼ Slightly quirky ergonomics, and a lack of advanced facilities.
- ▶ **£790.00 RRP**

SOUND QUALITY
 ■■■■■■
VALUE FOR MONEY
 ■■■■□

Laboratory Report

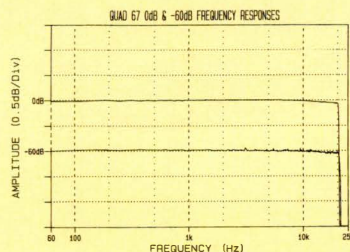
Packed tightly inside the 67's compact casework we find an example of Philips' ever-popular CD Engine; including a posh (version 44) CDM9 mechanism, next-coated 922 loading tray plus servo, decoder and digital output boards. These communicate to Quad's own analogue board via an I2S link where, incidentally, we find an equally popular CS4328 DAC and dual-channel PMI op-amp.

This brew delivers a very predictable set of results that are all but indistinguishable from Meridian's 206 (issue 119). Even at -30dB distortion remains very low at 0.0027-0.07 per cent while the in-built 64 times oversampling stages cut stop-band noise by a full 97dB (see 3D plot).

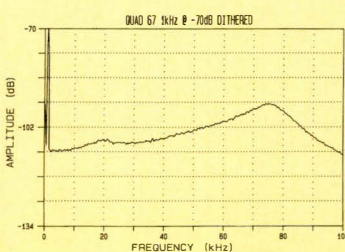
However, it's the -70dB plot that's most characteristic of the CS4328, its 5th-order noise-shapers spilling a trace of requantisation noise into the upper audio band (1 0-20kHz) while its integral filter network bites above 75kHz. The only drawback is a slightly low 97dB signal to noise ratio.

TEST RESULTS

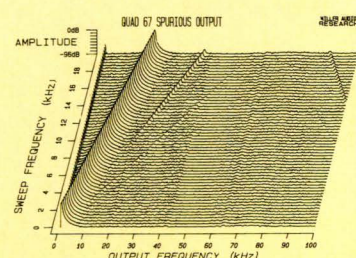
Channel Balance	20Hz	1kHz	20kHz	Output Impedance	124ohm
Channel Separation	113.2dB	109.9dB	86.2dB	Radio Frequency Spurious	<1mV broadband
THD vs Level, 0dB	-99.7dB	-99.0dB	-76.4dB	1Hz Noise Modulation	+1.8dB
-30dB	-91.5dB	-79.9dB	-63.2dB	CCIR IMD, 0dB	-78.5dB
-60dB	-60.2dB	-48.2dB	-34.6dB	Suppression of stop-band IMD	96.5dB
-80dB	-33.5dB	-28.1dB	-15.2dB	De-emphasis Accuracy, 1kHz	0.00dB
-80dB	-17.8dB	-18.9dB	-5.80dB	5kHz	+0.02dB
Dithered, -90dB		-11.3dB		16kHz	+0.07dB
Dithered, -100dB		-4.80dB		S/N Ratio (A-wtd), w emp, 0LSB	116.3dB
Dithered, -110dB		0.00dB		w/o emp, 0LSB	96.7dB
Resolution @ -60dB		0.00dB	0.00dB	w/o emp, 1LSB	116.3dB
-80dB		-0.22dB	-0.19dB	Digital Output	Coaxial
-90dB		+0.13dB	-0.63dB	Crystal Clock Accuracy	+14.7ppm
-100dB		-0.10dB	+0.80dB	Track Access Time (99)	2secs
Peak Output Level, L		1.980V		Serial Number	001409
R		1.976V		Typical Retail Price	£790
Relative Output Level		-0.10dB			



Once again the very flat, ripple-free response is a Crystal hallmark.



Noise-shaping shifts requantisation noise to higher frequencies.



Crystal DAC removes stop-band noise; leaving harmless 2nd-order distortion.

Sansui CD-Alpha 717DR



By far the costliest player in our survey, the flagship of Sansui's Vintage Line is engineered to Titanic standards. Polished wooden sidecheeks flank its massive carcass containing a central loading mechanism, a fluorescent display and both fixed and variable (plus balanced) analogue outputs.

A host of advanced facilities, including continuous, program, random and edit play modes are also available alongside auto fade, repeat, display dim, peak search, track and index selection on a busy-looking remote control.

Inside, however, is evidence of unnecessary over-engineering. Vast areas of circuit board are occupied with digital signal processing, including a complex series of 8-bit shift registers which perform data

inversion and delay ahead of the two complementary Technics MASH/PWM DACs. (A similar technique used in the Marantz CD-11, *The Collection* 1990/91).

Sound quality

Soak-up the glorious build quality of this high-end beast and you could believe that it sounds confident and luxurious. Fortunately, our blind listening panel are free from any such prejudice. So having just revelled in the transparency of the Quad, they found Sansui's massive slab of hi-tech electronics disappointingly flat.

There's nothing obviously amiss, no undue coloration, forwardness or graininess yet the music remains bland. The double bass from Hubbard's *Topsy* lacked richness and vibrancy, while his mute trum-

pet lacked the bite that brings magic.

Neither is the player sufficiently nimble to adapt to the changing tempos of this and other styles of music. Instead it boasts a sluggish, almost disinterested attitude to the shifting sands of the music.

Conclusion

For a player that's been engineered to wrestle every pit and bump from your CDs, Sansui's CD-Alpha 717DR has unwittingly blundered into the high-end trap of sounding too civilised, refined and measured for its own good. It reveals everything on the disc — everything, that is, except the heart and soul of the music.

Sansui UK, Emlym Street, Farnworth, Bolton BL4 7EB. ☎ (0204) 700 139

Verdict

- ▲ A masterpiece of engineering, totally unfatiguing and expertly detailed.
- ▼ Bland; my spectrum analyser had more fun than the listening panel.
- ▶ **£1,560.00 RRP**

SOUND QUALITY
 ■■■□□
VALUE FOR MONEY
 ■□□□□

Laboratory Report

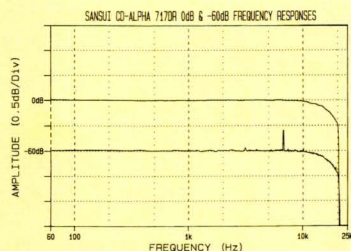
Employing a pair of complementary DACs while opting for a balanced filter stage confers a number of benefits. Compared to just one Technics' MN6474 DAC, Sansui's technique should increase its signal to noise ratio, reduce even-order and high frequency distortion, reduce stopband and requantisation noise while improving low-level linearity.

Sure enough the CD-Alpha 717DR does benefit from some minor improvement in resolution with errors of -1.2dB at -100dB rather than a typical -2.0dB. Most impressive of all is the reduction in high frequency distortion from a typical 0.018 to 0.002 per cent. Just compare this 3D plot with those of the Technics SL-PS620A (issue 112) or SL-PG520A (issue 107).

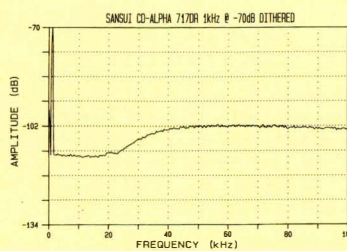
Unfortunately, there's absolutely no further rejection of stop-band noise (-81dB) while the effective signal to noise ratio of 100dB is actually some 1-2dB short of single MN6474 implementations.

TEST RESULTS

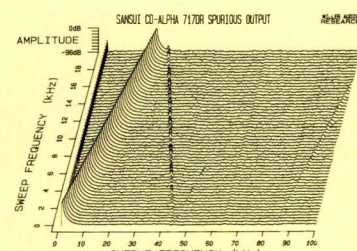
Channel Balance	20Hz	1kHz	20kHz	Output Impedance	53ohm
Channel Separation	0.06dB	0.05dB	0.16dB	Radio Frequency Spuria	7mV @ 33.8MHz
THD vs Level, 0dB	133.7dB	114.9dB	118.3dB	1Hz Noise Modulation	+4.8dB
-30dB	-92.3dB	-93.7dB	-94.1dB	CCIR IMD, 0dB	-100.5dB
-60dB	-87.5dB	-80.7dB	-62.1dB	Suppression of stop-band IMD	80.8dB
-80dB	-61.6dB	-51.3dB	-36.1dB	De-emphasis Accuracy, 1kHz	0.00dB
Dithered, -90dB	-28.7dB	-30.3dB	-17.2dB	5kHz	+0.01dB
Dithered, -100dB	-18.1dB	-20.2dB	-7.50dB	16kHz	-0.14dB
Dithered, -110dB		-12.9dB		S/N Ratio (A-wtd), w emp, 0LSB	116.3dB
Resolution @ -60dB		-5.55dB		w/o emp, 0LSB	115.3dB
-80dB		+0.01dB	0.00dB	Digital Output	100.1dB
-90dB		-0.02dB	-0.07dB	Coaxial and Optical	
-100dB		-0.32dB	-0.22dB	Crystal Clock Accuracy	+38.0ppm
Peak Output Level, L		-0.10dB	-1.20dB	Track Access Time (99)	3 secs
R		2.286V		Serial Number	602067875
Relative Output Level		2.271V		Typical Retail Price	£1,560
		+1.1dB			



Sansui has engineered a 0.5dB droop while avoiding Technics' 11kHz glitch.



No real change here as requantisation noise is swept out of the audio band.



As expected from a Technics CD player, but minus the distortion.

FOR THE BEST

ADVICE
INSTALLATIONS
DEMONSTRATIONS
AFTER SALES SERVICE

SPALDINGS

The South East's Leading Hi-Fi Specialists

352-354 Lower Addiscombe Road Croydon Surrey CR0 7AF

081 654 1231/2040

MERIDIAN **SONY**

naim audio **LINN** **res**

ROTEL **DENON**

ARCAM **R U A R K**

ROYAL **lexicon**

QED **QUAD**

HEYBROOK **CELESTION**

The world's best hi-fi... on the South Coast.

PORTSMOUTH BRIGHTON EASTBOURNE

Jeffries *hi-fi*

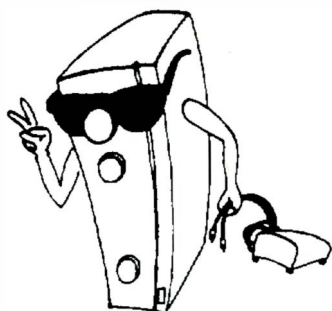
PORTSMOUTH 29 London Road (0705) 663604

BRIGHTON 69 London Road, (0273) 609431

EASTBOURNE Albert Parade, Green Street (0323) 731336

LATE NIGHT WED. TILL 8.00PM. FREE PARKING CLOSED MON.

BADA



T. EVANS AUDIO DESIGN
Tel: 0443 816 856
9am to 5pm Mon - Fri

Walkin' the dog . .

Just when you thought it was safe to go back into the demo room . . .

The PIONEER A400/X GTE

From the same designer that brought you the Iso, Argo and Alecto, a cost effective conversion that will transform the performance of your A400/X. You will gain faster transient response, greater resolution, improved imaging, increased tonal accuracy, and far greater bass authority. The sound becomes far smoother at high frequencies without resorting to band width limiting.

See the review in this, and other national magazines, against the standard model.

THE COST OF £141.00 INCLUDES RETURN CARRIAGE AND INSURANCE

"Don't agonise over this upgrade - it simply builds upon the existing strengths of the A400/X to realise the amp's fullest potential to date"

WHF? APRIL 1993
PIONEER A400/X

Sony CDP-X303ES



State-of-the-art build quality, technology and features come no cheaper than Sony's £550 CDP-X303ES. This latest flagship uses the company's established frame-and-beam chassis plus its Fine Drive CD transport, now re-located amidsthips.

Technology includes one of the most advanced PLM bitstream DACs on the planet plus a new digital filter that adds dither to the 20th bit of its 45-bit calculations. This puts a further squeeze on distortion and noise.

Meanwhile, every conceivable facility, including disc title, custom index, program and custom level options are located alongside index search, intro scan, shuffle, repeat, peak search, digital fade, tape edit and auto-cue options. If you're a

technophobe then Sony's remote handset will bring you out in a rash.

Sound quality

Play any music with a strong percussive line and the CDP-X303ES will shine as it leaves the shimmer of cymbals hanging in the air. But where was the warm and solid bass of the day before?

On its first outing the CDP-X303ES had sounded very measured, warm in balance but quietly confident in the way it plucked microscopic details from a melee of surrounding instruments. Yet its second showing hinged on the mid and treble poise. The percussive accompaniment to Chris Rea's *Daytona* now sounded crisp and the upper bass was hard and fast, contributing to the speed but not the

substance or momentum of the music.

So is this just another split opinion or a nagging inconsistency in the performance of a highly complex machine? The latter is more likely, especially as Sony's first PLM battleship, the CDP-X77ES, created similar confusion back in issue 95.

Conclusion

The CDP-X303ES is built like no other player at this price and spurred my spectrum analyser to paroxysms of joy. Unfortunately, the limited RF rejection of its power supply renders the player unduly sensitive to mains-borne noise, a sad quirk that led to the Panel's bemusement.

Sony UK Ltd, Sony House, South Str, Staines, Middlesex TW18 4PF. ☎ 081-784 1144

Verdict

- ▲ Oodles of features; highly controlled and revealing treble.
- ▼ Bass impact and focus varies rather unpredictably.
- ▶ **£549.99 RRP**

SOUND QUALITY
 ■ ■ □ □ □ □
VALUE FOR MONEY
 ■ ■ ■ □ □ □

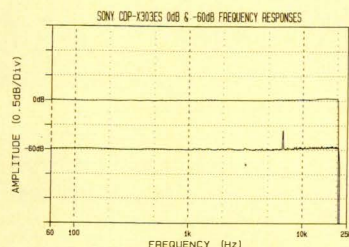
Laboratory Report

Casting back to the CDP-X339ES in issue 107 proves very interesting for, taking each of the plots in turn, there appears to be little change. Ok, so there's some 0.5dB improvement in dynamic range betrayed by the -70dB plot but Sony already had a textbook response to dithered signals under its corporate belt. Likewise, the older CXD-2560 eight times oversampling filter already offered a flat and ripple-free response plus a good 105dB rejection of stop-band images.

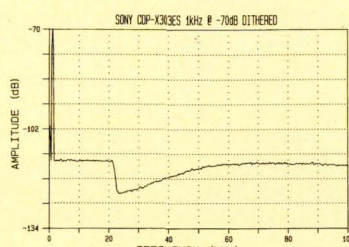
In practice the improvements wrought by Sony's new CXD-2567 'Score' filter are so subtle they lie underneath these familiar graphs. Sony's extra dither sequence reduces distortion (and noise) from 0.0025-0.015 per cent to 0.0021-0.012 per cent at -30dB, for example, and from 0.12-0.44 per cent to just 0.095-0.38 per cent at -60dB. Otherwise, please ignore the artificial 120dB signal to noise ratio (produced by digital muting) but do take account of the high 2.5V output during A/B listening dems.

TEST RESULTS

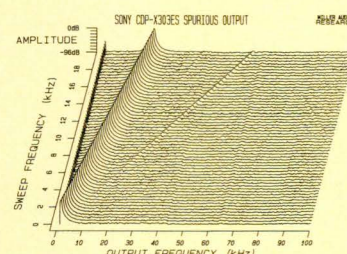
Channel Balance	20Hz	1kHz	20kHz	Output Impedance	203ohm
Channel Separation	120.4dB	123.4dB	109.3dB	Radio Frequency Spuria	10mV @ 66MHz
THD vs Level, 0dB	-104.7dB	-103.0dB	-89.0dB	1Hz Noise Modulation	+17.9dB
-30dB	-93.4dB	-83.7dB	-78.1dB	CCIR IMD, 0dB	-102.6dB
-60dB	-60.4dB	-55.7dB	-48.3dB	Suppression of stop-band IMD	107.1dB
-80dB	-28.5dB	-30.9dB	-28.6dB	De-emphasis Accuracy, 1kHz	-0.09dB
Dithered, -90dB	-17.7dB	-21.7dB	-20.2dB	5kHz	-0.08dB
Dithered, -100dB		-19.7dB		16kHz	-0.05dB
Dithered, -110dB		-13.3dB		S/N Ratio (A-wtd), w emp, 0LSB	117.5dB
Resolution @ -60dB		-0.01dB	0.00dB	w/o emp, 0LSB	119.7dB
-80dB		-0.14dB	-0.02dB	w/o emp, 2LSB	119.7dB
-90dB		-0.62dB	-0.26dB	Digital Output	Optical (Toslink)
-100dB		-0.25dB	+0.10dB	Crystal Clock Accuracy	-2.4ppm
Peak Output Level, L		2.486V		Track Access Time (99)	2.55secs
R		2.477V		Serial Number	600113
Relative Output Level		+1.9dB		Typical Retail Price	£550



A glitch in its low-level trace disturbs an otherwise perfect response.



A textbook result; all distortion converted to pure, random noise.



Little distortion; the Score filter removes stop-band images.

CD players: conclusions, best buys and recommendations

If proof were needed that budget CD players are getting better by the season, look no further than the results of our sub-£250 category. The profusion of *Hi-Fi Choice* swingtags is no coincidence, especially when each of these budget wonders was auditioned between random selections of far costlier players. Our listening

panel was faced with a clear choice; either recommend en masse or relegate every recommendation to 'worth considering' — our panel was feeling generous.

However, there are always a few players to inspire raspberries rather than recommendations. Sansui's *CD-Alpha 717DR* costs an arm and a leg (£1,560) but its reserved, close and conservative sound is far too reminiscent of the flagships of yesteryear. Similarly

Orelle's *CD-160.2* (£750) makes poor use of an elderly 16-bit chipset, while Sony's *CDP-X303ES* (£550) trips over itself in an effort to squeeze the highest specs from the newest technology. Nakamichi's *CD-4* (£350) is simply too fatiguing for serious consideration.

The other also-rans came

frustratingly close to a recommendation. These include the slightly-too-bland *DP-3050* from Kenwood (£200), the technically troubled *CDX-670* from Yamaha (£290) and inconsistent *PD-S802* from Pioneer (£350). All of which leaves the potent sound of Arcam's *Delta 270* (£800) to polarise opinion one way or the other — love it or hate it, you'll never ignore it.

Recommendations

One player teetering on the edge of its swingtag is the *GCD-600* from Adcom (£699), a bright and incisive machine saved by the added flexibility of a 5-disc carousel loader. At the other end of the scale Genexxa's *CD-4900* (£129) scrapes through with a dry slightly spiritless sound as does the Technics *SL-PG440A* (£170) which also seems a tad bland or colourless at times.

Meanwhile, it was left to the cheap and cheerful *CD690* from Philips (£130) to bring a flush of colour to our music. Rotel's new *RCD-945AX* (£230) builds on this theme with a little extra refinement and a lot of extra casework. In overall terms the *945AX* justifies the extra £100, despite sounding so very similar to the like-minded *CD690*.

Guts and gusto are also the key to Denon's success with the *DCD-695* (£200) — just avoid the busiest tracks to escape its hint of compression.

Otherwise the AMC *CD6* (£349) and Harman Kardon *HD7725* (£800) are two costly rock 'n' rollers whose music thunders unabashed from the speakers. Spirit, rather than subtlety, is the magic ingredient in this instance so beware all ye faint hearted.

On the other hand both the Sherwood *CD-5010R* (£160) and JVC *XL-Z464* (£200) won us over with their altogether more refined and luxurious performance. The latter is particularly impressive, its blend of sophistication and intriguing detail sailing very close indeed to a Best Buy swingtag.

Best Buys

The Goodmans *GCD-650II* (£110) represents a significant improvement on the original '650. It sounds slightly fizzy with rock and perhaps a little insecure with the classics, yet there's a down-to-earth honesty, an emotional strength that ensures its music bubbles with a breath of reality if not technical excellence.

Technical and subjective excellence is available of course, but at a price — £790. This is the model 67 from Quad, a player that betrays the subtle resolution, smoothness and delicacy that are hallmarks of its Crystal DAC, while retaining a powerful framework of pin-sharp stereo and convincing dynamics.

Swing tags

Products that make the grade are awarded *Hi-Fi Choice's* unique Best Buy or Recommended accolades. This sets them apart as being capable of a higher standard of fidelity than average, at a particular price point.

A product carrying the Best Buy swing tag is significantly better than the alternatives in its price band. It is of excellent quality and very good value for money. Watch out for this logo, it is your guarantee of quality.

Recommended products are also very good, but not in quite the same league as Best buys. Despite being runners up, they are definitely worth considering, as they may prove to be more compatible when assembling a first class system.



Best Buy and Recommended Listing

BEST BUY

Goodmans GCD-650II (£110) For all its technical foibles this player has an honesty that's extremely refreshing.

The Goodmans GCD-650II proves that there's more to digital music making than technical excellence or high prices.



RECOMMENDED

Adcom GCD-600 (£699) Equipped with a 5-disc carousel, this bright and breathtaking player sounds similar to Adcom's amps.

Genexa CD-4900 (£130) A little thin on detail, build quality and dynamics but thin on price too!

Technics SL-PG440A (£170) This mix of earlier models fails to benefit from their strengths and only just makes the grade.

Philips CD690 (£130) The remote-less version of the Philips CD692 with a colourful performance that's all its own.

Rotel RCD-945AX (£230) Based on the same player-on-a-chip as the Philips CD690 but with improved execution and build.

Denon DCD-695 (£200) A rough diamond with a raunchy sound to match. Pitch feature will be of interest to musicians.

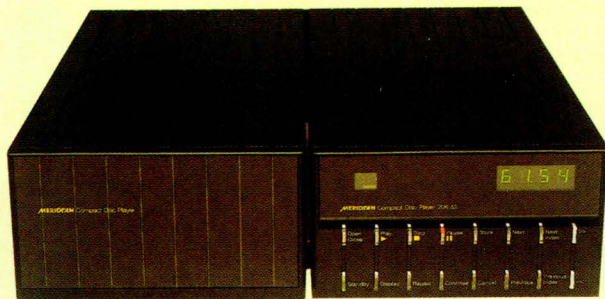
AMC CD6 (£350) Based on the same circuit as Rotel's RCD-965BX but with a raunchier, less transparent sound.

Harman Kardon HD7725 (£800) This flagship implementation of RLS sounds impressively bold and dynamic — a genuine rocker.

Sherwood CD-5010R (£160) A warm, detailed and enjoyable performance from a solidly built, affordable package.

JVC XL-Z464 (£200) This latest variation on a traditional 200 theme is no less impressive than JVC's past generations.

CD Players— best of the rest



For a liquid and captivating sound try the Meridian 206ΔΣ.

Despite the quality of these 20 contenders, there's still plenty of other fish in the digital ocean. The most impressive of which comes in the form of Meridian's 206ΔΣ (£995), a superbly balanced player that now faces very stiff competition from the sound-alike 67 from Quad. The same dilemma is

now faced by Linn with the dry and detailed Karik at £1,497. Otherwise, the stalwart RCD-965BX from Rotel (£300) is still going strong with an equally robust but transparent and highly charged sound. More

The NAD 502 has a precise but slightly mechanical sound.

affordable still are the CD-3020R (£120) and multiplay CDC-5010R (£200) from Sherwood, whose joint performances and build quality bear no relation to their paltry price tags. Then again there's always the CDP-397 (£140) and CDP-597 (£180), budget wonders from Sony that combine oodles of features with a slightly unsophisticated but very up-beat performance.

Marantz' CD-52mkII and CD-52SEmkII are always worth a listen. These are characterful players that are more than competent, but their reputation has been somewhat over-inflated.



Sherwood's 5010 multi-player.

Last, but certainly not least, are the NAD 502 (£200) and Musical Fidelity CDT (£500), two feature-frugal players that will appeal to the audiophile who is tired of the flashing lights of mainstream players.





EALING ELECTRONICS



10 Tottenham Court Road, London W1 Tel: 071-636 3260

188 South Ealing Road, London W5 4RJ

Tel: 081-560 0194/560 6161/568 5848/Fax: 071-758 2048

SALE .. SALE .. SALE .. SALE .. SALE .. SA
 LE .. SALE .. SALE .. SALE .. SALE .. SALE
 SALE .. SALE .. SALE .. SALE .. SALE .. SA
 LE .. SALE .. SALE .. SALE .. SALE .. SALE
 SALE .. SALE .. SALE .. SALE .. SALE .. SA
 LE .. SALE .. SALE .. SALE .. SALE .. SALE
 SALE .. SALE .. SALE .. SALE .. SALE .. SA
 LE .. SALE .. SALE .. SALE .. SALE .. SALE
 SALE .. SALE .. SALE .. SALE .. SALE .. SA
 LE .. SALE .. SALE .. SALE .. SALE .. SALE
 SALE .. SALE .. SALE .. SALE .. SALE .. SA
 LE .. SALE .. SALE .. SALE .. SALE .. SALE
 SALE .. SALE .. SALE .. SALE .. SALE .. SA
 LE .. SALE .. SALE .. SALE .. SALE .. SALE
 SALE .. SALE .. SALE .. SALE .. SALE .. SA
 LE .. SALE .. SALE .. SALE .. SALE .. SALE
 SALE .. SALE .. SALE .. SALE .. SALE .. SA
 LE .. SALE .. SALE .. SALE .. SALE .. SALE

*PHONE OR WRITE
FOR LIST.*

*OUR PRICES BEAT
THE REST*

EALING ELECTRONICS LTD

10 Tottenham Road, London W1

Tel: 071-636 3260

188 South Ealing Road, London W5 4RJ

Tel: 081-560 0194/ 580 6161/ 568 5848

Fax: 071-785 2048

THE ONLY PEOPLE WE DISAPPOINT ARE OUR COMPETITORS!

A PHONE CALL WILL SAVE YOU £££'s!

Ealing Electronics Ltd

10 TOTTENHAM COURT ROAD, LONDON W1. TEL: 071-636 3260

188 SOUTH EALING ROAD, LONDON W5 4RJ

TEL: 081-560 0194 / 560 6161 / 568 5848 / FAX: 081-758 2048

Our Prices Beat the Rest!

HI-FI, TV, VIDEO AVAILABLE ON ALL MAKES

JVC

AMPLIFIERS

AKX 742
AX 342
AD A442
AX 472
AX-R562
AX 662

HI-FI SYSTEMS

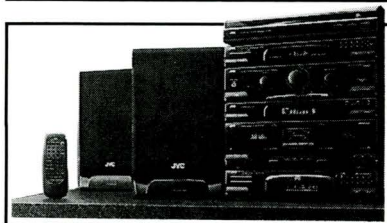
ADAGIO



S2
S3
S4
G7

G9

MIDI SYSTEMS



MIDI-W58CD



MIDI-W37CD

MIDI-W78CD
MIDI-W76CD

- ★ WORLDWIDE EXPORT
- ★ TAX FREE FACILITY
- ★ UNBEATABLE PRICES
- ★ AFTER SALES SERVICES
- ★ EXTENDED 5-YEAR WARRANTY ON APPLICATION

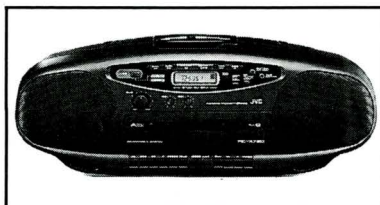
MICRO HI-FI



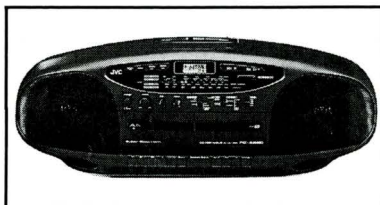
UX-A5

UX-A4
UX-A3
UX-T1

PORTABLES



RC-X720



RC-X520

PLUS MANY MORE

COMPACT DISCS

XL-1050
XL V164

CASSETTE DECKS

TDW 106
TDW 208
TDW 308
TDW 706

TUNERS

FX 1010TN
FX-362
FX-342

RECEIVERS

RX 1010TN
RX 808
RX 508
RX 206

TV

ALL MODELS

VCR

HRD 880
HRD820
HRS 4700

CAMERAS



GR-AX55 Award Winner
GR-AX35

On test: pre/power amplifiers

Why should you buy a separate preamplifier and power amplifier? Resident technical expert Paul Miller introduces our comprehensive round-up of six top amplifier combinations.

Central to every hi-fi system, the amplifier is the one component that links all the others together. It may take the guise of an integrated model or a separate pre/power combination, but either way amplifier roles are identical. These are the products that allow you to copy from CD or vinyl onto tape, for instance, while providing an interface between your choice of source and loudspeaker.

This apparently simple task is dominated by extremes,

from handling the minute voltages produced by a moving-coil cartridge to levels up to 100,000 times higher, as demanded by an inefficient and power hungry loudspeaker.

Just how adequately an amplifier copes with these extremes is reflected in both its technical and subjective

Ratings	
Excellent	■ ■ ■ ■ ■
Very good	■ ■ ■ ■ □
Good	■ ■ ■ □ □
Average	■ ■ □ □ □
Poor	■ □ □ □ □

These ratings are a simple guide to the sound quality and value for money of each pre/power amplifier.

performance, though the two are not mutually dependent.

Technological trends are hard to pin down among amplifiers, because the amp scene is not driven by new developments to the same extent as CD players or DACs, for example. Nevertheless, it's interesting to see a return to MOSFET power transistors in many

new models, chosen for their thermal stability as well as the opportunity to manipulate sound quality.

Naturally this month's test reflects this diversity of ideas. Manufacturers have very different priorities when it comes to pitching an amp at a common sub-£1500 price category. Once again, for an amplifier to be Recommended it must achieve a given standard of quality within this category, a benchmark that is judged to be above average for the price.

Most people are interested in the macho areas of amplifier performance like power output, headroom and peak current.

The peak current rating is often quoted with no regard to distortion. However, one power amp might squeeze out 20A at 50 per cent THD (Total Harmonic Distortion) while another could deliver the same 20A at just one per cent THD. *Hi-Fi Choice* adopted a one per cent distortion limit, so that you can readily compare the power, headroom and current rating of amplifiers in this and previous issues.

Look for power amplifiers that not only have a healthy current rating but that also get close to doubling their power output between eight and four ohm speaker loads. These beasts should have no trouble driving difficult or multiple loudspeaker combinations.

Unfortunately, such an amplifier will also suffer from a limited dynamic headroom. This latter figure gives us some idea of the maximum short-term power available under dynamic music conditions.

It would be very convenient if low distortion went hand-in-hand with high quality sound but there are just as many Recommended amps cluttered with harmonics as there are many superb-sounding pre/power amplifiers with vanishingly low levels of THD.

So long as distortion rises and

falls in sympathy with the music, most listeners quickly become accustomed to its consistent presence or colour. Some types of

distortion are more tolerable than others and this is where the 3D Ultrasonic Distortion plot comes in handy.

The three signals shown on the reference plot include a continuous tone at 20kHz, a sweep running from 0-20kHz and another stretching from 0-50kHz-0Hz. Ideally, the plot taken from the output of the power amplifier should exactly match the input of the preamp, only louder.

What the tests mean:



Amplifier expert Paul Miller at the controls of his hi-tech testing laboratory.

Inevitably, there's some corruption in the form of harmonic and intermodulation distortions. Harmonic distortions are seen as multiples of the original signal. So lines at 40kHz and 60kHz are harmonics of the original 20kHz. Intermodulation distortions are caused by combinations of two or more original signals.

Distortion can also be complicated by Radio Frequency (RF) noise and, once inside a power amplifier, can cause an audible modulation of its background noise. This can make music sound more fatiguing.

Such modulation shows up as raised areas on the 3D RF plot, drawing attention to the power amp's sensitivity to RF noise within a certain frequency band. If RF hash exists at these frequencies, then the amp will probably never give of its best.



How the Listening Tests were done:

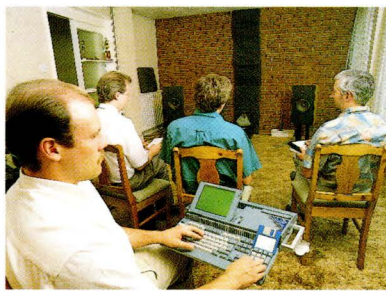
Our auditioning is performed under blind conditions with each pre/power combination being adjusted to not one but two predetermined listening levels. Furthermore, the pre/power combo's are assessed in a random order, having already warmed-up each duo on the test bench before they go behind the curtain.

Many pre/power amplifiers are auditioned several times to confirm the consistency of our results though only the rough price — not the model number — is revealed to the panel after the listening test.

Variety and objectivity are the keys to the success of our comprehensive listening tests. Variety comes in our choice of music which extends from pop, rock and jazz through to classical, female vocal and folk — an extensive battery of software chosen by our listeners at the beginning of each session. Even the panellists themselves are interchanged to cross-check on the results of a previous days listening.

Finally, there's the system itself; a combination of DPA's PDM2 D/A converter as a digital

source and Pink Triangle's PT 100 turntable together muster up a fine front-end while Audio Note's AN-J loudspeakers bring up the rear. Naturally, the choice of Silver Sounds cabling had been arrived at from our previous blind survey of speaker and interconnect cables.



At the end of every listening test, Paul Miller enters the panel's comments into his computer.

The cast list

Adcom GFP-555II/GFA-535II	£500/£350
Alchemist Kraken APD7/APD8	£395/£380
Arcam Delta 110S/120.2	£520/£550
DPA Digital DSP-200S/DPA-200S	£495/£750
NAD 1000S/208	£320/£800
QUAD 66/606	£840/£670

Six of the best? Half a dozen pre/power amplifiers prepare to do battle in our exhaustive blind group test.

Why split an integrated into separate pre/power amplifiers?

There is some interference between the tiny signals at the input of an integrated amplifier and the mail-fisted watts at its output. Unwanted coupling occurs through the common power supply and ground connections, allowing the brute force of the power amp stage to shake the fragile foundations of its disc input, for example. It's rather like trying to perform microsurgery in the middle of an earthquake.

Hence, the justification for separate pre and power amplifiers, housing the sensitive MM/MC disc circuitry in one box and the substantial power supplies and output stages of the power amp in another. Furthermore, even though a high-level line source like CD may drive a power amp directly, a fully-fledged line preamp should help remove the surge of RF noise that rides atop the output of most digital gear.

The active preamp will boost the 5mV or so of your average MM cartridge to around 1-10V but lacks the current to drive any loud-speaker directly. Therefore, it is necessary to have a power amplifier which reinforces its final output with a substantial reserve of current. This current is then available to sustain the output voltage across the impedance curve of the loudspeaker.

Adcom GFP-555II/GFA-535II



Courtesy of Celestion, a selection of Adcom's high-value US hi-fi is now available in the UK. This includes the £500 GFP-555 and £350 GFA-535 pre/power combo which, now in mkII guise, retains the familiar stain black, rugged, professional appearance.

The GFA-535 is certainly very robust with dual L/R power supplies feeding an equally substantial Sanken-based power stage, complete with fuse and electronic protection. Adcom even provides an 'Instantaneous Distortion Alert' if the amp is pushed into clipping, to warn of imminent damage to speakers and ears.

Adcom's GFP-555 preamp is equally straightforward, relying on a series of

own-brand op-amps for the MM (hi-output MC) phono, line, tape and tone amplifiers. The remaining CD, tuner, video and three tape inputs can be routed to the bypass outputs.

Sound quality

Though powerful, this combination is clearly most comfortable with simple, untaxing music. Yet even then dominant vocals may sound strained rather than easy and expressive. Similarly, orchestral bass can lack weight despite remaining punchy in a forthright fashion. What you lose is the natural resonance of low brass, double bass and drums.

Even Rachmaninov's dancing violins

and cellos sounded hurried, and although Mahler's *1st Symphony* on CD proved that the Adcoms can capture grand scale, detail and warmth were sacrificed.

Conclusion

On the face of it, Adcom has engineered two very competent, reliable and compatible amplifiers. Fine so far. Sadly their joint subjective performance remains very disappointing, being reminiscent of so many hard and heartless transistor amps that flourished during the Eighties. Nice figures, shame about the sound.

Celestion International, Foxhall Road, Ipswich IP3 8JP. ☎ (0473) 723 131

Verdict

▲ A powerful and speaker-tolerant design; consistent performance.

▼ Unfortunately, the combo's sound quality is uninspiring.

▶ £499/£350

SOUND QUALITY

■ ■ □ □ □

VALUE FOR MONEY

■ ■ ■ □ □

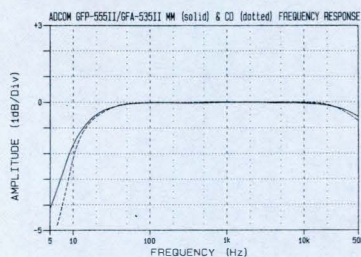
Laboratory Report

From an engineering standpoint both pre and power amplifier have been thoughtfully designed using high-speed, low-noise op-amps, shielded power transformers, tightly regulated low-impedance supplies, optimised PCB layouts and quality components including Roederstein resistors and Panasonic HF decoupling caps (a favourite of Rotel). This is reflected in the healthy +1.6dB power increase from 8 to 40hm, the very substantial 25A current rating and low 0.014ohm output impedance of the GFA-535II.

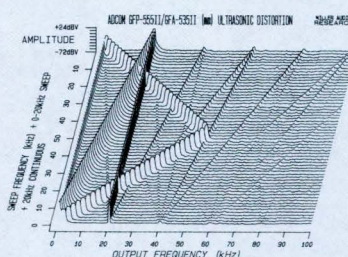
Unfortunately, the power amp is also susceptible to spurious RF noise in the 100-400MHz band even though there's plenty of feedback to keep THD at <0.01 per cent through the audio band. Incidentally, there's no major change in THD, signal to noise, output impedance or input sensitivity of the combination with the preamp's bypass outputs selected. Furthermore, the 1.4mV input sensitivity of the MM phono stage confirms Adcom's suggestion that it may also be used with high-output MCs.

TEST RESULTS

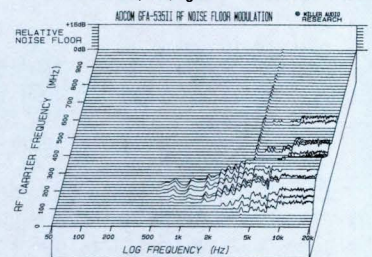
	20Hz	1kHz	20kHz	CCIR Intermod. Dist. (0dBW)	-86.7dB	-85.4dB
Maximum Continuous Power Output, 8ohms	86.4W	93.7W	91.0W	(2/3 power)	-81.5dB	-82.5dB
4ohms	117.6W	134.0W	132.1W	Noise (A wtd, 0dBW) (2/3 power)	-75.1dB	-74.9dB
Dynamic Headroom (IHF)	+1.8dB (142.4W)			(2/3 power)	-90.3dB	-86.1dB
Peak Current (5msec, 1% THD)	25.2A			Residual noise (unwtd)	-59.9dBV	-60.1dBV
Output Impedance	0.014ohm			Input Sen. (for 0dBW) (for full output)	13.0mV	1.42mV
Damping Factor	562.8			Disc Overload (1kHz) (50kHz)	126.5mV	1124mV
	CD/Aux	MM		Preamp Output/Imped.	11.1V/disc/121ohm	
Stereo Separation (1kHz)	88.3dB	85.8dB		Input loading	23kohm/150pF	
(20kHz)	63.8dB	59.8dB			47kohm/100pF	
Channel Bal. (1kHz, -20dBV)	0.05dB	0.05dB		DC offset, left/right	+0.6mV/+1.5mV	
(-60dBV)	2.16dB	2.16dB				
Total Harmonic Dist. (0dBW) (2/3 power)	-88.2dB	-88.5dB				
	-85.5dB	-86.3dB				



Response is sensibly rolled-off through low bass.

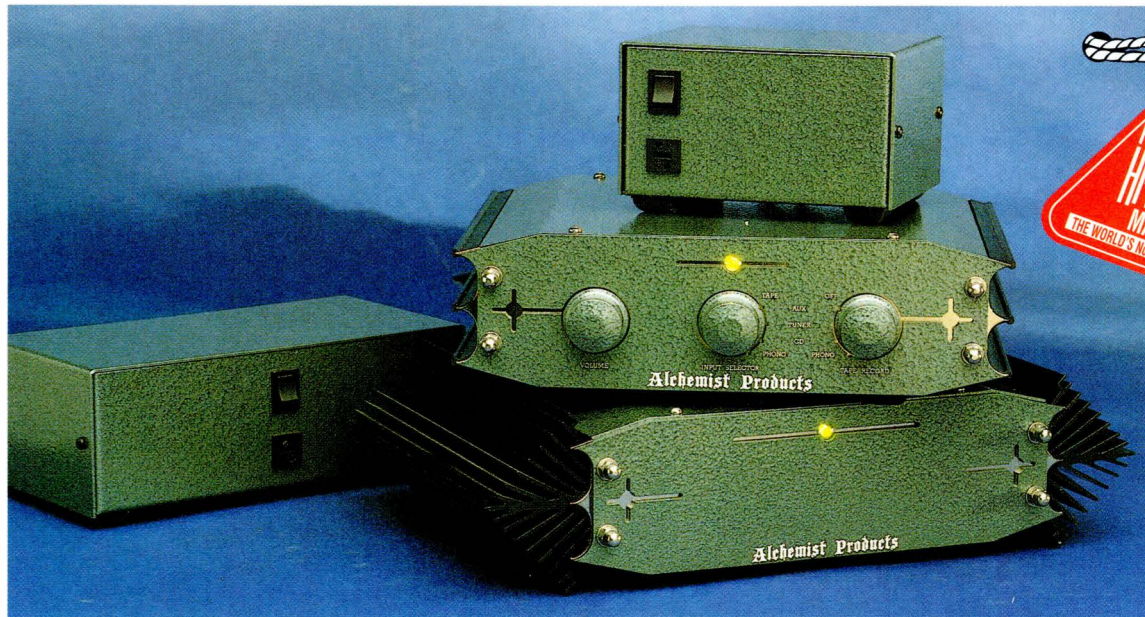


IM distortion is higher than harmonic distortion.



Very sensitive to RF hash above the FM radio band.

Alchemist Kraken APD7/APD8



Troy Tempest might dispatch the odd *Kraken* or two before breakfast but the remainder of us landlubbers should approach this particular steaming-hot serpent with greater respect. The shimmering heat wafting from its fluted gills warms fingers and separates alike to keep a wide berth.

Clearly this *Kraken* power amp is based on the original *Kraken* integrated (issue 116) — same carcass, same green hammerite finish and, broadly speaking, same internal circuitry. By contrast the *Kraken* preamp is a more elaborate affair the same range of CD, tuner, aux and tape inputs being joined by a MM phono board along with the novelty of both

inverting and non-inverting preamp outputs. This has the same effect to swapping over the black and red speaker cables.

Sound quality

The *Kraken* can sound both ponderous and impressive though rarely, if ever, harsh or aggressive. Only once did the panel describe it as over-enthusiastic, rushing through the sax and piano of our up-beat jazz selection. Otherwise the *Kraken* is tempered by a gentle muddling, a soft and confusing coloration that taints vocals, strings and dynamics.

However, there's plenty of welly from the MM phono department whose warm

and powerful sound tipped the votes of our panel in its favour. A fullsome and overly lush sound maybe, but the added colour makes it more attractive.

Conclusion

Our panellists likened the *Kraken* to a £700 version of the Arcam *Delta*, a comparison that seems to me neither unkind nor too wide of the mark. So the beastie may still harbour a wart or three, yet it remains rather less of a gamble than its integrated forebear. Recommended to the Stingray fan club.

Alchemist Products, 4 Rosebery Mews, Muswell Hill N10 2LG. ☎ 081-883 3008

Verdict

- ▲ Improvements reward the *Kraken* with a gentle but colourful sound.
- ▼ Not suited to tricky speakers; Obscures very low-level detail.
- ▶ **£395/380**

SOUND QUALITY
 ■■■□□
VALUE FOR MONEY
 ■■■□□

Laboratory Report

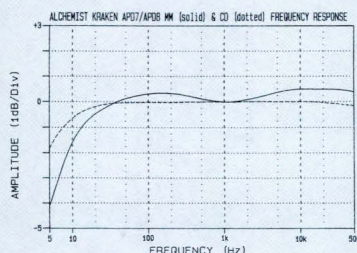
Alchemist has responded to our criticisms of the *Kraken* Integrated amp (issue 116) by re-working the earth pattern of its power amp. A glance at the RF IMD plot indicates these mods have eradicated the LF instability that originally plagued the design, leaving behind a residual sensitivity to RF noise in the 0-350MHz region.

Otherwise the modest 50W output is once again restricted to just 30W into 4ohm with severe, but contrived, slew-limiting squeezing this to just 16W at 20kHz. Taken together with its meagre 3.2A reserves of current, the *Kraken* must surely fight shy of insensitive speakers and/or difficult loads.

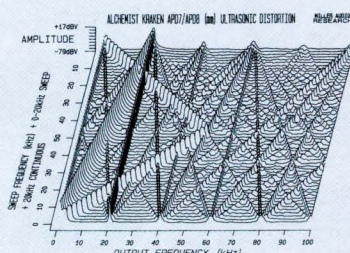
Meanwhile, the audible 'buzzing' detected while our 1kHz level tone was in service is revealed in the unusually extended distortion spectrum of the *Kraken* power amp. Here the audio signal is joined by pure odd-order spikes extending beyond the 99th harmonic. The numerical value of 0.04 per cent, however, seems low enough.

TEST RESULTS

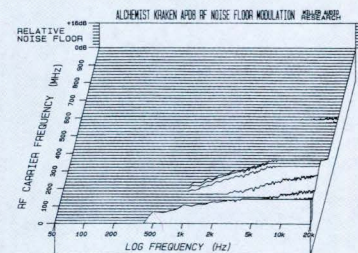
	20Hz	1kHz	20kHz	CCIR Intermod. Dist. (0dBW)	-60.4dB	-61.8dB
Maximum Continuous Power Output	48.4W	49.3W	9.4W	(2/3 power)	-22.8dB*	-22.8dB
8ohms	29.4W	30.0W	15.8W	Noise (A wtd, 0dBW)	-95.1dB	-76.6dB
4ohms				(2/3 power)	-104.5dB	-76.7dB
Dynamic Headroom (IHF)		+0.89dB	(60.5W)	Residual noise (unwtd)	-78.8dBV	-79.9dBV
Peak Current (5msec, 1% THD)		3.2A		Input Sensitivity (for 0dBW)	31.3mV	187uV
Output Impedance		0.162ohm		(for full output)	221mV	1.34mV
Damping Factor		49.5		Disc Overload (1kHz)		93.7mV
		CD/Aux	MM	(20kHz)		332.5mV
Stereo Separation (1kHz)		75.3dB	74.7dB	(50kHz)		344.5mV
(20kHz)		50.9dB	48.9dB	Preamp Output/Imped.	9.67V(disc)/59.4ohm	
Channel Balance (1kHz, -20dBV)		0.59dB	0.61dB	Input loading	47kohm/20pF	
(-60dBV)		7.66dB	7.68dB		9.2kohm/40pF	
Total Harmonic Dist. (0dBW)		-68.9dB	-68.8dB	DC offset, left/right	+11.9mV/+5.5mV	
(2/3 power)		-73.2dB	-73.1dB			



MM disc stage has a warm upper bass and brightened treble.



Oodles of distortion is all part of the *Kraken* design brief.



Possibly unpredictable with some CD players due to RF susceptibility.

Arcam Delta 110S/120.2



Twin Power Block Topology' announces the logo on this latest version of Arcam's popular D120 power amp. Inside the dour black casework this is realised as dual L/R power supplies, separate L/R monoblok power amps and bulky internal Audioquest wiring. A set of bi-wire 4mm speaker terminals and a bridging option enhance its flexibility but with the D120.2 you pay for hidden engineering rather than pretty visuals.

The matching D110S preamp is no beauty either, simply busier with its soft-touch input keys for MM/MC disc, AV, tuner and two tape sources. These, along with various record and mono facilities can be operated by Arcam's preamp and/

or system remote controls. Motorised volume is standard and a plug-in DAC board is available for £230, to upgrade the D110S to full D110 status.

Sound quality

The Deltas followed the NAD combination, a circumstance that only reinforced their extra poise and determination. By the tumultuous conclusion to Mahler's *1st Symphony* our panel were oblivious to the Arcam's lower power output.

Only this combination could restore the growling presence of Rachmaninov's *Symphony* via MM disc, delivering a performance that was both expressive, coherent and never less than captivating

CD has a wealth of subtle details that, although a trifle clinical at times, accurately reflect the various rhythmic and emotive threads woven into the music. A grand and confident performance.

Conclusion

This Delta series has evolved into an impressive combination, one that is now sympathetically matched with a very powerful, sure-footed and dynamic sound. An Incredible Hulk of the amplifier world, the D110S/120.2 really lets rip.

A&R Cambridge Ltd, Pembroke Avenue, Denny End Industrial Centre, Waterbeach, Cambridge CB5 9PB. ☎ (0223) 861 550

Verdict

- ▶ A dry but detailed and confident performance from a mature package.
- ▶ Looks and feels naff; the optional digital board may compromise sound.

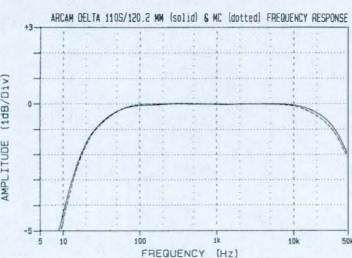
£520/£550

SOUND QUALITY
 ■■■■■□
 VALUE FOR MONEY
 ■■■■■■

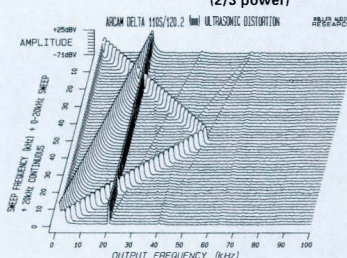
Laboratory Report

Arcam is still using a quasi-complementary style of power amp design, an unusual technique but one that confers an equally individual sound. The same trigger-happy fuse and relay-fired speaker protection also lurks beneath the bonnet so there's no change in either the 110W/158W (8/4ohm) output, the 17A current delivery or generous +2.4dB dynamic headroom (see issue 92).

Still, Arcam's new pre-driver and driver circuitry has squeezed distortion (at two-thirds output) from 0.0052 to 0.0029 per cent while ridding the D120.2 of any residual RF IMD. Then again, the same crossover distortions rear their collective heads at very low power outputs (0.03 per cent at 1W/20kHz), suggesting that Arcam could tickle-up the bias level a notch or two. The preamp's vinyl disc input headroom is a little low at +22.8dB, especially as it's now less sensitive than before, requiring some 3.7mV via MM to drive the D120.2 to full output.



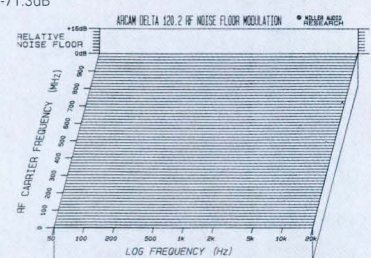
Low bass cut-off prevents problems with warped records.



A hint of distortion as feedback is reduced at high frequencies.

TEST RESULTS

	20Hz	1kHz	20kHz	CCIR Intermod. Dist. (0dBV)
Maximum Continuous Power Output, 8ohms	109.2W	109.0W	104.8W	-83.5dB -83.7dB -53.4dB
4ohms	151.0W	158.4W	148.9W*	-95.8dB -82.6dB -53.1dB
Dynamic Headroom (IHF)	+2.36dB (187.5W)			Noise (A wtd, 0dBV)
Peak Current (5msec, 1% THD)	17.1A**			(2/3 power)
Output Impedance	0.061ohm			(2/3 power)
Damping Factor	131.0			Residual noise (unwtd)
Stereo Sep. (1kHz)	CD/Aux	MM	MC	(for full output)
(20kHz)	77.4dB	75.0dB	67.8dB	16.5mV 34.7uV 18.5uV
Channel Balance (1kHz, -20dBV)	53.5dB	51.6dB	51.2dB	(for full output)
Channel Balance (-60dBV)	0.91dB	0.89dB	0.94dB	173mV 3.65mV 190uV
Total Harmonic Dist. (0dBV)	1.10dB	1.08dB	1.12dB	Disc Overload (1kHz)
(2/3 power)	-76.5dB	-76.5dB	-73.8dB	(20kHz)
	-90.3dB	-90.9dB	-71.3dB	(50kHz)
				Preamp Output/Imped.
				10.5V (disc) / 190ohm
				Input loading
				47kohm/100pF 218ohm
				DC offset, left/right
				+7.5mV/+8.0mV



Judicious filtering and clever design prevent RF interference.

DPA Digital DSP200S/DPA200S



From its origins as Deltec Precision Audio, DPA Digital has always pursued a very original route to state-of-the-art sounds. Unfortunately, its earlier amplifiers proved too fiddly for all but the most diehard of enthusiasts. Hence the diddy £495 DSP-200S preamp and equally cute £750 DPA-200S power amp — two packages designed to complement DPA's range of outboard DACs.

Five line inputs are selected in sequence using a single source button which feeds directly into a sealed ALPS volume control and electronic balance adjustment that hops in accurate 0.5dB steps.

The DPA-200S power amp is equally sophisticated, featuring two separate

main transformers contra-connected into a single stereo power supply. There's also a bridging option for the power crazy.

Sound quality

Although bridging the DPA-200S can extend headroom, the downside is a large increase in hum and the music loses the bounce and expressiveness heard in the normal stereo mode.

Stick to one DPA-200S and the result is a transparent, exquisitely detailed and unexpectedly dynamic performance. Its large, involving sound ensured that the Mahler strings remained vivid and articulate, and that every note was driven with conviction. For once, the separate bass

lines from Donald Fagen's *Trans-Island Skyway* were well defined, these amplifiers resolving oodles of musical detail without stomping on its soul.

Conclusion

It's possible that the starched accuracy of this 200 series may prove too honest for some systems, but it's difficult not to admire the seamlessness and poise of its music. Looks like DPA has another winner, and one doesn't require a degree in electronics to appreciate it.

DPA Digital Ltd, Units 7&8, Willowbrook Lab Units, Crickhowell Road, St Mellons, Cardiff CF3 0EF. ☎ (0222) 795 621

Verdict

- ▶ A rich and dynamic sound that conveys the life of its music. Best in the test.
- ▶ Not suited to insensitive speakers. Bridged — disappointing.
- ▶ £750/£495

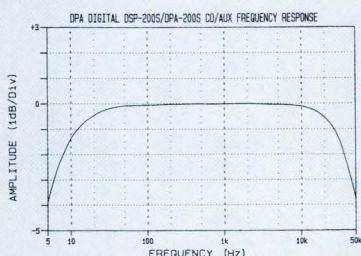
SOUND QUALITY
■■■■■
VALUE FOR MONEY
■■■■■

Laboratory Report

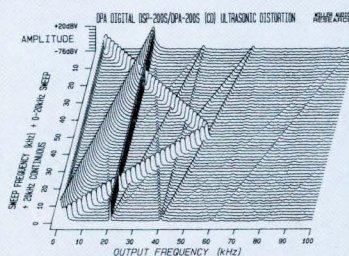
Both pre and power amp are equipped with Compound-Class A output stages, driven via surface-mount NE5534's in the case of the DSP-200S and via DPA's own DH-0A32 op-amps in the matching power amp. Feedback is also extended right to the output terminals of both amps, hence the low (<1ohm pre and <3mohm power) output impedances.

This reduces their sensitivity to different cables though the DPA-200S will still be fairly wary of low impedance or insensitive speakers thanks to its limited 50W output and meagre 6A current rating. Incidentally the power amp is phase-inverting, so do experiment with those red and black speaker leads!

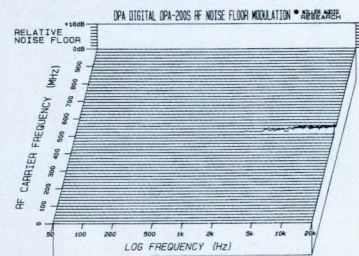
Meanwhile the preamp's logic switching dominates the overall distortion performance, pushing the analogue electronics' <0.0015 to some 0.005 per cent (see 3D plot). This 5V logic also restricts input headroom to just 4.6V — some 7dB above the nominal 2V CD level.



Output deliberately restrained outside the audio band.



Preamp logic chips cause these tracks of IM distortion.



Only the faintest blip of RF IMD is visible.

TEST RESULTS

20Hz	1kHz	20kHz	CCIR Intermod. Dist. (0dBW)	93.5dB
Maximum Continuous Power Output,			(2/3 power)	-91.6dB
8ohms	44.6W	48.2W	44.5W	-81.5dB
4ohms	50.6W	51.3W	49.9W	-98.4dB
Dynamic Headroom (IHF)	+0.70dB (56.6V)		Residual noise (unwtd)	-59.1dBV
Peak Current (5msec, 1% THD)	6.0A		Input Sensitivity (for 0dBW)	37.5mV
Output Impedance	<3mohm		(for full output)	248mV
Damping Factor	2663(1)		Line Overload (1kHz)	4.56V
	CD/Aux		(20kHz)	4.55V
Stereo Separation (1kHz)	85.5dB		(50kHz)	4.50V
(20kHz)	75.3dB		Preamp Output/Impedance	4.25V/<1ohm
Channel Balance (1kHz, -20dBV)	0.22dB		Input loading Pre/Power	
(-60dBV)	1.13dB			47kohm/500pF 43kohm/300pF
Total Harmonic Dist. (0dBW)	-86.3dB		DC offset, left/right	+1.7mV/+0.5mV
(2/3 power)	-85.8dB			

NAD 1000S/208



NAD's THX-approved £800 208 power amp is a beast. Extremely flexible it offers both balanced (XLR) and unbalanced (phono) inputs together with Soft Clipping, impedance selection and bridging options.

Inside, four pairs of quasi-complementary MOSFET power transistors comprise the main power amp, leaving an extra three pairs (per channel) for any monumental musical peaks. This energy-efficient technique is dubbed Extended Dynamic Power (EDP).

The matching 1000S preamp caters for MM/MC phono, tuner, video, CD and two tape sources, relying on the old 1000 Series as the bedrock of its design. In this

instance a heavily modified phono stage and bigger power supply is intended to boost its performance.

Sound quality

In spite of NAD's endeavours the 208 sounds surprisingly compressed and lazy in its handling of stereo depth, and dynamics. The string tone of our Mahler selection was lush rather than biting. Formerly vibrant and resonant bass notes would thud formlessly from the speakers. It can handle simple, boppy tunes but was taxed by Lyle Lovett's *Cryin' Shame*.

However, our panel liked the atmosphere the 1000S/208 sustained through mid and treble. Here its solid positioning

and ambient soundstaging contrasts markedly with its wishy-washy bass, though the MM phono input only serves to emphasise this disparity.

Conclusion

Both the 1000S and 208 are solid examples of value-for-money engineering, products brimming with honest intent if not superlative sound quality. Unfortunately the 208 fails to reflect the substantial power delivered on paper. After all you'd expect a 300W amplifier to rock and roll, not wear lead boots.

NAD Building, 401-405 Nether Street, London N3 1QG. ☎ 081-343 3240

Verdict

- ▶ Has an open mid/treble with simple pop and jazz tracks; oodles of power.
- ▶ Bass and orchestral dynamics are compressed and formless.
- ▶ **£320/£800**

SOUND QUALITY

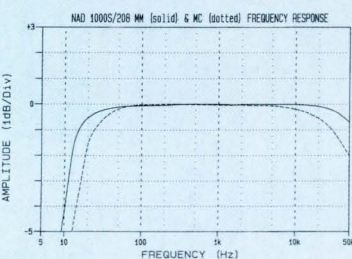
VALUE FOR MONEY

Laboratory Report

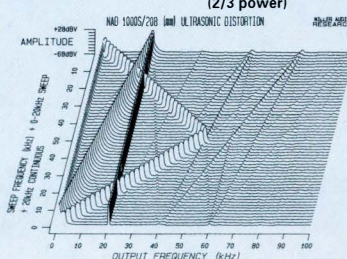
NAD's EDP headroom extension endows the 208 with short-term bursts of power exceeding 670W, though the maximum continuous output remains virtually unchanged from 8 to 4ohms. Still, 300W+ in stereo mode or some 600W+ in bridged (mono) mode remains more than generous.

In practice, the 208 knocks both the Rotel RB-980BX and Heybrook Signature (issue 109) into cocked hats, sailing into first place with the highest current rating on record — a white hot 46.8A at just one per cent distortion. This is equivalent to a dynamic power of 2.19kW into 1ohm, sufficient to scare off any recalcitrant loudspeaker but still no guarantee of great sound quality.

As expected, distortion is kept at bay from 0.001 per cent (via CD) to 0.004 per cent (via MC) even though its best signal to noise ratio still falls behind the Alchemist and Arcam at 104dB. Otherwise, the 1000S/208 duet is technically very sound indeed.



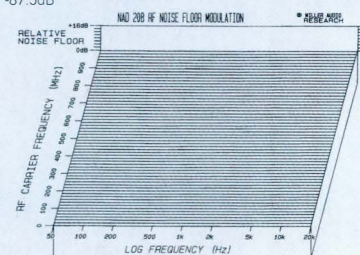
Response avoids problems with record warps; cut-off is quite severe.



The watts keep on coming, but distortion is held tightly in check.

TEST RESULTS

	20Hz	1kHz	20kHz	CCIR Intermod. Dist. (0dBW)
Maximum Continuous Power Output	317.6W	313.9W	302.8W	-95.5dB -86.5dB -73.6dB
8ohms	306.7W	317.4W	315.5W	(2/3 power) -91.5dB -85.4dB -71.4dB
4ohms				Noise (A wtd, 0dBW) -86.3dB -84.9dB -78.7dB
Dynamic Headroom (IHF)	+3.3dB	(671.3W)		(2/3 power) -103.7dB -91.7dB -80.3dB
Peak Current (5msec, 1% THD)		46.8A (I)		Residual noise (unwtd)
Output Impedance		0.024ohm		-71.7dBV-71.8dBV -71.6dBV
Damping Factor		338.9		Input Sen. (0dBW) (for full output)
	CD/Aux	MM	MC	17.2mV 255uV 17.2uV
Stereo Sep. (1kHz) (20kHz)	78.9dB 52.0dB	63.6dB 51.5dB	57.7dB 50.4dB	Disc Overload (1kHz) (20kHz)
Channel Balance (1kHz, -20dBV)	0.09dB 0.49dB	0.06dB 0.46dB	0.09dB 0.49dB	231mV 15.0mV 1983mV 142mV
Preamp Output/Imped. (0dBW)				(50kHz) 3715mV 294mV
Total Harmonic Dist. (2/3 power)	-98.6dB -95.1dB	-99.4dB -94.0dB	-88.7dB -87.5dB	Preamp Output/Imped. (0dBW)
				13.2V (disc) /221ohm
				Input loading
				21kohm/390pF 40kohm /200pF 25kohm
				DC offset, left/right
				+1.6mV/+2.4mV



RF filtering keeps spurious noise on the outside.

Quad 66/606



A decade slips by and another amplifier emerges from Quad, now with full remote control. Behind its slim fascia the 66 preamp is alive with the logic circuitry necessary to cope with its remote volume, balance and sophisticated 'tilt' tone controls.

Simplicity is the key here, for Quad's 66 is equipped with nothing more than two back-lit LC displays. The entire affair is extremely elegant, but would be rendered useless should the Modernist handset get lost down the side of an armchair.

By contrast the 606 power amp features substantial cast-alloy casework, a thumping great power supply and TO3-style Motorola transistors: the Current

Dumpers in Quad's tried-and-tested compound Class-A output stage.

Sound quality

Our blind panel readily identified the sound of this combination as 'Quad-like', because of its distinctively bland, soft and undemanding balance. Simple pop and jazz music seems confident enough but there's no sense of bite or excitement. Everything sounds so gratifying that the natural rawness and thrill of vocals, strings and percussion seem forcibly restrained.

Grand classical pieces also suffered. Whether via CD or MM disc, their bold dynamics became shapeless, and transparency and subtlety were sacrificed. This

is a soft and forgiving amp then, but hardly the stuff of hi-fi legend.

Conclusion

That this latest 66/606 combination will give years of sterling, trouble-free service is not in doubt. The reliability and after sales service offered by Quad is second to none. Unfortunately, the sound quality is predictable and safe to the point where blandness supercedes any hint of musical colour. So much for all competently designed amplifiers sounding the same!

Quad Electroacoustics Ltd, 30 St Peters Road, Huntingdon, Cambs PE18 7DB.
☎ (0480) 25261

Verdict

- Refined and powerful; quality engineering; advanced remote.
- Lacks sharp detail; Unlikely to cope with very tricky loudspeaker loads.
- **£840/£670**

SOUND QUALITY
■ ■ □ □ □ □
VALUE FOR MONEY
■ ■ ■ □ □ □

Laboratory Report

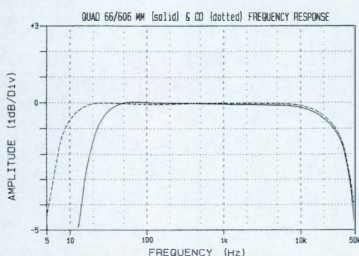
Bearing in mind Quad's reputation as a pragmatic engineering-based company, the technical performance of this 66/606 partnership is surprisingly mixed. On the one hand we have a low 0.007 per cent THD and 0.002 per cent IMD, the latter rising via the MM input and when driving lower (ie 4ohm) loads. Meanwhile the logic-controlled 66 yields a state-of-the-art channel balance together with superb signal to noise ratios.

However, although the output of the 606 seems beefy enough at 138W/232W (8/4ohm respectively), this is restricted at high frequencies by a severe waveform distortion. The 9A current rating is also inadequate for such a nominally powerful amplifier, and its broad sensitivity to spurious RF noise is quite poor (see plot).

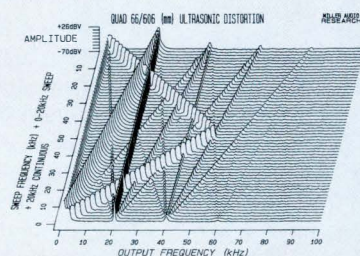
The 66 preamp suffers a low +20.5dB headroom (via disc) together with a weak 1.7V main output. This is sufficient to drive the sensitive 606 to full output but leaves little in reserve if required to manhandle an alternative power amplifier.

TEST RESULTS

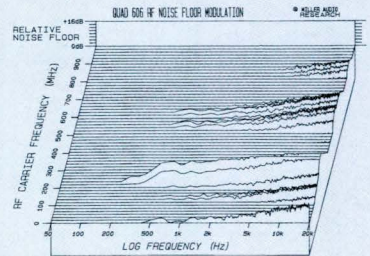
	20Hz	1kHz	20kHz	CCIR Intermod. Dist. (0dBW)	-88.1dB	-69.5dB
Maximum Continuous Power Output (2/3 power)	135.4W	137.8W	126.6W	(2/3 power)	-88.5dB	-69.3dB
8ohms	225.5W	231.8V	133.2W	Noise (A wtd, 0dBW)	-85.2dB	-84.6dB
4ohms				(2/3 power)	-100.6dB	-92.7dB
Dynamic Headroom (IHF)	+1.2dB (181.2W)			Residual noise (unwtd)	-71.2dBV	-71.3mV
Peak Current (5msec, 1% THD)	9.2A			Input Sen. (for 0dBW)	26.2mV	271uV
Output Impedance	0.018ohm			(for full output)	307mV	3.07mV
Damping Factor	433.6			Disc Overload (1kHz)		53.1mV
	CD/Aux	MM		(20kHz)		229.3mV
Stereo Separation (1kHz)	112.5dB	98.3dB		(50kHz)		231.0mV
(20kHz)	90.9dB	97.9dB		Preamp Output/Imped.	1.70V/disc/976ohm	
Channel Balance (1kHz, -20dBV)	0.04dB	0.02dB		Input loading	47kohm/220pF	
(-60dBV)	0.04dB	0.02dB			100kohm/400pF	
Total Harmonic Dist. (0dBW)	-82.9dB	-84.9dB		DC offset, left/right	+0.2mV/+0.3mV	
(2/3 power)	-82.8dB	-84.8dB				



MM input tailored to avoid warps, but CD extends into subsonic.



Innocuous 2nd and 3rd-order distortions dominate the spectrum.



Sadly the 606 is bruised by RF noise in many frequency bands.

Pre/power amps: conclusions, best buys and recommendations

This proved to be a very entertaining test, after all, taken at face value the NAD, Adcom and Quad combinations would appear to hit the audiophile nail on its head. All offer plenty of power for the price, include a wide range of input options and, importantly, are likely to provide years of trouble-free service.

But here lies the rub, for whatever the raw engineering value of these amplifiers, not one succeeded in painting a complete or satisfying picture in our listening tests. All may be satisfyingly bombproof, yet all three were dynamically restrained in the subjective battlefield. The weak bass of NAD's 1000S/208 failed to garner much enthusiasm just as the strained, hard and hurried performance of the Adcom left our panel in an agitated mood.

By contrast, the sheer lack of adventure demonstrated by Quad's 66/606 will not endear itself to any listener looking for a little life, atmosphere and electricity in his or her music. Neutrality is all well and good, but the Quad too often strays into lethargy. And it's this, rather than any lack of competence or good intent on the part of their construction, that lost all three of these contenders any chance of a *Hi-Fi Choice* Swingtag.

Recommendations

The remaining three pre/power amps were more fortunate, especially the Alchemist *Kraken* combination

How to Get the Best from your Pre/Power amplifier

- (1) Pre/power amplifiers will only reach their fullest potential once they've been left running for an hour or two. Some amps even require a 'breaking-in' period of a week or two from new. Always switch-on the preamp first followed by the power amp, keep both well ventilated and, if possible, leave both permanently powered-up. This should not reduce their life expectancy as most failures occur as the amps are switched on or off. If you do have to switch the amps off, remember to turn the power amplifier off before the preamp.
- (2) Experiment with positioning. Placing the power amp close to the speakers will enable very short lengths of speaker cable to be deployed. In this instance longer pre/power interconnects may be required but this will not prove troublesome for most preamps (look for a low output impedance, below 200ohm).
- (3) Nevertheless, do not let the quality of interconnect and speaker cables limit the performance of the amplifiers. Cables are not simply accessories, they are an integral part of the hi-fi system and can easily thwart the potential of either amp. Refer back to our recent cable guide (issues 108 and 109) for the full picture.
- (4) Experiment with placement and support. Most pre/power amps prefer not to sit on top of one another as the substantial mains transformer in the power amp can induce hum in the preamp, especially if it has a phono stage. Amplifiers appreciate good quality support as well, see our table supplement in the October issue.
- (5) Some manufacturers will tailor their CD inputs in a different way to the aux, tuner, video or tape inputs. Never connect a CD player to the MM/MC phono input of your amplifier but do experiment with the other line inputs. You never know, your CD player might sound better through a tape or tuner input.

which is hardly a model of conventional or compatible engineering. Its moving magnet disc stage employs an unusual Motorola IC, while the central preamp power supply comprises no less than 16 small-value reservoir capacitors. Furthermore, both pre and power amps are fed from separate AC power packs, making this a four-box combo with quirky aesthetics

to match. Nevertheless its coloured but very warm, bubbly and ingratiating sound is clear evidence of Alchemist's manipulation. This is no ordinary-sounding amplifier, it will inevitably fight shy of tricky speakers, but choose wisely and the *Kraken's* call will soothe your tired ears. A recommendation by the skin of its scales. Arcam achieved a much

bolder Recommendation with its latest *Delta 110S/120.2* combination, an amplifier with provision for both MM and MC phono cartridges, remote volume control, built-in DAC options and bridging to accommodate future upgrades in power. Clearly this is a very flexible duo even if its styling remains resolutely conservative.

Fortunately, its sound combines a marvellous sense of detail with very coherent and positive bass. There's a great sense of depth and scale too, ensuring the bold contrasts of grand classical recordings are realised without losing touch with the subtler elements. At times the taut, focused but slightly dry presentation can appear mildly clinical but then this same criticism was levelled at DPA's fabulous *200-Series*. The DPA proved to be a potent duet that, incidentally, marched confidently over its combatants in our test in addition to setting something of a reference in the sub-£2,000 category.

Indeed, compared to the disappointment of its bridged operation the standard two-box *DSP-200S/DPA-200S* proved something of a revelation. The power amp is not as tolerant of recalcitrant loudspeakers as Arcam's *D120.2* but the added transparency, rigid bass and searching insight of the most delicate tonal details marks it out as a rare if not unique combination. It will prove a cracking upgrade from the very best integrated models.

RECOMMENDED

Alchemist Kraken APD7/APD8 £395/£380 Class A number with warm and colourful sound; not the most accurate but very entertaining.

Arcam Delta 110S/120.2 £520/£550 Now in mkII guise, this combination is a very articulate and powerful, if dry sounding, amplifier.

DPA Digital DSP-200S/DPA-200S £495/£750 Modest power rating but DPA has dramatic, detailed and transparent sound quality.

Pre/Power Amplifiers: The Best of the Rest

Of the six combinations assessed here both the Arcam *Delta 110S/120.2* and DPA Digital *DSP-200S/DPA-200S* must rank as the most exciting. For those who want a warmer sound, and are prepared to experiment with speaker matching, the Alchemist *Kraken* pre/power is also worthy of a serious listen. Nevertheless, superb though they are, these red-hot numbers do face more than token competition



from home and abroad.

Those enthusiasts strapped for cash could do worse than seek out Rotel's *RC-960BX/RB-960BX* combination.

OK, so there's a slight fizziness and loss of composure about its music but with 80 very clean watts and a wealth of input options for just £350, who's quibbling? Above the £500 barrier there's the likes of QED's *C300/P300*, a combination that's getting long in the tooth but still capable of realising a very sweet and attractive sound.

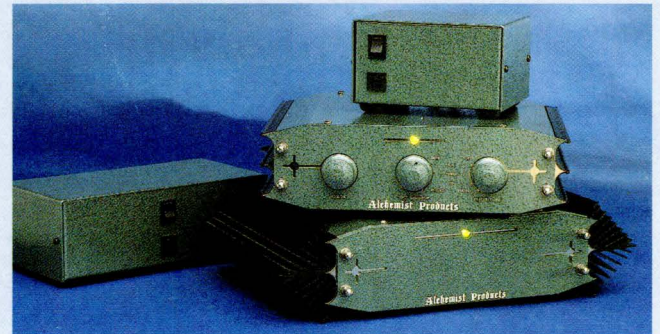


Otherwise, you've the very up-to-date *Preamp/Typhoon* duet from Musical Fidelity, one that dishes up a smaller but tightly focused and very controlled performance. Bridge the Typhoon, however, and its sound explodes into another dimension — bigger, bolder and endlessly entertaining.

Just as thrilling, though neither as bold in appearance or power output, is Moth's fascinating *Series 30*. This modular power amp, disc stage and passive pre adds up to just £530 but encourages a remarkably open, uncoloured and mercurial sound. You'll not discover a *Series 30* in every high street store, but the beautiful layering, the breathy vocals and sheer momentum of its bass is well worth a trek to any audio outpost.

Finally there is always the *Signature* combination from Heybrook, a tremendously dynamic and ruthlessly revealing amplifier worth every penny of its substantial £2,000 ticket. Where insensitive speakers or the sheer lust for power are determining factors, this capable duo will readily show DPA's *200-Series* a trick or two.

Then there's the wonder of tube amps, but that's another story.



Alchemist's *Kraken* combo; wild looks, entertaining sound.



Arcam's latest *Delta* pre/power has muscle and flexibility.

Swing tags

Products that make the grade are awarded *Hi-Fi Choice's* unique Best Buy or Recommended accolades. This sets them apart as being capable of a higher standard of fidelity than average, at a particular price point.

A product carrying the Best Buy swing tag is significantly better than the alternatives in its price band. It is of excellent quality and very good value for money. Watch out for this logo, it is your guarantee of quality.



Recommended products are also very good, but not in quite the same league as Best Buys. Despite being runners up, they are definitely worth considering, as they may prove to be more compatible when assembling a complete system.



HIFI & HOME CINEMA

BUY NOW PAY 1994
ON ALL AUDIO TV & LASER DISC

MARANTZ CD52II SE CD PLAYER
RECOMMENDED RETAIL PRICE £299
FIVE ★ BONUS £77
£22 CASH KICKBACK PLUS 5 YEAR COVER WORTH £55
AND NO DEPOSIT FINANCE OF 24 MONTHS AT £15.99 PER MONTH STARTING 1994

AUDIOLAB 8000A Integrated Amplifier
RECOMMENDED RETAIL PRICE £449
FIVE ★ BONUS £73
£33 CASH KICKBACK PLUS 5 YEAR COVER WORTH £40
AND NO DEPOSIT FINANCE OF 24 MONTHS AT £22.99 PER MONTH STARTING 1994

MERIDIAN 206 ΔΣ CD PLAYER
RECOMMENDED RETAIL PRICE £995
FIVE ★ BONUS £370
£300 CASH KICKBACK PLUS 5 YEAR COVER WORTH £70
AND NO DEPOSIT FINANCE OF 24 MONTHS AT £50.99 PER MONTH STARTING 1994

YAMAHA DSP A970 AV AMPLIFIER
RECOMMENDED RETAIL PRICE £799
FIVE ★ BONUS £110
£60 CASH KICKBACK PLUS 5 YEAR COVER WORTH £50
AND NO DEPOSIT FINANCE OF 24 MONTHS AT £40.99 PER MONTH STARTING 1994

DENON D110 Mini System
RECOMMENDED RETAIL PRICE £799
FIVE ★ BONUS £130
£60 CASH KICKBACK PLUS 5 YEAR COVER WORTH £70
AND NO DEPOSIT FINANCE OF 24 MONTHS AT £40.99 PER MONTH STARTING 1994

TECHNICS SC-CH 900 Mini System
RECOMMENDED RETAIL PRICE £799
FIVE ★ BONUS £230
£160 CASH KICKBACK PLUS 5 YEAR COVER WORTH £70
AND NO DEPOSIT FINANCE OF 24 MONTHS AT £40.99 PER MONTH STARTING 1994

PIONEER CLD1850 Laserdisc Player
RECOMMENDED RETAIL PRICE £570
FIVE ★ BONUS £123
£43 CASH KICKBACK PLUS 5 YEAR COVER WORTH £80
AND NO DEPOSIT FINANCE OF 24 MONTHS AT £29.99 PER MONTH STARTING 1994

PIONEER SDT 4000 40" Projection TV
RECOMMENDED RETAIL PRICE £3300
FIVE ★ BONUS £497
£247 CASH KICKBACK PLUS 5 YEAR COVER WORTH £250
AND NO DEPOSIT FINANCE OF 24 MONTHS AT £169.99 PER MONTH STARTING 1994

20% OFF LASERDISCS WITH THE FIVE ★ SAVERS CLUB

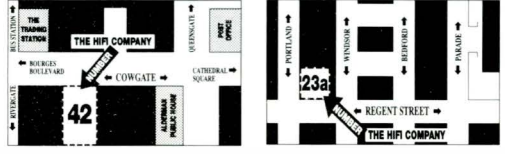
- BRAM STOKER'S DRACULAR RRP £160 FIVE ★ £128
- STAR WARS BOXED SET RRP £295 FIVE ★ £200
- BASIC INSTINCT New Wide Screen PAL Widescreen + Extras RRP £20 FIVE ★ £24
- EASTWOOD BOXED SET RRP £190 FIVE ★ £128

ABOVE IS JUST A SAMPLE OF WHAT WE CAN OFFER WHATEVER YOU WANT - WE'VE GOT THE LOT!!!

The HiFi Company

SOUND & VISION STUDIOS

42 COWGATE PETERBOROUGH Tel: 0733 341755 Open 10am - 5.30pm Mon - Sat
23a REGENT ST LEAMINGTON SPA Tel: 0926 888644 Open 10am - 6pm Mon - Fri 9-6 Sat



JOIN OUR CLUB AND GET £££s CASH BACK ON EVERY PURCHASE OVER £50 PLUS FREE 5 YEAR EQUIPMENT CARE COVER...

20 YEARS YES - The HiFi Company celebrates 20 years service to the Home Entertainment Enthusiast with the launch of the **FIVE ★ SAVERS CLUB**.
Once you've added up the savings we know you'll want to JOIN.
For starters why not take up our exclusive **FIVE ★ FINANCE PLAN** over 24 months you'll be fully protected and with our **FREE 5 YEAR CUSTOMER CARE PLAN** so will the equipment too. With the generous **CASH KICKBACK** you'll be even more better of - Its unbelievably TRUE.
Why hesitate when for only £50 annual administration charge you can start to enjoy a wealth of benefits straightaway. Just take a closer look.

Enjoy the Benefits of...

The HiFi Company
FIVE ★ SAVERS CLUB
100001 001
MR D BETHELL 06/94 EXPIRY

- ★ 5 YEAR CUSTOMER CARE PLAN** ON EVERY ITEM PURCHASED THROUGHOUT THE YEAR - ABSOLUTELY FREE!
- ★ 2 GENEROUS 'CASH KICKBACK' ON EVERY PURCHASE OVER £50**
- ★ 3 20% DISCOUNT OFF RRP, ON ALL SOFTWARE INCLUDING CDS, VIDEO MOVIES AND LASERVISION DISCS.**
- ★ 4 BI-MONTHLY 'BEST BUYS' EXCLUSIVE CLUB MAGAZINE - WITH GREAT OFFERS AND DOUBLE CASH KICKBACKS.**
- ★ 5 VIP INVITATIONS - TO ALL OUR SPECIALLY STAGED ACTIVITIES - EXHIBITIONS, PREVIEWS AND EVENTS.**

BEST BUY Throughout our stores and bi-monthly club magazine you will find extremely generous 'Best Buy Offers' with 'Double Cash Kickbacks'. This specially purchased or soon to be replaced equipment makes for a great buy.

1st CHOICE Look out for our '1st Choice' equipment and you will be selecting from Award Winning or Leading Technology equipment all of which carry our 'Single Cash Kickback'.

EXPERTRUST Experttrust Customer Care Plan protects your purchase giving you peace of mind and guaranteeing satisfaction for a Full 5 years. FREE REGISTRATION is just one of the benefits of the Five ★ Club membership.

FIVE ★ BONUS Our Five ★ Bonus information blocks show Five ★ Club Members full details of their Cash Kickbacks and the value of their FREE 5 Year Cover plus the terms of their special Five ★ Finance Plan should they require low cost finance.

Exclusive to Club Members
FIVE ★ FINANCE PLAN
NO DEPOSIT & 24 MONTHS TO PAY

Including full sickness, accident and redundancy protection. APR 19.5% * Subject to Status.
On purchases £200 plus. The HiFi Company are licensed credit brokers. Written details available on request.
Credit Example:
Marantz CD 52SE Store Price £299 Deposit £ Nil 24 Monthly Payments of £15.99 Total Credit Price at 19.5% APR £383.76 Cash Kick Back of £22 and Free 5 Year Warranty Worth £55 Still Applies.

SEND FOR MEMBERSHIP DETAILS & YOUR FREE 40 PAGE MAGALOGUE - OR PHONE 0733 344461

To: The HiFi Company Communications Ltd, FREE POST PE776, The Five Star Savers Club, Peterborough, PE1 1BR.
Please send me Club details and a Magalogue.
Mr/Mrs/Miss/Ms Initials
Name
Address
Postcode

HIFI TV & VIDEO

QUALITY USED
EXPERTRUST APPROVED

QUALITY USED EQUIPMENT WITH THE COMFORT OF A 12 MONTH ENGINEERS WARRANTY OR AN OPTIONAL 12 MONTH EXPERTRUST CUSTOMER CARE PLAN !!!

The HiFi Company Trading Station brings you the best in previously owned, quality hifi and home entertainment equipment - top brands, top models and top service from the region's most dedicated enthusiasts and all with the benefit of super deals and savings to members of The HiFi Company Five ★ Savers Club.

MAKE / MODEL

EQUIVALENT NEW GUIDE £££
TRADING STATION STORE PRICE £££
FIVE SAVERS £££

MAKE / MODEL	EQUIVALENT NEW GUIDE	TRADING STATION STORE PRICE	FIVE SAVERS
AMPLIFIERS			
Audio Innovations (series 300)	£499.00	£340.00	£306.00
Quad 33/303	£399.00	£199.00	£180.00
Nytech CA252	£129.00	£ 69.00	£ 62.00
Musical Fidelity A100	£399.00	£299.00	£269.00
Sumo Pre/Power	£1299.00	£549.00	£494.00
Beard (Integrated Valve)	£1100.00	£600.00	£540.00
Naim NAC42.5	£399.00	£ 175.00	£157.00
Revox T50 (Amp) New	£1099.00	£ 649.00	£584.00
CD			
Marantz CO 60SE	£350.00	£150.00	£135.00
Meridian 602/603 (mint)	£3500.00	£1995.00	£1795.00
Deltec DRA1 (DAC)	£1200.00	£395.00	£355.00
Micro Mega Logic	£500.00	£299.00	£269.00
CASS			
Pioneer CT93 (New)	£899.00	£599.00	£539.00
Nakamichi 700	£1299.00	£499.00	£449.00
Yamaha TC 800	£399.00	£199.00	£355.00
Teac X '000	£1999.00	£699.00	£629.00
TURNTABLES			
Linn Axis (mint)	£499.00	£340.00	£306.00
Linn LP12/5ME 3009II	£599.00	£195.00	£175.00
Roxsan Radius (New)	£625.00	£425.00	£382.00
Gyrodex/Tabriz/Ortonfon	£1270.00	£695.00	£625.00
AR EB 101	£299.00	£145.00	£130.00
Logic Deck	£399.00	£189.00	£170.00
Thoren 160S/Mission 774	£399.00	£149.00	£134.00
LOUD SPEAKERS			
Acoustic Energy AE1	£899.00	£599.00	£539.00
Bose 901 (incl Stands) mint	£1500.00	£795.00	£715.00
Rogers LS7T	£499.00	£295.00	£265.00
Rogers LS 3/5A	£449.00	£249.00	£224.00
Linn Index	£399.00	£245.00	£220.00
Musical Fidelity 2	£299.00	£149.00	£134.00
Mordaunt Short Signifier	£799.00	£399.00	£359.00
Celestion SL6	£299.00	£149.00	£134.00
Celestion Subwoofer Sys.(ExDem)	£1499.00	£999.00	£899.00
Mission 764i	£480.00	£249.00	£224.00
Diesis Solitaire	£299.00	£149.00	£134.00
Pro - AC Tablets	£389.00	£195.00	£175.00

A GUIDE TO BETTER BUYING

- NEW EQUIPMENT** = A price that is a guide to an equivalent new or alternative piece of equipment with similar specifications and quality.
- STORE PRICE** = Regular store price with normal 3 month engineer's warranty.
- FIVE SAVERS** = A special net price to Five ★ Savers Club members, including a full 12 month Experttrust Second User Warranty.
Our price includes a generous club cash kickback saving.

Phone or call in Now to find out more

There's lots more in-store but stock changes daily - so hurry now!

The HiFi Company

TRADING STATION

WE WANT IT!
BRING IN YOUR UNWANTED EQUIPMENT FOR CASH OR DOUBLE VALUE PART EXCHANGE VOUCHERS

PHONE IN AND WE WILL COLLECT
0733 891184

35 COWGATE PETERBOROUGH
Tel: 0733 891184 Open 10am - 5.30pm Mon - Sat

Dealer Guide

AVON

V'AUDIO 36 Druid Hill
Stoke Bishop
Bristol BS9 1EJ
Tel: 0272 686005

ATC, AVI, Acoustic Energy, Audio Innovations, Audio Technica, AMC, Analogue Electronics, Cadence Valve, Chord AMPS, Exposure, Goldring, Jamo, LFD, Lyra, Ortofon, Pink Triangle, Ruark, Michell, REL, Sansui, SME (inc. 20A), Sonic Link, Stax, Sumiko, Townsend, Wadia.

Demos by appointment only. Home trial facilities.
Free installations. Servicing facilities.
We are not a shop.

BUCKINGHAMSHIRE

Hazlemere Audio
CONSULTANTS

Our aim is to help music lovers get as close to the sound of the live performance as possible for the money they want to spend.



We only see customers by appointment, to ensure you get our complete attention.

To discuss how we can improve your enjoyment of music call us on

High Wycombe 0494 437892

ART AUDIO, BENZ, CONRAD JOHNSON, DYNAUDIO, KUZMA, LUMLEY, MICROMEGA, RESTEK, S. D. ACOUSTICS, WILSON BENESCH

ESSEX



Akai • Alphason • Arcam* • B&W • Bang & Olufsen • Bose • Celestion • Dual • Harman Kardon • Kenwood • Quad* • Marantz • Mordaunt-Short • NAD • Nakamichi* • Pioneer • Ruark • Sony • Wharfedale • Yamaha
* Epping and Saffron Walden only

148 HIGH STREET • EPPING • TEL: (0992) 574242
26 KING STREET • SAFFRON WALDEN • ESSEX • TEL: (0799) 523728
70 SOUTH STREET BISHOP'S STORTFORD • HERTS • TEL: (0279) 656401

BERKSHIRE

B&B Hi-Fi
Berkshire's Leading Specialist

Aiwa, Akai, Bang & Olufsen, Bose, B+W, Cambridge, Celestion, Denon, Dual, Heco, Heybrook, JPW, Kef, Kenwood, Marantz, Mission, Mitsubishi, Monitor Audio, Monster, Mordaunt/Short, NAD, Nagaoka, Nakamichi, Ortofon, Panasonic, Philips, Pioneer, QED, Quad, Revolver, Rogers, Rotel, Sennheiser, Sony, Tannoy, Target, Technics, TDK, Thorens, Wessex, Wharfedale, Yamaha.

Ask about FREE delivery & FREE installation

11-12 Market Place, Reading* Tel: 0734 583730
18 King Street, Maidenhead* Tel: 0628 73420
4 Priory Road, High Wycombe Tel: 0494 535910
62 North Brook Street, Newbury Tel: 0635 32474
Princess Square, Bracknell* Tel: 0344 424556

*DEMONSTRATION ROOMS

CAMBRIDGESHIRE

University Audio

Marantz Liquid Gold SC22
MA 24 Mono Blocks

Now on permanent demonstration
at

1 & 2 PEAS HILL
CAMBRIDGE CB2 3PP
TEL: 0223 354237 FAX: 0223 322079

GLOUCESTERSHIRE

Hutchinsons
TV • VIDEO • HI-FI

295 High Street, Cheltenham GL50 3HL
Telephone: 0242 573 012
AIWA, CELESTION, DUAL, KENWOOD,
MARANTZ, PIONEER, SENNHEISER,
TECHNICS, WHARFDALE.
FREE INSTALLATION SERVICE Dept

HAMPSHIRE

MANA • CASTLE • ALCHEMIST • ALBARRY • AUDIO INNOVATIONS
WADIA DELTEC • TUBE TECHNOLOGY

AUDIO GALLERY

NR PETERSFIELD HAMPSHIRE
MAIL ORDER CABINETS SUPPLIED TO ORDER IN ANY SIZE WOOD & HAND PAINTED FINISHES
STONE • GRANITE • MARBLE • SHELVING

HOME DEM ON DEM
WADIA 6, MICROMEGA CD3, TDL, SME, TEAC, VRDS 10, IMPULSE
BY APPOINTMENT ONLY

VALVE SPECIALISTS ON A SUPERIOR LEVEL
AUDIO ALCHEMY • TEAC • NAD • TRIPOD • ALPHASON • PIONEER • DENON

CHESHIRE

ASTON AUDIO HI-FI SPECIALISTS

ARCAM • CYRUS • DENON • AUDIOLAB • MERIDIAN • YAMAHA • MISSION • B&W • AND MANY MORE

4 WEST STREET, ALDERLEY EDGE, CHESHIRE
TEL: 0625 582704

DISCOUNT CD & TAPE
EXTENDED GUARANTEE
INTEREST FREE CREDIT
VISA / ACCESS

C.F. LAKE

FOR BETTER HI-FI
IN THE THAMES VALLEY

Agents for:

TECHNICS, KENWOOD, ROTEL,
NAKAMICHI, B&W, MORDAUNT SHORT,
SONY, PANASONIC, MITSUBISHI, PHILIPS,
AIWA, J.V.C., WHARFDALE, INFINITY

FREE DELIVERY • DEM ROOMS AT*

252/254 High Street, Slough SL1 1BN (0753) 538288*
117/119 Oxford Road, High Wycombe HP11 2DN (0494) 528605*
9 Market Street, Aylesbury HP20 2PN (0296) 25119*
11 West Street, Marlow, Bucks SL7 2LF (0628) 483555
83 High Street, Maidenhead, Berks SL6 1JX (0628) 778611
20 Chequer Street, St. Albans, Herts AL1 3YD (0727) 834046*
H.C. WHEATLANDS
85-89 Chiswick High Road, London W4 2EF (081) 994 2464

CUMBRIA

Peter TYSON LEADING HI-FI SPECIALIST

Demos and Part Exchange Welcome
6 ABBEY STREET, CARLISLE 46756

HERTFORDSHIRE

ENGLISH audio

CYRUS CENTRE
PINK TRIANGLE • AUDION • SYSTEMDEK • HEYBROOK
MICH • KEF • REFERENCE • MICROMEGA • NAKAMICHI
CHORD • ARCAM • MUSICAL FIDELITY • ROGERS • NAD
ROTEL • DENON • TANNOY • MARANTZ • MISSION
STAX • DUAL • TDL • ALBARRY • JPW • CELESTION • IXOS
SME • RUARK • MOTH • AUDIO TECHNICA • AND OTHERS

MONDAY - SATURDAY 10-8
95 WHITECROSS ROAD, HEREFORD, HR4 0DG. TELEPHONE 0432 355081

BUCKINGHAMSHIRE

THE SOUND GALLERY

BUCKINGHAMSHIRES
PREMIER HI-FI DEALER

Arcam, Denon, Linn Products, Naim Audio, Meridian, Rotel, Yamaha, NAD, Quad, Tripod, Nakamichi, Rega, Creek, Epos, Mordaunt Short, Celestion, Marantz, Mission, Cyrus, etc . . .

65 Castle Street, High Wycombe,
Buckinghamshire.

Open Monday - Saturday
0494 531682 / 464670

EDINBURGH

RUSS ANDREWS HI-FI

34 Northumberland Street, Edinburgh.
Telephone: 031 557 1672

Linn, Naim, Rega, Arcam, Rotel, Marantz,
Nakamichi, Quad, Creek, Yamaha.

Demonstrations.

Open 10.5.30. Mon-Fri, 10-5pm Sat.

Hi-Fi City

Aiwa, Arcam, Aura, Bose, B&W, Canon, Cerwin Vega, Denon, Jamo, JPW, Kenwood, Marantz, Mission, NAD, Philips, Pioneer, Rogers, Rotel, Sennheiser, Tannoy, Target, Technics, Thorens, Wharfedale.

0% CREDIT AVAILABLE • FREE LOCAL DELIVERY
12 YEARS SOUND ADVICE LASERDISC

FRIENDLY PROFESSIONAL ADVICE
WATFORD (0923) 226 169
15 CHARTER PLACE, HIGH STREET, WATFORD

Classified

Dealer Guide

HUMBERSIDE

Lend us your ears and we'll blow your mind . . .

Audio Innovations, B & W, Celestion, Cyrus, Denon, Inca Tech, Kenwood, Kef, Marantz, Michell, Mission, Meridian, Mordaunt-Short, NAD, Nakamichi, Philips, Pioneer, Panasonic, Quad, Revox, Rotel, Sony, Tannoy, Technics and more.

Audition the very best at South Humberside's premier Hi-Fi dealer . . .

MANDERS
HI-FI LTD.

2-4 EDWARD STREET (Off Pasture St.)
GRIMSBY. TEL: (0472) 351391

KENT

KIMBERLEY HI FI

A Sound Investment

SEPERATE DEMONSTRATION ROOM
BRANDS STOCKED: DENON TECHNICS KENWOOD AIWA NAD DUAL
WHARFEDALE MISSION MARANTZ SPKS TANNOY CASTLE MONITOR
AUDIO HECO JAMO CERWIN VEGA CELESTION ROTEL

SOUTH LONDON'S AND NORTH KENT ONLY



193 BROADWAY, BENLEYHEATH, KENT Tel: 081 304 3272

LONDON

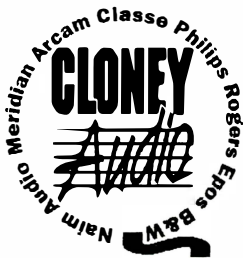


ZEBRA

081 688 2093/2491
18 BRIGHTON ROAD
SOUTH CROYDON

IRELAND

We Never Compromise On Quality



55 Main St Blackrock Co Dublin Tel 2889449/2888477
Fax 2834887 - Open Tue/Sat 10am-6pm. Thur/Fri 'till 9pm
Closed Monday

LANCASHIRE



HI-FI SPECIALIST

■ TECHNICS ■ SONY ■ PIONEER
■ PANASONIC ■ KENWOOD ■ DUAL
■ AIWA ■ CASTLE ■ QUAD ■ B&W

■ MARANTZ ■ SPENDOR ■ THORENS ■ ARCAM ■ ROTEL
■ WHARFEDALE ■ DENON ■ YAMAHA ■ TANNOY
■ PHILIPS CD ■ CELESTION ■ ROGERS ■ MORDAUNT SHORT
■ MONITOR AUDIO ■ JPW ■ TDL ■ AND MANY MORE

BIG DISCOUNT • TWO YEAR GUARANTEE ON HI-FI
EXCELLENT COMPARATOR DEMONSTRATIONS
PRIVATE LISTENING ROOM • FREE HOME INSTALLATION

CHORLEY (0257) 271935

54 Chapel Street, Chorley



350 Edgware Road
London W2
Tel: 071-402 2100
Fax: 071-724 7750

AIWA, AUDIO INOVATIONS, AUDIO QUEST, ARCAM, ALPHASON, B&W
CASTLE, CELEF, DALI, DENON, DUAL, FURUKAWA, HARMAN KARDON,
INFINITY, JBL, JPW, KENWOOD, HEYBROOK, MARANTZ, MISSION, MONITOR-
AUDIO, MUSICAL FIDELITY, NAKAMICHI, ORTOFON, PIONEER, QED,
REVOLVER, ROGERS, ROTEL, SERWIN VEGA, SONY, TANNOY, TARGET, TEAC,
TECHNICS, THORENS, WHARFEDALE, VAN DEN HUL, YAMAHA.

**WELCOME TO LONDON'S MOST
EXCITING SPECIALIST HI-FI STORE**

5000' of basement showrooms with 8 Listening Rooms

Open until
7pm every
weekday



Worldwide
Personal
Exports

A BADA
Bonded
Store

Audiophile
Recommended
Dealer

227 TOTTENHAM COURT RD., LONDON W1P 0HX
Tel. Help Line 071 580 3535 - 24 Hour Fax 071 436 4733

MANCHESTER



30-32 SHUDEHILL,
MANCHESTER M4 1EY
TELEPHONE 061 834 6700

Main Agents for:

JBL, Mission, B & W, Wharfedale,
Aiwa, Teac, Dual, Thorens, Panasonic,
Pioneer, Technics, Sony, Bose,
Trio-Kenwood.

KENT



B&W, Bose, Dual, Kenwood,
Marantz, Pioneer, Philips, Sony,
Tannoy, Technics.

*Dem Room facilities * 0% credit
* Service Department * Free Installation
PIONEER REFERENCE POINT DEALER
83B High Street Gillingham (0634) 573141
117 Week Street Maidstone (0622) 661488

LEICESTERSHIRE

SOUND ADVICE

THE MIDLANDS LEADING
BRITISH EQUIPMENT
SPECIALISTS,
FOR OVER A DECADE

NAIM • LINN • MICROMEGA • MISSION
CYRUS • ROYD AUDIO • REVOX
• SENNHEISER • ROTEL • YAMAHA
• NAKAMICHI • EPOS • CREEK • REGA • JPW
• ARCAM • MERIDION • MORDAUNT-SHORT

EXCLUSIVE REGA AGENT:
LEICESTERSHIRE & NOTTINGHAMSHIRE
TEL LOUGHBOROUGH : 0509 218254

WEST MIDLANDS

ELECTRO CENTRE

244 SOHO ROAD, HANDSWORTH, BIRMINGHAM
TEL 021 554 1878 & 523 2426

FULL RANGE OF HI-FI

PIONEER, TECHNICS, AKAI,
KENWOOD, JVC, SONY, AIWA,
Guaranteed the lowest price in the UK.
24 Hour Mail Order Facility Available

Classified

Dealer Guide

WEST MIDLANDS

Norman H. Field *Hi-Fi*

Consultants for Home High Fidelity

- B & W ■ Thorens
- Denon ■ Tannoy
- Castle ■ Yamaha
- Dual ■ Kenwood
- Mordaunt-Short
- Technics

NAD

Two-year guarantee
Private Listening Rooms

HURST STREET
BIRMINGHAM B5 4BJ
Telephone: 021-622 2323

NOTTINGHAMSHIRE

NOTTINGHAM ANALOGUE STUDIO

NAS Here we can offer you what we consider the ultimate in domestic musical reproduction.
CROFT • ALBANY • EAR • TUBE TECHNOLOGY • MENTOR • ETC
0773 762947

NORTH WALES

ACTON GATE AUDIO

THE HI-FI CENTRE IN
WREXHAM

Albany, Aiwa, ARCAM, Audio Technica, B&W, Cambridge, Celestion, Cyrus, Hafler, Marantz, Michell, Mission, Musical Fidelity, NAD, Nakamichi, Ortofon, Proton, Quad, Radford, Rega, Rogers, Rotel, Ruark, Sansui, Spendor, Teac, Tannoy, Thorens, UKD, Wharfedale, Yamaha, etc...

4 RUABON ROAD, WREXHAM
TEL: 0978 364500

OXFORD

o v e r t u r e

arcam	meridian
cyrus	mission
denon	naim audio
epos	nakamichi
heybrook	quad
linn products	yamaha



3 Church Lane, Banbury, Oxon
(0295) 272158



YORKSHIRE

LINN NAIM REGA ARCAM QUAD DENON YAMAHA
AUDIOLAB CASTLE HEYBROOK NAKAMICHI
MARANTZ KEF TARGET ACOUSTIC ENERGY



send for our
newsletter &
privilege club
details

SOUND STYLE

THE HI-FI EXPERTS

284 Glossop Road Sheffield S10 2HS
tel 0742 737893

81 Nether Hall Road Doncaster DN1 2QA
tel 0302 321421

SHROPSHIRE

SHROPSHIRE HI-FI THE HI-FI AND AUDIOVISUAL SPECIALIST

AUDIO TECHNICA, DELTEC, DENON, DUAL, INFINITY, KENWOOD, MARANTZ, MORDAUNT SHORT, MUSICAL FIDELITY, MONITOR AUDIO, ORTOFON, PIONEER, PROAC, QED, ROTEL, SONY, E S, TANNOY, TARGET, TEAC, THORENS, TOWNSHEND, WHARFEDAILE, ETC.

2 Demonstration Rooms, Free Parking,
Free installation, Repairs, Credit Available.

SHROPSHIRE HI-FI, ST. MICHAEL'S STREET,
SHREWSBURY 0743 232065

SMC GROUP

Moorgate Acoustics Hi-Fi



Frustrated and confused?

Call in and get some help and advice from a company that cares enough about its customers to put them first.
184 Fitzwilliam St., Sheffield. Tel: (0742) 756048
8 Westgate Chambers, Rotherham. Tel: (0709) 370666

SUSSEX

WORTHING AUDIO

20 Teville Gate, W. Sussex. BN11 1UA Tel: (0903) 212133

The friendly shop with the best sound systems in the South.

Friendly advice • 3 yr guarantees • easy parking
Open Mon-Sat 10am-6pm Late night Wed 7:30pm

Agencies include: Arcam, Exposure, JPW, Naim Audio, Marantz, Orelle, Origin Live, Ruark, Audio Technica, Target, TD, Tripod, and many more.

WEST YORKSHIRE

Audiovision (Brighouse) Ltd

PERSONAL SERVICE FOR OVER 35 YEARS
YORKSHIRE'S EXPERTS FOR TECHNICS & PANASONIC
SPECIALIST MAIN AGENTS - SALES - SERVICE

Technics

THE LARGEST RANGE OF TECHNICS HI-FI SYSTEMS,
CD PLAYERS & SEPARATES IN YORKSHIRE

Panasonic
PHILIPS
YAMAHA

NICAM TV, SATELLITE & AUDIO
— VHS VIDEO & CAMCORDERS —
HOME OFFICE COMMUNICATIONS

— WIDESCREEN TV & VIDEO —
CD-INTERACTIVE & LASER DISC PLAYERS

— CINEMA DSP —
DOLBY PRO-LOGIC SURROUND AV CENTRE

CASTLE, MORDAUNT-SHORT, BOSE, TD, CERWIN-VEGA & AIWA HI-FI

Comprehensive in-store after sales support.
We make comparison easy - Call Now! - Access Visa

0484 713996

1 Mile From Junction 25, M62
5, BETHEL ST. BRIGHOUSE, W. YORKS. HD6 1JR

NORFOLK



Near Norwich
Norfolk.
Tel: (0508) 70829

Basically Sound of Norfolk

STOCKISTS OF LEADING HI-FI

Arcam, Linn, Naim, Rega, Dichi, Audiolab, Creek,
Epos, Denon, Nakamichi, Acoustic Energy.

WEST SUSSEX

PHASE 3 HI-FI

THE SOUTH'S LEADING HI-FI SPECIALISTS

Listening Rooms • Dedicated 'Home Cinema' Demonstration Room
ADCOM • ARCAM • B&W-MATRIX • CASTLE • CELESTION • CREEK • DENON • HEYBROOK • KEF • REFERENCE • KENWOOD • LEXICON • MARANTZ • MERIDIAN • MONITOR AUDIO • MUSICAL FIDELITY • NAD • NAKAMICHI • SHEARNE • SPENDOR • TANNOY • THORENS • YAMAHA • including all Home Cinema products

215 TARRING ROAD, WORTHING, WEST SUSSEX BN11 4HW
TELEPHONE: (0903) 245577

Classified

Sound ACADEMY

THE MOST EXCLUSIVE INDEPENDENT HI-FI STUDIO

The internal atmosphere and easy access makes it so much more exciting choosing your hi-fi from the finest audio products available.

Just off the High Street, Bloxwich, Walsall, West Midlands.
(Ample free parking)
(OFF M6 JUNCTION 10)

Tel: (0922) 493499-473499
Just call in or phone Richard or Dorian for a demonstration.

EST 1981

ALBARRY • ACOUSTIC ENERGY • ARCAM • ART AUDIO • AUDIOLAB • AUDIO ALCHEMY • AUDIO QUEST • B&W • BOSE • CABLE TALK • CHORD • CYRUS • DPA • ENSEMBLE EPOS • INFINITY • JPW • KEF REFERENCE • MARANTZ • MERIDIAN • MICROMEGA MISSION • MOTH • MUSICAL FIDELITY • NAKAMICHI • ORTOFON • PROJECT • QUAD ROKSAN • ROGERS • ROTEL • SPENDOR • SUMIKO • SYSTEM DEK • TD • THORENS TRIANGLE • TUBE TECHNOLOGY • VAN DEN HUL • VANDERSTEEN • YBA • SONIC LINK • TRIANGLE • INFINITY • SPENDOR

Dealer Guide

WEST MIDLANDS

MUSIC MATTERS
THE AUDIO SPECIALISTS
for the most exciting range of equipment available in the Midlands which includes:

Aiwa, Alphason, Apollo, Arcam, Audiolab, Audioquest, Audio-Technica, B&W, Bever, Canon, Celestion, Chord, Cyrus, Deltec, Denon, Dual, Epos, Exposure, Harman Kardon, Heybrook, Infinity, KEF, Luxman, Marantz, Meridian, Michaelson Audio, Michell, Micromega, Mission, Monitor Audio, Monster, Mordaunt Short, Musical Fidelity, Nakamichi, Panasonic, Pink Triangle, Pro-Ac, Revolver, Revox, Rogers, Roksan, Rotel, Royd, Ruark, Sansui, Sehnheiser, Shure, SME, Sritwire, Systemdek, Target, Technics, Thorens, Wharfedale, Yamaha, etc. Full servicing facilities available

INTEREST FREE
(for Limited Period) APR 0%. Written details on request. Licensed Credit Broker.
VISA • ACCESS • SWITCH

351 HAGLEY ROAD, EDGBASTON, BIRMINGHAM B17 8DL
TEL: 021-429 2811 FAX: 021-434 3298
156-157 LOWER HIGH STREET, STOURBRIDGE, WEST MIDLANDS
TEL: 0384-444184

OPENING TIMES
Tues-Thurs 10.30-6.00
Friday 10.30-8.00 Saturday 10.30-5.00
Demonstrations by Appointment

HAMPSHIRE

Main agents for

naim audio

- ✓ 0% Interest Free Credit
- ✓ Three year guarantee
- ✓ Home trial
- ✓ All Hi-Fi installed in home
- ✓ Friendly ordinary guys

207 Solent Business Centre, Millbrook Road West, Southampton SO1 0LW. Telephone: (0703) 511030

Specialist Services & Manufacturers

Klipsch
HORN LOUDSPEAKERS
UK DISTRIBUTOR
021-430 7817
A LEGEND IN SOUND KLIPSCH AND ASSOCIATES INC

TRADE SALE

CHRIS BROOKS AUDIO
SPECIALIST HI-FI DEALER

Ex demo/2nd hand clearance
LINN • EXPOSURE • REGA • ROTEL
ROKSAN • ION SYSTEMS • ROYD
CREEK • AIWA • RADFORD • ETC.

WARRINGTON
29 GASKELL STREET, STOCKTON
HEATH, WARRINGTON WA4 2UN.
TELEPHONE: 0925 261212

Arcam Delta 170 Oblique Black Box II	£650.00
Exposure 15 Integrated Amplifier	£450.00
Exposure 8 power amplifier	£275.00
Ion Nexus SP1 pre-amp	£175.00/£117
1 Linn Axis/Akito/K9	each at £500.00
Linn LK280 Oblique Spark	£650.00
Linn Nexus Loudspeakers	£400.00
1 Linn Powertek Amplifiers	each at £325.00
Manticore Mantra Oblique M8 Turntable	£299.00
Manticore Mantra Electronic Oblique M8	£375.00
Monitor Audio 552 Loudspeakers	£200.00
Ruark Broadsword Loudspeakers	£350.00
Roksan Darius Speakers/Stands/Crossover	£1,250.00
Roksan Radius/Tabriz/Corus Blue	£499.00
Roksan ROK-DP1 CD Transport/ROK-DA1 D-A Converter	£1,250.00
Roksan Xerxes/Tabriz, Corus Black	£850.00
Roksan Xerxes/Artemiz/Shiraz/Artaxerxes	£1,350.00

SPECIAL OFFER
Linn Activity Kaber System, includes
Kabers/Stands/Crossover/3 LK100 amplifiers.....only £3,000.00

SERVICING

SOUNDS AROUND

Professional Service Repairs
and Accessories

Agent for Golden Dragon Valves

146 Clarendon Park Road, Leicester
Telephone: Leicester 702442

VALVES

VALVES/TUBES FROM WEST EUROPE

Please note supplies to dealers, manufacturers and distributors only - minimum export order £200 GBP/\$350 USD. Minimum UK order £50 plus VAT.

- Limited stocks of West European made 6L6GC, 12AT7, 12AU7, 12AX7, 2116E, ECC81, ECC82, ECC83, EL34, EL84, KT66, KT88, VT4C by G.E.C. Mullard, Brimar, Tungram, etc. We probably have the largest stocks of West European manufactured valves in the world.
- Low cost, large volumes available from Russia/East European factories.
- One million valves/tubes in stock including cathode ray tubes, tube sockets, etc.
- DG7-32 C.R.T. (for Marantz tuner) £24.00 each. 200 in stock. Discount for quantity.

Send today for our updated audio valve catalogue

Billington Export Ltd
1E Gilmans Industrial Estate, Billingshurst, Sussex RH14 9EZ, UK.
CALLERS STRICTLY BY APPOINTMENT ONLY
FAX: (0403) 783519. TEL: (0403) 784961

TRADE SALE

ALEMA UK LTD

AUDION
EST. 1987

Triode Amplifiers

Triode & Tube Amplifier
Manufacturers

"Probably the best amplifiers
in the world"

**Phone for your nearest
stockist: (0273) 202 637**

Prices ranging from £399 - £35,000

Audiophile Cartridges, Orfoton
MC3000II, MC2000II, Quasar,
Audio Technica AT-ART1,
ATOC30.

I also supply:
Denon, Shure & Goldring

Phone/write for
exchange/discount prices
& reviews.

IAN HARRISON
7 Mill Hill, Repton, Derby.
Tel: (0283) 702875

To find out more about advertising in the finest
Hi-Fi magazine in the world, call Emma Sherry
on (071) 631 1433 ext 7643

Classified

Choosing a good hi-fi dealer is the most vital step in acquiring the system that is right for you. This unique directory gives full information on dealers able to help in your area.

DEALER Directory



Members of the British Audio Dealers Association are able to offer:

- Two year guarantee, transferable to another BADA dealer should the purchaser move more than 30 miles from his/her original address
 - low cost five year guarantee option
 - proper demonstration facilities
 - seven day exchange or refund scheme if the dealer's advice is taken on product selection
 - fully guaranteed service work
 - customer complaints procedure in the event of problems
- For more information, contact BADA on ☎ (071) 226 4044**

AVON

AUDIO EXCELLENCE, 65 Park Street, Bristol. (0272) 264975. Great hi-fi carefully selected and demonstrated by friendly enthusiastic staff. Closed Mon.

PAUL GREEN HI-FI LTD, Kensington Showrooms, London Road, Bath. (0225) 316197. Musical Fidelity, Krell, Creek, Rogers, Quad, Yamaha, Rotel, Aiwa, Marantz, AVI. Cust. car park. Best selection in the West.

V AUDIO, 36 Druid Hill, Stoke Bishop, Bristol B59 1EJ. (0272) 686005. ATC, AVI, Acoustic Energy, Audio Innovations, AMC, Analogue Electronics, Cadence Valve, Chord Amps, Exposure, Jamo, LFD, Pink Triangle, Ruark, Michell, REL, Sansui, SME (inc20A), SonicLink, Stax, Townshend, Wadia. Dens by appt only, home trial facilities, free installation, service facilities.

BERKSHIRE

ARC AUDIO, 9 Dukess Ride, Crowthorne, Berks, RG116L2. (0344) 762201. Denon, Harman Kardon, JPW, Marantz, Monitor Audio, Onix, Rogers, Tannoy, Thorens, Yamaha. Demo facilities, no appt necessary, home trial facilities, free install. Access, Visa, Diners. Open Mon-Sat 9-6pm (closed Wed at 1pm)

B&B HI-FI, 11-12 Market Place, Reading, Berkshire, RG1 2EG. (0734) 583730. Aiwa, Denon, Kenwood, Mission, NAD, Panasonic, Pioneer, Rotel, Sony, Technics. Free installation, Service dept. Access, Visa, Credit Facilities including interest free credit subject to status. 9.30-5.30, Sat 9-5.30. Also at: Bracknell, Maidenhead, High Wycombe, Newbury. **NEWBURY AUDIO**, 2 Weavers Walk, Brook Street, Newbury, Berkshire, RG13 1AL. Tel/Fax (0635) 33929. Audiotech, Creek, Denon, Epos, J.P.W., Linn, Marantz, Micromega, Ruark, Tripod. Full demonstration facilities. Home trial, Free install, and delivery. Service and parts dept on site. Various financial facilities available. Open 10-5.30 Mon-Sat.

READING HI-FI CENTRE, 4 Queen's Walk, Reading RG1 7QF. (0734) 585463. 'The best equipment, advice and service from Berkshire's premier Hi-Fi emporium'.

BUCKINGHAMSHIRE

AUDIO INSIGHT LTD, 53 Wolverton Rd, Stony Stratford, Milton Keynes. (0908) 561551. Arcam, Audiolab, Heybrook, Ion, Linn, Meridian, Quad and more. Access, Visa, Finance, Dem. Room etc. **DEJAC HI-FI CONSULTANTS**, 21 The Broadway, Old Amersham, Bucks, HP7 0HL. Tel 0494 433173. AMC, Arcam, Bose, Meridian, Quad, Rotel, Denon, NAD, Tannoy, Mission, TDL. 2 Dem Rooms. Appts Necess. Free installation. Tricity Finance, Instant Credit, Open 9:30-5:30pm including Sat.

D.L. CHITTENDEN LIMITED, 59-61 The Broadway, Chesham, Bucks, HP5 1BX. (Opposite Boots). (0494) 784441 Philips, Aiwa, Denon, Kenwood, Canon Audio, Koss, Wharfedale, Nicam, TV & Video, Surround Sound, AV Systems. Showroom Demonstrations from expert and friendly staff. No appts nec. Service Department. Credit facilities available. Open 8.30 to 17.30 Mon-Sat. **TECHNOSOUND**, 7 Granville Square, Willen Centre, Milton Keynes. (0908) 604949. Also at Luton and Dunstable.

CAMBRIDGESHIRE

AUDIO FILE, 2 Foundry Walk, Market Hill, St. Ives, Cambridgeshire. (0480) 66123. Naim, Rega, Quad, Yamaha, Mission, Arcam, Denon, Audio Lab, Meredion, JPW. Musical Fidelity. 9.30am-6pm 6 days. 0% Credit.

STEVE BOXSHALL AUDIO, 41 Victoria Rd, Cambridge CB4 3BW. (0223) 68305. 10-6 - 6 days. 3 dem rooms, home trial, appts. preferred. Free installation and service dept. Access, Visa & credit.

UNIVERSITY AUDIO, 1-2 Peas Hill, Cambridge. (0223) 354237. Mission-Cyrus, Arcam, Rotel, Denon, Meridian, Ruark, ATC, AVI, Quad. 3 dems, 1 single speaker. Home trial, free install, Service Dept. Visa, Access, Amex, Credit. 9-5.30.

CHESHIRE

ASTON AUDIO, 4 West St, Alderley Edge. (0625) 582704. Wide range of specialist audio, interest free credit. Visa, Access. Home trial.

DOUG BRADY HI-FI, Kingsway Studios, Kingsway North, Warrington. (Padgate 0925) 828009. 'Largest choice of specialist Hi-Fi in N.W.' All credit cards. 3 Dem rooms. Open 6 days.

CHRIS BROOKS HI-FI, 29 Gaskell St, Stockton Heath, Warrington. (0925) 261212. Tues-Sat 10-6. 2 dem rooms. Credit facilities. All credit cards. Total absence of bull****.

CONGLETON HI-FI, 1/1a Duke St, Congleton, Cheshire, CW12 1AP. (0260) 297544. Acoustic Energy, Arcam, B&W, Denon, Epos, Linn, NAD, Nakamichi, Onix, Royd, Target, etc. Superbly appointed single speaker demo facilities. No appts nec, home trial facilities, free installation. 2 year guarantee on all equipment. Access, Visa. Credit facilities available on request. Open Mon-SAT, closed Weds.

NORMAN AUDIO, 106 Victoria Str, Crewe. (0270) 211091 Fx (0270) 211795. For full details see our Lancashire entry.

PETERSHI-FI, 4 St Michaels Sq, Grosvenor Precinct, Chester. (0244) 322063/319392. Arcam, Technics, Sony, Marantz, Dual, Denon, Tannoy, Wharfedale, Quad. 2 Single speaker Dem rooms, no appts nec, free installation service dept. Access, Visa, Amex. Peters credit chargecard. Mon-Sat 9-5.30.

THE HI-FI SHOWROOMS, 12A West Str, Congleton, Cheshire (0260 280017), 1 Stanley St, Leek (0533 383780), Celestion, Creek, Exposure, Marantz, Musical Fidelity, Pink Triangle, Project, Rotel, Ruark, Systemdek, Tannoy, Technics. 5 Demo Rooms, No appts nec, Home trial, Free install, Service dept. Access, Visa, Lombard Tricity. Open 9-5:30, Closed Wed.

SWIFT HI-FI, St Annes Parade, Willmslow. (0625) 526213. Aura, B&W, Denon, Kenwood, Marantz, NAD, Pioneer, Rotel, Systemdek, Tannoy, Revolver, JPW. Open 9:30am-6:00pm dem room. No pressure!

CLEVELAND

ACTION ACOUSTICS, 155-157 High Street, Redcar, Cleveland TS10 3AN. 0642 480723. Audio Innovations, Denon, Harman-Kardon, JBL, Michell, Musical Fidelity, Pink Triangle, Revox, Rogers, Thorens, etc. Dem Room. Appts nec. Home trial

facilities, free installation, service dept. Access, Visa & H.P. Open 9.15-5.30.

GILSON AUDIO LTD, 172 Borough Road, Middlesbrough. (0642) 248793. Linn, Exposure, Arcam, Mission, Cyrus, Denon, Marantz, Rotel, Pioneer, Audiolab, Tannoy. Demonstration facilities in main shop and 1 dem. room, appt nec, home trial facilities, free install. on request, service department. Access, Visa, HP. 10-5-6 days.

CORNWALL

ART OF MUSIC, Near Launceston, Cornwall. (0566) 86649. AC Magnum, Basis, CAT, Cogan Hall, Diamond Acoustics, Graham, Lumley Reference, Magnum Dynalab, Moth, REL, Silver Sounds, Sonic Link, Transfiguration. Dem studio appointments necessary, home trial facilities, & free installation. Open 7 days.

RJF Audio Visual, 84 Pendarves Str, Tucking Mill, Camborne, Cornwall TR14 8NJ. (0209) 710777/612260. TDL, Michell, Musical Fidelity, NAD, Nakamichi, Bower & Wilkins, SME, Micromega, Pink Triangle, Pro-jekt, Perception, Harman Kardon, Triangle. Integral Demo room/showroom and special home dems. Appts nec, home trial, free install, service dept. All cards, switch and transax. Open Mon-Sat 9.30-5.30.

CUMBRIA

MISONS SOUND & VISION, 11 Warwick Road, Carlisle CA1 1DH. Tel (0228) 22620. Bang & Olufsen, Arcam, Quad, NAD, Yamaha, Sony. Demo Suite, No appts nec, Home trial facilities, Free installation, Service Department. 9-5:30 Mon-Fri. Thurs 9-1. Sat 9-5.

PETER TYSON, 6 Abbey St, Carlisle, Cumbria, CA3 8TX. "Cumbria's premiere hi-fi centre". Part exchange welcome. (0228) 46756. Linn, Musical Fidelity, Cyrus, Marantz, Denon, Philips, Nakamichi, Technics, Pioneer, Creek & more. Dem room. Dens without obligation. Home trial, Free install. In-house service dept. Access & Visa. HP 9-5.30pm.

DEVONSHIRE

CHELSTON HI-FI, 38 Walnut Road, Chelston, Torquay, Devon TQ2 6HS. Tel: (0803) 606863. Denon, Marantz, Rotel, Musical Fidelity, Acoustic Energy, NAD, Castle, Heybrook, Celestion, JPW etc. 2 dem rooms. Home trial. Free installation. Access, Visa, Amex, Diners, Hi-Fi Markets Chargecard. Credit facilities. 9.30-7.30 Mon-Fri, 9.30-6 Sat.

THE HI-FI ATTIC, 58 New George St, Plymouth, Devon PL1 1RR. (0752) 669511. We stock most leading makes and have an expert enthusiastic staff. Premises include attractive hi-fi and home cinema demonstration rooms. We offer free installation and credit facilities (written details on request) also a fully equipped service department. We can also provide a mail order service for all your LaserDisc requirements. We accept Visa, Access, Amex.

STUDIO ACOUSTICS. (0626) 67060. OCM Technology, Shahinian Acoustics, Superplan amplifiers, Nobis loudspeakers & amplifiers, Mirror Image Audio, J.A. Michell, plus other fine equipment. homerial, free install, in-house service dept. Mon-Fri 9-4.30, appointments only.

DORSET

DAWSONS, 23 Seamoor Road, Westbourne, Bournemouth, Dorset. (0202) 764965. B&O, Castle, Canon, Jamo, JBL, Pioneer, Sony, Target, TDL, Technics. No appts necessary. Free install, Service depart. Various credit facilities available. Open 9-5.30 6 days a week.

SUTTONSHI-FI, 18 Westover Road, Bournemouth. 0202 555512. Linn, Arcam, Mission, Quad, Audiolab, Rotel, Yamaha, Denon, etc., 2 Single Speaker Listening Rooms, Home Demonstrations, Free Installations. Mon-Sat 9-5:30. Call for details.

ESSEX

AUDIO T, Gants Hill, 442-444 Cranbrook Rd, Gants Hill, Ilford, Essex
1G2 6LL. Tel: 081 518 0915 Fax 081 554 8463. Arcam, Audiolab, Cyrus, Denon, Kef, Meridian, Rotel, Micromega, Yamaha & many more. Mon-Sat 10-6. 3 yr gntee on Hi-Fi. Free del & instal. 30 day upgrade scheme. Home dems. PX.
1ST AND FOREMOST HI-FI CENTRE, 49-55 North Station Road, Colchester, Essex CO1 1RQ. Tel: (0206) 549842. Fax: (0206) 762900. Tx: 987873 SAIDG. Trio Kenwood, JVC, Akai, Aiwa, Sony, Pioneer, Technics, Nakamichi, Panasonic, Revox, etc. Home trial, free installation. Service dept. Instant credit available + all credit cards accepted. Mon to Sat 9am-6pm.

BRENTWOOD HI-FIDELITY, 2 Ingrave Rd, Brentwood, Essex, CM15 8AT. (0277) 221210. Audio Innovations, Denon, DNM, EAR, Marantz, Micromega, Mission, Pink Triangle, Quad, Tannoy plus many more. Single speaker dem rooms, home trials, evening appts (high end), home installations. Mon-Sat 9.30-5.30. Access. Visa. Service Facilities. Advice second to none.

LYON AUDIO, 16 Peartree Business Centre, Peartree Road, Stanway, Colchester, Essex CO3 5JN. (0206) 560259. Mission, Cyrus, Arcam, Denon, Rotel, KEF, Rogers, Marantz, NAD, Tannoy. Dem facilities. Mon-Sat 9-6. Installations. Access, Visa, Instant credit. Service dept.

RAYLEIGH HI-FI, 44a High Street, Rayleigh, Essex. (0268) 779762/747571. 216 Moulsham St, On-the-Parkway, Chelmsford. (0245) 265245. 132-134 London Road, Southend-on-Sea. (0702) 435255. A&R, Audiolab, Creek, Cyrus, Denon, Epos, Linn, Meridian, Mission, Naim, Quad, Rega, Roksan, Royd. 0% finance.

GLOUCESTERSHIRE

AUDIO EXCELLENCE, 58 Bristol Road, Gloucester. (0452) 300046. Great Hi-Fi carefully selected and demonstrated by friendly and enthusiastic staff. Closed Mon.

AUDIO T, 40-42 Albion St, Cheltenham, Glos. GL52 2RQ. (0242) 583960. Fax (0242) 226435. Great hi-fi from Arcam, Audiolab, Cyrus, Denon, Linn, Meridian, Mission, Rogers, Rotel, Yamaha and many more. Mon-Fri 10-6pm. Sat 9.30-5.30. 3 yr gntee on Hi-Fi. 30 day upgrade scheme. Home dems. PX. Single speaker dem room Free del. and instal

HUTCHINSONS, 295-297 High Str, Cheltenham, Glos. GL50 3HL. (0242) 573012. Pioneer reference point, Technics, Dual, NAD, JWharfedale, Celestion,

Marantz, Aiwa, Kenwood, Sennheiser. No appts necessary, free install, service dept. Instant credit up to £1000. Open Mon-Sat 9.15-5.30.

HAMPSHIRE

AUDIO SOUTH for further details see the Surrey entry.

AUDIO T, 4 Feathers Lane, Basingstoke, Hants. RG21 1AS. (0256) 24311, Fax (0256) 24430. Great hi-fi from Arcam, Audiolab, Cyrus, Denon, Linn, Meridian, Mission, Rotel, Yamaha and many more. Mon-Sat 9.30-5.30pm. 3yr gntee on Hi-Fi. Free del & instal. 30 day upgrade scheme. Home dems. PX. Single speaker dem room. Free del. and instal.

HAMPSHIRE AUDIO LTD, 2-12 Hursley Rd, Chandlers Ford, Hants SO5 2FU. (0703) 252827/265232. 3hi-fi and 2 home cinema/Dolbys surround sound demo studios. Thurs late eve, closed Mon (except in Dec). 2-year guarantee, service dept on site, large free car park, junctions 4 (M27/M3), 5(M27), 12(M3), 13(M3) all within 3 miles. Est 1969.

JEFFERIES HI-FI (Portsmouth) 29 London Road, Portsmouth PO2 0BH Tel: 0705 663604. 2 Dem Rooms, closed Mondays. Late night Wed. Free Parking Bus route. Credit facilities.

HEREFORDSHIRE

ENGLISH AUDIO, 95 Whitecross Road, Hereford HR4 0DG. (0432) 355081 Cyrus Centre, Pink Triangle, Audion, Systemdek, Heybrook, Michi, KEF Reference, Micromega, Nakamichi, Chord, Arcam, Musical Fidelity, Rogers, NAD, Rotel, Denon, Tannoy, Marantz, Mission, Stax, Dual, TDL, Albarray, JPW, Celestion, Ixos, SME, Ruark, Moth, Audio Technica and others.

Single Speaker Dem room. Home trial. Free install. Service dept. Access, Visa. Credit arranged. Open Mon-Sat 10am-6pm.

GOSPEL MUSIC AUDIO, 32A High St, Kington, Herefordshire. (0544) 230254. New Shop open: Castle Video, 1 Spa Centre, Station Crescent, Llandrindod Wells (0587 824 0200) Alphason, Alison, Revolver, Luxman, Yamaha, QED, Audio Systemline, Wharfedale, Jamo, Micromega. No appts nec., home trial facilities, service dept. -5.30 +evening dems.

HERTFORDSHIRE

ACOUSTIC ARTS LTD, 101 St Albans Rd, Watford, Herts. (0923) 245250. Fax (0923) 230798 Absolute Sounds, Acoustic Energy, Audiolab, Chord, Denon, Marantz, Meridian, SME, TDL., Teac, Tues-Sat 9.30-6.00.

AUDIO FILE, 27 Hockerill St, Bishops Stortford, Herts CM23 2DW. (0279) 506576. 9.30-5.30 open 6 days. Dealer of the Year 1988/89. Linn, Naim, Quad, Cyrus, Arcam, Roksan, Denon, Epos, Rotel, KEF, ProAc. 0% credit.

HERTFORD MUSIC. Music is pleasure. good when choosing your system in our, appointments only, demonstration rooms (and bar!) Home demonstrations encouraged. Systems from £1,000 to £15,000. Micromega, REL Acoustics, Acoustic Energy, Michell, Magnum, Diamond Acoustics, Beard, Lumley, Renaissance, etc. Access, Visa. Mail Order. Tel: (0992) 700 900

RADLETT AUDIO, 141 Watling Street, Radlett, Hertfordshire, WD7 7NQ. (0923) 856497. Mark Levinson, Proceed, PRO AC, AVI & ATC, Martin Logan, Tube Technology, Teac, Roksan, Audiolab, Rotel. Home trial facilities, Free Install, Service Dept. Visa, Access 9-5:30 Mon-Fri 10-5:30 Sat **STUDIO 82**, 82 High Street, Harpenden, Herts AL5 2SP. (0582) 764246, Fax (0582) 467022. ATC/AVI, Arcam, Aura, Audiolab, Bang & Olufsen, Denon, Epos, Mission Cyrus, Naim Audio, Nakamichi, Quad, Nad etc. Quiet single speaker dem room. Appts nec. Home trial, free install. Service Dept. Visa, Access & finance terms. 9-5.30pm (Mon/Sat). Closed Weds.

NORTH HUMBERSIDE

JUST AUDIO, 2A Foston Lane, North Frodingham, Driffell. Tel 0262 488700, call for details. SUPERFI, 4 Dock Str, Queens Gardens Hill, HU1 3DL. (0482) 24051. See main entry under Nottinghamshire for full details.

KENT

JOHN MARLEY HI-FI CENTRES, 2 Station Rd, West Canterbury. (0227) 769329. Also at Dover - (0304) 207562. Arcam, Aura, B&W, Heybrook, JPW, ProAc, Pioneer, Rotel, Ruark, Tannoy, Technics. Dem and home trail facilities. Mon-Sat 9-5.30 closed Thurs. Free install. Credit to £1,000. Access, Visa. Credit charge. Service dept.

PANATEC SOUND & VISION CENTRE, 83b High St, Gillingham. (0634) 573141 B&W, Bose, Cambridge, Dual, Kenwood, Marantz, Pioneer, Philips, Sony, Tannoy, Technics, Wharfedale. Dem room facilities. 0% credit, Service Dept. Free Installation. Pioneer Reference Point Dealer. **PANATEC SOUND & VISION**, 17 Week Str, Maidstone. (0622) 661488. See above for details.

SOUNDCRAFT HI-FI, 40 High Street, Ashford. Seeking music lovers, male or female any age, to share common interest in, musical Pro-aktiv Hi-Fi Systems, Multi Room or Home Cinema. Attractive unusual equipment in unusual setting, your place or ours, we guarantee lasting pleasure. Open Mon-Sat, Appointment Service or just pop in. Tel: 0233 624441.

VOLUME ONE, 41 Upper Wickham Lane, Welling, DA16 3AD. 081 304 4622. Arcam, Dual, Epos, Exposure, Mordant Short, Monitor Audio, JPW, Marantz, Micromega, Nakamichi, Pink Triangle, Rotel, Royd, Ruark, Sony, Systemdek. Large demo room, no appt nec. Evening dems in shop by appt. Home trial & demo, free delivery & installation. Access & Visa, 10.00-6.00 Mon-Sat.

V J HI-FI, 29 Guildhall St, Folkestone. (0303) 256860. Mon-Sat 9-6. NAD, Yamaha, Marantz, Sony, Tannoy, Denon, Kenwood, Rogers, Musical Fidelity, Quad, Dem and home trial facilities, free install, credit to £1000. Amex, Diners, Visa, Access. Service dept.

V J HI-FI, 119 High Street Margate. (0843) 226977. For full details see our above entry.

LANCASHIRE

NORMAN AUDIO, 131 Friargate, Preston, Lancs. PR1 2EE. Tel 0772 53057. Fax 0772 562731. Marantz, Pioneer, Yamaha, Audiolab, Arcam, Mission, Cyrus, B&W, KEF, Sendeor Catalogue. Home Cinema Dem room. No appt nec, Home trial facilities, free installation. Instant credit subject to status. Open 9.30-5.30, late night Wed till 8.00pm.

NORMAN AUDIO, also at 216 Church St, Blackpool, (0253) 295661, Fax (0253) 295722.

JO KOCZUR LTD., 185 Yorkshire Street, Rochdale, Lancashire. (0706) 42107 Harman Kardon, Quad, Revox, Aura, Teac, JBL, Tannoy (including definition) B&W, Canon, Bose and many others. Dolby Pro Logic, A.V. System. Established over 25 years, qualified & experienced staff. Appts nec only after 5.30pm. Home trial, free install, service dept. Open Sat 9-5. Mon, Wed, Thurs, Fri 9-5.30pm. Closed Tues.

ROMERSHI-FI CENTRE, 94-96 High Street, Rishton, Blackburn, Lancs BB1 4LQ. Tel: (0254) 887 799. Stockists of: Sony Esprit Hi-Fi, Technics, Marantz, Musical Fidelity, Pioneer, Kenwood, Rotel, Tannoy, Mission, Ruark, B&W and many more. Demonstration room, Service department. Free delivery and installation (Local area). The area's leading hi-fi specialist.

LEICESTERSHIRE

LEICESTER HI-FI CO, 6 Silver Walk, St Martins Square, Leicester LE1 5EW. Tel: (0533) 539753. Fax (0533) 626097. Acoustic Energy, Arcam, Marantz, Micromega, Mission/Cyrus, Musical Fidelity, Nakamichi. Meridian, Rogers, Roksan, "and oodles more". 2 Dem rooms, home trial arranged, free install, service dept, Credit facilities, Access, Visa, Diners, Amex, 6 days 9.30-5.30. Bada Member

LISTEN INN, 6 Hotel Street, Leicester. (0533) 623754 (Fax) 0533 623758. Linn, Arcam, Royd, Heybrook, Creek, Neat, Mission, Cyrus, Audiolab, Quad, Denon, etc. 2 Dem Rooms.

SOUND ADVICE, The Factory, Duke St, Loughborough LE11 1ED. (0509) 218254. Shahinian, Rega, Naim, Linn, Royd, Yamaha, Rotel, Arcam, Nakamichi, JPW. 3 demonstration areas, no appts necessary, free installation, service department. Lombard credit charge, Access, Visa. Mon-Fri 9.30-6.00, Sat 9.30-5.30. **STEREO SHACK**, 1-3 Guildhall Lane, Leicester. Tel 0533 530330. Aiwa, A.R., Denon, Kenwood, Jamo, Mission, NAD, Philips, Pioneer, Rotel, AV Speciality. Free Install Open 9.30 - 5.30 6 days. Credit available.

LINCOLNSHIRE

BOSTON HI FI CENTRE, 65a Wide Bargate, John Adams Way, Boston, Lincs PE21 6SG. (0205) 365477. Quad, Nakamichi, Arcam, Marantz, NAD, Castle, Tannoy, Rogers, etc. Separate demo studio. Home trial. Free installation. Access, Visa. Tues-Sat 9-5 pm.

STAMFORD HI-FI ; CENTRE, 9 Red Lion Square, Stamford, Lincs PE9 2AJ. (0780) 62128. Pioneer, Technics, Cyrus-Mission, Rotel, NAD, Yamaha, Kenwood, Quad, plus all major speaker manufacturers. Expert advice, comparator demonstrations, on two floors, part exchange Hi-Fi purchased for cash. No appointments necessary, home trial facilities, free installation, service department. Mastercard, Visa & credit charge, finance available. Mon-Sat 9-5.30pm, closed Thursdays.

SUPERFI, 271 A High St, Lincoln LN2 1JG. (0522) 520265. See main entry under Nottinghamshire for full details.

LONDON

ANALOG AUDIO, 849 High Road, London N12. (081) 445 3267. Cambridge, Denon, Rotel, Yamaha, Marantz, Wharfedale, Teac, Mordant-Short, Cerwin Vega, Nad. Free install. Service dept. Instant credit up to £1000. Visa & Access. 9.30-6.6 days.

AUDIO T, 190 West End Lane, West Hampstead, London NW6 1SQ.

(071) 794 7848, Fax (071) 431 3570. Great hi-fi from Arcam, Audiolab, Cyrus, Denon, Meridian, Mission, Philips, Rotel, Proac, Micromega, Yamaha, and many more. Mon-Sat 10-6pm. 3 yr gntee on Hi-Fi. Free del & instal. 30 day upgrade scheme. Home dems. PX. 2 dem rooms.

BILLY VEE SOUND SYSTEMS, 248 Lee High Road, London SE13. (081) 318 5755. Arcam, Linn, Naim, Quad, etc. 2 dem rooms. Int. free credit. Access, Visa. Closed Thurs.

CORNFLAKE SHOP, 37 Windmill St (just off Tottenham Court Rd), London W1. (071) 631 0472 (domestic), (071) 323 4554 (multiroom). Fax. (071) 323 4554 Fax. (071) 436 7165. Tues-Sat 10-7 Rega, Roksan, Naim, Monitor Audio, Arcam, Nakamichi, Rotel, Epos etc. 3 dem rooms. (incl. home cinema) Friendly, professional service. Home trial facilities. Appointments preferred. Full delivery and repair service. Multiroom specialists. Access & Visa.

COVENT GARDEN RECORDS, 84 Charing Cross Road, London WC2 (071) 379 7635, Fax (071) 836 1345. London's premier digital audio centre, Photo CD, DCC, CD, & 16X9 TV'S. Audiolab, B&O, Marantz, Mission, Cyrus, Philips, Pioneer, Rotel, Rogers, Quad, Sony, Technics, single speaker dem rooms, appointments suggested, installation service available. All major credit cards accepted. Mon-Sat 10am-7.30pm.

DOUG BRADY HI-FI, 14-18 Monmouth St. London WC2H 9HB. (071) 379 4010. Wide range of top specialist hi-fi from Britain, America and Japan. 3 dem rooms. Closed Monday.

GRAHAM'S HI-FI, Canonbury Yard, 190a New North Rd, London N1. 071-226 5500. Winner Sony/HFN Greater London Dealer Award 1986/89/90. "One of the 5 best hi-fi shops in the world". Arcam, Linn, Meridian, Naim, Rega, etc. Systems from £500. FREE PARKING, 4 dem rooms, service dept, open Tues-Sat. RING FOR APPOINT.

HI-FI & COMPONENTS, 84 Battersea Rise, London, SW11 1EH. Tel: 071 2231 110. Denon, Harman Kardon, Tannoy, Kenwood, Rotel, NAD, Wharfedale, Dual, Shure, Ortofon, Celestion, etc. Appts nec, Service Dept. Access, Visa, Diners, Amex, Open 10-6 Closed Wed.

INFIDELITY, 9 High Str, Hampton Wick, Kingston-upon-Thames. (081) 943 3530. For full details see entry under SURREY.

K.J. WEST ONE, 26 New Cavendish St, London, W1M 7LH. (071) 486 8262/63. Fax (071) 487 3452. Most established brands stocked. Two Hi-Fi and one Home Cinema dem' studios. Appts nec. Home trial. Free installation. Service dept. Major credit cards. Interest free credit usually available - ask for details. Mon-Sat 10-6pm. (Late night Thurs till 7pm)

MUSICAL IMAGES LTD. 173 Station Road, Edgware & 45 High Street, Hounslow, Middlesex. See under Middlesex & full pge ad. in The Directory.

SOUND ORGANISATION LONDON, 4 Pickfords Wharf, Clink Street, London, SE1 9DG. Tel 071 403 2255. Audio Research, Aura, Creek, Epos, Exposure, Heybrook, Koetsu, LFD, Lyra, Martin Logan, Micromega, Naim, Nakamichi, Rega, Rotel, Roksan, Royd, SME, Sonus Faber. Interesting new equipment always under evaluation. 2xsingle speaker listening rooms. Appts preferred. Free Installation. Service Department. Open Tues-Sat. 10-6. Late dem by appointment.

SOUND SENSE, 350 Edgware Road, London W2 1DX. (071) 402 2100. Alphason, B&W, Kenwood, Nakamichi, Celestion, Denon, Monitor Audio, Marantz, NVA, Sony ES, Yamaha. Appts preferred. Installations available. Access, Visa, Standard credit facilities. Mon-Sat 9.30-6.30.

STUDIO 99, 79-81 Fairfax Road, Swiss Cottage, London NW6. 071-624 8855, Fax 071-624 5315. Naim, Meridian, Quad, Mission/Cyrus, Rega, KEF, Arcam, Epos, Acoustic Energy, Yamaha, Nakamichi, NAD, Sonus Faber, B&O etc. Single speaker dem room, AV demos. Multiroom. Service dept. Visa/Access credit facilities. 10-7 Mon-Fri, 10-6 Sat.

SUPERFI, 2-4 Camden High Street, Camden, NW1 0JH (071) 3881 1300. See main entry under Notts for full details.

UXBRIDGE AUDIO - CHISWICK, 109 Chiswick High Road, Chiswick, W4 2ED (081) 742 3444 Fax (081) 742 3295. 2 Demo Rooms, Installations, 2 Year Guarantee, 7 day exchange. Major credit cards, Tues - Sat 10 - 6. See Middx entry for brands stocked.

VOLUME ONE, 41 Upper Wickham Lane, Welling. (081) 304 4622. For full details see entry under Kent.

ZEBRA, 18-24 Brighton Road, South Croydon CR2 6AA. 081 688 2093. Audio lab, Arcam, KEF Reference, Marantz, Mission, Micromega, Pioneer, Rotel, Sony, Tannoy, and large range of AV equipment. S2 Air Conditioned Demo Rooms. in a more casual environment. Service department. The UK's leading home cinema centre. Mon-Sat 9.30-6.00. Access, Visa, Switch & instant credit up to £1000 subject to status.

GREATER MANCHESTER

CENTRAL RADIO, 30-32 Shudehill, Manchester M4 1EY. Tel 061 834 6700. Technics, Kenwood, Pioneer, Aiwa, Marantz, Mission, B&W, Wharfedale, JBL, Thorens, Panasonic, etc. TV video, surround sound, AV systems, service dept, free delivery. Access, Visa, Switch finance. Mon-Sat 9-5.30.

THE AUDIO COUNSEL, 12 Shaw Road, Oldham, Manchester OL1 3LQ. (061) 633 2602. Linn, Yamaha, Rega, Rotel, Arcam, Micromega, EPOS, Creek, Nakamichi, Denon. 2 dem rooms. Free install. Visa, Access, Licenced credit brokers up to £1000 instant credit. 10.00-5.30 Tues, Weds, Sat; 10.00-7 Thurs & Fri. Closed Mon.

MURRAY HI-FI, 19 Middle Hillgate, Stockport. (061) 429 7666. Linn, Naim, Rega, Arcam, Yamaha, Royd, Epos, Creek, Nakamichi, Rotel. Full demo facilities, free installation & delivery, service dept. Full 2yr guarantee on all products. Access, Visa, Lombard Tricity, licensed credit broker. 10-6 Tue-Sat.

SWIFT OF WILMSLOW, 4-8 St Annes Parade, Wilmslow. (0625) 526213. Aura, B&W, Denon, Kenwood, Marantz, NAD, Pioneer, Rotel, Tannoy, Revolver, JPW. Open 9:30am-6:00pm 2 dem rooms. No pressure!

DEALER Directory

MIDDLESEX

AUDIO T, 159a Chase Side, Enfield, Middx EN2 0PW. (081) 367 3132. Fax (081) 367 1638. Great hi-fi from Arcam, Audiolab, Cyrus, Denon, Meridian, Micromega, Mission, Philips, Rotel, Yamaha and many more. Mon-Fri 10-6pm. Sat 9:30 - 5:30 3 yr gntee on Hi-Fi. Free del & instal. 30 day upgrade scheme. Home dems. PX. 2 dem rooms. AV Dept. **BADA**

HARROW AUDIO, 27 Springfield Rd, Harrow. (081) 863 0938. Mon-Sat 9.30-5.30. A&R, Audiolab, Cyrus, Denon, Epos, Monitor Audio, Musical Fidelity, Nakamichi, Quad, Rotel, Tannoy, Thorens, Yamaha. etc. **BADA**

MUSICAL IMAGES LTD, 45 High Street, Hounslow, Middlesex TW3 1JR. (081) 569 5802. FAX (081) 569 6353. & 173 Station Road, Edgeware HA8 7JX (081) 952 5535. FAX (081) 951 5864. Most brands available - see full page ad in the product directory. Interest free credit, ask for details. Demo Rms. Repairs & Service. Open Sunday and all week. A home cinema specialist. Mail Order. Part exchange.

RIVERSIDE HI-FI LTD, 422 Richmond Road, East Twickenham, Middlesex TW1 2EB. Tel. (081) 892 7613. Fax (081) 892 7749. A.R., Arcam, Audio Innovations, Castle, Dual, Denon, KEF, Luxman, Michell, Musical Fidelity, Micromega, Marantz, Nakamichi, Rotel, Spondor, Systemdek, Tannoy, Yamaha. One demo room, in-car demo for car hi-fi systems. Appts not always necessary. Home trial facilities. Free installation, service dept. Lombard Tricity, Access, Visa, Amex, Diners Club. Mon-Sat 9.30-6, Thurs, Fri 9.30-7.

SIGHT N SOUND, The Treaty Centre, Hounslow, Middlesex TW3 1ES. 081 572 5418, fax 081 572 5417. Sony, Kenwood, Finlux, Toshiba, Philips, Sanyo, Grundig, Pioneer, Technics, Akai. No appts nec, free install, service dept. Access & Visa, financing available. 9-6pm Mon-Sat.

MERSEYSIDE

W.A. BRADY & SON, 401 Smithdown Rd, Liverpool L15 3JJ. (051) 733 6859. 'Largest choice of specialist Hi-Fi in N.W. £100-£20K'. All credit cards. 3 dem rooms. Closed Monday. **BADA**

P & A AUDIO (BIRKDALE) LTD 31 Liverpool Road, Birkdale, Southport (0704) 68373. Arcam, Cambridge, Creek, Denon, Michell, Mission/Cyrus, Mordaunt-Short, NAD, Pink Triangle, QED, Revolver, Rogers, Rotel, Royd, Tannoy. 3 Single speaker demo rooms and Nicam surround sound dem room. Free delivery, installation (Merseyside) Service dept, Mon-Sat 9 - 5.30 Half day Tues, Access, Visa, Lombard.

PETERS HI-FI 11 Werburgh Sq, Grange Precinct, Berkenhead. (051) 647 5626. 9-5.30 closed Thurs. See Cheshire entry for full details.

PETERS HI-FI, 8 High Street, Bromburgh, Wirral. (051) 334 1874/2825. Open 9-5.30 6 days a week. See Cheshire entry for details.

WEST MIDLANDS

FRANK HARVEY HI-FI EXCELLENCE, 163 Spon Street, Coventry CU1 3BB. (0203) 525200. Audiolab, Arcam, Bang & Olufson, Mission-Cyrus, Denon, Marantz, Meridian, Nakamichi, NAD, Quad, Rega, Rotel, Yamaha. 3 floors, 3 demonstration rooms, nice staff, nice coffee. Appts nec, service dept, free install, home trial facilities. All credit facilities available. Mon-Sat 9.30-5.30. Wed til 8pm. **BADA**

GRIFFIN AUDIO LTD, 94 Bristol Street, Birmingham. (021) 692 1359/(021) 622 2230. Arcam, Castle, Cyrus, Denon, Linn, Marantz, Naim, Quad, Rega, Rotel. Open Tues-Sat 10-6. **MUSICAL APPROACH**, 37 High Street, Aldridge, Walsall, W. Mids. (0922) 57926. Linn products, Arcam, Creek, NVA, Revolver, Onix, Epos, Marantz, Rotel, Quad & more. Dem facs. Home trial. Service dept. Credit facs available. Access, Visa. 9.30-5.30 Mon-Sat. 9.30-1 on Thurs.

MUSIC MATTERS, 351 Hagley Road, Edgbaston, Birmingham B17 8DL. (021) 429 2811. Roksan, Nakamichi, Arcam, Audiolab, Musical Fidelity, Mission/Cyrus, Meridian, KEF, Monitor Audio, Pink Triangle. 2 single speaker luxury demo rooms. Appts nec, home trial facilities, free installation, service dept. Access, Visa, instant credit up to £1000, interest free credit available. Tue-Thur 10.30-6, Fri 10.30-8, Sat 10-5.30. **BADA**

NORFOLK

AUDIO IMAGES, 7 All Saints Rd, South Lowestoft, Suffolk NR33 0DL. Tel: 0502 582853. For full details see our main entry under Suffolk.

BASICALLY SOUND, The Old School, School Rd, Bracon Ash, Norwich NR14 8HE. (0508) 70829. Arcam, Linn, Naim, Denon, Spondor, Audiolab, Sound Organisation, Creek, Rega, Epos, etc. 2 comprehensive dem rooms. Home trial. Free installation. Visa, Access, HP facilities. Tues-Sat 9.30-1, 2-5.30.

MARTINS HI-FI, 5 High Street, Kings Lynn. (0553) 761683. Est. 1968. Making good vibrations for 20 years **BADA**

MARTINS HI-FI, 85/91 Ber Street, Norwich. (0603) 627010. Est. 1968. Making good vibrations for 20 years **BADA**

NORTHAMPTONSHIRE

AUDIO CRAFT 23-25 Derngate, Northampton, NN1 1TY. Tel: 0604 36291 Bang & Olufsen, Kenwood, Technics, Marantz, Celestion, Mordaunt-Short. No appts nec, Free Install, Service Dept. Open Mon-Sat 9-5:30pm

CLASSIC HI-FI + VIDEO, School Lane, Kettering, Northants. (0536) 515766. Rotel, Musical Fidelity, Wharfedale, Yamaha, Onix, NAD, Pioneer, Marantz, Kenwood, Kef, Shearman, Rogers, Metaxas Audio and many more. Home trial, free instal., service dept. Access, Visa, credit facs. 9.30-5.30pm.

LISTEN INN, 32 God Street, Northampton. (0604) 37871 (Fax) (0604) 601430. Linn, Naim, Rega, Epos, Royd, Mission, Cyrus, Arcam, Audiolab, Neat, Creek, Quad, Denon etc. 2 Dem Rooms **BADA**

NOTTINGHAMSHIRE

CHANTRY AUDIO, Chantry Walk, 18-18a Eldon Street, Tuxford, Nr Newark, Notts NG22 0LH. (0777) 870372. Pink Triangle, DPA, Rotel/Michell, Micromega, NVA, Alchemist, Michell, Monitor Audio, Lumley, SME and much more! 3 dem rooms. Home trial, free installation, service dept. Access, Visa & credit facilities and mail order. Mon-Sat 9:30-6pm Sun & evenings home dem by appt.

NOTTINGHAM HI-FI CENTRE, 120-122 Alfreton Road, Nottingham. (0602) 786919. Over 25 years experience, superb demo rooms, extensive range, free parking. Mon-Sat 9-5.30. **BADA**

PETER ELLIS AUDIO, 29 Kirkgate Newark, Nottingham, NG24 1AD (0636 704571) Quad, Castle, Arcam, QED, Sugden, Tannoy, Thorens, Marantz, Denon, Teac. Demo Room, Free Install, Service Department. Access, Visa, Mon-Sat 9-5:30 Close at 1:00pm on Thursday.

SUPERFI, 15 Market Str, Nottingham NG1 6HY. (0602) 412137. Kenwood, Technics, Denon, Aiwa, Rotel, Wharfedale, Mission, Marantz, NAD < Celestion, and many more. 2 single speaker dem rooms. Free install on systems, service dept. Access & Visa, Amex. Open 9-5.30, 6 days.

OXFORDSHIRE

ASTLEY AUDIO LTD, 3 Marketplace, Walford. (0491) 839305. Aura, B&W, Technics, Panasonic, Pioneer, Kenwood, Sony, Yamaha, Denon, Dual, Mission, Tannoy. Home trial, free installation. Service dept. Access, Visa, Amex, Diners. Instant credit. Tue-Fri 9-5.30, Sat 9-5. Records & CDs stocked.

AUDIO T, 19 Old High St, Headington, Oxford OX3 9HS. (0865) 65961, Fax (0865) 60415. Great hi-fi from Arcam, Audiolab, Cyrus, Denon, KEF, Meridian, Mission, Rotel, Sony, Yamaha and many more. Open Mon Fri 10-6pm, Sat 9.30-5.30. 3 yr gntee on Hi-Fi. Free del & instal. 30 day upgrade scheme. Home dems. PX. 2 dem rooms. AV Dept. **BADA**

OUVERTURE HI-FI, 3 Church Lane, Banbury, Oxfordshire OX16 8LR. (0295) 272158. Arcam, Heybrook, Mission, Quad, Denon, Linn Products, Naim Audio, Epos, Meridian, Nakamichi. For sensible unbiased advice, call Oxfordshire's audio experts. Superb demo facilities. No appts nec, service dept, free install, home trial. Access/Visa, instant credit. Mon-Fri 10-6, Sat 9.30-5.30. **BADA**

OXFORD AUDIO CONSULTANTS LTD, Cantay Hse, Park End Street, Oxford OX1 1JE. (0865) 790879 fax (0865) 791665. NAD, Rotel, Musical Fidelity, Pioneer, Marantz, Rogers, TDL, Thorens, Audio Research, Proceed. 2 Demo rooms. Service Dept, Home trial and free installation. Instant credit, Access, Amex, Visa. 10-6 Mon-Sat.

WESTWOOD AND MASON, 46 George St, Oxford. Tel: 0865 247783 Arcam, Rotel, Rega, Epos, Tanoy, Royd, JPW, Mission, Nakamichi, Denon, Aiwa, Naim, Quad, Aura, Teac. Open 9:30-5:00pm. Dem room. Closed Thur.

SHROPSHIRE

AVON HI-FI, 12 Barker Street, Shrewsbury, Shropshire SY1 1QJ. (0743) 55166. NAD, Quad, B&W, Arcam, Kenwood, Aiwa, Bose, Nakamichi, Revolver, Onkyo. Dem room. Home trial. Free install. Service dept. Access, Visa. £1000 instant credit. Mon, Tues, Wed, Fri, Sat 9-5.30.

CREATIVE AUDIO, 9 Dogpole, Shrewsbury. (0743) 241924. Arcam, Audiolab, Celestion, Cyrus, Denon, Epos, Kef, Meridian, Mission, Naim, Quad, Rega, Roksan, Rotel, Ruark, Tripod. Dem room. Home trial and free installation. One of the best ranges of quality hi-fi outside London. Credit to £1000. Access, Visa. Tues-Sat 9.30-5.30. Service dept.

SOMERSET

MIKE MANNING AUDIO, 110 Middle Street, Yeovil, Somerset BA20 1NE. (0935) 79361, Fax (0935) 32923, Mobile (0850) 325965. Naim, Roksan, Pink Triangle, A+R (Arcam), ATC, AVI, NAD, Pioneer, Rotel, Denon, etc. Dedicated listening lounge, for relaxed and unpressured demonstrations. Appts not usually nec. but best to phone first. Home trial facilities on request, free installation, service department. Instant credit, Access & Visa, etc. 9-5.30 closed Mondays.

STAFFORDSHIRE

GRANGE HI-FI LTD, 153 Branton Rd, Burton-on-Trent, Staffordshire DE14 3DQ. (0283) 33655. Albany, Audio Innovations, Audiolab, Arcam, Castle, Denon, Pink Triangle, Marantz, Rotel, Rogers, Systemdek, SME, Tannoy, TDL. Dem fac, appts nec on Sat, Free Install. Service dept Access, Visa. 9.00-5.30pm. Closed Mon all day & Wed aft. Closed for lunch 12.00-12.30.

SUFFOLK

AUDIO IMAGES, 7 All Saints Rd, Pakefield, South Lowestoft, Suffolk NR33 6JL. Tel/Fax: 0502 582853. Quad, Triangle, Arcam, Castle, Rotel, Moth, JPW, Finlux, Audio Innovations, plus the amazing Rothwell range. Separate demo room, no appts nec. 10-6.30 Tue-Thur, 7pm Fri, 6pm Sat. **BURY AUDIO**, 47 Churchgate St, Bury St Edmunds, Suffolk, IP 33 1RG. Tel 0284 724337. Arcam, Furukawa, Heybrook, Infinity, Marantz, Meridian, Michell, Pink Triangle, Proac, Rotel, Target, Roksan, Shanhin, Quad. Etc. Single Speaker Room. No appointments necessary. Home trial fac. Free Installation. Service Department. Access, Visa, Switch. Open 6 days a week. Mon/Tues/Sat 9.30-5.30 Thurs/Fri 9.30-7.00. Closed Wed

EASTERN AUDIO, 41 Bramford Rd, Ipswich. (0473) 217217. Quad Audio Lab, Denon, Dual, Marantz, Mission, NAD, Nakamichi, Technics, Arcam. Mon-Sat 9.30-6. **BADA**

SURREY

AUDIO SOUTH, 24 (The Woolmead) East Str, Farnham, Surrey GU9 7TT. (0252) 714555. Audio Note, Deltec, JPW, Marantz, Rotel, Teac, etc. AV specialist. Dem room and evening appointments available. Home trial facilities. Free installation. Access, Visa. 10.30-6 Mon-Sat. **DATASOUND**, 23 South St, Dorking, Surrey RH4 2JZ. (0306) 882897. Arcam, Celestion, Denon, Dual, Marantz, Mission, Musical Fidelity, NAD, Rotel, Tannoy. Dedicated listening room. Free install. Service dept. Up to £1000 instant credit subject to status. 9.30-5.30 6 days.

INFIDELITY, 9 High Str, Hampton Wick, Kingston Upon Thames, Surrey. Tel: (081) 9433530. Arcam, Creek, Epos, Heybrook, Micromega, Naim Audio, Roksan, Rega Research, Shanhin, TEAC. Single speaker listening room. Appts pref, free installation, service dept. Major credit cards. Closed Mon, Tue-Fri 10.30-7, Sat 10-6.

PJ HI-FI - the Hi-Fi Shop, 3 Bridge St, Guildford, Surrey GU1 4RY. (0483) 504801. 9-6 Mon-Sat. Linn, Meridian, Creek, Arcam, Quad, Revox, Musical Fidelity, Rotel, NAD, Nakamichi, Marantz. **BADA**

RIVERSIDE HI-FI, 422 Richmond Road, East Twickenham. TW1 2EB. Tel: (081) 892 761 3. Fax: (081) 892 7749. See main entry under Middlesex.

ROGERS HI-FI, 13 Bridge Street, Guildford, Surrey. (0483) 61049. Aiwa, Creek, Denon, JPW, Marantz, Micromega, Rogers, TEAC, Pioneer, Systemdek, Tannoy. Demonstration facilities available, no appointment necessary. Free installation. Service department. Access/Visa. Instant credit up to £1,000 subject to status. Monday-Saturday 9.30-6pm, later by appointment. **BADA**

SOUNDS EXCLUSIVE, 1 Kent House, High Str, Cranleigh GU6 8AU. (0483) 268185. Michell (amplification & decks), Marantz, Ariston, Ortofon, AME, Sumo, Proac, Jamo, Origin Live, Kiseki. Demo room, appts preferred, home trial facilities, free install, service dept. Access, Visa. Open 9-5.30 Mon-Sat.

SPALDINGS HI-FI, 352-4 Lower Addiscombe Rd, Croydon, Surrey. (081) 654 1231/2040. 3 dem rooms and home dem. Free install, credit. Mon-Sat 9-6. Tues-8. Closed Wed. Service dept. **BADA**

SURBITON PARK RADIO, 48 Surbiton Rd, Kingston-Upon-Thames, Surrey. (081) 546 5549. Quad, Castle, Dual, Denon, Kenwood, Rotel, Pioneer, QED, B&W, Tannoy. Demo facilities. Access, Visa. 9.30-5.00 Tues-Sat. Service dept. **SURREY HI-FI**, 45 High Street, Godstone, Surrey RH9 8LS. (0883) 744755. Parking, easy access - just 2 mins off junction 6, M25. Tube Technologies, Rel Acoustics, Audio Lab, Quad, TDL, Nakamichi, KEF, Thorens, Rotel, Marantz, Denon, Michell, Tannoy, Top Line, Rel Acoustics. Single speaker demo room. Demonstration by appointment, free installation, service dept. Access, Visa, Mastercard. 0% Credit. Open 9-6, closed Wed. **TRU-FI SOUND & VISION**, 10 Church Street, Leatherhead, Surrey. (0372) 378780. Sony, Technics, Panasonic, Mitsubishi, Ferguson, Aiwa, Pioneer, Sanyo, B&W, Mission. Free installation. Credit facilities. Access, Visa. 9.15-5.30 Mon-Sat. Closed Wed. Service dept. **ZEBRA** 18-24 Brighton Road, South Croydon CR2 6AA. 081 688 2093. See main entry under London.

SUSSEX (EAST)

JEFFRIES HI-FI, 69 London Rd, Brighton, East Sussex, Tel 0273 609431. 2 Dem Rooms, closed Mon. Late night Wed. Free parking. Bus route. Credit Facilities. **BADA**

JEFFRIES HI-FI, 4 Albert Parade, Green Street, Eastbourne, East Sussex. Tel: 0323 31336. 2 Dem Rooms. Closed Mon. Late night Wed. Free Parking. Bus Route. Credit Facilities. **BADA**
THE POWERPLANT, 66 Upper North Street, Brighton BN1 3FL. (0273) 775978. Roksan, Musical Fidelity, Marantz, Rotel, Yamaha, Tannoy, Audiolab, B&W, Micromega, Epos. JPW, etc. Comfortable single speaker facilities. No appts. nec. Home trial facilities, free install. Late night dems by request. Service dept. Credit facilities available on request. Tue-Sat 10-6pm.

SUSSEX (WEST)

AUDIO DESIGNS, 26 High Street, East Grinstead, W. Sussex RH19 3AS. 0342 314569. Arcam, Audiolab, Cyrus, Epos, Linn, Marantz, NAD, Naim, Rotel, etc. Very comfortable listening room. No appts nec., Home trial facilities, free installation, service dept. Access/Visa. 9.30-6:00 Mon-Sat, late Tue. **BADA**

BOWERS & WILKINS LTD. (Est. 1945) 1 Becket Buildings, Littlehampton Rd, Worthing. (0903) 2 64141. 1 minute from A24 & A27. Free local parking. Aura, B&W (inc. Matrix), Castle, Denon, Mission, Nakamichi, Philips, Quad, Technics, Thorens, and many more in 3 Dem Rooms. Systems, Hi-Fi and Home Cinema. Service Dept., Installations. Open 6 days a week. Access, Visa, instant credit to £1000 subject to status.

HICHCHESTER HI-FI, 7 St. Pancras, Chichester, W. Sussex PO19 1SJ. Tel: (0243) 776402. Linn, Naim, Rega, Creek, Nakamichi, A&R, Denon, Roksan etc. Tues-Sat, 10-1, 2-5.15 (closed Mon). **BADA**

TYNE & WEAR

RED RADIO SHOP AND HI-FI CENTRE, 11 Olive Street, (Off Park Lane), Sunderland. Tyne & Wear SR1 3PE (091) 567 2087. Castle, Denon, JVC, Kenwood, Mordaunt-Short, Michell, Pioneer, Teac, Tannoy, Monitor Audio etc. AV Dem room, large with comparator facility. No appts nec. Free install. Service dept. Interest free credit and no deposit 9am-5.30pm daily.

WARWICKSHIRE

CASTLE HI-FI, 59 Smith Street, Warwick. CV 34 4HC. Tel (0926) 499963. A.R. B&W, LPW, Jensen in car, Marantz, Musical Fidelity, NAD, Pioneer, Rogers, TDL, Yamaha, Dolby Pro Logic. Dem Room. No apt nec, Home trial facilities, Free Installation, Service Department. Interest free credit, Access, Visa, Chartered Trust. Open 10-6 6days a week.

FRANK HARVEY HI-FI, 163 Spon Street, Coventry, Warwickshire, CV1 3BD. Tel 0203 525200. Arcam, Mission, Cyrus, Musical Fidelity, Marantz, Rotel, NAD, Tannoy, Yamaha, KEF. Open 9.30-5:30 closed Thursday. **BADA**

STRATFORD HI-FI, 25 Henley Street, Stratford Upon Avon, CV3 9W. Tel (0789) 414533. Please call for further details.

WILTSHIRE

THE AUDIO EXCHANGE, 52 Morse St, Swindon, Wiltshire SN1 5QP. (0793) 539008. Acoustic Energy, Audio Innovations, Beard, Cerwin Vega, Impulse, Magnum, Micromega, Michell, REL, Sequence. AV and single speaker demo room. Home trial facilities, free installation, service dept. 10-6 Mon-Sat.

AUDIO T, 60 Fleet St, Swindon, Wiltshire. SN1 1RA. (0793) 538222, Fax (0793) 487260. Great hi-fi from Arcam, Audiolab, Cyrus, Denon, Linn, Meridian, Mission, Rotel, Sony, Yamaha, and many more. Mon-Sat 9.30-5.30. 3 yr gntee on Hi-Fi. Free del & instal. 30 day upgrade scheme. Home dems. PX. 2 dem rooms. AV Dept. **BADA**

PR SOUNDS, 58 Castle Street, Trowbridge, BA14 8AU. Tel 0225 777799. Also at Melksham & Devizes. Pioneer, Technics, Kenwood, Denon,

Marantz, B&W, Tannoy, JPW, Dual. Where music is a pleasure, personal service, no appointments necessary. Installations & much much more. Access/Visa £1000 instant credit. Open 9-6, 6 days.

WORCESTERSHIRE

SPAINS HI-FI, 2&2a New Road, Bromsgrove, Worcestershire. Tel: (0527) 72460. B&W, Denon, Kenwood, Marantz, Mission, Nad, Pioneer, Rotel, Sony, Tannoy and more. Integral demo room/showroom for instant comparisons on hi-fi and AV equipment. Free installation, service dept & credit facilities, Access & Visa.

WEST MIDLANDS AUDIO, 158 Ombersley Road, Worcester WR3 7HA. (0905) 58046. Audiolab, Nakamichi, Naim, Rega, Absolute Sounds, Meridian, Arcam, Ion Systems, Roksan. 4 demo rooms for budget & high-end audio. Full DSP. Appointments necessary. Free install. Service dept. Access, Visa, Amex, Diners, Lombard/Hitachi. Mon-Fri 9.30-8.30 by apt Sat 9-5.30.

YORKSHIRE (NORTH)

THE AUDIO CLINIC, 22 Lord Mayors Walk, York, Yorkshire YO3 7HA. (0904) 646309. Mission, Revox, Yamaha, JVC, Audio Innovations, Celestion, NAD, Musical Fidelity, Allison, Thorens. No appts nec. Home trial facilities, free installation, service dept. Access/Visa, credit. Open 10-5.30 Mon-Sat, Wed 11-5.30.

SCARBOROUGH HI-FI CENTRE, 14 Northway, Scarborough, N. Yorks YO11 1JL. (0723) 374547. Aura, Albary, B&W Matrix, Cyrus, Denon, Pioneer, Marantz, Cabasse, Tannoy. Laser vision and wide screen TV. Dem room, appointment preferred. Home trial facilities. Free installation. Service dept. Access/Visa/Creditcharge/£1,000 instant credit/Amex/Diners. 10-6 Mon to Sat.

SOUND ORGANISATION YORK, 2b Gillygate, York YO3 7EQ. Tel: (0904) 627108. Closed Mondays. Linn, Naim, Rega, Creek, Meridian, Arcam, Denon, Royd, Rotel and other well chosen makes. "You can't go wrong — we wouldn't let you". **BADA**

VICKERS HI-FI, 24 Gillygate, York. (0904) 629659. Audiolab, Harman-Kardon, Marantz, Musical Fidelity, Pink Triangle, Quad, Systemdek, Tannoy, Technics, & lots more. 3 demonstration studios (2 by appointment) super showrooms, 2 year guarantee on all hi-fi products. Appts as above, home trial facilities, free installation, service department. Qualified and experienced staff, over 25 years experience. 12 months interest free credit. 10.30-5.30 Mon-Sat.

YORKSHIRE (SOUTH)

BARNESLEY HI-FI CENTRE, 40-42 Sheffield Road, Barnsley, S. Yorks. S70 1HP. (0226) 205549 Fax (0742) 467207. Arcam, Quad, Audiolab, Mission Cyrus, Technics, Denon, Tannoy, Nakamichi, Dual, Rotel. Purpose built demo room, no appts necessary, free install, service dept, Access, Visa, varying finance packages. Open 9.30-5.30, 5 days (closed Thurs).

HI-FI STUDIOS, Sunnyfields, Doncaster, S Yorks DN5 85A. (0302) 781387. Proac, Acoustic Energy, TDL, Sugden, Albary, Art Audio + AMC Valves, EAR Valves, Teac, Michell, Systemdek, Projekt, Keswick, Audio Research, Rel & more. AV room with laserdisc, Yamaha prologic surround, listening room, dems, home trial, free delivery and install, 2 year guarantee. Access, Visa. 10-8pm Mon-Fri, 10-6 Sat. Phone for further info. & FREE fact pack.

YORKSHIRE (WEST)

AUDIO PROJECTS, 45 Headingley Lane, Leeds. (0532) 304565. A&R, Audiolab, Creek, Heybrook, Linn, Musical Fidelity, Naim, Quad, Rega, etc. Free installation, home trial, 2 year warranty, appts preferred. Tues-Fri 9.30-6, Sat 2.30-5.30.

DOUG BRADY HI-FI, The Forge Cottage, 19 Crossgate, Otley, Leeds, West Yorkshire LS21 1AA. (0943) 467689. Naim, Arcam, Rotel, Pink Triangle, Meridian, Epos, Castle. Two dem rooms, free install, service. Access/Visa. Open 10-6pm Tues-Sat. **BADA**

HUDDERSFIELD HI-FI CENTRE, 4 Cross Church St, Huddersfield. (0484) 544668. B&W, Kenwood, Denon, Rotel, Arcam, Musical Fidelity, Quad, Audio Lab, Marantz, Mission, etc. Dem facilities — appointment reqd. Mon-Sat 9-5.30, Thurs 9-8. Closed Wed. Free installation, credit facilities. Access, Visa. **BADA**

IMAGE HI-FI, 17 The Springs, Wakefield, WF1 1QE. (0924) 200272. Arcam, Linn, Meridian, Mission, Quad, Rotel, etc. 2 Listening Rooms. Free Parking, Dell & Instal Mon-Sat 9:30 5:30 pm **BADA**

IMAGE HI-FI, 8-10 St Annes Road, Headingley, Leeds, LS6 3NK (0532 789374) Arcam, Linn, Meridian, Mission, Quad, Rotel, etc. 3 Listening Rooms. Free Dem & Instal. Mon-Sat 9:30 - 6:00pm **BADA**

NORTHERN IRELAND

BELFAST

LYRIC HI-FI, 163 Stranmills Road, Belfast. (0232) 381 296. Linn, Naim, Rega, Arcam, Denon, Rotel, Musical Fidelity, Revox, Mission etc. Mon-Sat 10-6. Late night Thurs.

ZEUS AUDIO, 6 Hope Street, Belfast, (0232) 332522. Audio Innovations, Pink Triangle, Roksan, Marantz, Celestion, Linn, Meridian, Mission Cyrus, Ortofon, etc. Mon-Sat 10.00-5.30. Late night Thursdays. **BADA**

COUNTY DOWN

ASTON AUDIO, Unit 8, Kings Road Shopping Centre, Kings Road, Belfast. Tel: 0232 402220. Akai, Technics, JVC, Mitsubishi, Samsung, Toshiba, Panasonic, and many more. Demos available, Open Mon-Fri 10-8pm Sat 10-5pm

IRELAND

DUBLIN

LAFAYETTE HI-FI, 50 Wellington Quay, Dublin, Tel: 353177 0443. Technics, Denon, Marantz, Sony, Pioneer, Aiwa, Cyrus, Mission, Cerwin Vega. No appts nec, Free Install. Unique trade in service. Credit Cards welcome. Open 10-6 6 days a week.

SCOTLAND

AYRSHIRE

LASER AUDIO 9 West George Street, Kilmarnick, Ayrshire, KA11 1DH. Tel 0563 40292. Audiolab, Aiwa, Celestion, Cyrus, Denon, Dual, Mission, Philips, Pioneer, Rotel, Ruark, Systemdek and Tannoy. Dem Room, AV on Dem. Appts Preferred, home trial facilities, Free installation, service facilities. Access, Visa and written credit. Open Tues-Fri 10-5.30 Sat 9.30-5.30.

GLASGOW

STEREO STEREO, 278 St. Vincent St, Glasgow G2 5RL. (041) 248 4079. Fax 0555 82358. Linn, Naim, Rega, Arcam, Creek, Epos, Castle, Shahinian, Denon and Sehring etc. 3 Single Speaker Demo Rooms. No appointments necessary. Home Trial Facilities. Free Installation, service dept. Interest free credit all standard facilities. Closed Tues Mon-Sat 10-6.

GRAMPIAN

HI-FI EXCELLENCE 293 Union Grove, Aberdeen, AB1 6TD. Tel 0224 322520. Aiwa, Audio Innovations, Denon, Impulse, Infinity, Musical Fidelity, Rotel, Roksan, TDL. 2 large single speaker dem rooms. Appts necessary after 6.00pm. Home trial facilities, Free Installation, Service Department. Various offers. 3Yr guarantee. Open 10-6.00pm 6 days.

HOLBURN HI FI Ltd, 441 Holburn St, Aberdeen (0224) 585713. Arcam, Audiolab, B&W, Celestion, Denon, Dual, Epos, Heybrook, ION, Kenwood, Linn, Creek, Marantz, Meridian, Mission Cyrus, M.S., NAD, Nakamichi, Pioneer, QED, Quad, Revox, Rogers, Rotel, Ruark, Tannoy, Technics, Wharfedale, Yamaha. 9.30-5.30 Mon-Sat. **BADA**

HIGHLANDS

THE MUSIC STATION, 49 Church Str, Inverness IV 1DR. Tel: (0463) 225 523. Beyer Dynamic, Celestion, Denon, Jamo, Kef, Kenwood, Mission, Pioneer, Rotel, Sony. Listening room service dept, free delivery to local area, part exchange, full range of credit facilities.

TAYSIDE

J.D. BROWN, 28-36 Castle St, Dundee DD1 9NZ. (0382) 26591. Rotel, Denon, Pioneer, Technics, Aiwa, Mission, Castle, Mordaunt-Short, Monitor Audio, Bose, Infinity. All equipment ready for demonstration. No apt nec, free installation, service dept. Open 9.30-6pm six days a week, (close 5pm Sat).

WALES

CLWYD

ELECTRO TRADER, 19 Colwyn Crescent, Rhos On Sea, Colwyn Bay, Clwyd. North Wales LL28 4RN. (0492) 548932. Rotel, Yamaha, Harman Kardon, Teac, Alphason, Heco, Infinity, JBL, Musical Fidelity, Tannoy, Rotel, Michi etc. Dem room. Appts preferred. Home trial. Free install. Access, Visa. Open 9.30-1.00, 2.00-5.30 Mon-Sat.

ACTON GATE AUDIO, 4 Ruabon Rd, Wrexham, North Wales, Tel: 0978 364 500, Arcam, B&W, Marantz, Mission, NAD, Quad, Rega, Rotel, Tannoy, Yamaha, etc, Dem Facilities, A.V. on dem, Mail Order. No appts nec, home trial fac, Free install, Service Dept. Access, Visa. 9.30-5:30 closed Weds PM

SOUTH GLAMORGAN

AUDIO EXCELLENCE, 134 Crwys Road, Cardiff. (0222) 228565. Great Hi-Fi carefully selected and dem'd by friendly, enthusiastic staff. Closed Mon. **BADA**

WEST GLAMORGAN

AUDIO EXCELLENCE, 9 High St, Swansea. (0792) 474608. Great Hi-Fi carefully selected and demonstrated by friendly, enthusiastic staff. Closed Mon. **BADA**

GWYNEDD

I&H GRIFFITHS & SONS, 313 High St, Bangor LL57 1YA. (0248) 370655. Yamaha, Tannoy, Teac, Sony, B&W, SVC, Wharfedale, Rotel, JVC. Demos available, no appts nec, home trial facilities, free installation, service dept. Access, Visa, Lombard credit charge. Mon-Sat 9-5.30, Wed 9-1. Audio Visual Specialists.

PETERS HI-FI Victoria Buildings, Mostyn Avenue, Craigh-y-don, Landudno. (0492) 876788. 1 Single speaker dem room. Open 9-5.30. Closed Wed. See Cheshire branch for details.



Bill Hutchinson Ltd.

PIONEER
REFERENCE POINT

HI-FI, AUDIO & CD CENTRES

When you purchase from Bill Hutchinson you're buying the best names in Hi-Fi from the best name for Hi-Fi. Our product guarantee and pricing policy ensure you obtain an excellent deal, my staff and I look forward to being of service to you.



KRV-6050
AV Amplifier

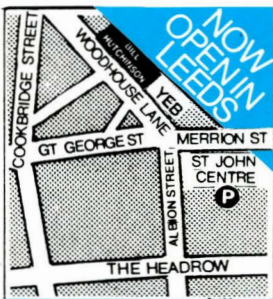
HEAR KENWOODS AWARD WINNING AV AMPLIFIER

- MARANTZ CD52 MK11SE** – CD Player – Award Winner '93
- MARANTZ PM44 SE** – Amplifier – Award Winner '93
- MISSION 751** – Speakers – Award Winner '93
- SONY TCK-611S** – Cassette Deck – Award Winner '93
- SONY STS 311** – Tuner – Award Winner '93
- AIWA NSX-360** – Mini System – Award Winner '93

Bill Hutchinson

ALL WITH 2 YEAR GUARANTEE

BEST PRICES GUARANTEED



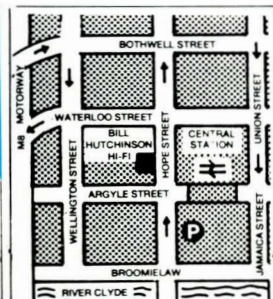
26-28 WOODHOUSE LANE
LEEDS
0532-427777



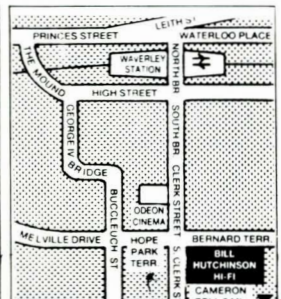
50/52 DEANSGATE
MANCHESTER
061-832 1600



87a CLAYTON STREET
NEWCASTLE NE1 5PY
091-230 3600



43 HOPE STREET
GLASGOW G2 6AE
041-248 2857



43 SOUTH CLERK STREET
EDINBURGH EH8 9NZ
031-667 2877

The Directory

The UK's ultimate review based buying guide:
our views on over 1000 products tested and rated
in the pages of *Hi-Fi Choice*



- We tell you the best hi-fi to buy
- Full guide to prices and specifications
- Every product tested in *Hi-Fi Choice*

HI-FI CHOICE

MAIL ORDER
Tel: 071 436 1053
Fax: 071 637 2690

KAMLA

Coming Soon:
Large range of
NTSC Laserdiscs
will be available
from November

Product List

- AIWA
- AKAI
- AR
- ALCHEMIST
- ALPHASON
- AUDIO ALCHEMY
- AUDIOSTATIC
- AURA
- B&W
- BEYER
- BOSTON
- CERWIN VEGA
- CONRAD JOHNSON
- GOLDRING
- INFINITY
- JAMO
- JVC
- KEF
- KENWOOD
- MICROMEGA
- MORDAUNT-SHORT
- MOTH
- NAKAMICHI
- ORIGIN LIVE
- PHILIPS
- PIONEER
- PROCEED
- PROJECT
- ROTEL
- RUARK
- SANSUI
- STAX
- SME
- SYSTEMDEK
- TEAC
- TECHNICS
- THORENS
- TOWNSEND

TEAC
VRDS 7
D700/P700
NOW ON
DEMONSTRATION

We also stock a large
range of TV's/Video's
from
**AKAI, HITACHI, JVC
MITSUBISHI, PANASONIC
PHILIPS, SAMSUNG
SHARP, TOSHIBA**

MICROMEGA
T-DAC
T-DRIVE
*the first front loading
transport from Micromega*

*Townshend Rock III
Turntable Now On
Demonstration
See review in Oct '93
issue of Hi-Fi Choice*

*New Rotel AV
Products Now
In Stock
RSP 960 AX Prologic Processor
RB956 Six Channel Poweramp*

SALE ON NEW AND EX-DEM HIFI

	RRP	NOW
Audio Alchemy DDE V1.0	new 420.00	295.00
Motif (Conrad Johnson) MS2001 200 Watt Power Amp	ex-dem 4000.00	2400.00
Motif (Conrad Johnson) MP11 Phono Stage	ex-dem 2250.00	1125.00
Conrad Johnson MF200 200 Watt Power Amp	ex-dem 2400.00	1800.00
Oracle Alexandria inc. SME345 arm	new 1890.00	945.00
Oracle Delhi III	ex-dem 1595.00	950.00
B&W Matrix 803 Series 1	ex-dem 1945.00	1050.00
Alphason Sonata inc. HR100/Atlas	ex-dem 1785.00	1160.00
Teac D500 D/A Converter	ex-dem 330.00	265.00
SD Acoustics SD1	ex-dem 1650.00	825.00
SD Acoustics SD4	ex-dem 700.00	455.00
Nakamichi 1000mbi	new 4500.00	2295.00

UPTO 50% OFF

ACCESSORIES FROM:
AKG, ALPHASON, AUDIOQUEST, AUDIOTECHNICA, BEYER, CABLETALK
FOUNDATION, FURUKAWA, GOLDRING, IXOS, KONTAK, LYRA, LYNWOOD
MONSTER, ORTOFON, QED, SENNHEISER, SONIC LINK, SOUND STYLE
STRAIGHTWIRE, STANDS UNIQUE, SUMIKO, SUPRA, TOWNSEND, XLO
VAN DEN HUL

ASK Electronics Ltd.
248-250 Tottenham Court Road
London
W1P 9AD
071 637 0353/0590

251 Tottenham Court Road
London W1P 9AD
071 323 2747

Harp Electronics Ltd
237 Tottenham Court Road
London
W1P 9AD
071 636 4611

The Directory

This is the legendary Hi-Fi Choice Directory, the only buying guide that is entirely based on comprehensive technical and subjective reviews. Each and every entry carries the weight of our exhaustive test procedures with regularly updated prices and specifications.



The *Hi-Fi Choice Directory* was conceived as a reference guide to all the audio products reviewed by *Choice* that are currently available. The products are split into categories, each with its own introduction containing information about the product type and its applications. They are particularly relevant to the uninitiated first time buyer and help sort out the order of priorities when buying a piece of equipment.

Each product along with its current retail price is placed in its respective category in alphabetical order. The prices of the products are updated on a regular basis, although it should be noted that our value ratings are based on the product's price at the time of review.

Sound quality

This column contains the ratings for the standard achieved in our listening tests. The sound quality ratings range from Poor to Excellent. Their meaning and order are as follows:

P	Poor
A-	Average-
A	Average
A+	Average+
G-	Good-
G	Good
G+	Good+
VG	Very Good
E	Excellent

With P being the worst and E the best rating within a section.

One important point to remember is that these cannot be used to compare products from different categories. For example, a cassette deck rated Excellent in sound quality will not usually offer the same standard of fidelity as a similarly rated turntable or CD player.

How to use this guide

Perhaps the most influential symbols in the *Directory* are the little red triangles ▲ found in the value column at the beginning of each entry where appropriate.

Products that make the grade are awarded the Best Buy or Recommended accolade.

▲▲ A product carrying the Best Buy swingtag is of excellent quality and good value for money in its price category.

▲ Recommended products are runners up, but still definitely worth considering within their price bands.

Please note however, that an expensive Recommended product will nearly always sound better than an inexpensive Best Buy. An ideal situation would be to choose suitably priced ▲▲ Best Buy or ▲ Recommended products from relevant categories and create a Best Buy system. But, due to the variety in tonal balance that exists in much audio equipment, and differences in taste, system building is unfortunately not that simple. These ratings make a useful guideline for shortlisting components, but only experiencing the actual combination will tell you whether it works for you.

Finding that component

Before you shop, follow our top eight tips for better buying:

1. Check out the components' recommended retail prices in the *Directory*.
2. Find out as much as you can about the products you want by reading *Hi-Fi Choice's* reviews and lab tests.
3. Visit local dealers that stock some of the brands you want to hear and try to find one that seems sympathetic to your needs.
4. Don't discount a dealer's suggestions just because the products don't have rave reviews.
5. Take your own software (records, CDs, tapes) along for a demonstration of the equipment that the dealer recommends.
6. Listen at the sort of volume you would normally use at home — systems often sound more impressive when played loud.
7. If you are unsure about something or want to hear an alternative, just ask.
8. Audition a system for a reasonable amount of time, say three quarters of an hour or so, before making a decision.

Unless you have first generation masters of course.

Comments

The Comments column contains a potted summary based on the original review, emphasising

the salient points of a product's character and sonic performance. The space available doesn't allow for great detail but we have attempted to put across the essence of the review. Obviously, important

information on compatibility or auxiliary equipment used in the test cannot be included, and we would advise you to refer to the original review for this.

Please note that these comments are those of our own reviewers and not, as is the case with some magazines, those of the manufacturer.

Features

Product features are shown with a combination of figures and blob charts, with headings at the top of each column indicating the appropriate category, a blob indicating the existence of a particular feature.

There are different headings for each section and the more complicated categories are explained in the individual introductions. Where figures are used the unit of measurement is shown in the heading.

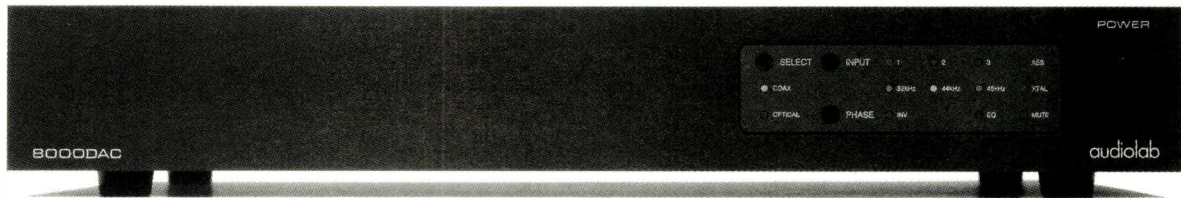
Back issues

The final column contains a reference to the issue of *Hi-Fi Choice* which featured the complete review.

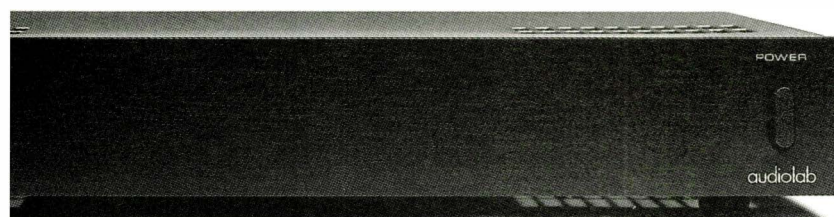
Index

Amplifiers	125
Cables	132
Cassette decks	135
CD players	137
CD transports	139
DACs	141
DAT players	141
Headphones	144
Loudspeakers	145
Tuners	157
Turntables - Cartridges	157
Turntables - Integrated	161
Motor units	161
Tonearms	161

The new Audiolab Digital-Analogue convertor



The Audiolab product range:
 8000A Integrated amplifier
 8000C Pre-amplifier
 8000P Stereo power amplifier
 8000T FM/AM tuner
 8000M Monobloc power amplifier
 8000DAC digital-analogue convertor



Winners

FBA AWARDS 1993
 Audiolab 8000A
 Best Integrated Amplifier
 Audiolab 8000T Best Tuner
 Audiolab 8000DAC
 Best Digital Component
 Audiolab 8000C & 8000P
 Best Hi-Fi Separates

AUDIOLAB



Amplifiers

The amplifier sits at the heart of the system, processing the outputs from all the various music sources as necessary and then driving the loudspeakers. These two (quite separate) functions are integrated into a single box at the low-to-middle price points; separated pre- and power amplifiers, even separate power supplies, become increasingly common as one moves upmarket. At the upper end of the specialist market, valve amplifiers provide a popular alternative to the transistor types amongst enthusiasts.

There is a substantial difference between specialist (sound quality oriented) amplifiers and the consumer electronics style models. The former

are bleakly simple, avoiding all unnecessary features to provide the most direct signal path in the interests of best sound quality. The latter range from models with just basic tone controls and tape recorder switching, to those with elaborate facilities such as graphic equalisers, remote control (including volume), surround sound options etc. etc.

We include our measured power output (RMS, 8ohm load, 1 channel driven) – but again, paradoxically, this doesn't necessarily correspond to the loudness capability of the amplifier, which has as much to do with the elegance of the over-load characteristics within a given system (valve

amplifiers invariably sound more powerful than their rating would suggest).

Apart from output the facilities listing shows how many line (that is inputs besides those for phono cartridges) inputs a product has and includes tape inputs. The MM and MC blobs indicate which types of cartridge can be accommodated. Integrated, preamp and power amp indicate the type of amplifier reviewed, and in some instances that a pre/power combination has been tested. In such instances the price given is for both components. The remote control and headphone socket blobs indicate the existence of these facilities.

Amplifiers

Product	£Price	Comments	Output W/BCL	Line inputs	MM	MC	Integrated	Preamp	Power amp	Remote control	Headphone socket	Issue No.
Adcom GCA-510	349	G American power amp with line inputs and passive pot, highly detailed midrange but rather high price.	81	5								121
Adcom GFP-555II/GFA-535II	850	A+ Technically proficient pre/power saddled with a slightly hard and unsympathetic sound.	94	6								124
AMC CVT3030	460	A A well meaning and affordable attempt to mix transistors with valves, albeit one that only really shines with simple musical styles.	35	5								116
Aiwa XA-006	150	A Competent enough performer with plenty of facilities. A gutsy sound though one that's rougher via CD than MM.	67	5								92
▲ Akai AM-47	230	G+ Plenty of widgets and an unexpectedly sharp, open and detailed sound. Looks ghastly but sounds strain free.	104	4								104
Akai AM-95	630	A- A revamped version of the older AM-93 with newer onboard bitstream DACs. Its sound is just too eager, however	110	6								109
Albarray AP4/S508	850	A- A disappointing sound from a pre/power amp that's hamstrung by a variety of technical oversights. Albarray has done better.	46	4								116
▲ Albarray PP1	400	G+ Available with or without various MM/MC options, the 'basic' PP1 has an attractively warm, earthy sound.	48	4								104
Alchemist Kraken	444	A Class-A objet d'art that's far too sensitive to RF interference. Can sound cold and fierce as a result.	54	5								116
▲ Alchemist Kraken APD7/APD8	775	G A quirky Class A number with an equally warm and colourful sound. Hardly accurate but entertaining nonetheless.	49	4								124
▲ Arcam Delta 110S/120.2	1070	VG Now in mkII guise this established combination has matured into a very articulate, powerful if dry-sounding amplifier.	109	4								124
▲ Arcam Delta 290	450	VG Combines the dryness and restraint of Arcam's older models with a refreshing sense of detail, dynamics and musical colour.	99	5								116
▲ Art Audio Quintet	988	VG Switchable triode/ultralinear output stage. In triode mode these are 15 of the sweetest watts around. Surprisingly gutsy	15/25									109
Audio Innovations Series 200	850	G Turns in a fuller and more substantial performance via MM rather than CD. Otherwise its sound can seem slightly bleached.	10	5								109
▲ Audio Innovations Series 300II	500	G+ Under-powered and over-distorted yet capable of realising an open and captivately expressive sound. Sensitive speakers are a must	9	4								97
▲ Audio Innovations Series 700	999	G+ Valve amp that can turn the roughest of digital sounds into music, both understated and graceful. Sensitive speakers are a must	24	5								116
▲ Audio Note Ongaku	43125	E A single ended, zero negative feedback, triode, line level integrated amp and a half. Probably the best amplifier in the world!	27	6								Col
▲ Audiogram MB1	500	G+ It'll successfully tackle the most difficult of speakers and still provide a very warm, rich and euphonic sound	46									116
▲ Audiolab 8000A	450	VG Recent mods have cured the slightly glassy treble, replacing it with a smoother and more solid style of music making	81	7								97
Audiolab 8000C/8000P	1100	G Very distinctive, almost stark neutrality that will not appeal to all listeners. Good value engineering, nevertheless	157	7								97
▲ Aura VA-100 Evolution	300	G+ Might overheat when driving insensitive, low-impedance speakers but was applauded for its sense of scale and drama via CD	81	5								109
▲ Aura VA-50	220	VG Superficially similar to the cheaper VA-40 but with much more of the old MA-80's magic! Great sound from a slimline package	65	5								97
▲ Beard Audio CA35/P35mkII	1790	VG Good build quality and finish and a characteristic valve sound make a first class amplifier capable of great musical enjoyment	35	4								63
Beard CA506	1295	G+ A versatile valve preamp, the bass sounded lively if a touch softened, while the treble was detailed but lacked a little sparkle	4									50
Beard M70	1995	G+ A substantial British monoblok power amplifier, but not a great deal more impressive than the P35	70									50
▲ Concordant Excelsior	1040	E Styling might not inspire confidence, but sonically this preamp is tremendously vivid and detailed. Real high-end performance	3									77
▲ Conrad-Johnson PV-10	1250	E Fabulous preamplifier. Beautiful imaging, superb detail, plenty of gain on the phono stage; classy build quality too.	4									78
▲ Conrad-Johnson Premier 7	11000	E The 'Seven' is designed without compromise, and is clearly one of the finest (valve) preamplifiers money can buy.	4									Col
▲ Creek CAS 4040 S3	220	G Now in mk3 guise the '4040 offers a dry but tidy sound via disc and one that's slightly leaner and better focussed on CD.	41	3								92
Creek CAS 4140 S2	250	A+ Running production changes inspired us to re-review this amp which now sounds thicker and 'blurred' compared to the original	41	3								109
Creek CAS 6060	500	G Looks like the old '5050 but employs the sort of big, meaty-sounding electronics used in the earlier '4040. Dynamic and impressive.	81	5								104
▲ Cyclone Catalyst	1995	VG Exceptionally load tolerant and very refined in delivery. Extra options available in future	74									80
▲ Denon PMA-250III	160	A- Pretty high resolution for the price, occasionally loses its grip but is generally engaging and enjoyable	55	3								121
▲ Denon PMA-450	250	G+ Denon's latest integrated amp swept the board with its big, brassy if somewhat extravagant sound.	99	5								116
▲ DPA Digital DSP-200S/DPA-200S	1245	E The very dramatic but exceptionally detailed and transparent sound of this combination belies its modest power rating.	48	5								124
▲ Dual CV600RC	160	G A very lively, open and vibrant sound. Slightly sanitised via CD perhaps, but still damn good for a features-first integrated amp!	63	5								104
E.A.R. 549	5400	VG Valves imitating trannies give exceptional power delivery but not the delicacy and transparency one expects	200									60
▲ E.A.R. 802/509mkII	4200	VG Extremely well made and combining the sonic strengths of both transistors and valves this EAR combo warrants attention	100	6								63
EMF Audio Sequel	349	G+ A fresh start for Mike Creek has resulted in the Sequel, a minimalist amp with a very refined but mildly restrained sound	47	4								109
Exposure XX	625	A Line only integrated with good sense of timing but limited hf extension. Likely to be very system dependent.	43	4								121
▲ Exposure XI/XII/VIII Super	1650	VG New preamp and improved power amp led to a smooth and refined sound, MM/MC less transparent than CD	61	5								80
▲ Grant G60AMS	1300	G+ Neat and compact valve monoblok gave good sound on the 8ohm tap, better still on 4ohms. The midrange was particularly natural	60									57
▲ Harman Kardon HK6150	200	G+ Based on the older HK6100 but with a more solid, punchy and expressive performance that attracted considerable praise	44	5								109
▲ Harman Kardon HK6250	280	G+ Heavily based on the cheaper HK6150, this version offers slightly more power with a similarly gutsy and expressive sound	51	5								116
Harman Kardon HK6550	430	A- Follow up to 6500 is disappointing with grainy hf and limited depth. Quite powerful but ultimately not up to the mark	69	6								121
Harman Kardon HK6850	900	G This monster is derived from the HK6800 with a similarly deep and powerful sound but a rather steep price tag	101	6								109
Heybrook C3/P3	1379	A Heybrook has improved the manufacture of its power amp though flaws in the preamp's disc input remain	146	4								104

Amplifiers continued

Product	Price	Comments	Output	Line inputs	MM	MC	Integrated Preamp	Headphone socket	Remote control	Issue No.
▲ Heybrook Signature	2014	G+ A stunningly powerful and vivid-sounding combination which is equally impressive via vinyl or CD	148	4	•	•	•	•		109
JVC AX-A342	170	A A value-conscious budget amp offering plenty of power but a slightly untidy and inconsistent sound	77	5	•		•		•	109
JVC AX-R562	249	A- More fuss and bluster than detail and dynamics was how one listener concisely described this less than wonderful model	90	5	•		•		•	121
▲ JVC AX-Z1010	650	G+ One of the best behemoths: a big amp with a big, boppy and unclouded sound and a couple of ancient 16-bit DACs for good measure!	124	6	•	•	•			109
▲ Jadis JP30/JA30	10750	E French tubes. Beautiful build, nostalgic styling and delightful sounding midrange transcend limitations at frequency extremes	34	4	•			•	•	60
Kelvin AZI	700	A This latest Absolute Zero still sounds animated but also rather more synthetic and crude. It's also rather more expensive.	100	6			•			116
▲ Kenwood KA-3020	160	G+ An unassuming little amplifier that turns in a remarkably balanced and entertaining sound. Lively, detailed and engaging	66	5	•		•			97
Kenwood KA-4050R	250	A- Respectable but ultimately uninspiring model whose remote control is its main asset.	85	5	•	•	•		•	121
▲ Lecson Quattra	370	G Underpowered but with the flexibility of four independent power amps. Very deep, captivating sound with 3D soundstaging.	40	5	•	•	•			92
Lecson Stereo	230	G+ Can reflect the full weight of a classical performance. Genuinely deep, detailed and enthralling sound	76	6	•	•	•			104
Linn Intek	448	A+ Linn's no-nonsense Intek still lacks the authority and confidence to support its forward balance.	55	5	•	•	•		•	104
Magnum Quartet A	329	A- An integrated model that incorporates four monoblocks optimised for bi-wiring, but sound is sandy in the treble.	72	5			•		•	121
▲ Magnum A-Class	599	G+ Lashings of rich and compelling music, trading a hint of lushness for stark accuracy. An unexpected find. Phono stage option	55	7			•			116
▲ Marantz PM-52SE	430	G+ The SE premium pays for a degree of fluency that draws you into the music and keeps you there. Rather nice	95	6	•	•	•			121
▲ Meridian 201/205	1285	G+ A fine preamp with option of full system remote, plus competent monoblock power amplifiers with generally good performance	100	6	•	•		•	•	62
▲ Moth Series 30	587	G+ A modular system capable of cracking results. The passive preamp and power amp combination warrant a Best Buy in their own right.	35	4	•	•		•	•	109
▲ Musical Fidelity Preamp/Typhoon	500	G+ A combination that plays everything close to its chest but bridge the power amp and you'll witness an explosion of detail.	62	6				•	•	116
Musical Fidelity Tempest	200	P+ Basic but lusty amp has a disturbingly bright and forward sound, accentuating strings and percussive detail above all else.	62	6			•			116
▲ NAD 302	160	G+ A spritely and uplifting performance. Sounds loud but never intrusive or fatiguing.	39	5	•		•			116
▲ NAD 304	230	G+ Equally effective with CD and vinyl this is another successful and entertaining NAD amplifier for your shortlist	50	6	•		•			121
NAD 1000S/208	1120	A+ One of the beefiest amplifiers we've ever tested. Unfortunately it sounds too restrained and lightweight.	314	5	•	•		•	•	124
▲ Nakamichi IA-3	350	G A minimalist outing for the cassette heroes that's very confident if a tad restrained.	62	3			•			121
▲ NVA AP20	260	G+ Utilitarian amplifier sounds gentle and restrained but is euphonic and utterly engaging. Optional phono stage	35	4			•			109
Onix OA-21S/SOAP	730	G- Via MM disc this amp comes alive with a fresh and vibrant sound though its CD input sounds utterly dead by comparison.	60	4	•	•	•			97
Onix OA22L	300	A+ Nothing genuinely unpleasant about this amplifier, simply that its hurried and lacklustre sound fails to spark the imagination.	39	5			•			116
Orelle SA-Q20.2	419	A Potentially system dependent this split the panel but ultimately elicited only limited enthusiasm	86	6			•			121
▲ Philips FA-930	200	A+ Radical styling hides a digital switching facility plus full remote control over what is Philips' best effort to date	99	5	•		•		•	109
Pioneer A-300X	200	A+ This revamped version of the A-300 was also more confident sounding via CD than MM, yet our panel were still left unmoved.	55	5	•		•			116
▲ Pioneer A-400	280	VG Pioneer's design concept snaps into focus with an amp that seems to bubble with musical detail. A budget bench-mark	71	5	•	•	•			92
Pioneer A-676	300	A- A lusty amplifier at a modest price yet one that failed to inspire our listeners with its bland, indifferent sound	98	7	•	•	•			109
Pioneer A-777	450	A- A larger version (!) of the A-676 that offers more power but an equally sluggish and uninspiring sound	121	7	•	•	•			109
▲ QED A270CD/PA	370	G+ Recent updates have bolstered the output of the A270 without adding to its colorations. The PA phono option is a touch expensive	61	5			•			97
▲ QED C300/P300	630	G A cost-effective combo, limited in its resolution but less beguiling as a result. Disc stage is sweeter but samey	58	3	•	•		•	•	85
Quad 34	388	A Well-built durable preamp, filtering and above average tone controls but was found lacking in sound quality (viz: detail/dynamics)	4	•	•		•			44
Quad 66/606	1510	G Amplifiers with a classic lineage but compromised by an equally dated, soft and undynamic sound.	138	6	•			•	•	124
Rational Audio	175	A+ Wacky Czechoslovakian amp offers a very open and fluid sound via CD but its MM performance depends on cartridge load impedance.	129	3	•		•			92
Ray Lumley Model 75	1995	G+ Valve monoblocks represent good value. What they lack in musical subtlety they make up for in sheer muscle.	75					•		78
Rega Elex	298	A Minimalist amplifier that sounds too forward, hard and unforgiving for its own good. Shows plenty of promise, however.	51	4	•		•			116
▲ Rose RV-23	425	G+ Beautifully built British 'hybrid'. You can spend more to get a more transparent sound but it's hard to criticise at the price	3	•			•			77
▲ Rotel RA-930AX	180	G+ This budget wonder captivated our listeners with its clean, vibrant and thoroughly involving sound	53	3	•		•			104
▲ Rotel RA-935BX	200	G A line only winner that lets a lot of music through and never lets things get out of hand. Could be a touch more enthusiastic	58	5			•			121
▲ Rotel RA-940BX	250	G Rotel's cheapest 'BX' amp prompted a mixed reaction, some finding it muddled while others thought it 'exceedingly musical'	53	5	•	•	•			109
▲ Rotel RA-960BX	275	G+ If you like music to harbour a latent rather than blatant sense of power this amp's confident restraint could be just the ticket.	88	5	•	•	•			116
▲ Rotel RC-960BX/RB-960BX	350	G- Excellent standards of construction, flexibility and plenty of power under the bonnet, an ideal choice for the first-time buyer.	80	5	•			•	•	104
Rotel RC-980BX/RB-980BX	700	A Plenty of watts per pound, sound is expansive but lacks a sense of poise, of control and fine detail - a disappointment	143	5	•	•		•	•	109
▲ Sansui AUX-417R	310	G+ Unusually clean and precise with more subtlety than is usually attributed to remote control amps.	53	5	•	•	•			121
▲ Sansui AU-X911DG	800	G+ At its best when used with the on-board MASH/PWM DAC where it sounds technically neutral but still emotionally charged	112	7	•	•	•			85
Sherwood AI-2210	80	P Lightweight in all respects this is better than you'd find on a midi and at least its reasonably painless.	47	4	•		•			121
▲ Sony TA-F440E	200	G A new budget amp based on tried-and-tested circuits. A fresh and up-beat sound with plenty of detail, can sound smeared via CD	109	5	•		•			104
Sony TA-F540E	250	G- An MC input but little else over the TA-F440E. Sounds more consistent from input to input but is still rather superficial	108	5	•	•	•			104
Sugden A21a	469	G The modern-day relative of Sugden's original Class A amp and one that offers a smooth, easy-going sound.	25					•		92
TEAC AX-1000	150	A- Initially entertaining but ultimately unsatisfactory and rather short on high frequencies	62	5	•					121
TEAC A-X5000	230	A- This amplifier is compromised by a grey and muddled sound that taxed the concentration of our listeners. Better via MM disc	107	6	•	•	•			97
▲ Technics SU-VX600	220	G The first 'tweaked' amp from Technics, its solid and sharply focused sound a taste of things to come.	90	5	•	•	•			104
Technics SU-VX720	250	A+ Big and spacious sound either appears rough and blustery or impressively grand depending on the music at hand.	84	5	•	•	•		•	116
Technics SU-VZ220	100	A- Cheap, cheerful and pretty flexible to boot the SU-VZ220 quickly sounds thin, splashy and relentless when the going gets tough	50	4	•		•			109
Threshold FET 10e/SA-4	11852	G+ Almost valve-like limpidity and excellent soundstaging are star qualities of the Threshold amps	100	7	•	•		•	•	Col
Wharfedale 2050A	250	A- Loud and potentially aggressive amp that is reasonably detailed and clear. but ultimately a bit much like hard work	70	5	•	•	•			121
Woodside ISA230	900	A Smooth and inoffensive valve amplifier if one that lacks the sparkle and euphony required for a truly entertaining sound.	27	5	•		•			116
Woodside SC26/STA35	2743	G+ Synergistic pairing with a cool, controlled sound, good focus and transparency. More about poise than grunt	35	5				•	•	100
YBA Integre	1199	G+ Audiophile spec French integrated with good resolution and nice phono stage.	57	4	•		•			121
▲ YBA 1 pre/power amp	7649	E Well finished pre/power amp offers front rank stereo staging and transparency, and is capable of driving the most difficult loads	85	5	•	•		•	•	62
▲ YBA 2 pre/power amp	3624	G+ Superbly finished with very good space and transparency, slightly softened bass. Needs transformer for MC cartridges	70	5	•	•		•	•	56
YBA 3 pre/power amp	2350	G This duo produced see-through, ethereal stereo images that were more convincing towards the centre of the soundstage	56	4	•			•	•	72



SEVENOAKS SUPERFI

This advertisement is valid until at least 30th October 1993

Display, Demonstrations and After Sales

Unlike many of our competitors, all products (subject to availability) are on display and may be auditioned in dedicated listening rooms in any of our branches. Our helpful staff enjoy and understand the equipment they sell and will be only too happy to assist you through the Hi Fi choices that lie ahead. Our Sevenoaks Superfi service dept is one of the largest and best equipped in the business and will maintain your purchase in tip-top working order at all times.

SUGGESTED SYSTEMS

The suggested systems priced below all include the popular NAD 5120 turntable but an alternative turntable or CD player is available at extra cost. Please see "OPTIONS" list below for further details.

SPEAKERS	AMPS	CD Players	Turntables
JPW Sonata (V) Celestion I Goodmans M100	275.95	Aiwa XC300 Add £99	Dual CS503.2 Add £79
Celestion 3 MK II JPW Sonata (W) Tannoy 603 MK II Mission 760I Widale Diamond 5 B & W 2001	291.95	Denon DCD595 Add £79	Dual CS505.4 Add £129
Tannoy 605 MK II Moni/Audio One Mission 760I SE	319.95	Denon DCD890 Add £99	Nad 533 Add £49
Celestion 5 MK II B&W DM600 Kef K120 Heybrook Solo Mission 761I Moni/Audio R7	327.95	Denon DCD1290 Add £169	Thorens TD280 IV Add £119
Tannoy 607 MK II B&W DM610 Celestion 7 MK II	359.95	Goodmans GCD360 Add £229	Systemdek IIX900 Add £129
Rogers LS2A-2 JPW AP3 Kef 140	375.95	Kenwood DP2050 Add £0	(+ choice of arm) Add £69
Mission 762 Castle Durham II Heybrook HB17/3	391.95	Kenwood DP3050 Add £59	
Rogers LSA4-2 Tannoy 609 MK II	415.95	Kenwood DP7050 Add £99	
	423.95	Marantz CD52II Add £129	
	436.95	Marantz CD52SEII Add £199	
	452.95	NAD 502 Add £119	
	480.95	Rotel RCD945AX Add £129	
	495.95	Sony CDP311 Add £69	
	503.95	Sony CDP711E Add £149	

FREE

- with suggested Systems
- Cartridge (turntable based systems only)
- Speaker Leads (80 strand cable)
- Carriage (Systems over £300)

Options

The following Compact Disc Player or Turntable may be ordered instead of the NAD 5120 in the above systems.

0% FINANCE

We offer 0% finance on a wide range of manufacturer's products. **Option 1:** 10% deposit followed by 6 equal monthly payments. Example: Cost £600. Deposit £60 plus 6 payments of £90. **Option 2:** 25% deposit followed by 9 equal monthly payments. Example: Cost £600. Deposit £150 plus 9 payments of £50. **Both options:** minimum balance £400. Subject to status. **0% APR.** Personal shoppers only. Written details on request. 0% finance not available on Suggested Systems or 'Price Match' sales. Added value offers not available on 'Price Match' sales.

GETTING IT TOGETHER

Enhance the performance of your new hi fi. Buy a quality interconnect or stand from us, and if you don't think your sound has improved return it in 'as new' condition and we'll refund your money in full. **Interconnects.** Choose from Audioquest, Monster, IXOS and Furukawa. **Loudspeaker Stands.** Our extensive range includes Apollo, Partington and Target. **Headphones.** A range to suit all budgets including Sennheiser, Audio Technica and Beyer. **Too Numerous to Mention.** We sell a huge number of essential and useful accessories too numerous to mention. If you have a particular need - we probably have the solution.



This advertisement is valid until at least 30th October 1993

PLEASE CALL US BEFORE TRAVELLING TO VERIFY PRICE AND AVAILABILITY

THE WHAT HI FI AWARD WINNERS

Heads You Win . . .

You can see and hear the What Hi Fi? Award Winners at your local Sevenoaks Superfi branch, where we pride ourselves in the quality of our displays, demonstration facilities, staff knowledge and after sales care. And all this comes at highly competitive prices, giving you unbeatable value for money.



At Sevenoaks Superfi we are confident that you won't find a better package anywhere else. However, in the unlikely event of an *authorised* dealer offering an identical product at a lower price - we will match that price!

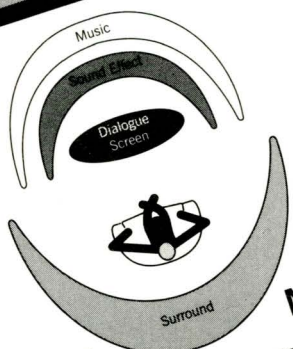
See our price match conditions in this ad.

. . . Tails You Can't Lose!



BRING THE CINEMA TO YOUR LIVING ROOM

Turn your living room into your own cinema or concert hall and surround yourself with the ultimate sound and vision sensation.



You can experience home cinema at selected Sevenoaks Superfi branches. So call us now and book your mind blowing demonstration.

Marantz, Mordaunt Short

Buy with confidence from one of the leading independents in the industry!

ADDED VALUE AT SEVENOAKS SUPERFI

You can claim from our range of added value options developed to make our already competitive prices even more attractive.

- ▶ Claim **FREE** CDs* with selected CD Players
- ▶ Claim **FREE** Cassettes with selected Cassette Decks
- ▶ Claim **FREE** Stands and Cable with selected Speakers
- ▶ Claim **FREE** Audio Technica ATH-610 Headphones worth £40 on **any** Hi Fi purchase over £500



Added value offers are not available on 'Price Match' sales. *CDs must be chosen from our 'Free CD' collection.

BUY WITH CONFIDENCE

IN STORE & MAIL ORDER - You can buy with confidence from **Sevensoaks** Hi-Fi. We've been in business for 21 years and have lots of experience with personal callers and Mail Order customers. All goods are **BRAND NEW, FULLY GUARANTEED** and maintained by **OUR OWN SERVICE DEPARTMENT**. For personal attention and demonstration call into any of our branches. If you live too far away, simply post or phone your order through and our efficient Mail Order department at Sevensoaks head office should have your equipment safely delivered within 2 or 3 days, subject to availability. Carriage is only £7 per order and generally **FREE** if total exceeds £300 (UK mainland only). All goods are insured against loss or damage in transit. Payment may be made by cash, cheque, Access or Visa (Barclaycard). Prices include VAT.

Amplifiers

- Alchemist Kraken £399.95
- Arcam Alpha 5 £229.95
- Arcam Delta 290 £449.95
- Aura VA50 Black £219.95
- Aura VA100 Black £299.95
- Audiolab 8000A/II £449.95
- Audiolab 8000C/II £649.95
- Audiolab 8000M (teach) £599.95
- Audiolab 8000PH £159.95
- Audiolab (700aks branch only) £219.95
- Cyrus PMA250 II £249.95
- Denon PMA350 II £624.95
- Denon PMA450R £774.95
- Denon PMA450 £749.95
- Exposure EXP20 £279.95
- Exposure EXP17 MM £399.95
- Exposure EXP18 £279.95
- Exposure EXP19 £199.95
- Harman Kardon HK1200 £119.95
- Harman Kardon HK6250 £199.95
- Harman Kardon HK6150 £349.95
- Kenwood KA3020 £199.95
- Kenwood KA5050R £299.95
- Marantz PM44SE £199.95
- Kenwood KA5050R £299.95
- Marantz PM44SE £199.95
- Musical Fidelity A1 Mk III £299.95
- Musical Fidelity Pre B £874.95
- Musical Fidelity Typtron £199.95
- Musical Fidelity Mk65 (Pair) £45.95
- Musical Fidelity Bridging cable £169.95
- Nad 302 £229.95
- Nad 304 £329.95
- Nad 306 £279.95
- Nad 306 £279.95
- Pioneer A300X £482.95
- Pioneer A400 £388.95
- Pioneer A400X £388.95
- Quad 66 inc R1 £673.95
- Quad 34 £169.95
- Quad 306 £199.95
- Quad 606 £249.95
- Rotel RA920AX £299.95
- Rotel RA935BX £299.95
- Rotel RA940BX £749.95
- Rotel RA960BX £424.95
- Rotel RB970BX £149.95
- Rotel RB990BX £324.95
- Rotel RA980BX £499.95
- Rotel RB980BX £324.95
- Rotel RC970BX £249.95
- Rotel RC980BX £299.95
- Rotel RC990BX £299.95
- Sony TAF442 £199.95
- Sony TAF542 £249.95
- Technics SAJ600 £249.95
- Technics SAJ700

Cassette/DCC Decks

- Awa ADF410 £119.95 (FT)
- Awa ADF810 £229.95 (FT)
- Awa ADW828 £199.95 (FT)
- Awa ADW1929 £229.95 (FT)
- Denon DRM540 £159.95
- Denon DRM710 £259.95
- Denon DRM10 £299.95
- Denon DRM510 £249.95
- Denon DRW760 £249.95 (FT)
- Harman Kardon TD4200 £649.95 (FT)
- Marantz DD82 - DCC £799.95 (FT)
- Marantz DD92 - DCC £269.95 (FT)
- Marantz SD52 £199.95
- Marantz SD62 £849.95 (FT)
- NAD 602 £599.95 (FT)
- Nakamichi DR1 £399.95 (FT)
- Nakamichi DR2 £399.95 (FT)
- Nakamichi DR3 £399.95 (FT)
- Philips DCC 900 £399.95 (FT)
- Pioneer £199.95 (FT)
- Rotel RD955AX £149.95 (FT)
- Sony TCK311 £199.95 (FT)
- Sony TCK411 £279.95 (FT)
- Sony TCK511S £279.95 (FT)
- Sony TCK611S £179.95 (FT)
- Sony TCK635S £229.95 (FT)
- Technics RS8X404K £169.95 (FT)
- Technics RS8X464K £189.95 (FT)
- Technics RSTR333K £159.95 (FT)
- Yamaha KX260 £249.95
- Denon DRA345R £319.95
- Denon DRA545RD £259.95
- Nad 701 £329.95
- Nad 705

Speakers

- Arcam Delta 2 Black (Vinyl) £299.95 (FS)
- B & W DM600 £179.95 (FS)
- B & W DM610 £239.95 (FS)
- B & W DM620 £399.95 (FS)
- B & W DM650 £845.95 (FS)
- B & W 805 £199.95 (FS)
- B & W 804 £129.95 (FS)
- B & W 2001 £649.95 (FS)
- B & W Team Solid £249.95 (FS)
- Castle Chester £49.95 (FT)
- Castle Durham II £649.95 (FT)
- Castle Trent II £179.95 (FT)
- Castle York £269.95 (FT)
- Celestion 1 £199.95 (FT)
- Celestion 3 Mk II £149.95 (FT)
- Celestion 5 Mk II £199.95 (FT)
- Celestion 7 Mk II £279.95 (FT)
- Harman Kardon LS2020 £329.95 (FT)
- Harman Kardon HB1/3 £179.95 (FT)
- Heybrook Prima £179.95 (FT)
- Heybrook Solo £189.95 (FT)
- Heybrook Trio £359.95 (FS)
- Heybrook Quartets £555.95 (FS)
- JBL L1 £479.95 (FS)
- JPW Sonata £114.95 (FS)
- Kel 90 £79.95
- Kel 100 £549.95 (FS)
- Kel R102.2 £749.95 (FS)
- Kel R103.4 £1199.95 (FS)
- Kel R104.2 £2295.95 (FS)
- Kel R105.2 £3695.95 (FS)
- Kel R107.3 £169.95 (FS)
- Kel K120 £169.95 (FS)
- Kel K160 £329.95 (FS)
- Kel Q60 £329.95 (FS)
- Kel Q80 £329.95 (FS)
- Kel Q90 £329.95 (FS)
- Mission 751 £599.95
- Mission 753 £599.95
- Mission 760SE £399.95
- Mission 761 £469.95
- Mission 762 £799.95
- Mission 763 £329.95
- Mission 764 £399.95

PRICE PROMISE
We always try to ensure our prices are competitive. In the unlikely event of a product being available from an authorized dealer at a lower price - we will match it.*

Tuner Amps/Receivers

- Denon DRA345R £249.95
- Denon DRA545RD £319.95
- Nad 701 £319.95
- Nad 705 £259.95
- £329.95

Audio Visual

- Denon AVC 3020 £729.95
- Harman Kardon AVR30 £1149.95
- Harman Kardon AVR30 £349.95
- Kenwood KAV8500 £699.95
- Kenwood KR6050 £329.95
- Kenwood KR7050 £449.95
- Kenwood PM700 AV £114.95
- Marantz Short CS1 £259.95
- Mordaunt Short Stereo & sw £59.95
- Mordaunt Short Triple £149.95
- Mordaunt Short Dialogue £29.95
- Mordaunt Short Sub-Wooder £29.95
- Mordaunt Wall bracket £579.95
- Pioneer CLD1850 £399.95
- Pioneer CLD2800 £399.95
- Pioneer SDT5000 £399.95
- Pioneer VSAD802 £469.95
- Rotel RSP960AX £799.95
- Yamaha DSP9500 £329.95
- Yamaha DSPA910 £1099.95
- Yamaha DSPA1000 £369.95
- Yamaha DSPA2070 £569.95
- Yamaha DSPA200 £399.95
- Yamaha DSPA1000 £399.95
- Yamaha RV470

Midi/Mini Systems

Alwa, Denon, JVC, Kenwood, Technics and Yamaha P.O.A.
Prices include VAT and were correct at time of going to press (approximately 5 weeks before publication) but are subject to change without prior notice. E&OE.

Compact Disc Players

- Mission 751 £679.95 (FS)
- Mission 780 £199.95 (FS)
- Mon Audio 1 Gold £249.95 (FS)
- Mon Audio 7 Gold £469.95 (FS)
- Mon Audio 14 Gold £178.95 (FS)
- Mon Audio CC200 BLK P.O.A.
- Mordaunt Short £149.95 (FS)
- NAD 800 £219.95 (FS)
- NAD 802 £319.95 (FS)
- NAD 804 £2384.95
- Quad ESL 63 £1659.95
- Quad Gradient SW63 £229.95 (FS)
- Rel-Acoustics £299.95 (FS)
- Rogers LS24-2 £399.95 (FS)
- Rogers LS6A-2 £449.95 (FS)
- Rogers Studio 3 £189.95 (FS)
- Ruark Crusader II £349.95 (FS)
- Ruark Swordsman Plus £79.95
- Ruark Sabre £129.95 (FS)
- Ruark Talsman II £169.95 (FS)
- Ruark Tempus £219.95 (FS)
- Tannoy 603 Mk II £149.95 (FS)
- Tannoy 605 Mk II £259.95 (FS)
- Tannoy 607 Mk II £599.95 (FS)
- Tannoy 609 Mk II £189.95 (FS)
- Tannoy 611 Mk II £179.95 (FS)
- Tannoy 613 Mk II £179.95 (FS)
- Tannoy 615 Mk II £179.95 (FS)
- Wharfedale Diamond V £179.95
- Wharfedale FR53 £29.95
- Dual CS503-2 £529.95
- Dual CS505-4 £29.95
- Goodmans GSP650 £84.95
- Nad 510 £199.95
- Nad 512 £229.95
- Pink Anniv/Export/PT £324.95
- Systemdek IX 900 (lex) £419.95
- Systemdek IX 900 + Tabris £399.95
- Systemdek IX 900 + Tabris £399.95
- Technics SL120 II £179.95
- Technics SL120 II £209.95
- Thorens TD180 £299.95
- Thorens TD280 Mk IV £359.95 (FS)
- Thorens TD166/RB250 £555.95 (FS)
- Thorens TD166/RB250 £479.95 (FS)
- Aura TU50 £79.95
- Arcam Alpha 5 £549.95 (FS)
- Arcam Delta 280 £749.95 (FS)
- Audiolab 8000T £1199.95 (FS)
- Cyrus 70aks £1295.95 (FS)
- Denon TU560L £3695.95 (FS)
- Denon TU560R £169.95 (FS)
- Harman Kardon TU9400 £329.95 (FS)
- Marantz ST50L £419.95 (FS)
- Marantz ST50L £569.95 (FS)
- Musical Fidelity T1 II £739.95 (FS)
- Nad 402 £299.95 (FS)
- Pioneer £699.95 (FS)
- Quad 66FM £299.95 (FS)
- Quad FMA £129.95 (FS)
- Rotel RT930AX £149.95 (FS)
- Rotel RT950BX £249.95 (FS)
- Sony STS11/ROS £379.95 (FS)
- Technics £479.95 (FS)

Turntables

- Dual CS503-2 £529.95
- Dual CS505-4 £29.95
- Goodmans GSP650 £84.95
- Nad 510 £199.95
- Nad 512 £229.95
- Pink Anniv/Export/PT £324.95
- Systemdek IX 900 (lex) £419.95
- Systemdek IX 900 + Tabris £399.95
- Systemdek IX 900 + Tabris £399.95
- Technics SL120 II £179.95
- Technics SL120 II £209.95
- Thorens TD180 £299.95
- Thorens TD280 Mk IV £359.95 (FS)
- Thorens TD166/RB250 £555.95 (FS)
- Thorens TD166/RB250 £479.95 (FS)
- Aura TU50 £79.95
- Arcam Alpha 5 £549.95 (FS)
- Arcam Delta 280 £749.95 (FS)
- Audiolab 8000T £1199.95 (FS)
- Cyrus 70aks £1295.95 (FS)
- Denon TU560L £3695.95 (FS)
- Denon TU560R £169.95 (FS)
- Harman Kardon TU9400 £329.95 (FS)
- Marantz ST50L £419.95 (FS)
- Marantz ST50L £569.95 (FS)
- Musical Fidelity T1 II £739.95 (FS)
- Nad 402 £299.95 (FS)
- Pioneer £699.95 (FS)
- Quad 66FM £299.95 (FS)
- Quad FMA £129.95 (FS)
- Rotel RT930AX £149.95 (FS)
- Rotel RT950BX £249.95 (FS)
- Sony STS11/ROS £379.95 (FS)
- Technics £479.95 (FS)

Tuners

- Aura TU50 £79.95
- Arcam Alpha 5 £549.95 (FS)
- Arcam Delta 280 £749.95 (FS)
- Audiolab 8000T £1199.95 (FS)
- Cyrus 70aks £1295.95 (FS)
- Denon TU560L £3695.95 (FS)
- Denon TU560R £169.95 (FS)
- Harman Kardon TU9400 £329.95 (FS)
- Marantz ST50L £419.95 (FS)
- Marantz ST50L £569.95 (FS)
- Musical Fidelity T1 II £739.95 (FS)
- Nad 402 £299.95 (FS)
- Pioneer £699.95 (FS)
- Quad 66FM £299.95 (FS)
- Quad FMA £129.95 (FS)
- Rotel RT930AX £149.95 (FS)
- Rotel RT950BX £249.95 (FS)
- Sony STS11/ROS £379.95 (FS)
- Technics £479.95 (FS)

PLEASE CALL US BEFORE TRAVELLING TO VERIFY PRICE AND AVAILABILITY

20 Branches Nationwide



- 109-113 London Road **SEVENOAKS** 0732 459555
- 24 Pitville Street **CHELTHENHAM** 0242 241171
- 162 Powis Street **WOOLWICH** 081 855 8016
- 67 Smallbrook, Queensway **BIRMINGHAM** 021 631 2675
- 4 Dock Street **HULL** 0482 24051
- 55 Preston Street **BRIGHTON** 0733338
- 1 Grove Centre Witham **ESSEX** 501733
- 73b North Street **GUILDFORD** 0483 36666
- 4 Railway Street **CHATHAM** 0634 846859
- 7 King Edward Street **LEEDS** 0532 449075
- 271a High Street **LINCOLN** 0522 520265

- 20a Lower Bridge Street **CANTERBURY** 0227 462787
- 478 St. Albans Road **WATFORD** 0923 213533
- 28 St Johns Road **TUN. WELLS** 0892 531543
- 7 Genotin Road **ENFIELD** 081 342 1973
- 2-4 Camden High Street **LONDON** 071 388 1300
- 15 Market Street **NOTTINGHAM** 0602 412137
- 373 London Road **CROYDON** 081 665 1203
- Sevensoaks Branch only **0732 458985**
- 1 Rockingham Gate, The Moor **SHEFFIELD** 0742 723768
- 51 Picadilly, Hanley **STOKE ON TRENT** 0782 265010

Most but not all of the offers displayed above are also available from our associates Superfi, whose addresses appear above. Please always phone first to check price & availability before travelling. State finish required. *Open as usual during major road works.

MAIL ORDER TO SEVENOAKS HI-FI 109/113 LONDON RD. SEVENOAKS, KENT. TEL: (0732) 458985.

Please send me I enclose a cheque/cash/card No. + Expiry Date Name Address Daytime Tel No:

WE'RE BLASTIN'

CUTMORE'S CANNON BALLS!
LOOK FOR THE CANNON BALLS ON SELECTED
PRODUCTS FOR EXTRA SPECIAL
DISCOUNTS THIS MONTH

PIRATES
HI FI

10%

OFF MARKED
PRICES

20%

OFF MARKED
PRICES

30%

OFF MARKED
PRICES

25%

OFF MARKED
PRICES

NOBODY...
BUT NOBODY...
BUT NOBODY BEATS
MY PRICES



HERE BE THE
PLACES WHERE
YOU SWAPS YOUR
DOUBLOONS* FOR
OUR TREASURE
* WE ACCEPTS ALL KINDS OF
DOUBLOONS - GOLD, PAPER &
PLASTIC'S ALL FINE



- 1 WATFORD 478 ST ALBANS ROAD (0923) 212736
- 2 LEICESTER 94 GRANBY STREET (0533) 557518
- 3 NOTTINGHAM 3 MANSFIELD ROAD (0602) 501003
- 4 CROYDON 369 LONDON ROAD 081 665 9342
- 5 OXFORD 41 ST CLEMENTS (0865) 241773

HOURS OF PIRACY

WE MAN THE YARDARMS FROM 9:30AM TO 5:30PM MONDAYS TO SATURDAYS. OUTSIDE
THURSDAYS 11AM TO 5PM. PLEASE NOTE: WE DO NOT TAKE CASH. WE ARE A MEMBER OF THE
CANNON BALLS CLUB AND WE ARE A MEMBER OF THE CANNON BALLS CLUB

GHI FI PRICES

SYSTEM PRICE BLASTER

MARANTZ CD5211 CD PLAYER
KENWOOD KA3020 AMP
MISSION 760i SPEAKERS
£379.95!!



CAP'N CUTMORE'S CHARTER

NO ONE CUTS DEEPER THAN CUTMORE, SHIPMATES IF YOU FIND A LOWER PRICE LOCALLY ON IDENTICAL GOODS IN STOCK, WITHIN 7 DAYS OF PURCHASE, PIRATES WILL BETTER THAT PRICE.
THE BOOTY WE STOCK BE BRAND SPANKING NEW IF IT'S EX-DISPLAY ETC THIS IS CLEARLY STATED. IF IT'S NOT RIGHT AS RAIN, CUTMORE'LL SORT IT OUT PROPER
EVERYTHING WE SELL WE GUARANTEE FOR AT LEAST ONE YEAR, PARTS AND LABOUR.
WHEN THE SNAFF DON'T SUIT, WE SWAPS IT GLADLY IF YOU RETURN AN ITEM AS NEW WITH ALL ACCESSORIES AND PACKAGING WE WILL GLADLY REPLACE IT WITHIN 7 DAYS OF PURCHASE PROVIDED WE STOCK THE REPLACEMENT.
CUTMORE'S GREN WANTS NAUGHT BUT YOUR 'APPINESS
WE VALUE OUR CUSTOMERS AND GENUINELY WANT YOU TO BE SATISFIED.

WE BE PIRATES, NOT SHARKS

EAST OR WEST
WE STOCKS THE BEST
RING OUR LADS & PUT
'EM TO THE TEST

TREASURE TRAIL

THERE BE SOME REAL TREASURE BURIED IN ERE ME HEARTIES. MOST OF THESE GOODIES BE REDUCED BY 30% SOME A WHOLE HEAP MORE. SO HACK AWAY THROUGH THE UNDERGROWTH TO A SPANKING DEAL. THOUGH MOST OF THESE ITEMS ARE BRAND NEW, SOME MAY BE EX-DISPLAY AND ALL OF THEM ARE IN SHORT SUPPLY. PLEASE PHONE BEFORE YOU MAKE YOUR JOURNEY

- AMPS**
AMC
 CVT 3030 £ 369.95
CAMBRIDGE
 C70 PRE £ 89.95
DENON
 PMA 350 £ 129.95
GOODMANS
 GSA 650 £ 79.95
MARANTZ
 PM40SE £ 119.95
PHILIPS
 FA920 £ 99.95
 FA930 £ 139.95
PIONEER
 A400 £ 199.95
 A300X £ 179.95
ROTEL
 RA960BK £ 209.95
 RA940BK £ 179.95
 RA980BK £ 279.95
 RB960BK £ 149.95
 RC960BK £ 119.95
 RC980BK £ 229.95
 RB980BK £ 299.95
TECHNICS
 SUX500 £ 129.95
 SUX600 £ 159.95
YAMAHA

- DSPA1000 £ 629.95**
TUNERS
PHILIPS
 FT920 £ 89.95
 FT930 £ 99.95
SYSTEMS
AINA
 LXX01 £ 249.95
DENON
 D100 £ 479.95
KENWOOD
 UD900 £ 689.95
SONY
 MHC7100 £ 349.95
YAMAHA
 CDS £ 399.95
CD PLAYERS
MARANTZ
 CD52 £ 139.95
 CD62 £ 169.95
PHILIPS
 CD930 £ 139.95
 CD950 £ 249.95
ROTEL
 RCD955AK £ 199.95
 RCD965LE £ 269.95

- SHERWOOD**
 CD50TOR £ 149.95
TECHNICS
 SLP520 £ 139.95
 SLP5620 £ 159.95
YAMAHA
 CD0615 £ 209.95
TURNTABLES
DAAL
 CS503/2 £ 154.95
 CS505/4 £ 199.95
GOODMANS
 GSP360 £ 139.95
KENWOOD
 CS6 £ 99.95
RECEIVERS
ROTEL
 RX940AK £ 179.95
YAMAHA
 RXV470 £ 279.95
CASSETTE DECKS
DENON
 DRM510 £ 119.95
GOODMANS
 GSW650 £ 99.95
PHILIPS

- FC920 £ 129.95**
DC0600 £ 399.95
DC0900 £ 379.95
PIONEER
 PDS801 £ 229.95
ROTEL
 RD945AK £ 109.95
 RD965AK £ 139.95
 RD965BK £ 179.95
TEAC
 V3000 £ 159.95
SPEAKERS
B&N
 DM600 £ 149.95
 DM670 £ 189.95
 DM620 £ 379.95
CANON
 S50 £ 249.95
CELESTION
 CEL1 £ 79.95
 CEL5 £ 59.95
 700 £ 379.95
 SL651 £ 299.95
GOODMANS
 M100 £ 49.95
HECO
 REFLEK10 £ 109.95
 HEYBROOK

- SD10 £ 129.95**
JAMM
 SAT200 £ 69.95
 SW150 £ 139.95
JPM
 MINIM £ 59.95
KEF
 KT20 £ 119.95
 KT40 £ 169.95
 K160 £ 229.95
 Q60 £ 279.95
 Q90 £ 489.95
MAD
 B225 £ 104.95
SEQUENCE
 SEQ30 £ 139.95
TANNOY
 603 £ 97.95
 605 £ 123.95
 609 £ 209.95
 611 £ 374.95
 615 £ 569.95
WHARFEDALE
 DIAMOND 5 £ 89.95
YAMAHA
 NS250 £ 69.95

MARDOINED?

WE STOCK ALL LEADING BRANDS OF HI FI. IF YOU ARE UNABLE TO CLAMBER ABOARD ONE OF OUR VESSELS PHONE (0923) 212736 FOR A PRICE, AND A FAST CLIPPER COULD BE ON ITS WAY TO YOU WITH YOUR BOOTY. (A CHARGE OF £T PER ORDER IS MADE FOR MAIL ORDER.)

MY BOOTY LIES OVER THE OCEAN!

PRICES BE VALID TILL 30TH OCTOBER 1993

Amplifiers continued

Product	£Price	Comments	Output W/8Ω	Line inputs	MM	MC	Integrated Preamp	Remote control	Headphone socket	Issue No.
Yamaha AX-550	260	G Neutral yet lacks the ability to involve on an emotional level	131	5	•	•	•	•	•	97
Yamaha AX-750	400	A Impressive handling, but two samples split the opinion of our listeners, one sounded squashed the other fast and articulate	149	5	•	•	•	•	•	104



Cables

Cables are not accessories but an integral part of your system. You can make do without accessories but no conventional system will function without cables. Inevitably some cables are greater than others. The best cable for your system will only be found through trial and error, but hopefully by combining our recommendations with those of a dealer you will end up with something that suits both your pocket and your system. Generally speaking budget to spend about ten per cent of the total system cost on cables.

Analogue interconnects are the leads that connect source components to amplifiers and pre to power amps. The cables in this section are priced for a one metre terminated pair. Symmetrical indicates where a twisted pair of conductors are used. Coaxial means that there is a central 'hot' conductor and a shield that carries the negative signal. Stranded cables have multiple strands and solid core use individually insulated strand(s). Copper and silver indicates whether these metals are used as conductors. Digital interconnects connect CD transports

to DACs, and are traditionally coaxial with a 75ohm impedance. They come in optical and electrical varieties, the former being made of plastic or glass and the latter in coaxial or alternative configurations. The prices shown are for a terminated linear metre. Speaker cables are used between the amplifier and speaker. Our prices are for a terminated 5metre pair. Resistance and capacitance are indicated as low (L), medium (M) or high (H). Neither high resistance nor high capacitance cables are suitable for long runs.

Analogue interconnects

Product	£Price	Comments	Symmetrical	Coaxial	Stranded	Solid core	Copper	Silver	Issue No.
Audio Note AN-A	29.50	A- A well-rounded and cuddly sound from a high-ish resistance interconnect. Lacks a sense of scale and dynamics	•			•		•	108
Audioquest Ruby Hyperlitz	70	A+ A crisp, fast and articulate-sounding cable if one that's a little too pointed for our listeners	•				•	•	108
▲ Audioquest Lapis Hyperlitz	329	E An expensive cable that justifies its tag with a beautifully poised sound - natural, relaxed and very compatible.	•				•	•	108
Audio Technica AT620	28	A Plenty of cable for the money but its performance is distinctly lightweight, lacking depth and subtlety			•			•	108
Chord Chameleon	59	A An unpredictable cable with an 'anomalous treble' that can sound harsh one moment and oddly recessed the next!			•			•	108
▲ Chord Solid	115	VG What looks like a military RF cable actually provides a slightly forward but incisive and intimately detailed performance			•			•	108
▲ Cogan-Hall Intermezzo Ref	185	E A user-hostile cable with a tight, convincing bass allied to a very relaxed and involving mid/treble.	•				•	•	108
Cogan Hall Intermezzo E-M	320	G+ This bigger, thicker and thoroughly unwieldy 3-core version of the Intermezzo Reference actually sounds a little coarser	•				•	•	108
▲▲ DNM Interconnect	40	VG Fresh, transparent and packed full of detail, this slither of a cable scored a direct hit with our listeners	•				•	•	108
Goldring 'Studio Quality'	20	A- A bog-standard OFC coaxial cable that might otherwise be given away with a new amp or CD player. Cheap but nothing special.		•		•		•	108
▲ Isoda Electric HA-08-PSR	199	G+ This odd-ball cables utilises a mix of copper, brass and aluminium strands to achieve a very distinct sound	•			•		•	108
▲ Madrigal HPC	215	VG A very unusual cable design with a business-like approach to music-making that barely conceals its underlying 'fizz'.	•			•		•	108
Magnan Type Vi	595	A+ With a series resistance some 500-1000 times higher than average, the furry sound of the Type Vi will alter from system to system.		•		•		•	108
▲ Monster Interlink 500	60	G+ Plenty of hype to keep the marketing bandwagon rolling plus a lively and lucid balance to cheer up the enthusiast	•			•		•	108
▲ Moth Ley Line Black	100	G+ The cheapest of Moth's Ley Line series uses just two twisted conductors to achieve a very solid and confident sound.	•				•	•	108
Moth Ley Line Grey	200	G+ The four twisted conductors of this cable actually mark a downturn in audio quality	•				•	•	108
▲ Panasonic RP-CA910	50	G This conventional coax employs plenty of hi-tech materials which encourage an even-handed balance. A good upgrade.		•		•		•	108
▲ Silver Sounds 12/2 and 12/3	99/150	VG Both these cables share a similarly open, transparent and dynamic sound though the latter is arguably the better integrated	•			•		•	108
Sonic Link Yellow	60	A An interesting non-copper cable with an up-front sounded described as 'heavy-handed and pushy'.		•			•	•	108
▲ Sonic Link Violet	99	G+ Another nickel-based cable but with a very much better-balanced sound than Sonic Link Yellow		•		•		•	108
Straight Wire Laser Link	50	A+ Thanks to its high parallel capacitance this interconnect helps remove ultrasonic noise. Unfortunately it still sounds very odd!	•				•	•	108
Straight Wire LSI-Encore	90	A+ A solid-sounding cable with a strong mid and bass but a disappointingly sat-upon treble	•				•	•	108



Tel: 081 348 5676 (2.00-7.00 pm)
Fax: 081 341 9368

Esoteric High Fidelity CABLES

Dealers in: Absolute, Audio Note, Audioquest, Deltec, Harmonix, Kimber, Mandrake, MIT, Siltech, Symo, Van den Hul, WBT and others

... the **RIGHT** cables
... in **YOUR** system
... for **YOUR** ears
... in **YOUR** home

Contact us by phone, fax, or letter and we'll do our best to help you achieve your goal.
(Auditions may be subject to a handling charge)

CONNECTIONS 11 Archer St, London W1V 7HG (A division of Connection 90' Travel Ltd.)

Analogue interconnects continued

Product	£Price	Comments	Symmetrical	Coaxial	Stranded	Solid core	Copper	Silver	Issue No.
▲ Tara Labs Prism	36	G 6N-purity copper, aero-grade insulation and spaced solid-core conductors all add-up to a slightly bright but frisky sound	•				•	•	108
▲ Tara Labs Quantum CD	63	G+ Praised by our panel for its lack of obvious vices, Quantum CD encourages a sweet and positive sound.	•				•	•	108
Tara Labs Quantum II	99	G Bass power and extension is the key to the sound of this unusual and hi-tech cable	•				•	•	108
▲ Van den Hul The Source	70	G+ Accurately reflects the life of the music without detail forcibly from the speakers			•	•		•	108
Van den Hul MC D-102mkIII S	80	A+ A rather coloured sound thanks to its full and resonant bass but spoiled overall by a dirty treble	•			•		•	108

Digital interconnects

Product	£Price	Comments	Type	Plastic	Glass	Non-coaxial	Coaxial	75Ω	Issue No.
▲▲ Audioquest Video Z	50	E The very best available with an expressive sound but generous price to sweeten the pill	Electrical				•		108
Audioquest Digital PRO	90	A+ A silver cable with all the drive of Video Z but lacking its clean-cut transparency	Electrical				•		108
Audioquest Optlink Z	100	A Good level of midband detail but frequency extremes lack depth and extension	Optical		•				108
Bandridge AL560	20	P The disappointingly heavy and muddled sound of this basic fibre thwarts any recommendation	Optical		•				108
Chord Codac	34	A A connection with a stranded inner core and a sound that lacks integration	Electrical				•		108
▲▲ Deltec Digilink	27.50	VG Can seem slightly impassive but there's no avoiding its exceptionally detailed sound	Electrical				•		108
Deltec Optlink	20	P Very similar to Bandridge AL560 with an equally naff sound	Optical	•					108
Kimber PSB Digilink	24	A- An analogue interconnect inappropriately pressed into digital service. A visible deterioration in the digital signal results.	Electrical					•	108
Kimber KC-1 Digilink	52	A This cable adopts a woven construction with the addition of a conductive screen. Music lacks detail and spirit.	Electrical					•	108
Kimber KC-AG Digilink	222	A- An asymmetric cable using silver conductors that deviates from the 75ohm standard. Not ideal for digital applications.	Electrical					•	108
▲ Kimber Opti-Link	70	G Hardly cheap for what appears to be a bog-standard PMMA fibre, yet it sounds a little brighter and livelier than most.	Optical	•					108
▲ Monster Cable Datalink 100	45	G+ A colourful coaxial interconnect with an equally colourful and up-beat sound. Very compatible.	Electrical				•		108
▲ Monster Cable Interlink LS100	45	G Well constructed stepped-index fibre with polished ends and rugged connectors. Slightly lean, fuzzy but engaging performance	Optical		•				108
Moth Leyline Datalink	140	A- A thin, coaxial version of Leyline Black with a rather hard and unforgiving character. Too expensive.	Electrical				•		108
▲▲ QED Digiflex	19	VG A top performance, low-loss 75ohm coax with a very open, almost liquid quality that allows its music to ease naturally across.	Electrical				•		108
Sonic Link Brown Digital	35	A- A solid-core, twisted-pair interconnect that deviates from the 75ohm standard and provides an equally unbalanced sound	Electrical					•	108
Straight Wire Silver link	60	G+ A genuine attempt to get things right with a silver-plated, multi-strand coax. Yet it still sounds too dry and mechanical	Electrical				•		108
▲ van den Hul MC Videolink 75	30	VG An AV-cum-digital cable that comes very close to besting QED's Digiflex. Still some emphasis of vocal sibilants, however	Electrical				•		108

Speaker cables

Product	£Price	Comments	Resistance	Capacitance	Stranded	Solid core	Copper	Silver	Issue No.
▲ Audio Note AN-B	165	G+ A very high capacitance Litz-style cable whose sound may well act as a taming influence in many systems	M	H			•	•	109
Audio Note AN-D	100	A Supplied in linear, non-polarised lengths that should be twisted into stereo pairs. Sounds rather gritty and forward	L	L		•		•	109
▲ Audio Note AN-SP	1270	VG Some 15 individually-insulated silver strands go to make up this very civilised but exceptionally detailed-sounding cable	H	L			•		109
▲ Audioquest F-14	44.50	A+ Ideal for laying flat under carpets, F-14 encourages a slightly warm and vibrant sound	M	L			•	•	109
Audioquest Type 4	75	A+ Four 18-gauge OFHC copper conductors wound in a Litz-fashion increases capacitance but restrain the cable's 'bite'	M	H			•	•	109
Audioquest Midnight Hyperlitz	260	G Very similar to Type 4 but with a delicate smoothness that contrasts with the brighter sound of cheap cables	L	H			•	•	109
▲ Bandridge LC7259 & LC7401	20/30	A Two very traditional figure-of-eight cables. The thinner version (LC7259) sounds lighter and coarser than LC7401	L	L		•		•	109
Bandridge LC8258 & LC8408	30/50	A- Two versions of the Silverflex series that, sadly, encourage very little sense of poise or decorum in their music	L	L		•		•	109
▲ Cogan-Hall Intermezzo Full-Range	465	VG Extra care must be taken to prevent shorting this user-hostile cable. Nevertheless it sounds superb!	L	L			•	•	109
▲ Deltec IS19	275	G+ Shares the clear, neutral and transparent sound of the older 8S without the tremendous clarity of Gortex Black-16	L	L			•	•	109
DNM Rainbow	84	A+ The high impedance of this simple ribbon cable has an influence on the treble response of some speakers. Lacks 'oomph'	H	L			•	•	109
Heybrook Heywire	66	A This well-meaning facsimile of earlier ribbon-style cables ends up sounding lumpy and uneven	H	L			•	•	109
Isoda Electric HA-20	400	A+ This unorthodox cable employs a combination of copper, brass and aluminium strands. It sounds 'oddly impure'!	M	L		•		•	109
▲ Mission Stranded	20	G+ This Swedish-made cable proved a real hit with our listeners - a slick performer and Best Buy upgrade	L	M		•		•	109
Monitor PC KC27/KC34	40/60	A Two heavyweight multi-strand cables with a thick and chasty (10027) or light and wispy (10034) balance. Take your pick	L	L		•		•	109
Monster Powerline 3 Plus	75	A- The archetypal 'old-style Monster Cable' that labours under a soggy bass and untidy treble	L	M		•		•	109
Naim NAC A5	44	A- Described as a 'dinosaur of a cable' by our listening panel, this stiff rod of wire has little application outside of a Naim system	L	L		•		•	109
QED Bi-wire 79-Strand	35	A Reminiscent of curtain track, this bi-wire version of 79-strand is unfortunately saddled with a 'loud, hard and untidy' balance	L	L		•		•	109
▲ Silver Sounds 12/2	300	E Tonally accurate and exquisitely detailed, this cable opens a very transparent window on the music	L	H			•	•	109
▲ Silver Sounds 16/4	200	VG A prime choice for bi-wire systems even if this cable does lack the full finesse of its sister 12/2	M	H			•	•	109
Sonic Link Grey	80	G- A spaghetti-thin cable composed of silver-plated OF-copper and PTFE insulation. Lacks bass impact and treble 'air'	H	M			•	•	109
▲ Straight Wire Waveguide 1.5	20	G A conventional multi-stranded cable with a refreshingly up-beat, crisp but slightly lean-sounding balance	M	M		•		•	109
▲ Straight Wire Flex-4	50	G+ Another very quick and dynamic-sounding cable from Straight Wire. A little short on subtlety but very engaging nonetheless.	L	H		•		•	109
Tara Labs Quantum III	238	G An imaginatively-named cable that encourages an equally colourful sound. Described as 'dark and fruity' by our panel!	L	H		•		•	109
van den Hul MC The Clearwater	50	A Despite its evocative title, the Clearwater turns out to be a disappointingly 'murky sounding' cable	M	L		•		•	109
van den Hul MC The Magnum	265	A Touted as vdH's most prestigious twinlead speaker cable, the Magnum sounds surprisingly soft and old-fashioned	L	L		•		•	109
▲ van den Hul MC The Wind	330	VG Blown-in from the continent, vdH's 'Wind' kicks up a storm with its lush midrange and bone-crunching bass!	L	M		•		•	109



Cassette decks

The bad odour of copyright theft hangs around the compact cassette, but there is no doubt it is the world's most versatile and ubiquitous music storage medium. Buffs may wrinkle their noses, but are happy to use cassette decks to make up tapes for the car or personal.

There is no problem in connecting a cassette deck to any normal amplifier, but some care needs to be taken in choosing the best tapes for a specific machine. (Trial and error is one effective technique, but many decks have manual bias adjustment and some match up to the tape auto-

matically.) Lab performance and sound quality often go hand in hand, and are frequently somewhat dependent upon factory alignment. The mechanical integrity of the mechanism is another crucial factor, that is reflected in the price.

The columns on the right indicate when the facilities shown in the headings are available on a deck. Dolby B and C offer varying degrees of noise reduction and the HX Pro system gives significant treble improvements with ferric (Type I) tapes. Dolby S increases the level of noise reduction with less signal degradation than B or C.

Three-head recorders allow you to listen to a recording as it's being made, a useful quality control function. Bias adjustment allows you to fine tune the deck to suit different types of tape when recording. Auto calibration is an automatic system for setting bias and Dolby levels. Twin deck offers the option to dub tapes or to play two cassettes simultaneously. Autoreverse is a useful convenience feature, but usually with some mechanical compromise. In the case of twin decks a blob is inserted in this column even if only one transport autoreverses.

Cassette decks

Product	£Price	Comments	Dolby B	Dolby C	Dolby HX Pro	Dolby S	3 Head	Auto calibration Bias adjust	Twin deck	Autoreverse	Issue No.
▲▲ Aiwa AD-F410	120	A Comparable to AD-F500 but cheaper: Good all round performance, well adjusted, useful basic and not so basic features	•	•	•						99
▲▲ Aiwa AD-F810	230	G First class budget 3-head machine with a dual capstan transport that really works at reducing the 'fudge' factor	•	•	•						99
▲▲ Aiwa AD-WX828	200	G- Equipment levels strong, and sound is both vivid and presentable, but control system daunting.	•	•	•					•	123
▲▲ Aiwa AD-WX929	230	A Superbly equipped twin deck that works and works well - remote control	•	•	•	•				•	117
▲ Aiwa XK-S9000	700	G+ Fabulous build, clunky transport and sharp, refined sound quality with Dolby S or B and metal tapes	•	•	•	•	•	•			105
Akai DX-57	220	G Eschews fancy gadgets for a good transport and decent electronics. Sound quality is firm and tidy but avoid Dolby C.	•	•	•	•	•	•			105
Akai GX-65	300	A Fine ungimmicky middle ranking deck with simple, purposeful controls, works best with metal tapes. Performance fair to good	•	•	•	•	•	•			87
▲ Akai GX-95II	440	G+ Sharp, clear and articulate sounding deck, with superb performance extending to frequency extremes	•	•	•	•	•	•	•		99
Akai GX-R35	220	A Middling sound quality at best with Dolby B; deteriorates with Dolby C	•	•	•	•	•	•			99
▲ Akai GX-W45	320	A Costly but musical high-spec dual deck, doesn't like modern high energy Type IIs and IVs. Good stability and clarity	•	•	•					•	111
▲ Arcam Delta 100	850	E Superb transport and a ripe, spacious sound. The Dolby S installation more successful than most. Some replay incompatibility	•	•		•	•			•	111
▲ Denon DRM-510	150	A+ An amnesic Dolby switch and lack of timer standby detract from an otherwise strikingly successful deck with a good performance	•	•	•						99
Denon DRM-710	250	A Although this is a fair performing model, the design has lost some of the competitive edge of its predecessor, the DRM-700.	•	•	•				•		105
▲ Denon DRS-610	180	G Unique loading mechanism provides stability, and the deck has a crisp, clean quality. Occasionally anaemic bass.	•	•	•				•		111
Denon DRS-810	300	A Basically good deck with non-stressful material let down by an inability to deal with high energy tapes properly.	•	•	•	•	•	•			105
▲ Denon DRW-650	200	A This simply equipped model is a little fiddly to operate at times, but sound quality is generally workmanlike - good value	•	•	•					•	93
Dual CC800RS	170	A- Low(ish) cost auto-reverse deck. Delivers a punchy but ultimately rather crude impersonation of source material, thin, lightweight bass.	•	•	•						105
Harman Kardon DC5500	500	A Workmanlike sound quality offset by high price and inexplicable shortcomings like 'forgetful' Dolby switching and no timer support.	•	•	•					•	117
▲▲ Harman Kardon TD4200	250	G+ This is a very basically equipped deck built to a high standard which sounds solid and refined.	•	•	•				•		123
Harman Kardon TD4600	600	A Original Dolby S deck has improved over the years and now sounds very acceptable. A strong, solid sounding deck - but expensive.	•	•	•	•					117
Goodmans Delta 700W	140	P Compact and ultra-basic twin deck which is rough and bass shy, with less than stable tape path.	•							•	123
JVC TD-R452	180	A- Tidy, stable but ultimately rather soul-less experience. Auto-reverse is useful though.	•	•	•						117
JVC TD-X352	150	A- Disappointingly amorphous sound despite decent measured results.	•	•	•					•	117
▲ JVC TD-V562	200	G+ Ultra-sophisticated transport at a silly price; sound quality is stable but slightly opaque.	•	•	•				•	•	123
▲ Kenwood KX-3050	160	A Acceptable sound quality marred only by a loss of midband analysis and slightly edgy treble.	•	•	•						117
Kenwood KX-5030	200	A Confusing mishmash of listening impressions caused by poor set-up afflicting metal tapes and Dolby C in particular. Promising otherwise	•	•	•				•		99
Kenwood KX-5530	190	A- Neat looking, well equipped deck, adequately engineered but somewhat lacking musically. Worth considering if auto-reverse is a must	•	•	•					•	105
▲ Kenwood KX-7030	260	G Fine, articulate middle price cassette deck whose only (mild) failing with some programme material is a just perceptibly synthetic glaze	•	•	•	•	•	•			99
▲ Marantz CP230	330	A This is a competitively priced portable recorder though not suited to replay of musicassettes	•							•	52
▲ Marantz CP430	400	A Uniquely flexible and compact package for outside work which at a pinch can double as a domestic cassette deck	•			•	•	•			87
Memorex SCT-5	150	P Poor example of a twin cassette deck where everything has been sacrificed on the altar of flexibility	•	•							87
▲ Nakamichi DR-3	400	VG Refined, exquisitely detailed and solid sounding 'budget' Nakamichi 2-header.	•	•	•				•		123
▲ Nakamichi DR-1	780	VG Typically idiosyncratic Nakamichi with manual everything, Good azimuth adjustment and dynamic, authoritative sound.	•	•	•						117
▲ Nakamichi RX-202E	500	G+ Fine, clear and articulate sounding player. Excellent with prerecorded material, but idiosyncratic and sometimes obstructive control	•	•	•				•		63
Philips DCC600	600	A+ Simplified circuit and mechanism, but the Philips badly needs a D/A converter transplant	•	•	•					•	123
▲ Pioneer CT-S520	280	G Decent if slightly coloured middle ranker with FLEX to revitalise old or soggy sounding tapes.	•	•	•	•	•	•			123
▲ Revox B215	1322	G+ Fine, consistent and solid sound, excellent under the skin engineering and many useful features — but you're also paying for it	•	•	•	•	•	•			87
▲ Revox B215-S	1697	G+ This is a superbly engineered deck with a classically fine performance that almost transcends the stereotypes.	•	•	•	•	•	•			75
Revox Professional Series C115	1083	G Not for the numbers freaks, it's unobtrusively musical, with a slightly wayward top and a very clean, extended bass	•	•	•	•	•	•			111
Sansui D-790WR	200	P Modestly poor sounding but simple to use twin deck. Type II tapes show large response errors.	•							•	123
Sansui D-X117WR	240	P Bass is thin and coloured, and the sound lacks dynamics, pitch accuracy and overall stability - the sound is neither stable nor solid.	•	•	•					•	111
Sherwood DD-3010C	160	P Good range of features, let down by poor transport and iffy electronics	•	•	•					•	117
Sherwood DS-5010C	160	P+ Mediocre performance from well priced deck with some useful secondary features.	•	•	•				•		123
▲▲ Sony (WMD6C) Pro Walkman	280	G+ One of the finest sounding cassette decks on the market today. A mandatory Best Buy, which also fits in your pocket	•	•	•						60
▲▲ Sony TC-K520	180	G Fine, assured and detailed performer with a very well designed and straightforward user interface	•	•	•				•		87
Sony TC-K870ES	350	A+ Good but not outstanding deck which proved slightly disappointing on audition. This model is no standard setter	•	•	•	•	•	•			99
TEAC R-9000	350	G Much better than average auto-reverse deck, well worth considering. Nicely engineered too.	•	•	•	•	•	•			105
TEAC V-7000	480	G Intrinsically sharp, clear and solid sound spoiled by exaggerated detail with prerecorded material and losses imposed by Dolby circuits	•	•	•	•	•	•			99
▲ TEAC V-8000S	700	G Superb stability and real subtlety, this must be the best TEAC yet. The only disappointment was the Dolby C	•	•	•	•	•	•			105

Sound Video Centre

SPECIAL OFFER ON YAMAHA DSP-A1000 IMPRO LOGIC AMP

AUTHORISED DEALER FOR ALL MAJOR BRANDS

RING US FOR BEST PRICE IN TOWN - WE CAN BEAT ANY PRICE!



SONY

MINI HIFI

Compact 108CD.....	£POA
Compact 109CD.....	£POA
Compact 209CD.....	£POA
Compact 159CD.....	£POA
Compact 259CD.....	£POA
Compact 359CD.....	£POA
Compact 559CD.....	£POA
Compact 707CD.....	£POA
Compact 759CD.....	£POA
MHC-510CD.....	£POA
MHC-710CD.....	£POA
MHC-2750CD.....	£POA
MHC-2800CD.....	£POA
MHC-3800CD.....	£POA
MDS101.....	£POA
SS-V77.....	£POA
SS-J80AV.....	£POA
SA-W90.....	£POA
DSP 2070.....	£POA

CD PLAYERS

CDP 411.....	£POA
CDP 711E.....	£POA
CDP 911E.....	£POA

CASSETTE DECKS

TCK 411B.....	£POA
TCK 511B.....	£POA
TCK 611B.....	£POA

TUNERS

CSTS 2118B.....	£POA
STS 311LB.....	£POA
STS 505ES.....	£POA
Graphic 9.....	£POA
SEO 411B.....	£POA

YAMAHA

AMPLIFIER

DSPA500.....	£POA
DSPA1000.....	£POA
DSPA2070.....	£POA
DSP-E200.....	£POA
DSP-E1000.....	£POA
NS-E100.....	£POA
NS-C90.....	£POA
AX 401.....	£POA
AX 470.....	£POA
AX 570.....	£POA

CASSETTE DECKS

KX260.....	£POA
KX360.....	£POA
KX650.....	£POA
KXW262.....	£POA
KXW362.....	£POA
KXW952.....	£POA

JVC

MACRO HIFI

UXA3.....	£POA
UXA5.....	£POA
UX TI.....	£POA
ADAGIOS9.....	£POA
ADAGIOS7.....	£POA
ADAGIOS6.....	£POA
ADAGIOS4.....	£POA
ADAGIOS3.....	£POA
ADAGIOS2.....	£POA

MICRO HIFI

UXA5.....	£POA
UXA4.....	£POA

AIWA

CASSETTE DECKS

ADF810.....	£POA
ADF500.....	£POA

ADF410.....	£POA
ADWX 929.....	£POA
ADWX 828.....	£POA

PIONEER

J10.....	£POA
J10M.....	£POA
J20M.....	£POA
J30M.....	£POA
J40M.....	£POA
N33M.....	£POA
N53M.....	£POA
N73T.....	£POA

MISSION

SPEAKERS

760 SE.....	£POA
7601.....	£POA
761.....	£POA
762.....	£POA
763.....	£POA
764.....	£POA
753.....	£POA
780.....	£POA

BOSE

SPEAKERS

AM 7.....	£POA
AM 5.....	£POA
AM 3.....	£POA
301.....	£POA
401.....	£POA
205.....	£POA
601.....	£POA
701.....	£POA

JAMO

SPEAKERS

PRO 200.....	£POA
PRO 300.....	£POA
PRO 400.....	£POA
D 165.....	£POA
D 265.....	£POA
D 365.....	£POA

TECHNICS

MINI HIFI

SC CH950.....	£POA
SC CH750.....	£POA
SC CH650.....	£POA
SC CH550.....	£POA
CD X920.....	£POA
CD X520.....	£POA
CD X320.....	£POA
CD X120.....	£POA
CD C120.....	£POA

AMPLIFIERS

SUA 900K.....	£POA
SUA 800K.....	£POA
SUA 700K.....	£POA
SUA 600K.....	£POA
SUV2 320K.....	£POA
SUV2 220K.....	£POA

TURNTABLES

SL 1210.....	£POA
SL 1200.....	£POA
SL DD33.....	£POA

CASSETTE DECKS

RS BX808K.....	£POA
RS BX747K.....	£POA
RS BX646K.....	£POA
RS BX404K.....	£POA
RS TR777K.....	£POA
RS TR515K.....	£POA

RS TR333K.....	£POA
RS TR232K.....	£POA

CD PLAYERS

SLPG 340.....	£POA
SLPG 440.....	£POA
SLPG 520.....	£POA
SLPS 620.....	£POA
SLPS 700.....	£POA
SLPS 900.....	£POA

KENWOOD

MINI HIFI

UD 300.....	£POA
UD 500.....	£POA
UD 500M.....	£POA
UD 700.....	£POA
UD 700M.....	£POA
UD 900.....	£POA

MIDI SYSTEMS

M 26.....	£POA
M 47G.....	£POA
M 56G.....	£POA
M 76G.....	£POA
M 97G.....	£POA
CM 5ES.....	£POA
CM 7ES.....	£POA
SW 900.....	£POA
CS 6.....	£POA

NAD

AMPLIFIERS

302.....	£POA
304.....	£POA
306.....	£POA

CD PLAYERS

502.....	£POA
505.....	£POA



132 Balham High Road, Balham, London SW12. Tel: 081- 673 3398. Fax: 081-673 3068

264 Lavender Hill, London SW11. Tel: 071-228 3123 or 081-675 0048

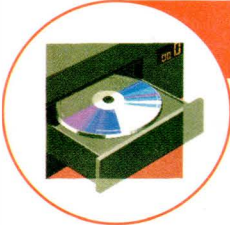
385 North End Road, London SW6. Tel: 071-381 0706



Sound Video Centre

Cassette decks continued

Product	£Price	Comments	Dolby B	Dolby C	Dolby HX Pro	Dolby S	3 Head	Bias adjust	Auto calibration	Twin deck	Autoreverse	Issue No.
Technics RS-BX626 II	180	G First rate deck at a bargain price. Losses when recording are low and mostly benign, an all-round achiever	•	•	•	•	•	•	•	•	•	111
Technics RS-BX828 II	300	G Fine deck, with explicit detail and stability, but in the final analysis it doesn't go much further musically than the cheaper RS-BX626	•	•	•	•	•	•	•	•	•	111
Yamaha KX-260	160	A Lively, entertaining deck that trades gadgets for a convincing performance at an attractive price point	•	•	•	•	•	•	•	•	•	111
Yamaha KX-360	200	A Performance has both dryness and precision. Good - but doesn't 'breathe,' and occasionally sounds unstable	•	•	•	•	•	•	•	•	•	111
Yamaha KX-650	260	G Fine audio manners, especially in the midband and treble, mark this high class deck out from the crowd	•	•	•	•	•	•	•	•	•	99
Yamaha KX-W362	250	A- Almost a good deck, it is let down by audible levels of wow & flutter, apparent even with prerecorded material, audio circuits are good	•	•	•	•	•	•	•	•	•	111



CD players

Now over a decade old, this all digital music source is well established despite high disc prices and the opposition of some hi-fi enthusiasts. Compact Disc's strengths over conventional vinyl are complete freedom from surface noise, ease of use, and more robust software.

However, many vinyl enthusiasts still find CDs sound less involving than top quality vinyl. But, with the dominance of CD in the high street, even vinyl die-hards need a CD player today.

The columns on the right indicate when the facilities shown in the headings are available on a CD player: DAC type indicates the type of converter chip used in each player, 16, 18 and 20-bit are multi-bit types, all the others are bitstream variants. In much the same way that an amp's output is not indicative of its sound quality, the chip used in a DAC isn't the only determining factor in a CD player's sound, but it is an important one. Remote control is not yet universal, and we have included a tick box, more to show which

machines don't have one than which do. The existence of electrical and/or optical digital outputs is important for future upgrading with an outboard DAC, as a rule electrical outputs are the most desirable. Phase inversion in the digital domain is rare on one box players but can make quite a big difference if you've got golden ears. Headphone sockets are useful but beware of those without volume controls. Track entry keypads are those with calculator style buttons which makes track access much quicker.

CD players

Product	£Price	Comments	DAC type	Electrical digital output	Optical digital output	Remote control	Headphone output	Variable output	Track entry keypad	Issue No.
Aiwa XC-300	150	A+ Cheap, cheerfully and gratifyingly free of digital 'nasties', well-equipped but safe rather than thrilling on the sonic front.	Toshiba BS	•	•	•	•	•	•	107
Aiwa XC-750	200	A A refined version of the XC-700, sadly it has lost the magic of the original	SAA7350	•	•	•	•	•	•	119
Adcom GCD-600	699	G Equipped with a 5-disc carousel loader, this bright and 'breathtaking' player sounds similar to Adcom's amps.	16-bit	•	•	•	•	•	•	124
AMC CD6	349	VG Based on the same 1-Bit circuit as Rotel's RCD-965BX but with a raunchier, beefier but less transparent sound.	PDM BS	•	•	•	•	•	•	124
Arcam Delta 270	800	G+ The dry but tightly-focussed and supremely detailed sound of this player will either beguile or aggravate, depending on taste!	Hybrid	•	•	•	•	•	•	124
Audio Alchemy DDS/DTI/XDP/P52	2047	A+ A multi-box combination with a Bit Stream DAC that is fundamentally more inspiring than its partnering transport.	DAC7	•	•	•	•	•	•	120
Aura CD-50	400	G- Based on an older Philips board with new CDM9 transport, this is a slim player with an innocuous sound	SAA7321	•	•	•	•	•	•	119
AVI S2000MC	999	G+ A stylish, midi-width player with an exceptionally refined and comfortable sound. Lacks passion	20-bit	•	•	•	•	•	•	119
Cary Audio Design CAD-955	899	A+ Rotel with add-on valve processor to filter-out any RF. Nice idea but sounds very dry and taut, lacking warmth and body.	16-bit	•	•	•	•	•	•	107
Creek CD60	500	G A big and confident sound from a player that's 'into' green. So it looks ghastly even if the internal design is very thoughtful.	16-bit	•	•	•	•	•	•	107
Denon DCD-695	200	G A rough diamond with a raunchy sound to match. Pitch feature will be of interest to budding musicians.	18-bit	•	•	•	•	•	•	124
Denon DCD-890	270	G- Similar to the DCD-1290 in its execution, sounds lively and powerful but lacks subtlety.	18-bit	•	•	•	•	•	•	112
Denon DCD-1290	330	G Looks the business but sound is a real five-minute wonder. Its compelling fizz lasts about as long as a firework.	18-bit	•	•	•	•	•	•	107
DPA Digital T-VPDM2mkII	3245	G An ingenious combination that includes a clock-feed from the DAC to CD transport. Capable of astonishing results	DAC7	•	•	•	•	•	•	120
Dual CD1080RC	200	A- Strange-sounding player with a top-heavy treble that does little to redress its lack of vibrancy and emotion	MASH/PWM	•	•	•	•	•	•	107
EAD T-1000/DSP-1000	2195	VG A two-box player based on Pioneer's Stable Platter CD transport. Its music always sounds fast, furious and fascinating.	20-bit	•	•	•	•	•	•	120
Genexxa CD-4900	129	A A little thin on detail, build quality and dynamics but thin on price too!	MASH/PWM	•	•	•	•	•	•	124
Goodmans GCD-650II	110	A+ For all its technical foibles this player has a fresh-faced honesty that's very refreshing.	MASH/PWM	•	•	•	•	•	•	124
Goodmans GCD-658	170	A- A 6+1 magazine-loading autochanger with an exaggerated and often aggressive sound	Hybrid	•	•	•	•	•	•	117
Harman Kardon TL8500	600	A This 5-disc carousel player sounds civilised enough but lacks the detail and finesse of its peers	MASH/PWM	•	•	•	•	•	•	117
Harman Kardon HK7725	800	VG This flagship implementation of RLS sounds impressively bold and dynamic - a genuine rock 'n roller!	18-bit RLS	•	•	•	•	•	•	124
JVC XL-Z464	200	G+ This latest variation on a traditional 200 theme is no less impressive than JVC's past generations.	PEM bitstrm	•	•	•	•	•	•	124
JVC XL-Z1050	500	A Technically advanced and luxuriously equipped, this player remains rather bland and unsatisfying on audition	PEM bitstrm	•	•	•	•	•	•	119
Kenwood DP-3050	200	A+ A slightly over-cooked version of the DP-3040 with a highly civilised but uninteresting sound.	NPC bitstrm	•	•	•	•	•	•	124
Kenwood DP-7050	350	A Kenwood's first sowing of Philips' Bit Stream technology has fallen on stony ground judging by its dry and awkward sound	SAA7350	•	•	•	•	•	•	119
Kenwood L-1000D	830	G A beautifully constructed and very stylish player that really only gives off its best when used in balanced	16-bit	•	•	•	•	•	•	100
Linn Karik	1497	VG Based on Linn's original CD transport, this player sounds dry but very positive, detailed and engrossing	Crystal BS	•	•	•	•	•	•	119
Linn Karik/Numerik	2500	G+ Partnering Linn's Numerik DAC with its Karik CD player (as transport) provides a dry, dynamic but also slightly dirty sound.	20-bit	•	•	•	•	•	•	120
Marantz CD-52II	230	G Launched to usurp the position of its own CD-52SE, the '52II is less colourful but equally appealing	SAA7350	•	•	•	•	•	•	119
Marantz CD-52IISE	300	G A new mains transformer plus the full complement of internal mods has recaptured the frothy if startling sound of the original '52	SAA7350	•	•	•	•	•	•	119
Marantz CD-72	400	G+ A heavily-constructed player. This implementation sounds astonishingly solid and immediate but also rather too 'clean'	bitstream	•	•	•	•	•	•	107
Marantz CD-72SE	500	G+ A recommendation just eluded the grasp of this superbly built player thanks to its very polished but restrained sound.	bitstream	•	•	•	•	•	•	112
Meridian 206ΔΣ	995	E A new variation on the 206 theme with the most liquid and captivating sound to date	Crystal BS	•	•	•	•	•	•	119
Meridian 208	1550	E State of the art CD sound combined with a decent preamp and full remote control	bitstream	•	•	•	•	•	•	83
Meridian 200/263	1390	G Now updated with Crystal Bit Stream technology, this popular duet has unfortunately lost much of the charm and poise of the original.	Bit Stream	•	•	•	•	•	•	120
Meridian 602/606	3100	VG Meridian's top-of-the-range two-box player looks and sounds both distinctive and elegant, the perfect partner for a cultured system!	DAC7	•	•	•	•	•	•	120
Micro Seiki CD-M100	5541	G Extravagantly styled, finished and built. The good lab performance led to an only 'good' sonic display	16-bit	•	•	•	•	•	•	72
Micromega Logic	300	G A version of Philips CD624 with new op-amps and CD tray. Still, it sounds rather meatier, better integrated and more purposeful	SAA7321	•	•	•	•	•	•	100
Mission DAD5	300	A+ Similar to Philips' 600-series: lively, plenty of space and full of 'bounce' but a little too eager to impress in the short term	bitstream	•	•	•	•	•	•	107

**MAIL
ORDER
WORLD
WIDE**



081 569 5802

**WE ARE OPEN
SUNDAYS**

PART EXCHANGE

SPEND £1000

CLAIM
GOODS
WORTH

£150

NOT VALID WITH ANY OTHER OFFER

FREE

**DEMO
ROOMS**

**BUY NOW
PAY '94** *Ask for
details* **0%** APR INTEREST
FREE CREDIT
ANYWHERE
IN UK

Mordaunt-Short

The new Music Series loudspeakers from Mordaunt-Short

MASTERY OF SOUND

This mastery of sound is the result of numerous technical innovations unique to Mordaunt-Short.

For instance, MCS technology – an injection moulded cone and surround which ensures a precise cross-section profile for exact bass unit performance.

All crossovers are first order configurations based on minimalistic principles because of the excellent performance of the individual drive units. Result? A simple load and fewer components between the amplifier and the final sound. Bi-wiring is possible too on all speakers except the MS10.

Mordaunt-Short



E.& O.E.

MUSICAL IMAGES

173 STATION ROAD
EDGWARE
MIDDLESEX HA8 7JX
TEL: (081) 952 5535
FAX: (081) 951 5864

NTH/NW
LONDON

**HOME
CINEMA
A/V SPECIALIST**

10 MIN FROM
HEATHROW

MUSICAL IMAGES

45 HIGH STREET
HOUNSLOW
MIDDLESEX TW3 1RH
TEL: (081) 569 5802
FAX: (081) 569 6353

MAIN DEALERS FOR:

- ACOUSTIC ENERGY
- ADCOM
- AIWA
- AKAI
- AKG/AR
- ALBARRY
- ALCHEMIST (KRAKEN)
- ALPHASON
- ARCAM
- AUDIO ALCHEMY
- AUDIO INNOVATIONS
- AUDIOQUEST
- AUDIO TECHNICA
- AURA
- B & W
- BANBRIDGE ACCESSORIES
- BANG & OLUFSEN
- BEYER DYNAMIC
- BOSE
- BOSTON
- CABLE TALK
- CANON
- CASTLE
- CELESTON
- CERWIN VEGA
- CYRUS
- DENON
- DUAL
- GOLDRING
- HARMAN KARDON
- HECO
- HEYBROOK
- INFINITY
- JAMO
- JPW
- JBL
- JVC
- KEF
- KENWOOD
- KODAK (PHOTO-CD)
- LEXICON
- LUXMAN
- MARANTZ
- MAXELL
- MICHELL
- MICROMEGA
- MISSION
- MITSUBISHI
- MONITOR AUDIO/MONSTOR
- CABLE
- MORDAUNT-SHORT
- NAD
- NAKAMICHI
- NINTENDO/SEGA
- ORTOFON
- PANASONIC
- PHILIPS
- PINK TRIANGLE
- PIONEER
- PROJECT TURNTABLES
- PROTON
- QED
- QUAD
- REVOLVER
- REVOX
- ROGERS
- ROKSAN
- ROTEL
- RUARK
- SANSUI
- SCOTCH/3M
- SENNHEISER
- SHURE
- SME
- SONY
- SOUND STYLE
- SPENDOR
- STAX
- SYSTEMDEK
- TARGET
- TANNOY
- TDK
- TEAC
- TECHNICS
- THORENS
- TOSHIBA
- TRIPOD
- VAN DEN HUL
- WHARFEDALE
- YAMAHA
- AND MANY MORE

CD players continued

Product	EPrice	Comments	DAC type	Optical digital output	Electrical digital output	Track entry keypad	Headphone socket	Variable output	Remote control	Issue No.
▲ Musical Fidelity CDT	500	G+ Oddball player with a cheap top-loading transport and appalling digital gubbins yet saved by the euphony of its valves!	hybrid							112
▲ NAD 502	200	G This updated version of the 5425 has traded the spontaneity of its forebear for a more precise but mechanical style of music	MASH/PWM	•	•				•	119
Nakamichi CD-4	350	A- This looks new enough but sounds little better than the older CD Player 4 upon which it is firmly based.	18-bit	•	•				•	124
Orelle CD-160.2	750	A- Based on Philips traditional 16-bit technology but suffering an unusually disjointed and undynamic sound.	16-bit	•	•					124
▲ Philips CD690	130	G- The remote-less version of Philips CD692 but with a colourful performance that's all its own.	PDM BS						•	124
▲ Philips CD920	160	A+ A new budget player with an appalling technical record but a surprisingly clean if understated sound	SAA7341	•	•				•	119
Philips CD930	200	G- Featuring digital circuitry similar to Marantz's players but a sound that's a little too ripe and soft.	bitstream	•	•				•	112
▲ Philips CD950	350	G+ Philips' top 900-series player is the first to employ its advanced DAC7 chipset. Sounds very crisp, clear and confident.	DAC7	•	•				•	112
Pioneer PD-S802	350	G Once again Pioneer's LLC topology only served to split and confuse the listening panel. It's good, but quirky!	PFM BS	•	•	•				124
▲ Pioneer PD-M701	330	G+ A 6-disc multichanger from the originators of the breed. A little untidy perhaps, but still sounds fresh, dynamic and exciting	PDM	•					•	117
Pioneer PD-M901	450	A Another 6-disc multichanger based on the PD-M701 but with the addition of various 'Sound Field' options. Listening is hard work	PDM	•					•	117
▲ Pioneer PD-S901	500	G+ The very refined but confident, crisp and powerful sound of the '901 snatches Pioneer's LLC concept from the jaws of defeat	PFM bitstrm	•	•	•				119
Proceed PDT3/PDP3	4598	G+ The third in a series of unusual transport/DAC combinations and a pairing that retains a powerful, confident and rugged sound	20-bit	•	•	•				120
▲▲ Quad 67	790	E Deceptively sleek in appearance but with a powerful, fluid and captivating sound reminiscent of Meridian's 206.	Crystal BS	•	•					124
Revox B226S	840	A Top quality build and finish for the Revox system enthusiast. For high value sound look elsewhere	16-bit	•					•	76
▲ Rotel RCD-945AX	230	G Based on the same CD-player-on-a-chip as Philips CD690 but with improved execution and build.	PDM BS	•	•					124
Rotel RCD-955AX	280	A Repackaged version of the evergreen RCD-855. Our sample disappointed, lacking the clean, cohesive quality of the original	16-bit	•	•					107
▲▲ Rotel RCD-965BX	300	E An exceptionally refined bitstreamer: transparent, exquisitely detailed and powerfully emotive. A landmark player	SAA7323	•	•					100
Rotel RCD-965BX LE	380	G- This 'tweaked' version of the fabulous '965BX certainly sounds different, but different is rarely better	SAA7323	•	•					119
▲ Sansui CD-X217	240	G- Sansui has returned to its roots judging by the balmy and very comfortable sound that pours from this player	MASH/PWM	•	•				•	119
Sansui CD-X317	280	A Not in the same class as older CD-X311 mkII. Same technology but the sound is neither as responsive or engaging	MASH	•	•				•	107
Sansui CD-X617	350	A This 'double-DAC' version of the CD-X317 is more impressive, sounding light and tizzy with pop but dull with classical CD's	MASH	•					•	112
Sansui CD-Alpha 717DR	1560	G+ A beautifully constructed if rather dated flagship player with an equally sedate and unadventurous sound.	MASH/PWM	•	•	•			•	124
▲▲ Sherwood CD-3020R	120	G Although this budget wonder has little respect for musical convention, what emerges is still remarkably entertaining	NPC bitstrm	•					•	119
▲ Sherwood CD-5010R	160	G+ A warm, detailed and enjoyable performance from a solidly built but affordable package.	PDM BS	•					•	124
▲▲ Sherwood CDC-5010R	200	G+ This highly affordable 5-disc carousel player sounds unexpectedly deep, spacious and involving - a rare find	PDM	•					•	117
▲▲ Sony CDP-397	140	G The first CD player to be almost entirely composed of miniature surface-mount components. Unsophisticated but enthusiastic sound	PLM	•						112
▲▲ Sony CDP-597	180	G This lightweight version of the acclaimed CDP-797 is equally flexible but provides a slightly warmer and smoother sound	PLM bitstrm	•					•	119
Sony CDP-X229ES	300	G- Built to the same standards as the CDP-X339ES but with a colder and less forgiving sound. Lacks a sense of integration	PLM	•	•				•	112
Sony CDP-X303ES	550	A+ A disappointingly lean and inconsistent result from a player that puts the 'high' in technology if not fidelity	PLM bitstrm	•	•	•			•	124
Sugden SDT-1	850	A Bearing in mind Sugden's SDA-1 converter lies at the heart of this player, its unpredictable performance is disappointing	16-bit	•	•					119
TEAC CD-P3500	200	A A well-meaning attempt to pare-down the CD-P4500 results in a similar looking player with a thoroughly uninspiring sound	bitstream	•	•				•	112
▲ TEAC CD-P4500	280	G TEAC's first genuine 1-bit player its sound described as having a certain 'organic warmth', very composed and easy-going.	SAA7350	•	•				•	107
TEAC VRDS-10	850	A+ A basic analogue stage compromises the potential of TEAC's superb engineering and digital electronics. Lacks bass energy	DAC7	•	•	•				119
▲▲ TEAC P-700/D-700	1500	VG They may lack the resolution of high-end colleagues but still sound warm, bubbly and perpetually entertaining.	20-bit	•	•	•				120
▲ Technics SL-PG440A	170	G This mix of the SL-PG520 and '420 fails to benefit from the strengths of either and only just achieves recommendation.	MASH/PWM	•					•	124
▲▲ Technics SL-PG520A	200	G+ A cracking player. Superb clarity and dynamics, thrilling but musically involving too	MASH	•					•	107
▲ Technics SL-PS620A	230	G+ A costlier, started-up version of the SL-PG520A that loses very little in the way of clarity, sparkle or in compelling dynamics	MASH	•	•				•	112
▲ Technics SL-PS840	420	A A very refined but highly detailed and engrossing performance from just about the fastest, slickest player on the planet	MASH/PWM	•	•				•	119
Technics SL-PS900	350	G- Just about the quietest transport in existence and a sound that is equally unobtrusive, polite and refined	MASH	•	•				•	100
Woodside WS2	1095	G+ Responded well to our jazz and classical selection but sounding bright and grainy with the pop CD's	16-bit	•	•					95
Yamaha CDX-670	290	G- Yamaha has retained the CDX-660 casework but cut costs with a new multi-task IC that's not entirely de-bugged.	PDM Bit Stream	•	•				•	124



CD transports and DACs

A CD player can be split into two basic components, the mechanism which reads the information from the disc, called the transport, and an electronic device which turns the digital bitstream coming off the disc into an analogue audio signal, this is called a digital to analogue converter or DAC. Although at the lower end of the market both of these are contained in a single box, the best CD players are usually two box affairs.

Although many of these units will be purchased as matching pairs, a DAC can also be

used to upgrade an existing CD player. For instance an early machine with a satisfactory transport but a dated converter can be rejuvenated by adding an outboard DAC.

The columns on the right indicate the facilities available on a transport or DAC. Remote control is self explanatory. The existence of electrical and/or optical digital in and outputs is pretty fundamental to transports and DACs, as a rule electrical outputs are the most desirable. Class 1 transports are those with an output whose crystal clock accuracy is better than ± 50ppm (parts

per million), certain DACs won't lock onto (and thus can't be used with) transports with a lower clock accuracy. DAC type shows the specific converter chip employed. In much the same way that an amp's output is not indicative of its sound quality, the chip used in a DAC isn't the only determining factor in a CD player's sound. Phase inversion in the digital domain can make quite a big difference if you've got a high resolution system and golden ears to go with it.

Entries for one make transport/DAC combinations are listed in the CD players section.

CD transports

Product	EPrice	Comments	Remote control	Optical digital output	Electrical digital output	Class 1	Issue No.
Kenwood DP-X9010	500	A+ Compromised by jitter, RF noise and poor clock selection it encourages a dynamic but bright and edgy sound with most DACs	•	•	•		96
▲ Meridian 200	895	G+ Broadly compatible and offering a light, fresh and very bubbly sound that is both natural, engaging and unfatiguing	•	•	•	•	96



071-402 2441

EST SINCE '78

315 EDGWARE ROAD
LONDON W2 1BN
MAIL ORDER 071-402-2441



Technics

SL-PG520A COMPACT DISC



LIMITED STOCK



£199

- MASH 4-DAC system. Shuttle search dial for easy, precise search. CD editing functions: Peak Level Search for level setting convenience, Time Fade, Edit Guide, Disc Link and Synchro Editing. High Speed Access System. 10-key direct access on both front panel and remote.
- Wireless remote control with digital attenuator. Multi-function FL display with music matrix. Random Play and Auto Cue. Aluminum front panel. Headphone jack with volume control. Auto timer Play.

MASH

INC FREE CD CLEANER WORTH £39.95

COMPACT DISC	PRICE	C/DECKS	PRICE
SL-P1200	£1799	RS-BX747	£299
SL-PS740	£239	RS-BX646	£229
SL-PS840	£399	RS-BX404	£179
SL-PS520	£229	RS-TR979	£359
SL-PG440	£169	RS-TR777	£299
SL-PG340	£149	RS-TR515	£259
AMPS		RS-TR333	£189
SU-VZ220 (30W)	£129	RS-TR232	£169
SU-VZ320 (40W)	£149		
SU-A600 (40W)	£199	TURNTABLES	
SU-A700 (45W)	£249	SL-BD20	£129
SU-A900 (80x2)	£389	SL-BD22	£149
TUNERS		SL-DD33	£159
ST-510	£129	SL-OD33	£199
ST-G470	£149	SL-1210 MkII (inc. cartridge)	£349
ST-G70	£249	EQUALISER	
RECEIVERS		SH-GE90	£229
SA-GX350 (60Wx2)	£319	SH-GE70	£169
SA-GX550 (100Wx2)	£439	SH-8038	£119

OCC RS-DC10 £699 INC. 10 FREE PRE-RECORDED TAPES
NEW SYSTEMS IN STOCK

SL-1210 MkII

Technics Turntable - Designed for Professionals

Used throughout the world in broadcast studios and clubs, the SL-1200 MkII quartz direct drive turntable continues to receive praise for its high performance and reliability.

Quartz Synthesizer Direct Drive Turntable

- Unwavering quartz DD accuracy now and flutter (0.01% WRMS, rumble -78% (DIN B)). Very high torque (1.5kg cm) for quick start-ups.
- Highly sensitive low-mass tonearm with gimbal suspension. Helicoid tonearm height adjustment.
- Total quartz locked continuous pitch adjustment up to ± 8%.
- Precision aluminium diecast cabinet and heavy rubber base material absorb unwanted vibrations.
- The Club and Disco Turntable.

Quartz Direct Drive



£349.99

INC STANTON CARTRIDGE

RRP £429.99

AIWA

SYSTEMS	PRICE	SEPARATES	PRICE
NSX-220	£249	XC-300 CD	£139
NSX-360	£309	XC-750 CD	£189
NSX-500	£339	AD-F410 Deck	£115
ZD-5000 MCD	£619	AD-F810 Deck	£219
ZD-7000 MCD	£759	AD-WX828 Twin	£189
ZD-3000M	£569	AD-WX929 "Best Buy"	£229
Z-720	£379		
NSX-D707	£475		
NSX-D909	£619		

MAIL ORDER (315 Edgware Rd. only)

Hi-Way have a fast, efficient and friendly mail order service. When placing an order please give credit card details or send a cheque. Once an order has been placed our daily Securitor Service will make sure it arrives to you quickly and safely.

HI-WAY PRICE PROMISE

Hi-Way price promise. If prior to purchase you can find any of our products advertised elsewhere cheaper (and in stock), and from an Authorised Dealer, we will beat the price at the time of purchase.

HI-WAY HI-FI LTD
313/315 EDGWARE ROAD
LONDON W2 1BN
TEL: 071-402 2441
FAX: 071-724 6101

HI-WAY HI-FI (WEST END) LTD
242 TOTTENHAM COURT ROAD
LONDON W1 9AD
TEL: 071-636 5974
TEL: 071-636 1752
FAX: 071 722 4150

AWARD WINNERS

- Denon PMA 250 III Amplifier
- Denon TU 260L Tuner
- Sony TCK 611S Cassette Deck
- Sony STS 311 Tuner
- Aiwa NSX-360 Mini System
- Marantz PM44SE Amplifier
- Marantz CD52MKII SE CD Player
- Aiwa ADF-410 Cassette Deck
- Aiwa ADWX 828 Cassette Deck
- Kenwood KRV 6050 Dolby Prologic Amp
- Denon D70 System
- Technics SC CH950 System

REVOX
"EVOLUTION"
SYSTEM
SPECIAL

FREE
DIGITAL PIONEER
HEADPHONES
FOR PURCHASES
OVER £200

DEMO ROOM

CLEARANCE OFFERS

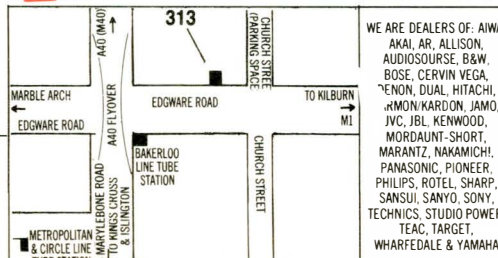
AMPLIFIERS	WAS	NOW	COMPACT DISC	WAS	NOW
JVC AX-335(65x2)	£179	129	Kenwood DP-3040	£190	139
JVC AX-A342(65x2)	£169	99	Philips CD-910	£129	109
Pioneer A-676	£299	229	Philips CD-930	£159	149
			Philips CD-940	£179	169
			Philips CD-618	£149	119
			Yamaha CDX-560	£199	139
			Yamaha CDX-460	£179	129
			Yamaha CDX-750	£249	179
			Pioneer PD-101	£149	119
			Pioneer PD-201	£169	139
			Aiwa XC-900	£209	159
TUNERS			CASSETTE DECKS		
Akai AT-56	£179	139	Kenwood KT-3510	£190	129
Kenwood KT-2030	£139	99	Kenwood KT-6040	£229	169
Kenwood KT-6040	£229	169	JVC TD-W253	£145	99
Pioneer F-676	£199	149	Yamaha KX-W232	£199	149
Sony ST-S444ES	£299	99			
Sony ST-S300	£199	99			
Sony ST-S170	£119	99			
			SEPARATES		
			Yamaha NS-C90 (100W)	£119	99
			Yamaha NS-E100 (80W)	£139	109
			Yamaha YST-SE10 (40W)	£100	79
			Yamaha NS-A102 (80W)	£139	109

0% INTEREST FREE CREDIT

Up to 6/12 months interest free credit is available on selected items (not available on price match or specified offers). Subject to status. We also offer low rate credit facilities for up to 48 months. Please call for a quote.

EXTENDED WARRANTY

Up to 5 years extended warranty is available on all Hi-Fi products including accidental damage.



WE ARE DEALERS OF: AIWA, AKAI, AR, ALLISON, AUDIOSOURCE, B&W, BOSE, CERVIN VEGA, DENON, DUAL, HITACHI, JBL, KARDON, JAMO, JVC, JBL, KENWOOD, MORDAUNT-SHORT, MARANTZ, NAKAMICHI, PANASONIC, PIONEER, PHILIPS, ROTEL, SHARP, SANSUI, SANYO, SONY, TECHNICS, STUDIO POWER, TEAC, TARGET, WHARFEDALE & YAMAHA

KENWOOD



DP-7030
COMPACT DISC
PLAYER

RRP
£299.99

NOW

£199.99

DIGITAL PIONEER HEADPHONES WORTH £39



DP-7040
COMPACT DISC
PLAYER

RRP
£299.99

NOW

£199.99

AKAI

MX-570/T £429/£519
MX-670/T £519/£619
MX-750 £669

ROTEL

RA-940AX Amp (40x2) £199
RA-920AX Amp (20x2) £129
RCD-955AX C/D £229
RCD-965BX C/D £279
RD-945AX C/Deck £149

JVC

MX-B9 £949
MX-C7 £759
MX-55M £439
MX-P56 £539
MX-S4 £429
MX-S3 £379
MX-S2 £339
UX-A4 £339
UX-A5 £339
UX-T1 £259
+ New range of Separates in Stock

SPEAKERS

We stock AR, Bose, Cervin Vega, Tannoy, Mission, Jamo, Mordaunt Short, Studio Power, Wharfedale

THORENS

TD-166 £249
TD-290 £189
TD-280 £229

YAMAHA

AX-470 (65W) Amp Remote £239
AX-570 (100W) Amp Remote £289
AX-V401 (55W) Amp £199
TX-470 Tuner NEW
KX-260 C/Deck £159
KX-360 C/Deck £199
KX-930 C/Deck £399
KX-W262 Twin Deck £219
KX-W362 Twin Deck £249
EQ-550 Equaliser £199

AV/PRO-LOGIC AMPS

Yamaha DSP-A500 £469
Yamaha DSP-A1000 (Award) £899
Yamaha DSP-A2070 £1099
Yamaha DSP-E200 £369
Yamaha DSP-E1000 £669
Denon AVC-3020 £729
Kenwood KA-V8500 (Award) £699
Kenwood KR-V6050 £329
Kenwood KR-V7050 £399
Marantz PM-700AV £399
Sony TA-AV570 £399
Sony TA-AV670 £679
Pioneer VSA-D8025 £579

DENON

PMA-250 III £159
PMA-350 II £219
PMA-450 (60x2) £249
PMA-880R (75x2) £299
PMA-480R £219
DCD-890 C/Disc £269
DCD-1290 C/Disc £329
DCD-585 C/Disc £179
DCD-695 C/Disc £199
TU-260 Tuner £119
TU-580 Tuner £219
DRM-510 Deck £159
DRM-610 Deck £199
DRM-710 Deck £259
DRS-810 Deck £299
DRW-760 Deck £249
D-250 £929
D-70 (Award Winner) £589

For In-Car, Mobile Phones, contact our CAR HI-FI CENTRE 287-289 EDGWARE ROAD LONDON W2 1BE TEL: 071-723 5891

MAIL ORDER HOT LINE 071-402 2441

Please supply

Send to: HI-WAY HI-FI 313/315 EDGWARE ROAD, LONDON W2

I enclose cheque/PO for £ or debit Access/Visa/Amex Card No:

Expiry date

Name

Address

Postcode

Tel:

CD transports

Product	Price	Comments	Remote control	Electrical digital output	Optical digital output	Class 1	Issue No.
TEAC P-2	3300	G Beautifully styled and constructed but sound is bleached and generally less inspiring than that of the P-10	•	•	•	•	96
Technics SL-PA10	470	G Has the unusual limitation of only optical output. Reassuringly solid and more immune to vibration than most			•		88

DACs

Product	Price	Comments	DAC type	Electrical digital input	Optical digital input	Phase invert	Issue No.
▲ Arcam Black Box 3	300	G+ Top of a series of three decoders it can offer a high sonic standard with top class transports	Bitstream	•	•		88
Arcam Black Box 5	450	G Equipped with Sync Lock for D170.3. It gives off its best with a standard 75ohm transport like the TEAC P-10.	hybrid	•	•	•	113
▲▲ Audio Alchemy DDE v1.0	420	VG A very sweet and seductive sounding unit that gives good results with a wide range of CD players/transports	Bitstream	•	•	•	101
AudioSynthesis DSM-M	1234	G+ A weighty but neutral and highly calculated performer, best suited to transports like the P-10, despite Sync Lock facility.	20-bit	•	•		113
Beard DAP-1	975	A- Clad in a wooden case this marriage of digital technology and valves has hit the rocks, a disappointingly flat sound	16-bit	•	•	•	113
▲ DPA Digital Bigger Bit	700	G With either P-10 or Meridian 200 transports it delivers a very taut and dynamic sound, bathed in an open acoustic	DAC7	•	•		103
DPA Digital Little Bit (Optical)	400	VG Works especially well with Meridian's 200 transport but does require the services of Deltec's 'Power' mains filter	SAA7350	•			101
DPA Digital PDM1 Series 3	1280	G+ Bears technical comparison with both PDM2 and Bigger Bit but - in terms of sound quality - is great advance on the latter	DAC7	•	•		103
▲ ds/d Decode-1	495	G Elegantly designed bitstreamer with plenty of inputs, can sound too bright, immediate or artificial for its own good.	Bitstream	•	•	•	113
▲ Forte Audio Model 50	950	VG A typically big and full-blooded sound, infiltrated by a slightly euphonic quality but never hard or gritty.	DAC7	•	•		103
Meridian 606 DAC7	1350	G By refining the 203's sound further Meridian have also tempered its vibrancy and 'life', Fickle with other transports	DAC7	•	•	•	101
Micromega Duo BSII	550	G Has a tendency to sound light, airy and 'fast' but it can also become a little hard or - fatiguing with some digital outputs	SAA7321	•	•	•	101
Micromega Microdac	300	A+ Described as a modest but entertaining performer, achieving its sweetest balance with Arcam's D170.3 transport.	SAA7321	•	•		113
▲ Mission DAC5	299	G+ Another modest DAC but one capable of a lean but clean and detailed sound that's typical of the DAC7 breed.	DAC7	•		•	113
▲ NVA DAC-ON	730	G+ DAC-ON actually turns out to be a QED Digit linked to substantial external supplies. A ruse that undoubtedly improves its sound	SAA7323	•			113
PS Audio Superlink	1498	G- Does the business with Meridian's 200 but can sound bloated, smeared and even vaguely electronic other transports	18-bit	•	•	•	103
▲▲ QED Digit	139	G+ Bearing in mind its expressive but very forgiving performance the Digit is almost embarrassingly cheap	SAA7323	•			113
Roksan ROK-DA1/ROK-DS4	995	G+ A creditable affair, both expansive and expressive in character but rather also lean in balance.	Crystal	•			113
Stax DAC-Talent	1400	G+ Natural, refined and never over-zealous, its also capable of sounding very spicy and dynamic. Can be a maturing influence	20-bit	•	•	•	101
▲ Sugden SDA-1	749	G+ A pleasant surprise from the fuddy-duddies of audio, judging by its 'masses of high resolution detail and tremendous dynamics'	TDA1541it	•			113
Sugden Stemfoort PDA-10	1200	G+ Unfortunately this 'upgraded' SDA-1 is less impressive than the original, losing out on dynamics, airiness and subtle detailing	16-bit	•	•	•	113
Threshold DAC 1/e	3150	G+ Can sound beautifully detailed with a marvellous sense of scale and sharp, solid images. Compatibility is unpredictable	MASH	•	•	•	103
Woodside DAC1	909	G Fine but slightly dated and costly package in performance terms - but flexible, musical and t well built	16-bit	•	•		87
▲ Woodside DAC2	510	G+ Offering a sharp and dynamic sound, all the more captivating for its lack of graininess and 'tizz'. A reliable upgrade	16-bit	•			101



DAT players

DAT, or digital audio tape, has been on the market for quite some time now but has never really 'made it' as a consumer medium, probably due to the fact that very little prerecorded software has been made available.

In the last year or so it has begun to carve itself a niche at the top end of the market replacing reel to reel tape recorders as the audiophile's

tape based medium.

The DAT standard specifies a 48kHz sampling rate, which is higher than CD. so direct copying in the digital domain is only possible on those machines with dual sampling frequencies, ie 48kHz and 44.1 kHz. Some machines also record at 32kHz to give a longer recording time for a given length of tape, this is shown in the LP

mode column.

The optical and electrical in/outputs in the column headings are for digital signals, analogue in/outputs are universal. The AES/EBU and S/PDIF socketry is for connection to professional components and typically DAT machines with this facility have been made for the pro and semi-pro markets.

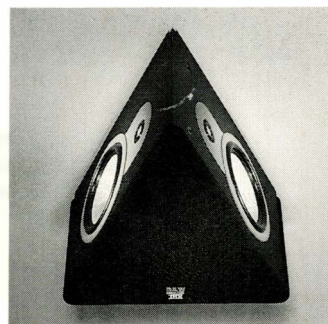
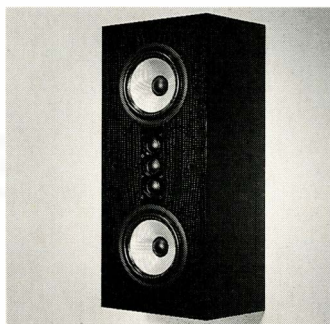
DAT players

Product	Price	Comments	Remote control	Electrical in/outputs	AES/EBU in/outputs	S/PDIF in/outputs	LP mode	Issue No.
JVC XD-Z1010TN	1050	A+ Ambitious but ultimately disappointing deck with an opaque musical delivery and more features than you can shake a stick at	•	•	•	•		111
▲ JVC XD-Z505	620	G Competent middle market DAT with uncomplicated (but still flawed) user interface, but good basic sound quality	•	•	•			105
Kenwood DX-7	500	A Sound quality is pretty fair, but a little rougher than the best of the breed. Controls are good, the display however is poor	•		•			94
Kenwood DX-7030	700	A- Bland sounding deck that lacks low level clarity and imaging. Build quality is good however and ease of use ranks highly		•	•	•		99
Panasonic SV-3700	1111	A Slick, powerfully equipped, this pro DAT has a clear, quick and colourful sound somewhat lacking in weight and substance		•		•	•	111
▲ Sony DTC-55ES	550	G Broadly comparable to a middle ranking CD player sonically, the Sony is particularly well equipped and well priced.	•	•	•	•		93
Sony DTC-77ES	1000	A Superb engineering, many nice features (including off tape monitoring) but perceptibly slowed, thickened sound	•	•	•	•		105
▲▲ Sony TCD-D3	500	G+ At the time of writing, this model represents the state of the art, and beats all corners.	•		•			94
Tascam DA-30	1199	A+ Interesting pro DAT deck with solid, tangible sound quality which is nevertheless lacking in analysis		•		•	•	111

HOME MOVIES



(with Lucasfilm Home THX processing and B&W Audio technology
in full six channel Surround Sound)



Why go out to the cinema when B&W's Home Cinema brings the full movie-going experience home to you?

B&W Loudspeakers Virtual Acoustic Reality enables you to experience the breadth, depth and clarity of movie sound in your living room as at the cinema.

So you see and hear all the action where it happens, as it happens. Without the inconvenience of travelling.

B&W's Home Cinema is the best means currently available to explore all the sonic potential captured and stored on the modern laserdisk or video cassette.

B&W
HOME CINEMA



VIRTUAL ACOUSTIC REALITY

Using Lucasfilm's Home THX electronic processing, the B&W Home Cinema system with identical left, centre and right front speakers, left and right surround speakers and single (or dual) mono subwoofer gives you lifelike, cinematic sound. Whilst conforming to the highest audiophile standards.

Of course, there are alternatives on the market. But they do not have the benefit of B&W Loudspeakers' unrivalled track history in acoustic technology.

Listen and you'll see.

**ANOTHER CLEARSTONE
EXCLUSIVE!**
**The first THX Home Cinema
in the North**
Now showing at Clearstone, Bolton
You won't believe your ears!

NUMBER
CLEARSTONE

**FOR HOME
ENTERTAINMENT**

BIRMINGHAM 122/123 New Street. Tel 021 633 4944 **BIRMINGHAM** Horntons Electronics, 8-9 Lower Temple Street. Tel 021 643 0972 **BOLTON** 235 Blackburn Road. Tel 0204 31423

BRADFORD Rawson Square. Tel 0274 309266 **COVENTRY** 78 Lower Precinct. Tel 0203 632086 **GLOUCESTER** (formerly Robbs) 13/15 Worcester Street. Tel 0452 419777

HALE 162/164 Ashley Road. Tel 061 928 1610 **KEIGHLEY** 38 Cavendish Street. Tel 0535 602933 **MANCHESTER** 54 Bridge Street. Tel 061 835 1156 **ROCHDALE** 52 Drake Street. Tel 0706 524652

WALSALL Park Street. Tel 0922 644169 **WORCESTER** 27/27A The Cross. Tel 0905 726375 **WORCESTER** David Waring's, Marmion House, High Street. Tel 0905 27551

They deserve their awards.

CD PLAYERS

Rotel RCD-945AX
Marantz CD52MkIISE
Kenwood DP-7050
Arcam Alpha 5
Marantz CD10

AMPLIFIERS

Denon PMA-250/III
Marantz PM44SE
Aura VA-100 Evolution
Audiolab 8000A
Audiolab 8000C/P

LOUDSPEAKERS

Mission 760ISE
NAD 802
Mission 751
Mission 753

TURNTABLES

Systemdek IIX
Thorens TD166 MkVI

RECORDING DECKS

Aiwa AD-F410
Aiwa AD-F810
Sony TCK-611S
Marantz DD-82
Nakamichi DR1
Aiwa AD-WX828

CD UPGRADES

QED Digit
Audiolab 8000DAC

TUNERS

Denon TU-260L
Sony STS-311
Audiolab 8000T

SYSTEMS

Aiwa NSX-360
Sharp C5300
Aiwa NSX-D707
Denon D-70
Denon D-110
Technics SC-CH950

HEADPHONES

Audio Technica ATH-L1a
Beyer Dynamic DT-311
Beyer Dynamic DT-511
Sennheiser HD480 II
Sony MDR CD750

AV AMPS/PROCESSORS

Kenwood KAV-8500
Kenwood KRV-6050
Denon AVC-3020

Now you deserve yours.

CLEARTONE Cashback[©]

WORTH

UP TO

£100

against future purchases,
when you buy any What Hi-Fi?
nominated award winner.

© Cleartone Group 1993

Purchase any What Hi-Fi? nominated award winners from the above list at Cleartone, hand over this voucher, and we'll put a cheque in the post to you (to use against any future purchase over £50 from Cleartone excluding special offers) to the following value.

Spend £100-£199 on award winners - receive Cleartone Cashback cheque for £10
Spend £200-£399 on award winners - receive Cleartone Cashback cheque for £20
Spend £400-£599 on award winners - receive Cleartone Cashback cheque for £40
Spend £600-£799 on award winners - receive Cleartone Cashback cheque for £60
Spend £800-£999 on award winners - receive Cleartone Cashback cheque for £80
Spend £1000+ on award winners - receive Cleartone Cashback cheque for £100

Use your Cashback cheque any time between Sep 14 and Dec 23 1993 off our complete range of TV's, Videos, Camcorders, Hi-Fi or even Photographic, Communications and Car Hi-Fi at selected stores. Remember with Cleartone Cashback you save twice, with your initial purchase and on your second purchase off our already kept prices.

See us at

THE
NORTHERN
VIDEO
& HI-FI
SHOW '93

MANCHESTER G-MEX
October 29/30/31 1993
10-6 Daily

NEW BRANCH
NOW OPEN

Park Street, Walsall

NUMBER

CLEARTONE

FOR HI-FI

BIRMINGHAM 122/123 New Street. Tel 021 633 4944 **BIRMINGHAM** Horntons Electronics, 8-9 Lower Temple Street. Tel 021 643 0972
BOLTON 235 Blackburn Road. Tel 0204 31423 **BRADFORD** Rawson Square. Tel 0274 309266 **COVENTRY** 78 Lower Precinct. Tel 0203 632086
GLOUCESTER (formerly Robbs) 13/15 Worcester Street. Tel 0452 419777 **HALE** 162/164 Ashley Road. Tel 061 928 1610
KEIGHLEY 38 Cavendish Street. Tel 0535 602933 **MANCHESTER** 54 Bridge Street. Tel 061 835 1156 **ROCHDALE** 52 Drake Street. Tel 0706 524652
WALSALL Park Street. Tel 0922 644169 **WIGAN** 6 Crompton Street. Tel 0942 323897 **WOLVERHAMPTON** 39 Victoria Street. Tel 0902 772901
WORCESTER 27/27A The Cross. Tel 0905 726375 **WORCESTER** David Warings, Marmion House, High Street. Tel 0905 27551

MAIL ORDER
HOTLINE
0204 31423

Headphones

There are a variety of different approaches to headphone design. Amongst the more expensive models, electrostatic drivers are used in open-backed phones. The majority of these come with some form of transformer which usually takes the signal from the speaker terminals on the amplifier, but some can run from a pair of tape out sockets.

The more down to earth (see affordable) models feature dynamic, or moving coil, drivers in circular open or closed backed designs. The advantage of open backs seems to be a correspondingly open sound, but one can also of course hear external noises. Closed-back designs are useful in situations where it is necessary to block out background noise, but they aren't gen-

erally as good sonically.

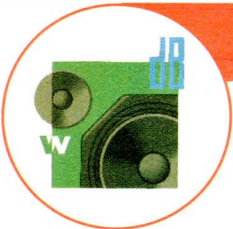
Another means of distinguishing different types is the way they sit on your head. There are three styles: circumaural models enclose the ear and rest on the side of the head; supra-aural designs feature a flat pad which presses on the outer ear (pinna); and intra-aurals rest inside the ear itself, and are popular with personal stereos.

Headphones

Product	£Price	Comments	Type	Open back	Closed back	Dynamic	Electrostatic	Issue No.
▲ AKG K1000	500	E One of the best dynamics on the market, hooks directly to speaker outputs and makes much of the competition sound lame	Extra-aural	•	•	•	•	99
AKG K135	33	A The K135s don't live up to the usual AKG standards, though they do have the ability to reproduce rhythm well	Supra-aural	•		•		63
▲ AKG K240 Monitor	60	G Something of a classic, these AKGs are very user friendly in all respects; sonically on the warm side of neutral	Circumaural	•		•		63
▲ AKG K280 Parabolic	90	G+ A very revealing and unusual twin driver design that uses the same principle as a satellite dish to beam sound into the ear	Circumaural	•		•		63
▲ AKG K340	140	E Heavyweight cans in most respects, the K340 with its electrostatic tweeter is a very revealing headphone	Circumaural			•	•	75
AKG K44	40	A Good quality personal oriented phone, could have a better sense of space but is musically quite communicative	Supra-aural	•		•		99
▲ AKG K400	100	VG Comfortable over long sessions. Sound is exquisitely detailed, dynamic and uncoloured	Supra-aural	•		•		121
▲ AKG K500	119	G+ Open and clear, they reproduced music with impressive definition, balance is on the light side but transparency is high	Circumaural	•		•		111
Aiwa HP-X30	31	G- A flashy personal stereo phone which alternatively could be used at home. A slight LF tonal preference colours the response	Supra-aural			•	•	75
▲ Audio-Technica ATH-308	26	A- Small cans with a fairly forward balance which helps perceived clarity but can become wearing over time, good for personals	Supra-aural	•		•		111
▲ Audio-Technica ATH-609	31	A- Warm feeling and sounding with impressive physical substance for the price, could be more relaxed and open	Circumaural	•		•		99
Audio-Technica ATH-611	51	G Same basic design as 609 but bigger thinner diaphragm makes this a more relaxed and informative headphone	Circumaural	•		•		99
Audio-Technica ATH-9000	246	G Electrets which connect to the amps speaker outputs, it sounds a little too smooth but would suit aggressive amps	Circumaural	•				111
▲ Audio-Technica ATH-910	70	G The closed-back 910s are an improvement on the 909s with a nice rhythmic quality rarely found with headphones	Circumaural			•	•	55
▲ Audio-Technica ATH-911	80	VG Nicely finished dynamic headphones with all the trimmings, plus a very clean and subtle sound	Circumaural	•		•		63
Bandridge EH910DD	50	A- Modestly successful mid/top, but dreadfully cloying, ploddy bass makes this model essentially unlistenable	Circumaural			•	•	121
▲ Beyer DT-211	25	A Good value compact, couth and enjoyable, esp in midband. Earpads not removable for cleaning	Supra-aural	•		•		121
Beyer DT411	49	VG A reasonable but not very thrilling headphone that doesn't really offer enough at the price	Supra-aural	•		•		111
▲ Beyer DT911	179	VG Probably too revealing for many headphone amps these are very subtle and fine if expensive cans	Circumaural	•		•		111
▲ Beyer DT990	102	VG A significant pair of dynamic headphones; they have a smooth and yet revealing neutral sound that is hard to criticise	Circumaural	•		•		55
▲ Beyer IRS690	203	VG High quality infra-red headphones with soft comfy earpads and mellow but informative sound quality which is hard to dislike	Circumaural	•		•		75
JVC HA-D690	40	A Competent but rather undistinctive cans, a bit middle of the road and well suited to aggressive sources	Supra-aural			•	•	111
JVC HA-D910	60	A Broadly acceptable if unexciting design with low level losses and some colourations	Circumaural			•	•	121
▲ Jecklin Float Electrostatic	399	E These electrostatics have an openness of sound rarely found in the breed, with good dynamic range to boot	Circumaural	•			•	55
▲▲ Jecklin Float Model One	79	G+ Whilst very unusual in appearance, the Floats give remarkable sound quality and openness at a reasonable price	Circumaural	•		•		55
▲ Jecklin Float Model Two	99	G+ Helmet shaped and pretty unflattering but open sounding and comfortable in the long term. The lack of adjustment	Circumaural	•		•		63
Kenwood KH-1000	20	A- First step up from a true mini: a near miniature which is cheap, comfortable and inoffensive	Supra-aural	•		•		121
Philips SBC3390	60	A Up front but rather aggressive headphone with lightweight, coloured sound. Not very comfortable.	Supra-aural			•	•	121
Quart Phone 75X	70	A Unusually comfortable sealed headphone, though sound isolation poor. Hard, edgy sound quality.	Circumaural			•	•	121
▲▲ Sennheiser HD440 II	30	A+ Still the one by which others at the price are measured, though now slightly leaden sounding, cold treble	Supra-aural	•		•		121
▲▲ Sennheiser HD 480II	50	G Not the most accurate cans on the market but amongst the most enjoyable	Supra-aural	•		•		111
Sennheiser HD 540II	100	G+ A good but not great headphone that due to its high impedance and efficiency should work well with most sources	Circumaural	•		•		111
▲▲ Sennheiser HD40	20	G- Very light and comfortable headphones with an even sonic balance that will suit most sources. 6.3mm jack	Supra-aural	•		•		75
Sennheiser HD450II	40	G- Makes quite acceptable noises with a variety of outputs, could sound more spacious but is pleasantly relaxed	Supra-aural	•		•		99
▲ Sennheiser HD480 Classic II	60	G Same basic design as the 450 but improved sound quality as a result of aluminium coil and extra damping, natural with good bass	Supra-aural	•		•		99
▲ Sennheiser HD520	65	G+ A very comfortable and musically capable headphone. If you've got this sort of bread to blow on cans, give 'em a blast	Circumaural	•		•		75
▲ Sennheiser HD530	75	G+ One of the better dynamics in its group, the 530s create a sense of space that eludes most sub £100 cans, and they're dead comfy	Circumaural	•		•		75
▲▲ Sennheiser HD560 Ovation II	125	VG Characteristic slightly heavy sound, but still the benchmark at this price level. High class sound and comfort	Circumaural	•		•		121
▲ Sony MDR-CD1000	150	G+ A fine sounding and comfortable headphone that's likely to work well with most sources	Circumaural			•	•	111
▲ Sony MDR-CD3000	300	G+ Better than most of the headphone outputs around so hard to make the most of, potentially up there with the electrostatics	Circumaural			•	•	99
▲▲ Sony MDR-CD350	32	G Very impressive, possibly the most open sounding cheap closed back can around, lightweight in balance but transparent	Circumaural			•	•	99
▲▲ Sony MDR-CD550	50	G+ A very competent headphone, creates a remarkable sense of space for a closed back design and sounds natural to boot	Circumaural			•	•	99
▲ Sony MDR-CD750	73	G+ Reasonably comfortable and eminently listenable these Sonys have characteristically good bass power and relaxed hf	Circumaural			•	•	111
Sony MDR-CD850	100	A+ Very comfortable, and reasonable sound - better than most sealed designs - though hardness intrudes	Circumaural			•	•	121
▲ Sony MDR-R10	2500	E State of the art design built to the highest standards. Sound quality reflects this care, being big, clear, sweet and refined	Circumaural	•		•		72
▲ Stax Gamma pro/SRD-X pro	583	E The Gamma pros are like a stethoscope for your hi-fi, revealing subtleties that many loudspeakers fail to resolve	Circumaural	•			•	63
▲ Stax Lambda Signature/SRM-T1	1370	E The Signature when combined with the SRM-T1 valve driver must be the most transparent headphone available	Circumaural	•			•	72
▲ Stax SR Gamma	219	G+ The next model down the Stax range from the Lambda, the Gamma is an excellent headphone with little to criticise but the price	Circumaural	•			•	55
▲ Stax SR Lambda Pro/SRD-7SB	559	G+ An industry reference, frighteningly revealing, bringing across more information than loudspeakers costing twice as much	Circumaural	•			•	55
▲ Stax SR Lambda Pro/SRM-1	1020	E Extracts layers of information that other headphones only hint at. The SRM-1 has more edge than the SRM-T1	Circumaural	•			•	75
Stax SR34	140	G+ The electret driven SR34s are lively and rhythmic with good tight bass and a sweet midrange	Supra-aural	•				55
▲ Stax SR84	210	G+ The stepping stone between dynamics and full electrostatics, these electret phones are revealing, open and highly enjoyable	Supra-aural	•				63

Headphones continued

Product	£Price	Comments	Type	Open back	Closed back	Dynamic	Electrostatic	Issue No.
Technics RP-F10	100	A Another very comfortable sealed model, modest sound isolation and uneven sound favouring bass	Circumaural			•	•	121
▲▲ Vivanco SR808 Classic	55	G A new mid price reference from a new and interesting source. Good all round, no obvious shortcomings	Supra-aural	•			•	121
Yamaha YHD-1	46	G Stylish semi-folding design with a slightly forward balance that very nearly scraped a recommendation	Supra-aural	•			•	111



Loudspeakers

Last item in the hi-fi chain, to some extent the loudspeaker is merely the slave of what has gone before, capable only of reproducing a signal as good as it is fed. Nevertheless the distortions (colorations and stereo effects) introduced by loudspeakers (and rooms) tend to be more immediately obvious than those anywhere else in the chain, so careful choosing according to taste is very important.

The average loudspeaker consists of a small-

ish enclosure, much of which may have begun life as part of a tree, plus a couple of drive units hidden behind a removable grille. Inside the box lurks a simple electrical circuit known as a crossover, which divides the incoming (full range) signal into the right bits for the drivers to handle. Variations on the above formula are specifically identified in the entries. The designer's primary task is to balance the 'sensitivity' of the loudspeaker (how loud it goes for a given electrical

input) against the bass extension (how low does it go), shown as 'bass from', for the given box size. After that such subtleties as coloration (or lack of it) and dispersion come into the equation.

Careful placement of the loudspeakers within the room is as important as the initial choice of model. See siting columns for guidance. For good stereo they need to be more or less the same distance from nearby walls. Models not ticked as 'floorstanding' will require rigid stands.

Loudspeakers

Product	£Price	Comments	Size: HxWxD (cm)	Bass from (Hz)	Sensitivity (dB)	Site close to wall	Site in free space	Floorstanding	Issue No.
ATC SCM20	1461	G+ Massively built, invariably informative but the rather forward presentation can be uncomfortable	44x24x31	28	82			•	86
▲ Acoustic Energy Aegis 1	452	G Rich and slightly heavy balance doesn't mask fine mid/treble coherence and transparency. Entry level for all-metal drivers	39x21x26	28	84			•	118
Acoustic Energy AE1	764	G Amongst the best miniatures around, shows exceptional mid focus and coherence, but is pricey and could be more agile.	29.5x18x25	48	84			•	102
▲ Acoustic Energy AE3	1650	G+ Solid, authoritative and impressively accurate – if a shade ponderous and slow	63x26.5x37	23	85			•	86
Acoustic Research Pi 3	219	A Lively good value box has extra bass driver to give plenty of thump, but lacks refinement and extension	51.5x21x23	50	88	•			110
Acoustic Research AR M.5	129	A- Pretty enough but a bit too tiny for its own good, it's better suited to auxiliary surround sound duties	22x16x23	50	88	•			114
▲▲ Acoustic Research AR M1	199	G Cutely shaped miniature delivers splendidly unboxy bass and midrange, but is a little marred by a rather bright treble	27x20x26	30	85	•			110
Acoustic Research AR M2	269	A Not necessarily as agile or well balanced as the cute little M1, M2 is larger, louder and still attractively unboxy	41x24x36	28	89	•			118
▲▲ Allison AL100	100	A Loud and lively budget wall-mount is bigger and beefier than most of the competition, if lacking some subtlety and refinement	33.5x24x21.5	30	87	•			94
Allison AL105	170	A- Pretty enough in appearance, sonically the AL105 doesn't really make the grade at the £150 asking price	37x24x21	45	87	•			78
▲ Allison AL110	220	G- Compact bookshelf model is a little dry and mid forward, but bass is extended and solid	40x24.5x22.5	28	86			•	102
Allison AL120	420	A Pretty well balanced if slightly mid forward, but sound quality is a little disappointing for the price	63x28x27	30	88	•		•	98
Allison MS 200	220	A- Small and solid as a brick, this micro-miniature has limited bass and bright balance, but sounds agile and communicative	25.5x14.5x15	50	85	•			106
▲ Apogee Caliper Signature	3998	G+ Power hungry full range ribbon panels have remarkable transparency and delicacy, loudness and 'grunt' are a bit lacking	122x70x6.5	30	81			•	81
▲ Arcam Delta Two	340	G Pretty luxury compact sounds a shade forward and coloured but has dynamic and lively bass for its size	37.5x22.5x27.5	40	87			•	94
▲ Audio Note AN-E	1300	G+ Lovely coherence, great midband dynamics and transparency, extended bass and high sensitivity — pity it's so darn ugly!	80x36x28	20	91			•	106
▲ Audio Note AN-J	799	G+ Light damping and local unevenness adds some coloration, but doesn't spoil the very lively, dynamic and coherent sound	58.5x33x24.5	25	90			•	110
▲ Audioplan Kontrapunkt	899	G+ Sounds as sweet as it looks, dressed expensively in real wood with matching stands. not for bass or loudness freaks	31x24x13	48	83			•	86
▲ B&W 2001	120	A Cunningly concealing its (very real) limitations, this is just about the smoothest and best balanced miniature around	29x18x21	48	87			•	118
B&W 2003	190	A- Flashy and assertive ghetto blaster styling is not reflected in the rather bland, if well balanced sound	43x21x25	30	88			•	122
B&W 610	220	A Bass extension and impressive loudness credentials, but rather indifferent integration and coherence	49x23.5x30	25	89			•	102
▲▲ B&W 620	370	G Has well balanced, laid back and slightly lazy sound that is pleasantly easy on the ears; could do with its own spikes	74x23.5x30	25	89			•	94
▲ B&W DM600	170	A+ An impressively smooth overall balance, but sound is a touch bland with it	35x20.5x25	30	85			•	98
▲ B&W Matrix 801	3495	G+ Lacks the transparency of the best panels, and the drama of the best dynamics, but is something of an acoustic tour de force	77/99x56x43	<20	86	•		•	81
B&W Matrix 805	845	G Stylish, with remarkable imaging properties, good balance and low coloration, though less successful at musical communication	42x26x22.5	30	87			•	98
▲ Bose 305	390	G- A bit of an oddball, fine dynamic liveliness and a good room match more than make up for the strange stereo imaging and treble	28x45x23	40	88	•			78
Bose 401	456	A Cheaply built but distinctively styled semi-omni floorstander suffers from heavy midbass but still sounds lively and open	78.5x30x28.5	28	89			•	110
Bose 901 MK6	1496	A The pre-equalised multi-driver 901 is cleverly engineered to deliver exceptional loudness	33x54x32	28	89			•	86
Bose Interaudio 3000XL	170	A- Lots of perceived value and well enough balanced, but low cost engineering results in a crude and unsubtle sound	46.5x29x23	45	89			•	71
Boston HD5	130	A Tiny and prettily shaped miniature has an attractive lack of boxiness, but is a little short of drama and dynamic drive	25x16x18.5	30	86	•			110
Brinkmann Endymion	395	A+ Omnidirectional design with rococo styled urn-shaped ceramic enclosure. Distinctly bass light, but impressively coherent	48x29 (diam)	50	85			•	106
▲ Cabasse Bisquine	600	G+ Classy French large bookshelf speaker has great coherence and dynamic grip, but a rather mid-forward overall character	48x26x30.5	30	91			•	110
▲ Cabasse Skiff	1500	G+ Large floorstanding three-way gives great sensitivity and bass extension with fine dynamic grip	100x30x36	25	92			•	122
▲ Canon S-30	150	A+ Clever and unusual moulded design has attractive lively coherence, along with 'wide imaging stereo' effect	27x22.5x23.5	50	88	•			114
▲ Canon S-50	350	A+ Only a small cone miniature at heart, the fascinating styling and extended sweet spot feature make it utterly original.	30x24 (diam)	48	84			•	102
▲▲ Castle Chester	650	G+ A brilliant throwback, using horn-type approach to provide startling midrange dynamics and coherence.	94x23x27	45	87			•	98
Castle Durham	250	A Like the slightly larger York, the very pretty presentation is not reflected in a similarly sweet sound	40x22x24	48	88			•	118
▲ Castle Pembroke	400	A+ Comfortably recommended, a sweet smooth sound with good overall balance of engineering-based performance	55x37.5x30.5	46	88			•	31
▲ Castle Trent II	190	A Very classy finish for the price, plus a sound that passes muster without setting anything much alight	33.5x18x20	50	88	•			122
▲ Castle Winchester	1499	G+ Unconventional and beautifully crafted, large for its bass extension but engagingly agile and attractively open and airy	114x24x47	25	87			•	90

RING FOR A DEAL

Contact us for the very best prices on top names
Sony, Technics, Panasonic and Kenwood Hi-Fi

**WE MUST
 HAVE THE
 CHANCE TO
 BEAT ANY
 OTHER DEAL**

AMPLIFIERS

TECHNICS

SUVZ 220 NEW, 30 watts per ch.
 SUVZ 320 NEW, 40 watts per ch.
 SU A800K NEW, 40 watts per ch. MOS, Class AA
 SU A700K NEW, 45 watts per ch. MOS. Class AA.

Remote

SU A800K NEW, 55 watts per ch. MOS, Class AA. Remote
 SU A900K NEW, 80 watts per ch. MOS, Class AA. Remote

KENWOOD

KA 1030 65 watts per ch.
 KA 3020 45 watts per ch. British sound
 KA 3050R NEW, 45 watts per ch. Remote
 KA 4020 60 watts per ch. British sound
 KA 404DR 70 watts per ch. Remote
 KA 5020 80 watts per ch.
 KA 5050R 90 watts per ch. Remote. NEW
 KA7050R 100 watts per ch. Remote. NEW
 KAV 8500 HOME CINEMA "What Hi-Fi?" Award Winner

SONY

TAF 211B 30 watts per ch. NEW
 TAF 242B 60 watts per ch. NEW
 TAF 442E 80 watts per ch. UK sound. NEW
 TAF 542E 90 watts per ch. UK sound. NEW
 TAAV 570B Dolby Pro-logic Home Cinema Amp. NEW

CD PLAYERS

TECHNICS

SLXP 150, SLXP 330, SLXP 440, SLXP 550,
 SLXPS 900, Portables
 SLPG 340A Budget MASH Player
 SLPG 440K NEW, Remote MASH Player
 SLPG 620A NEW, MASH with digital output
 SLPG 740K NEW, MASH digital servo
 SLPG 940K NEW, advanced MASH

KENWOOD

DP 2050 NEW model with CCRS
 DP 3050 NEW, 1 bit model
 DP 5050 NEW, 1 bit model
 DP 7050 NEW, 1 BIT Model
 DPM 6650 NEW, multi play model

SONY

CDPM 201 Midi size. NEW
 CDPM 301 Midi size, remote control. NEW
 CDCP 325M Midi size, 5 disc multi-player
 CDP 311 Full size, remote control. NEW
 CDP 411 Full size, remote control. NEW
 CDP 711E Full size, UK Sound. NEW
 CDP 911E Full size, UK Sound. NEW
 CDPX 303 ES Full size. UK Sound. NEW ES
 CDCP 335 Full size, 5 disc multi-player. NEW
 D33, D121, D311, D515,
 DT115 & D122CK portable players all in stock

CASSETTE DECKS

TECHNICS

RSBX 404K NEW Dolby B/C + HX Pro
 RSBX 646K — NEW, 3 Head Deck with HX-PRO
 RSBX 747K NEW, 3 Head Deck with HX-PRO
 Class AA
 RSTR 232 NEW, A.R. twin deck
 RSTR 333 NEW, A.R. twin deck with Bias adjustment
 RSTR 515K NEW, twin deck with HX Pro

KENWOOD

KX 3050 Dolby B/C, power loading
 KX 5050 Dolby B/C, 3 motor, power loading
 KX 7030 Dolby B/C, HX Pro, 3 head, 3 motor
 KXW 4050 NEW, twin deck, Dolby B + C
 KXW 6050 NEW, twin deck — Double record
 KXW 8050 NEW, twin deck with HX-Pro

SONY

Single decks
 TCFX 211B Dolby B and C, NEW
 TCK 311B With auto calibration. NEW
 TCK 411B 3 head deck, auto monitor, NEW
 TCK 511S 3 head deck with Dolby S. NEW
 TCK 611S 3 head/3 motor deck with Dolby S. NEW
 Double decks
 TCW 435B Dolby B+C + Hx-Pro. NEW
 TCWR 535B with record-reverse. NEW
 TCWR 635S With Dolby S. NEW

SPEAKERS

SONY

SS 8SE UK design
 SS 12SE UK design

WHARFEDALE

Diamond 5 — NEW
 415 Performance
 425 Performance

MORDAUNT-SHORT

New series MS-10, MS-20, MS-30, MS-40, MS-50 now in stock
 CS-1 + SW1 — Home Entertainment Series in stock in dialogue, stereo and Pro-logic packs

CANON

S-30
 VT-100 Corner units

TANNOY

803 Mk II 120 watts power handling
 805 Mk II 150 watts power handling
 807 Mk II 175 watts power handling
 609 Mk II 200 watts power handling
 611 Mk II 250 watts power handling
 613 Mk II 250 watts power handling
 615 Mk II 300 watts power handling

HI-FI SYSTEMS

TECHNICS

All systems in speakers and CD
 CDX 520E 60 watts per ch. inc equaliser
 CDX 320 50 watts per ch.
 CDX 120 40 watts per ch.
 SSCH 404 NEW Budget Minisystem
 SCCH 550 NEW, budget minisystem
 SCCH 650 NEW, 50 watts mini system
 SCCH 655 NEW, MULTI-PLAY mini system
 SCCH 750 NEW, 50 watts system with D.S.P.
 SCCH 950 NEW, Pro-logic mini system
 SHE 51 Equaliser for CDX 120 & CDX 320 systems

KENWOOD

All systems with CD & speakers & remote control
 M27 CDS — 40 watts per ch.
 M47 G — NEW 45 watts per ch.
 MS6 PX, 45 watts per ch.
 M57 MG — NEW 45 watts per ch., Multiplay system
 M76 G, 60 watts per ch., inc. equaliser
 M77 MG NEW 80 watts per ch., Multiplay system
 M97 G NEW 85 watts per ch. Pro-logic system with multiplay CD option
NEW KENWOOD mini systems all with multi-play CD option

UD301/351 M, 25 watts per ch.
 UD 501/551 M 32 watts per ch.
 UD 701/751 M 32 watts per ch., — Dolby surround
 UD 901/951 M 42 watts per ch., — Dolby Pro-logic
 MS-A7 NEW Micro system

EXTRAS AVAILABLE

P 100 record deck for mini-hi-fi systems
 CS-6 Centre speaker
 CM 7ES Rear surround speakers, 70 watts
 CM 5ES Rear surround speakers, 40 watts
 SW900 Super woofer for midi systems
 SW 700 Super woofer for mini systems
 OMNI 7 Top Speaker

SONY

All systems inc speakers & remote control
 NEW systems in now in stock
 Compact 109CD 25 watts per ch.
 Compact 159CD 25 watts per ch., Multiplay
 Compact 209CD 30 watts per ch.
 Compact 259CD 30 watts per ch., Multiplay
 Compact 359CD 50 watts per ch., Multiplay
 Compact 559CD Separate components, Multiplay
 Compact 759CD Dolby Pro-logic

SONY MINI HI-FI

inc speakers & remote control & CD
 MHC 510CD, NEW, 25 watts per ch.
 MHC — C 50 CD NEW MULTIPLAY SYSTEM
 MHC 710CD, NEW, 40 watts per ch
 MHC — C 70 CD NEW MULTIPLAY SYSTEM
 MHC 2800CD, NEW, 40 watts per ch.
 MHC 3800CD, NEW, 50 watts per ch, with D.S.P.
MINI-DISC
 MZ1 + MZ2 Portables in stock
 MDS 101 For Mini Systems

DAT RECORDERS

SONY

TC DD3 portable
 TC DD7 NEW, Budget portable
 DTC 690 NEW, Full size deck

TUNERS

TECHNICS

ST 610 24 Presets
 STG 60 Twin Tuner
 ST G7550K with RDS
 ST G7650K with RDS

KENWOOD

KT 1050 NEW model
 KT 2030 With Timer
 KT 2050 NEW model
 KT 3050 NEW model with R.D.S.
 KT 6050 Remote compatible

SONY

STS 211B NEW, with 30 presets
 STS 311B NEW, with R.D.S. — EON
 STS 505ES with R.D.S.

RECEIVERS

TECHNICS

SAGX 130K 60 watts, 30 presets
 SAGX 230K 80 watts VCR input
 SAGX 350K NEW Pro-logic

KENWOOD

KR-A4050 WITH R.D.S.
 KRV 6050 NEW model with Dolby Pro-logic and R.D.S.
 KRV 7050 NEW model with Dolby Pro-logic R.D.S. + D.S.P.

SONY

STRD 311B NEW
 STRD 511B NEW
 STRD 811B NEW
 STRD 311B, STRD511B, STRD611B - new models now in stock.

IN BUSINESS FOR 30 YRS

Essex Discount

CHELMSFORD, 2-3 West Square, High Chelmer; tel (0245) 490747
HARLOW, 57 Harvey Centre; tel (0279) 426155
LOUGHTON, 152 High Road; tel 081-508 4838
ROMFORD, 8-9 Swan Walk; tel (0708) 746600



FOR FAST & EFFICIENT
MAIL ORDER
 PHONE
0708 721854

Loudspeakers continued

Product	Price	Comments	Size: HxWxD (cm)	Site in free space Bass from (Hz)	Site in free space Sensitivity (dB)	Floorstanding	Issue No.
Castle York	340	A+ Pretty little real wood compact has an engaging transparency, good balance and fine timing, could do with more authority	43x22x26	30	86		110
▲▲ Celestion 1	109	A Pretty basic performance but at a very basic price — it all sounds a bit scrappy and untidy, but its heart's in the right place	27.5x16x21	50	87	•	114
▲ Celestion 15	389	G Big box and bang for your bucks, short on subtlety and control, but long on both enthusiasm and perceived vinyl wood grain	103x20.5x25.5	28	90	• •	114
Celestion 3	129	A- Now reflex ported, this budget miniature is neat enough all round but sounds terminally unexciting with it	30.5x18.5x22	48	87	•	122
Celestion 5	169	A Cunningly conceived and balanced, the 5 may be a little slow for some tastes, but is well suited to CD-oriented budget systems	35x20.5x26	30	89	•	90
▲ Celestion 6000	1510	G+ A genuine full range audiophile quality speaker system — with Star Wars styling to suit a high tech environment	Two box system	30	82	•	C92
▲ Celestion 7	219	A+ Good looking large bookshelf size wall-mount has lively up front presentation. Can sound a bit coarse, stand is critical	45x24.5x32	30	87	•	98
Celestion 9	269	A Nicely presented and fair material value, with impressively flat bass-to-mid balance	49.5x20.5x24	30	89	•	102
Celestion SL12Si	629	A Elements of fine sound quality, but this 'grown up' SL6 variation has a lumpy response alongside its improved power handling	53x20x27	50	85	•	66
Celestion SL600Si	820	G Has certain remarkable qualities that some will find irresistible, but needs careful system and room matching	27x20x23	52	82	•	68
Celestion SL6Si	429	A+ This stereotype luxury compact can sound a bit dull and congested, but really opens up on Slate Audio stands; favours CD	37.5x20x25	30	86	•	94
Celestion 300	1100	G Splendid bass extension and fine panel-like openness and transparency, but dynamics and timing are suspect, balance very laid back.	100x21x31	<20	86	•	118
Creek CLS 10	119	A Almost identical to the Goodmans Maxim 3, this neat miniature is very competently engineered, but not desperately exciting	26x17x21	50	85	•	114
Dali 102	230	A Attractive bookshelf model has fine midband focus and bass extension, but treble's a bit restrained and bass a bit detached	37x21x25	30	86	•	114
Dawn Chorus FS	698	G Compact floorstander with superb coherence but rather forward midband. Would suit smaller rooms best	91x26x21	30	86	• •	114
▲ Diamond Acoustics Reference III	895	G+ Lovely free stander suffers from indifferent bass alignment, but is fast, coherent, solid and very informative indeed.	87x27.5x28	30	90	•	106
Dynaudio Contour1.3	1199	G Heavyweight luxury finish bookshelf model has good scale and weight but is pricey and a bit ponderous	38x20.5x29	28	86	•	122
▲▲ Epos ES11	350	G+ Integral baffle/driver to give a remarkable combination of low coloration, transparency and speed; bass is a bit shy	37.5x20x25	45	86	•	94
▲ Epos ES14	515	G+ Substantial stand mount delivers delightful midrange focus and delicacy with good bass control. System sensitive	49x22.5x29	25	85	•	98
▲ Faraday FS1	225	A+ Concrete box on a budget, works surprisingly well despite cheap drivers, wood veneers here Direct sale only	47x27x28	45	86	•	114
Faraday FSS	589	G Pricey and ugly, but with its own sonic charm, thanks to substantial influence of the concrete enclosure has upon the sound	46x27x26	28	90	•	102
Faraday Siren	330	A- Interesting if ugly high mass concrete cabinet is let down by imbalance of ageing driver combination	46x27x27	48	87	•	94
Genexxa SE100	150	A Tandy-stocked miniature is attractively lively, coherent and communicative, could do with more grunt and lower coloration	28x15.5x19	50	84	•	110
▲ Goodmans Maxim	120	A Budget miniature offers well balanced strengths and few weaknesses at a very realistic price; a bit feeble	26x17x20	30	85	•	122
Harbeth HL Compact	584	A Clean, neutral sound lacks resolution and gives rather unobtrusive though well differentiated stereo	52x27.2x28.1	65	87	•	59
Harbeth LS3/5A	379	A Still a classic miniature, though not to every taste, and none the better for the recent update under our listening conditions	30.5x19x16	60	81	•	66
▲ Harbeth HL-P3	400	G Very limited loudness but impressive full-range scale from uncoloured and very well balanced but time-smearing sub-miniature	31x19x17	23	82	•	118
Heco Presto Superior 750	650	A Tall slim and attractive floorstander delivers a fine, even in-room balance but lacks transparency, coherence and dynamic drive	95x24x27	22	87	•	106
Heco Reflex 10	160	A Nicely balanced small bookshelf is a competent rather than exceptional package for the price, thanks to indifferent build.	32x21x23	30	90	•	102
▲▲ Heybrook HB1 S3	250	G Latest version of long established favourite delivers good liveliness and fine coherence for the price	47x29x24	30	88	•	98
▲ Heybrook Prima	120	A+ Neat and discreet miniature delivers fine coherence, pace and timing, though balance is a trifle forward and bass a bit light	29x19.5x18	50	86	•	110
▲ Heybrook Quartet	555	G Beautifully presented and built large bookshelf model with good sensitivity and a lively, forward sound	41x24x23	48	89	•	122
▲ Heybrook Sextet	1079	G+ Engagingly coherent and a highly analytical, partly due to distinct and t always comfortable upper-mid forwardness	96x27x20	25	85	• •	102
▲ Heybrook Solo	170	A+ Discreetly styled, sounds a little untidy in both bass and treble but handles complex rhythmic material much better than most	36x23x22	28	87	•	90
▲ Heybrook Trio	349	G Same drivers as HBS1 in prettier real wood enclosure give a sweeter and more forgiving if less committed sound	47x24x25	45	89	•	118
Infinity Modulus	795	A+ Carefully conceived and beautifully built. Undeniably attractive in the mid and treble, it failed to handle the bass as well	30x18x26	45	84	•	86
▲ Infinity Reference 10	180	A An engaging and lively sound from a prettily finished and substantial small bookshelf size model	36x23x23	50	87	•	98
Infinity Reference 20	230	A Well presented and balanced with good bass control, but somehow lacks convincing cohesion and agility.	46x27x24	27	88	•	102
▲ Infinity Reference 30	400	G Budget price floorstander has good overall balance and bass extension, but is rather coloured and uneven	86x27x24	25	89	• •	122
Infinity Reference 50	550	A- Despite hi-tech drivers, good bass extension and sensitivity, this three-way suffers from a forward, coloured sound	86x26.5x25	25	89	• •	98
Jamo 307	300	A- Beautifully styled bookshelf baby places more emphasis on presentation than basic engineering	32x18x27	48	86	•	122
JBL Control 1 Plus	250	A Sub-miniature with forward midrange and real bass; highish price partly justified by near-indestructible Pro build	23x15.5x14	50	89	•	90
JBL L1	450	G Good power handling, decent transparency and deep but current hungry bass from a compact and solid enclosure	40x21x25.4	47	87	•	121
JBL ti1000	1500	G Ultra-engineered, beautifully crafted bookshelf model. Performance compromised by over enthusiastic midbass output from port	44x30x28	45	89	•	118
▲ JPW AP2	180	A Offers real wood veneer at a bargain price; performance is cleaner but broadly comparable to P1 Vinyl overall	43.5x25.5x26	45	86	•	106
▲ JPW AP3	225	A+ Pretty good stereo and well balanced overall it had its own character which is well suited to vinyl replay	52x25x29.5	57	90	•	46
▲ JPW Minim	79	A- Very civilised but dynamically limited, the Minim is well suited to the smaller room and where limited loudness is acceptable	27.5x18x19.5	28	85	•	82
▲▲ JPW Mini Monitor	£60	A- Ultra cheap Richer Sounds special is lightweight and short of welly, but a snip for surround sound use	27x18x17	50	85	•	122
▲ JPW P1	155	A+ Honest and basically articulate if not very sophisticated, resolution is good but can sound a little wearing in bright systems	44x25.9x26.1	60	89	•	59
▲▲ JPW P1 Vinyl	135	A A lot of highly competent loudspeaker for the price, with a safe sound that's unlikely to disappoint.	43.5x25.5x26	32	87	•	102
▲▲ JPW Sonata	115	A+ Well balanced and integrated, offers fine sound if limited bass and dynamic range, plus real tree wood at a nearly silly price	32x23x20	55	86	•	71
JPW Sonata Plus	135	A- This luxury variation on the redoubtable Sonata theme features a metal dome tweeter, and isn't the better for it	32x23x21	30	87	•	90
▲ JRT AD1	500	G+ A fair share of cosmetic deficiencies do little to spoil the impressive coherence and timing	59.5x28x36	28	86	•	86
▲ JRT AD1 Micro	389	G Delightful life and coherence, gives surprising impression of scale; some aggressive tendencies but very open to system tuning	28x17x21	50	87	•	94
Jamo Concert II	330	A- A respectable 'bookshelf' performer that needs free space siting but includes attractive cabinetwork and a neat grille	41x24x25	48	85	•	66
Jamo Concert V	500	A Compact, solid, nicely finished delivers unusually extended bass at the expense of lowish sensitivity; midband is laid back	86x24x28	20	85	• •	102
Jamo Concert VII	800	A Beautifully built, uses unusual double reflex bass system, unsuccessfully as far as low frequency resolution is concerned	96x28x31.5	25	87	• •	94
▲ Jamo Cornet 50	150	A+ Good value bookshelf size speaker has a rough and ready sound but good heart, engaging liveliness and fair timing	42x23x22.5	28	87	•	110
Jamo Silhouette	400	A+ Tall, slim and rather elegant in its way, doesn't sound bad for a styling exercise, just a bit rich and polite	122x24.7x17	45	88	• •	114
▲ Jordan JH400	504	A+ Piano finish hexagon has single full range driver and controversial sound, with uneven balance but delightful mid coherence	33x24x30.5	50	83	•	106
KEF 101/2	549	G- Small high class wall-mount has a beautifully even, slightly dull balance, fine freedom from boxiness, but not much bass drive	33x26.5x26	50	86	•	114
▲ KEF 104/2	1495	G+ A reference point for dynamics, preferred without KUBE, suited to many rooms. Good stereo, high sound level	90x28x41.5	50	92	• •	60
KEF K120	169	A Physically pretty and sonically competent but undistinguished bookshelf size model has good sensitivity but limited extension	34x20.5x26	45	87	•	106
▲ KEF Q80	549	A+ Uni-Q floorstander has good stereo and fine midband coherence, but bass lacks extension, drive and resolution	85x24.5x26.5	45	87	• •	106
KEF Q90	700	A Generous floorstander has even balance and decent extension but fails to communicate excitement and involvement effectively	90x25x32	25	88	• •	118

Loudspeakers continued

Product	£Price	Comments	Size: HxWxD (cm)	Site in free space	Site close to wall	Site Sensitivity (dB)	Bass from (Hz)	Floorstanding	Issue No.
Kammerzell Ref Mini Monitor	425	G A beguilingly sweet sound with good pace and drive, but scale is restricted and presence a little dulled considering the price	27x17x24	50	85	•	•	•	94
▲ Kenwood LS-770E	260	G Impressively communicative bookshelf model has fine vigour, scale and dynamics, if not the smoothest sound around	48x27x25	25	89	•	•	•	106
▲ Kenwood LS-500G	500	G Japanese designed and built luxury compact delivers an invigorating and exciting sound; an interesting contrast to some lazier models	45x23x26	48	89	•	•	•	118
▲▲ Legend II	200	G Liveliness, coherence and fine information retrieval justifies the odd looking moulded baffle construction	37x21x30	48	88	•	•	•	122
▲▲ Linn Index II/KuStone	374	G Stand and speaker looks and sounds very good, good bass extension and control, fine dynamic range. Clean, clear if a shade slow	44x21x23.5	28	86	•	•	•	90
▲ Linn Kaber	1198	G+ Dry, bright balance emphasises superb dynamic range and transient precision, but can sound unforgiving	89x19x29	25	85	•	•	•	118
Linn Kan II	530	A+ Niche product for those prepared to tolerate its strong character for the sake of fine bass performance and near invisibility	30.5x18.5x16.5	35	82	•	•	•	78
▲ Linn Keilidh	579	G+ Stunning timing and coherence and awesome bass drive, especially with ceramic plinth; sounds a bit shut in	83x20x27.5	22	87	•	•	•	114
Living Voice Air Partner	11990	E Formidable horn design with astounding transparency, dynamics and speed. Its idiosyncracies are compensated by sheer energy	165x64x92	40	101	•	•	•	117
▲ Magneplanar MG1.4	1090	G+ Offers a very crisp and articulate sound, particularly revealing of upper mid vocal details	155x8x57	40	88	•	•	•	72
Magneplanar SMGa	688	A Tonally 'rich', in the right room it proved a satisfactory musical experience	122x48x4.5	56	85	•	•	•	46
Marantz DS110	200	A+ Pretty near-miniature trades bass extension for sensitivity, delivering fine midband dynamics but little grunt	33x19.5x20.5	55	88	•	•	•	114
Marantz DS220	300	A+ Nicely shaped and presented large bookshelf model sounds competent rather than inspired; a touch too heavy	37x23x26	50	88	•	•	•	122
▲ Martin Logan CLS II	4200	G+ High resolution design, fussy about system set-up, demanding of ancillaries and software alike. It rewards the efforts though	60x28x7.5	45	86	•	•	•	72
Meridian Argent 1	995	G+ Beautifully built, finished and shaped, has fine bass extension and virtual absence of 'boxiness'; needs a big amplifier	33x27x27	28	83	•	•	•	98
Meridian Argent 2	875	G Beautiful high-tech 'large compact' delivers extended, smooth and neutral sound with fair speed. Slate Audio stands essential	48.5x21x29.5	23	85	•	•	•	94
Meridian M30	950	A Pricey active speaker, easy on the ears and worth considering especially where space is at a premium	38.5x18x32	40	NA	•	•	•	46
▲ Mission 753	700	G+ Gorgeous presentation and potential for open transparency. Floorstander with lots of drivers that gives lots of loudness	90x22x30.5	45	88	•	•	•	114
▲ Mission 760i	130	A+ Attractive little wall-mount miniature has livelier dynamics and bass drive than most of its type, but sounds as little shut in	29.5x18x20	48	87	•	•	•	110
Mission 761i	180	A 760 theme adds an extra driver for easier amp loading and power handling. Slightly inferior to simpler, cheaper 760i	38x19x24	48	88	•	•	•	102
Mission 764i	480	A Generous and handsome floorstander looks fine material value for money, but good scale sound has lazy tendencies	89x25x32	22	86	•	•	•	118
Mission 765i	680	A+ Big heavyweight floorstander has good sensitivity and bandwidth, but somehow lacks agility, authority and dynamic grip	102x25x33	22	91	•	•	•	110
Mission Cyrus 751	300	G Potentially promising high class baby suffered early production inconsistency: full retest scheduled soon	32x17x27	50	86	•	•	•	122
Monitor Audio MA1800	1350	A+ Even when ballasted with lead shot the 1800 inclines towards upper bass richness and lacks genuine extension	106x22x32	30	88	•	•	•	81
Monitor Audio MA700 Gold	400	A Luxury compact does a good job of voice reproduction, but sounds a bit lazy and off the tempo with faster, busier material	35x21.5x25	50	85	•	•	•	110
Monitor Audio MA1200 Gold II	1200	G Pricey but classy floorstanding variation on MA800 theme; beautifully voiced midband, heavy midbass	93.5x17x27	28	85	•	•	•	122
Monitor Audio MA800	600	G Beautifully finished compact has a delightfully even and uncolored midband transparency, sensitivity and bandwidth are limited	51.5x20x27.5	45	85	•	•	•	114
▲ Monitor Audio Monitor 11	330	G Tall, slim and attractive compact has an extra driver to help out in the bass, giving extra urge at some price in delicacy	52x20x24	48	87	•	•	•	94
Monitor Audio Monitor 14	400	A Suffers from excess upper bass, giving a thick, chesty coloration beneath a quite lively and well focused mid and treble	78x20x24	30	86	•	•	•	98
Monitor Audio Monitor 7	180	A Lively and punchy, looks pretty enough and is good value but is let down by an unruly and indifferently integrated tweeter	34x16.5x17	70	84	•	•	•	74
Monitor Audio Monitor 9	210	A Despite a much better treble balance than the 7, the 9 is less engaging and lively at low frequencies than its smaller sibling	37x20x21	30	85	•	•	•	78
▲ Monitor Audio Monitor One	150	A+ Pricey but cute micro-miniature just about gets away with it sonically, though performance envelope is inevitably limited	24x15x16	55	85	•	•	•	106
Monitor Audio Studio 10	1200	A+ All-metal driver diaphragms provide engagingly transparent midrange and treble, spoilt by over-strong mid-bass.	40x20x25	45	87	•	•	•	90
▲ Monitor Audio Studio 15	1600	G A little slow and lazy but better balanced than the smaller Studio models, the midband coherence and focus is superb	51x20x26	45	87	•	•	•	102
Monitor Audio Studio 5	650	A+ All metal diaphragm luxury miniature has splendid presence coherence but sound can be aggressive and lacks welly.	32x18x20	28	83	•	•	•	98
Monitor Audio Studio 6	800	A+ Pretty but pricey metal diaphragm compact has clear and transparent midband but is ultimately lacking in vim, vigour and drive.	35x22x25	45	86	•	•	•	118
Mordaunt-Short 5.10	130	A Plenty of well engineered speaker for the money, and smoother than most of the competition, but lacks timing and enthusiasm	30.5x18.5x21.5	50	85	•	•	•	110
Mordaunt-Short 5.20	150	A Lots of speaker for your money, but not as smooth or well balanced as other M-S 5-series models	36x21.5x21.5	45	87	•	•	•	114
Mordaunt-Short 5.30	220	A- Good hi-tech material value for money, but a disappointingly dull and rather bland sound. Safe but uninspiring.	42.5x25x28	28	86	•	•	•	106
▲ Mordaunt-Short 5.40	299	G Elegant near-floorstander has an even balance that makes it very easy on the ears, yet also inviting and informative	64x21.5x26.5	28	85	•	•	•	110
Mordaunt-Short Classic 20	395	A+ Luxuriously finished, beguiling mid transparency, bass is altogether less convincing	37x22x27	45	86	•	•	•	102
Morel Bassmaster 602	1200	G+ Superbly built compact stand-mount, did well in listening tests but suffers (enjoys?) upper midband peak	24.5x40x22.5	25	84	•	•	•	114
Musical Fidelity MC-3	400	A+ Solid and authoritative large bookshelf model gives fine stereo and decent dynamic drive but balance is rather shut in	47x26x28	25	88	•	•	•	118
▲ NVA Cube 1	720	G+ Attractive, semi-omni is very sturdily built, and gives an idiosyncratic but unusually open, spacious and informative sound	33x32x32	52	85	•	•	•	71
▲ NVA Cube 2	480	G A rude but exciting miniature, with unusually accomplished bass capabilities for its size	28.5x27x28.5	48	85	•	•	•	82
NVA Cubix	1400	G Too idiosyncratic for recommendation, the Cubix possesses remarkable bass extension for its size, but is tricky to optimise	60x32.5x32.5	28	84	•	•	•	78
Naim NA IBL	823	G This tiny floorstanding wall mount delivers outstanding dynamics, speed and detail, marred by pronounced upper mid forwardness	80x18x15-20	30	84	•	•	•	94

Audio Designs

HI-FI
SPECIALISTS

26 High Street, East Grinstead, West Sussex RH19 3AS.
Telephone: (0342) 314569.

Open 9.30-6.00 Mon-Sat • ACCESS • VISA • CREDIT FACILITIES •

We have on demonstration the best Hi-Fi and AV products available plus the knowledge to enable you to get the best value for your money regardless of budget.

We have a comfortable demonstration room, are able to deliver and install free of charge and offer part exchange facilities.

Visit us – you will be pleased you did.

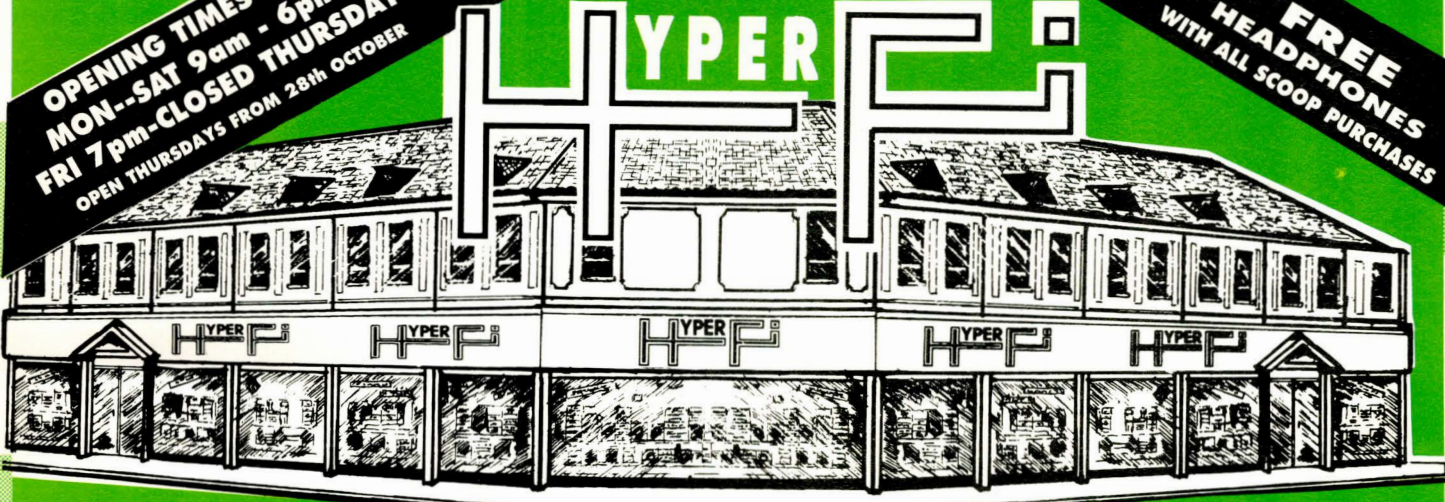
Authorised stockists of:

ARCAM, AUDIOLAB, CASTLE, YAMAHA, LINN PRODUCTS, NAIM, AUDIO, TANNOY, KEF, B&W, ROTEL, SONY, J.P.W., THROENS, MARANTZ, MISSION, ALPHASON, CREEK, CYRUS, QUAD, TARGET, TEAC, ETC.

Please call for details of
Arcam & Quad Musical Evenings

OPENING TIMES
MON-SAT 9am - 6pm
FRI 7pm-CLOSED THURSDAYS
 OPEN THURSDAYS FROM 28th OCTOBER

FREE HEADPHONES
 WITH ALL SCOOP PURCHASES



BRITAIN'S LARGEST INDEPENDENT HI-FI/VIDEO BULK BUYER

Our Massive Buying Power gives you the Best Possible Deal. Brand New Factory Sealed units - All Fully Guaranteed.

(NO REPAIRED UNITS, MAIL ORDER RETURNS OR GREY IMPORTS)

- All prices include V.A.T.
- We have Friendly Expert Advisers on hand at our 10,000sq. ft. Superstore at Barking. They can offer Advice and Full Demonstrations.
- We offer the Fastest Mail Order Department in the Business. Insured - 24 Hour Securicor Delivery.
- We Care. We have Fully Trained Service Personnel.
- We want your custom . . .
 If you have been satisfied with the Service at Hyper-Fi tell others. If you're not happy for any reason don't hesitate to tell us.

JUST WRITE TO: HYPER-FI P.R. DEPT. (RICHSIDE), FREEPOST, RM90, CHIGWELL, IG7 6BR.

THIS MONTH'S STAR BUYS

PIONEER

PDS601

- * HIGHLY REVIEWED RANGE
- * STABLE PLATTER MECHANISM
- * 1 BIT DIRECT LINEAR CONVERSION
- * ANTI RESONANCE DESIGN
- * OPTICAL DIGITAL OUTPUT
- * H/P MOTOR DRIVE OUTPUT

Also PDS101 £119.95

SAVE £90 **£149.95**

PIONEER

N72T

- * SUPERB REMOTE MINI HI-FI
- * 2 x 50 WATTS OUTPUT SURROUND SOUND
- * 3 BAND AM/FM DIGITAL TUNER
- * 13 BAND SPECTRUM EQUALIZER
- * TWIN TAPE DOLBY B&C
- * TWIN PLAYER 1 BIT C.D.

SAVE £200 **£399.95**

PIONEER

J3M

- * FULL REMOTE MIDI HI-FI
- * 2 X 80 WATTS SEPERATE POWER AMP
- * 13 BAND SPECTRUM EQUALISER
- * AM/FM DIGITAL SYTHESIZER TUNER
- * TWIN AUTO REV CASS DOLBY B.C. HX PRO
- * MULTI-PLAY COMPACT DISC
- * TIMER PROGRAM EDIT

SAVE £230 **£599.95**

BARGAIN OFFERS

£5 HI-FI CHOICE HYPER-FI VOUCHER

EXTRA £5.00 OFF PUBLISHED PRICES ONLY FOR HI-FI CHOICE READERS

£5

PIONEER

£1/4 MILLION

SPECIAL PURCHASE
 Most at trade price or less, all equipment brand new sealed cartons fully guaranteed direct from Pioneer (G.B.) Ltd. prices inc V.A.T.

NAKAMICHI

SOUND SPACE 7

£499.95

MORDAUNT SHORT

£1/4 MILLION

SPECIAL PURCHASE
 Trade Price or less Latest Specification Models Brand New sealed Cartons

TDK SA90

£1.19 IN TENS

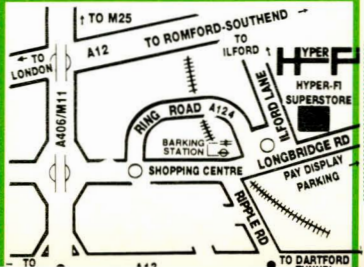
Free delivery with Hi-Fi orders

WE WILL BEAT ANY GENUINE ADVERTISED PRICE

67-73 LONGBRIDGE ROAD BARKING, ESSEX.

HOTLINE: 081-591 6961

NOW ONLY MINUTES AWAY FROM THE NEW M11 (A406) MOTORWAY CLOSE TO PARKING UNDERGROUND /MAINLINE STATION



PHILIPS
FB290
QUALITY
SPIKED
SPEAKER
STANDS
£ **19.95**
PAIR



HYPERS

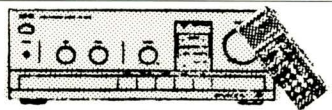
SONY RACK
VERSATILE
VERTICAL or
HORIZONTAL
CONSTRUCTION
WILL FIT ANY
MAKE UP TO
435mm WIDE
£ **29.95**
SAVE
£70



HOTLINE 0815916961

AMPLIFIERS

AKAI



AMM459

- 2 x 40 WATTS OUTPUT 8 OHMS
- 2 x 190 WATTS MUSIC POWER
- FULL REMOTE CONTROL
- 5 INPUT H.P. SOCKET
- SLEEK BLACK FINISH

Also AMM 659
2 x 55w (250w
Music) £129.95

HALF PRICE **£79.95** HALF PRICE

AMPLIFIERS

YAMAHA AV



AXV401

- FULL AUDIO/VISUAL FUNCTION
- 90 WATTS PER CHANNEL
- INFRA-RED REMOTE
- 6 INPUTS INC TWO TAPE
- SOURCE DIRECT. LOUDNESS
- TWIN SPEAKER OUTPUTS

Also AX450
£129.95

SAVE **£60** **£139.95**

AMPLIFIERS

SONY AV




TAE1000ES

- DIGITAL SIGNAL PROCESSING PRE AMP
- 10 MODE. 2 HALL. OPERA. JAZZ
- DOLBY SURROUND LIVE CONCERT STADIUM DISCO
- DOLBY PRO LOGIC
- REVERBERATION PARAMETRIC EQ.
- PROGRAMMABLE REMOTE

TAN220
100W
POWER AMP
£139.95

SAVE **£250** **£449.95**

SONY AV



TAF319R

- AUDIO/VISUAL AMPLIFIER
- 2 x 40 WATTS RMS 8 OHMS
- REMOTE CONTROL MOTORISED VOL
- TWIN DRIVE POWER SUPPLY
- HEAVY DUTY BINDING POSTS
- TWIN SPEAKERS. SEARCH DIRECT SWITCH

SAVE **£70** **£119.95**

SONY



TAF540E

- EXCLUSIVE U.K. AUDIOPHILE DESIGN
- HIGHLY REVIEWED
- 2 x 90 WATTS RMS 8 OHMS
- PURE STRAIGHT PATH DESIGN
- MM + MC CART INPUTS

SAVE **£80** **£169.95**

SONY AV



TAAV670ES

- 5 CHANNEL AV SURROUND SOUND AMP
- DOLBY PRO LOGIC * 2 X 65 WATTS RMS 8 OHMS FRONT
- 2 X 20 WATTS RMS 8 OHMS REAR * ES GIBRALTER CHASSIS
- DIGITAL SIG PROCESS HALL JAZZ CLUB STADIUM THEATRE
- MULTI SOUND CONTROL * 12 AV FUNCTIONS
- FULLY PROGRAMMABLE REMOTE

SAVE **£210** **£469.95** SCOOP

MARANTZ



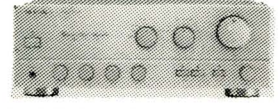
PM405E

- 2 x 50 WATTS RMS
- 2 x 95 DYNAMIC POWER
- SPECIAL EDITION MODEL
- BI-WIRE TERMINALS
- HIGHLY REVIEWED RANGE

Also PM445E
UNBEATABLE

SAVE **£120** **£129.95** SCOOP

PIONEER



A676G

- 2x95 WATTS 20HZ - 20KHZ
- 2 x 200 WATTS DYNAMIC POWER
- SUPER LINEAR CIRCUIT
- DIRECT SWITCH 7 INPUTS
- RECORD SELECTOR HIGH GAIN PHONE EQ.

Also A676BL
£229.95

SAVE **£100** **£199.95**

RECEIVERS

SONY AV



STRD590

- A.V. REMOTE RECEIVER
- DOLBY SURROUND SOUND
- 2 x 60 WATTS FRONT 2 x 10 WATTS REAR
- 6 AUDIO 2 VIDEO INPUTS
- VIDEO OUT COPY FACILITY
- DYNAMIC BASS FEEDBACK SYSTEM

SAVE **£50** **£199.95**

KENWOOD



KA4020

- 2 x 60WATTS 20HZ-20KHZ 8 OHMS
- 2 x 140 WATTS DYNAMIC POWER.
- LARGE POWER SUPPLY 200VA
- ANTI RESONANCE CHASSIS
- HIGHLY REVIEWED RANGE

Also KA404OR
£169.95

SAVE **£70** **£139.95**

SONY



TAF670ES

- 100 WATTS RMS 8 OHMS * GIBRALTER CHASSIS
- 7 INPUTS. TWIN DRIVE POWER SUPPLY
- SOURCE DIRECT/RECORD OUT SELECT
- MM/MC. PREOUT. AB SPEAKERS
- HIGHLY REVIEWED AMP

SAVE **£150** **£249.95**

TUNERS

SONY



STS170

- HIGHLY REVIEWED TUNER RANGE
- DIAL TUNING SYSTEM AUTOSCAN
- 30 RANDOM PRESET
- 3 WAVEBAND
- QUARTZ LOCKED SYNTHESIZER

SAVE **£30** **£89.95** SAVE **£30**

SONY AV




TAN 220B

- 2-4 CHANNEL POWER AMP
- MULTI CHANNEL/ SURROUND SOUND
- 4 X 50 WATTS RMS 8 OHMS
- 2 X 100 WATTS RMS 8 OHMS
- 2-4 CHANNEL SWITCHABLE

SAVE **£90** **£139.95**

PIONEER AV



VSA740

- SURROUND SOUND PROCESSING AMPLIFIER
- DOLBY PRO-LOGIC. DIGITAL DELAY
- 2 x 95 WATTS FRONT 2 x 23 WATTS REAR
- 5 CHANNEL 3 x 60 WATTS 2 x 23 WATTS
- FULL REMOTE CONTROL. 4. 5 VIDEO TERMINALS
- 5 AUDIO. 5 VIDEO INPUTS. PRE OUT POWER INPUT

SAVE **£££** **£ Censored** SAVE **£££**

KENWOOD



KT2030L

- FM/LW/MW 30 PRESETS
- 12 STATION NAME PRESETS
- 6 EVENT PROGRAMME TIMER
- 60 MINUTE SLEEP TIMER
- SUPERB QUALITY

SAVE **£50** **£89.95** SAVE **£50**

IMPORTANT NOTICE WHAT HI-FI AWARDS 1993

We stock nearly all the award winning products of 1993.

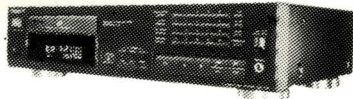
We will beat any voucher, tape, disc, speaker stand, cashback, headphone, extended guarantee, instant free credit, free gifts or any other promotional offer with a guaranteed cash equivalent deducted from the cost of your purchase.

We guarantee to be the cheapest We will beat any genuine advertised price by £12

HOTLINE TELEVISION 081951991661

COMPACT DISC

SONY



- * GREAT FEATURE REVIEW WHAT HI-FI
 - * 45 BIT 8 DAC D/A CONVERSION.
 - * DIGITAL SERVO SYSTEM
 - * FULL REMOTE/REM VOL
 - * TIME/MANUAL FADE
- CDP597**

SAVE £50 **£129.95**

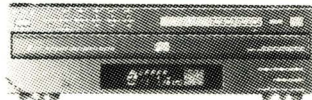
SONY



- * QUALITY STANDARD MIDI C.D.
 - * KARAOKE VOCAL REDUCTION SYSTEM
 - * PITCH CONTROL +/-12%
 - * FULL REMOTE CONTROL
 - * OPTIONAL MIC £9.95
- CDPK1**

SAVE £80 **£139.95**

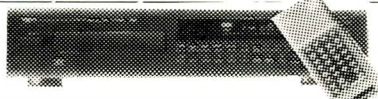
SONY



- * 5 DISC MULTI PLAY C.D.
 - * 1 BIT CD 45 BIT DIGITAL FILTER
 - * 20 TRACK MUSIC CALENDAR
 - * 5 DISC DIRECT ACCESS
 - * PEAK SEARCH TIME EDIT/FADE
- CDP322M**

SAVE £50 **£149.95**

YAMAHA



- * UK SPECIFIED FOR SOUND QUALITY
 - * 1 BIT PDM CONVERTOR
 - * REMOTE CONTROL INCLUDES VOLUME
 - * RANDOM AND PROGRAM PLAY
 - * DIGITAL OUTPUT
- CDX 660**

SAVE £80 **£169.95**

PIONEER

PDS 701



- * HIGHLY REVIEWED STABLE PLATTER
- * ANTI RESONANCE DESIGN
- * 1 BIT DIRECT LINEAR CONVERSION.
- * SEMI CENTRE TRAY OPTIC DIGITAL OUT
- * DISPLAY OFF CONT. CD DECK SYNCRO

SAVE £90 **£179.95**

SPEAKERS

J.P.W.

MINIM

- * IMPROVED MODEL UP FROM MINI MONITOR
- * HIGHLY REVIEWED RANGE
- * 70 WATTS POWER RATING
- * FERRO FLUID DAMPING DOME TWEETER
- * HARD WIRED X/OVERS
- * LARGE DIAMETER TERMINALS



Also SONATA UNPRINTABLE

SAVE £33 **£ Censored** SAVE £33

SONY

SSA505

- * QUALITY BRITISH BUILT SPEAKERS
- * 100 WATT POWER HANDLING
- * 3 WAY INFINITE BAFFLE SYSTEM.
- * SENSITIVITY 88DB PER WATT 1 METRE
- * DELUXE BLACK ASH FINISH 250 X 470 X 195MM



HALF PRICE **£49.95** HALF PRICE

MORDAUNT SHORT

MS5.10

- * FULLY SHEILDED MAGNETS SUITABLE FOR ALL A/V APPLICATIONS
- * HIGHLY REVIEWED HI-FI SPEAKER
- * ORIGINAL DOME TWEETERS
- * POSITEC PROTECTION SYSTEM
- * SHELF OR FLOOR STAND USE
- * 100 WATTS HANDLING



MS5.10 ROSEWOOD IMPROVED TWEETER £69.95
MS5.10 BLACK IMPROVED TWEETER £79.95

HALF PRICE **£59.95** HALF PRICE

CELESTION

CELESTION 1

- * RECOMMENDED WHAT HI-FI AWARDS
- * 2 WAY BASS REFLEX
- * 50 WATTS POWER HANDLING
- * SENSITIVITY 86 DB SPL 1W/1M
- * FREQ RES 78HZ-20KHZ
- * 5 ELEMENT CROSSOVER

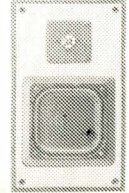


SAVE £40 **£69.95** SAVE £40

SONY

APM121ES

- * HIGHLY REVIEWED SPEAKER
- * APM BASS DRIVE UNIT
- * BASS REFLEX TWIN PORTS
- * 4mm BINDING POSTS
- * 80 WATTS HANDLING
- * BI WIREABLE UK BUILT
- * BLACK ASH FINISH 250 X 430 X 297mm



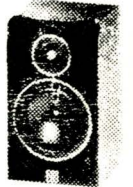
SAVE £90 **£79.95** SAVE £90

SPEAKERS

WHARFEDALE

505/2

- * BEST BUY HI-FI CHOICE
- * HIGHLY REVIEWED WHAT HI-FI
- * 100 WATTS HANDLING
- * 2 WAY INFINITE BAFFLE
- * BLACK ASH FINISH



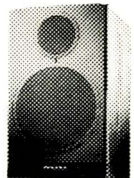
Also 507/2 £149.95

SAVE £90 **£129.95**

MORDAUNT SHORT

MS5.30

- * 300 WATT HANDLING
- * POSITEC PROTECTION
- * MAGNETIC SHIELDED
- * BI-WIRE FACILITY
- * ROSEWOOD FINISH



Also BLACK FINISH £149.95

SAVE £80 **£139.95**

MORDAUNT SHORT

MS5.40

- * 3 UNIT BASS REFLEX DESIGN
- * 100 WATTS HANDLING
- * POSITEC PROTECTION SYSTEM
- * HIGHLY REVIEWED SPEAKER
- * GOLD TERMINALS BI-WIRE CAPABILITY
- * ROSEWOOD FINISH



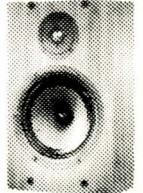
Deluxe Black Finish £229.95

SAVE £120 **£199.95**

WHARFEDALE

COLORIDGE

- * HIGHLY REVIEWED HI-FI CHOICE
- * 100W POWER HANDLING
- * FREQUENCY RESPONSE 45HZ-25KHZ
- * SENSITIVITY 89DB
- * BLACK FINISH
- * FB815 SPIKED STANDS £39.95
- * DELUXE REAL WALNUT VENEER FINISH £249.95



THIRD PRICE **£199.95** SAVE £400

MORDAUNT SHORT

MS5.50

- * HIGHLY REVIEWED SPEAKER
- * FLOOR STANDING BASS REFLEX
- * 89 DB 1 WATT SENSITIVITY
- * TWIN BASS UNITS DOME TWEETER
- * ROSEWOOD FINISH



Also DELUXE BLACK FINISH £319.95

SAVE £140 **£289.95**

TUNERS

PIONEER



- * HIGHLY REVIEWED TUNER
- * DIGITAL DIRECT DECODER
- * FDNIR LOWPASS FILTER
- * AM/FM 36PRESET MPX SWITCH
- * SELECTABLE IF BAND TWIN ARIEL

F676

SAVE £80
£119.95

SONY

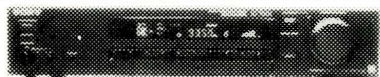


- * HIGHLY REVIEWED WHAT HI-FI
- * BEST TUNER IN CLASS (£200 WHAT HI-FI)
- * RADIO DATA SERVICE RDS SYSTEM
- * RADIAL POWER SUPPLY
- * DIAL TUNING SYSTEM
- * ALPHA NUMERIC DISPLAY
- * 30 RANDOM PRESET 3 WAVEBAND

STS570RDS

SAVE £80
£149.95

SONY



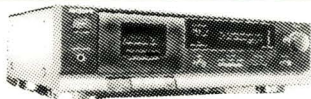
- * HIGHLY REVIEWED RANGE
- * 3 WAVEBAND AM/FM/LW
- * WAVE IF. DIRECT DETECTION
- * 30 RANDOM PRESETS
- * STATE OF THE ART QUALITY
- * ALPHA NUMERIC DISPLAY

STS770ES

SAVE £100
£199.95 SCOOP

CASSETTE DECKS

SONY



- * QUALITY CASSETTE DECK
- * DOLBY B+C
- * FINE BIAS ADJUST
- * AUTO TAPE SELECT
- * MULTIPLEX FILTER

TCFX170

SAVE £25
£69.95 SAVE £25

SONY



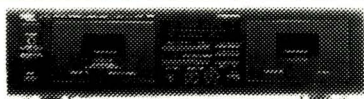
- * TWO HEAD SYSTEM
- * DOLBY B+C HX PRO
- * 2 MOTOR TRANSPORT
- * FINE BIAS CONTROL
- * AUTO TAPE SELECT
- * REAL TIME COUNTER
- * OPTIONAL REMOTE CONTROL

TCK 390

Also TCK370
£99.95

SAVE £25
£99.95 SAVE £25

YAMAHA



- * QUALITY TWIN CASSETTE
- * DOLBY B+C N.R.
- * NORMAL OR HIGH SPEED DUBBING
- * LEFT & RIGHT RECORD LEVEL
- * 2 MOTOR MECHANISM

KXW162

SAVE £50
£129.95

CASSETTE DECKS

SONY



- * HIGH REVIEWED CASSETTE RANGE
- * THREE HEAD 2 MOTOR SYSTEM
- * DOLBY B.C. HX PRO
- * FINE BIAS CONTROL
- * GOLD PLATED H/P SOCK VOL. CONT.
- * OPTIONAL REMOTE CONTROL

TCK490

Also TCK470
£129.95

SAVE £15
£159.95

PIONEER



- * 3 HEAD CASSETTE
- * INFRA RED REMOTE
- * DOLBY B. C. HX PRO
- * ELECTRONIC COUNTER
- * H/P OUTPUT MUSIC SEARCH

CTS 510

Also CTS210 £99.95
CTS410 £169.95

SAVE £20
£199.95

SONY



- * FIVE CASSETTE CAROUSEL
- * CONTINUOUS RECORD/PLAY FOR 7.5 HOURS
- * 3 MOTOR AMORPHOUS HEAD
- * REMOTE CONTROL POWER LOADING
- * DOLBY B. C. HX PRO. HIGH SPEED DUBBING

TCC5

SAVE £100
£199.95 SCOOP

TECHNICS

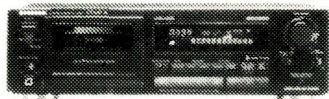


- * 3 HEAD CASSETTE
- * CLOSED LOOP DUAL CAPSTAN
- * MOTORISED EJECT DOLBY B.C. HX PRO
- * L & R CALIBRATION LEVEL BIAS ADJUST
- * 3 MTR DIRECT DRIVE REC CALIBRATION

RSB808

SAVE £80
£219.95 SCOOP

PIONEER



- * HIGHLY REVIEWED CASSETTE
- * DUAL CAPSTAN 3 HEAD DECK
- * DOLBY BC HX PRO
- * CD DECK SYNCRO
- * MUSIC SKIP DISPLAY OFF

CTS610

SAVE £70
£229.95

AKAI



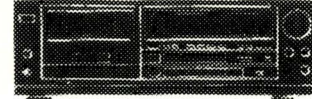
- * RECOMMENDED HI-FI CHOICE
- * 3 HEAD SUPER GX (10 YEAR GUARANTEE)
- * CLOSED LOOP DUAL CAPSTAN DRIVE
- * DOLBY B. C & HX PRO (SWITCHABLE)
- * AZIMUTH & HEIGHT ADJUSTMENT

GX9511

SAVE £140
£299.95

CASSETTE DECKS

AIWA



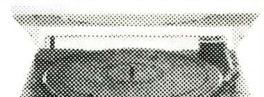
- * 'RECOMMENDED' WHAT HI-FI
- * BUILT-IN DAC'S
- * DOLBY B. C. S + HX PRO
- * 3 HEAD DUAL CAPSTAN
- * CALIBRATION VIA DISPLAY

XKS7000

SAVE £200
£Censored

TURNTABLES

PHILIPS



- * D.C. BELT DRIVE
- * W+F 0.09%
- * DIE CAST PLATTER
- * ANTI RESONANCE MAT
- * QUALITY M.M. CART £5 EXTRA

FP320

SAVE £50
£49.95 SAVE £50

COMPACT DISC

AKAI

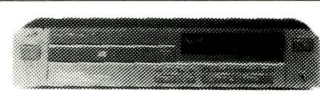


- * QUALITY COMPACT DISC
- * 3 BEAM LASER PICK UP
- * 20 SELECTION PROGRAM
- * REMOTE OPTIONAL
- * DIGITAL OPTICAL OUTPUT
- * SLIMLINE BLACK 240 VOLT

CDM659

HALF PRICE
£59.95 SCOOP

JVC



- * HIGHLY REVIEWED PLAYER
- * PRECISION 3 BEAM LASER
- * DISC STABILISING CLAMPER
- * THREE WAY REPEAT
- * AUTO/MAN SEARCH H.P. OUTPUT

XLV235TN

HALF PRICE
£79.95 SCOOP

PHILIPS



- * HIGHLY REVIEWED BY WHAT HI-FI
- * INFRA-RED REMOTE CONTROL
- * REMOTE VOLUME - DIGITAL OUTPUT
- * HEADPHONE SOCKET AND VOLUME CONTROL
- * FTS 1 + 2 RANDOM TRACK ACCESS

CD624

HALF PRICE
£99.95 SCOOP

SONY



- * QUALITY COMPACT DISC
- * 1 BIT D/A CONVERTOR
- * 45 BIT NOISE SHAPING DIGITAL FILTER
- * 20 TRACK MUSIC CALENDER
- * PEAK SEARCH

CDPM43

CDPM33
£69.95

HALF PRICE
£99.95 HALF PRICE

H
O
T
L
I
N
E
T
E
L
E
P
H
O
N
E
0
8
1
5
9
1
6
9
6
1

WE WILL BEAT ANY GENUINE ADVERTISED PRICE!

AMPLIFIERS AKAI AM17 £59.95 AMM459 £79.95 AMM659 £129.95 AM47 £199.95 AM959 £229.95 AM95 £499.95 AIWA XA006 £99.95 XA003 £99.95 XA008 £119.95 AURA VA100 P.O.A. CAMBRIDGE C75/A75 £199.95 DENON PMA330 £99.95 PMA480R £219.95 PMA450 £249.95 PMA880R £299.95 AVC3020 £729.95 JVC AXA21N £79.95 AXA662 £229.95 KENWOOD KA1030 £109.95 KA3020 £139.95 KA4020 £139.95 KA3050R £169.95 KA4040R £169.95 KA5020 £169.95 KA5040R £169.95 KA7020 £179.95 KA5070R £319.95 KA8500 P.O.A. MARANTZ PM32 P.O.A. PM30SE £99.95 PM40SE £129.95 SP50 £149.95 PM80 £199.95 PM44SE £199.95 PM52 P.O.A. PM62 P.O.A. SM80 £299.95 PM75 £299.95 PM95 £299.95 NAD 302 P.O.A. 304 P.O.A. 306 £329.95 NAKAMICHI AMP 2 £229.95 AMP 1 £249.95 PIONEER A119 £99.95 A201 £119.95 A300XED £169.95 A676G £199.95 A400X P.O.A. A676BL £229.95 A400ED £229.95 A501R £229.95 ROTEL RA 920 £99.95 RA 930 £169.95 RA 940 £169.95 RA935 £199.95 RA 960 BX £299.95 RC/RB960BX £349.95 RA 980 BX £399.95 SONY TAF170B £79.95 TAF270B £99.95 TAF319R £119.95 TAN220 £139.95 TAF440E £149.95 TAF540E £169.95 TAF670ES £249.95 TAN55ES £299.95 TAF542 £299.95 TAAV570 £379.95 TAE1000ES £449.95 TAAV670 £469.95 TECHNICS SUVZ220 £99.95 SUVZ320 £119.95 SUVX500 £129.95 SUVX600 £149.95 SUVX720K £199.95 SUA600K £199.95 SUVX820 £249.95 SUA700K £249.95 SUA800K £399.95 SUVX800 £399.95 SUVX920K £399.95 SUA900K £399.95	YAMAHA AX350 £99.95 AX450 £129.95 AX401 £139.95 AX550 £139.95 DSP200 P.O.A. DSPA500 P.O.A. DSPA1000 P.O.A. DSPA1000 P.O.A. AUDIO VISUAL CELESTON FULL RANGE P.O.A. DENON AVC3020 P.O.A. AVC1530 £479.95 AVR1000 £519.95 AVC 3530 £999.95 JPW FULL RANGE P.O.A. KENWOOD KR76050 P.O.A. KR7040 £249.95 KR7050 P.O.A. KR78040 £299.95 KAV8500ZED P.O.A. MARANTZ SP50 £149.95 PM700 £399.95 MORDAUNT SHORT FULL RANGE P.O.A. PIONEER VSA740 P.O.A. VS7015 P.O.A. VSA802S P.O.A. SONY TAN220 £139.95 STRD590 £199.95 TAAV570B £379.95 TAN55ES £279.95 TAE1000ES £449.95 TAAV670 £469.95 STRD790 £379.95 TECHNICS SAG530 P.O.A. SAGX550LK P.O.A. YAMAHA DSPA500 P.O.A. DSPA1000 P.O.A. DSPA2070 P.O.A. DSP200 P.O.A. DSPA1000 P.O.A. RXV470 P.O.A. TUNERS AKAI AT56L £79.95 AIWA XT005 £69.95 XT950 £89.95 CAMBRIDGE T50 £99.95 DENON TU260L £119.95 TU580L £159.95 TU580 £219.95 JVC FX3411N £79.95 KENWOOD KT1030L £69.95 KT2030L £89.95 KT6040 £99.95 KT3050LED £129.95 KT7020 £129.95 MARANTZ S315L £99.95 S140 £119.95 S150 £149.95 S154 £149.95 S172LED £199.95 NAD 402 P.O.A. NAKAMICHI TUNER 2 £199.95 PIONEER F201L £89.95 F676 £119.95 F4491 £129.95 F530RDS £199.95 F701 £149.95 F757 £199.95 ROTEL RT930AX £129.95 RT950BXED £169.95 SONY STS170 £89.95 STS370 £129.95 STS570 £129.95 STS211B £129.95 STS570 ES £149.95	STS311B £179.95 STS770 ES £199.95 STS505ES £249.95 TECHNICS ST610LED £89.95 STG570L £99.95 STG470L £124.95 STG630RDS P.O.A. STG7550 £189.95 STG90LKED £199.95 STG7650 £229.95 YAMAHA TX550 £99.95 TX350 £129.95 TX950 £149.95 RECEIVERS DENON DRA435 £149.95 DRA345R £249.95 DRA545R £319.95 JVC RX206BK £99.95 RX506VBK P.O.A. KENWOOD KRA5020 £129.95 KRA5040 £199.95 KR7040 £249.95 KR78040 £299.95 KR6650 P.O.A. KR7050 P.O.A. NAD 701/705 £259.95 NAKAMICHI RECEIVER 3 £149.95 RECEIVER 2 £199.95 RECEIVER 1 £299.95 PIONEER SK221RED £169.95 SK777 £199.95 SONY STRAV370X £169.95 STRD390 £199.95 STR B90 £199.95 STRD790 £379.95 TECHNICS SAGX130DLK P.O.A. SAGX230DLK P.O.A. SAGX530LK P.O.A. SAGX350LK £329.95 SAGXLX550LK P.O.A. YAMAHA RX550 £159.95 RXV660 £299.95 RXV470 P.O.A. CASSETTE DECKS AKAI DX57 £169.95 GXW45 £229.95 GX95 II £299.95 AIWA ADF410ED £89.95 ADF500 £99.95 ADWX828ED £139.95 ADF810ED £169.95 ADWX929ED £189.95 ADF910ED £199.95 KXS7000 £399.95 DENON DRM510 £159.95 DRM610 £199.95 DRW650ED £149.95 DRM710 £259.95 DRM810 £299.95 JVC TDW106BK £99.95 TDW805TN £229.95 KENWOOD KX3030 £79.95 KX3050 £109.95 KXW8040 £129.95 KX5030 £149.95 KX5050 £149.95 KX9050S £299.95	MARANTZ SD40 £99.95 SD52 £99.95 SD50 £99.95 SD2 £199.95 NAKAMICHI DR1 P.O.A. DR3 P.O.A. DR2 P.O.A. CASS 2 £279.95 CASS 1.5 £299.95 CASS 1 £399.95 PHILIPS DCC900 £299.95 PIONEER CT449 £79.95 CT1210 £99.95 CT1310 £129.95 CT1410 £169.95 CT1510 £199.95 CT1610 £229.95 CT1810S £299.95 CT1910 £299.95 CT15710 £349.95 CT1979 £399.95 SONY TCFX170B £69.95 TCK370 £99.95 TCK390 £99.95 TCK520B £119.95 TCK470 £129.95 TCWR570 £129.95 TCW490 £149.95 TCK490 £159.95 TCK590 £159.95 RCWR435 £169.95 TCK411 £199.95 TCWR535B £199.95 TCC5 £199.95 TCKB70ES £239.95 TCWR635S £249.95 TCK511S £249.95 TCK611S £299.95 TECHNICS RSBX404 P.O.A. R5TR232K £139.95 RSBX626ED £139.95 R5TR333K £159.95 RSBX727ED £169.95 R5TR515KED £99.95 RSBX646K £229.95 RSBX828ED £219.95 RSBX808 £219.95 RSBX747K £299.95 YAMAHA KX260ED £119.95 KXW162 £129.95 KXW262 £129.95 KX360ED £149.95 KX650ED £199.95 TURNABLES DUAL CS431 £59.95 CS435 P.O.A. CS503/2 P.O.A. CS505/4 P.O.A. KENWOOD P26 £49.95 KD491F £54.95 PHILIPS FP320 £54.95 SONY PSXL100B £54.95 PSXL150B £79.95 PSXL431B £149.95 TECHNICS SLBD20 P.O.A. SLDB22K P.O.A. SLGQ33K P.O.A. SLI 200 £299.95 SLI210 P.O.A. BOWERS & WILKINS DM600ED £99.95 2001 £99.95 DM610ED £119.95 DM620ED £199.95 CELESTION DL4II £69.95 CEL1 £69.95 CEL 3 £89.95	CEL 5 P.O.A. CEL 7 P.O.A. DITTON 2 £149.95 CERWIN VEGA AT40 £279.95 AT60 £369.95 AT80 £499.95 AT100 £599.95 JPW MINIM P.O.A. SONATA P.O.A. SONATA+ P.O.A. PI £139.95 AP2 £169.95 AP3 £199.95 MONITOR AUDIO MON7ER £99.95 MON9 £129.95 MON11 £199.95 MON14ED £249.95 STUDIO 5 £419.95 MA800 £439.95 MA14 GOLD P.O.A. MA1200 £619.95 STUDIO 10 £829.95 MA18900 £949.95 STUDIO 15 £999.95 STUDIO 20 £1249.95 MORDAUNT SHORT MSS.10R0 £69.95 MSS.10 BL £79.95 MSS.20 BL £79.95 MSS.30 R0 £139.95 MSS.30 BL £149.95 MSS.40R0 £199.95 MSS.40BL £229.95 MSS.50R0 £289.95 MSS.50BL £319.95 MS MUSIC P.O.A. NAD 802 £49.95 SONY S5A50S £49.95 S570 STAND £79.95 S585E £79.95 APM121ES £109.95 S5125E £109.95 APM141ES £129.95 APM181ES £199.95 S5570ES £199.95 TANNOY 603 £79.95 607 £129.95 605 £149.95 611 £189.95 609 £289.95 613 £329.95 615 £499.95 WHARFEDALE Diamond Iiv £59.95 Diamond V £79.95 Delta 30 II £89.95 CR53 £129.95 505/2 £129.95 515 £129.95 507/2 £149.95 517 £149.95 COLERIDGE BL £199.95 COLERIDGE WL £249.95 COLERIDGE WLC £299.95 YAMAHA NSB50 £149.95 EQUALISERS KENWOOD GE 4030 £149.95 GE 7030 £199.95 MARANTZ EQ515 £139.95 TECHNICS SH803BK £89.95 SHE85KED £99.95 SHGE70EK £139.95 SHGE90K P.O.A. MINI SYSTEMS AKAI MX92 £239.95 MX550 £299.95 MX650 £399.95 MX750 £499.95 MX950 £649.95	AIWA NSX220 £199.95 NSX360 £289.95 NSX500 £319.95 C108CD £299.95 NSXK606 £359.95 NSXK707 £399.95 NSXK909 £549.95 DENON D100ED £499.95 D70 £589.95 D110 P.O.A. NS1 E.D. £699.95 D250 £929.95 JVC UX A3 £249.95 UX1 £299.95 UXA5 £299.95 ADA S2 £299.95 ADA S3 £349.95 ADA S4 £399.95 ADA S6 £599.95 ADA G7 £699.95 ADA G9 £899.95 KENWOOD MS5 £299.95 UD300 £299.95 UD301 £339.95 UD500 £349.95 UD351M £389.95 UD700 £399.95 UD700M £599.95 UD900 £699.95 UD900M £749.95 PIONEER N337 £339.95 N52T £339.95 N53 P.O.A. N72T £399.95 N72M £399.95 N92T £399.95 N92M £399.95 SONY MHC500 £229.95 MHC700 £299.95 MHC510CD £329.95 MHC710CD £399.95 MHC3700 £399.95 MHC2800CD £499.95 MHC3800CD £649.95 MHC2750 £649.95 MHC6700CD £649.95 TECHNICS SCC700 £449.95 SCC950 P.O.A. SCCX550 £499.95 SCC950 £599.95 SCC655 £649.95 SCC655 £699.95 MIDI SYSTEMS AKAI M55CD £249.95 FX430CD £299.95 FX630CD £349.95 FX830CD £449.95 ZD5000M £549.95 ZD7000M £699.95 AIWA Z700 £249.95 Z800 £299.95 Z900M £349.95 ZD93CD £399.95 JVC W23CD £249.95 W37CD £299.95 W56CD £299.95 W85CD £399.95 W76CD £399.95 W78CD £599.95 W95CD £599.95 KENWOOD M26 £299.95 M27 £399.95 M56 £489.95 M45 £449.95 M76 £599.95 M85 £599.95 NAKAMICHI S57 £499.95 PIONEER J10 £499.95 J20 £529.95 J10M £549.95 J4M £599.95 J3M £599.95 J20M £599.95 J5M £599.95 J30 £649.95 J30M £699.95 J40 £849.95 J40M £899.95	PHILIPS CD160 £69.95 CDP301ED £79.95 CD690ED £99.95 CD624 £99.95 CD692* £119.95 CD920ED* £119.95 C159CD £129.95 C209CD £149.95 C259CD £499.95 C707CD £499.95 C359CD £599.95 C559CD £649.95 C709CD £899.95 C759CD £999.95 SONY C207CD £249.95 C108CD £299.95 C357CD £299.95 C109CD £349.95 C159CD £399.95 C209CD £449.95 C259CD £449.95 C707CD £499.95 C359CD £599.95 C559CD £649.95 C709CD £899.95 C759CD £999.95 TECHNICS CDX120 P.O.A. CDX320 P.O.A. CDX520 P.O.A. CDX920 £669.95 COMPACT DISCS AKAI CD25 £99.95 CD27 £129.95 AIWA XC300ED £109.95 XC700 £119.95 XC750ED £159.95 XC950* £199.95 DENON DCD590* £119.95 DCD690* £129.95 DCD595 £179.95 DCD890* £269.95 DCD1290* £329.95 DCD3560 £699.95 JVC XLV235TINED £79.95 KENWOOD DP2030 £109.95 DP3040 £119.95 DP5040 £129.95 DP2050 £149.95 DP7050 £299.95 DP3050 £179.95 DP5050 £229.95 DP7050 £299.95 MARANTZ CD52 £119.95 CD52SE £169.95 CD62 £149.95 CD10 P.O.A. CD421* £169.95 CD10 £199.95 CD550 £229.95 CD72ED £269.95 CD521SE* £299.95 CV55 £299.95 CD95 £599.95 NAD 5425 £119.95 502 P.O.A. NAKAMICHI CD4 £199.95 CD 3 £299.95 CD2 £399.95 YAMAHA SLP38 £79.95 SLP320 £99.95 SLP420 £129.95 SLP2340AK* £149.95 SLP20AED £149.95 SLP6440AK* £169.95 SLP6900 £179.95 SLP20AED £179.95 SLP540AK* £199.95 SLP740AK* £249.95 SLP840AK* £419.95 CDX460 £99.95 CDX560 £119.95 CDX660 £169.95 CDX860 £169.95 CDX470 £169.95
--	---	---	--	---	--	---

ALL PRICES SPECIAL TO HI-FI CHOICE READERS. USE COUPONS TO QUALIFY
 V.A.T. FREE PERSONAL ORDERS WELCOME. PRICES SUBJECT TO CHANGE E. & O.E.
 ALL SYSTEMS AVAILABLE WITH SPEAKERS FROM £20 A PAIR. E.D.: EX DISPLAY FULLY GUARANTEED

HYPER-FI

67-73 LONGBRIDGE ROAD
 BARKING, ESSEX IG11 8TG.

081-591 6961
 FAX: 081-594 3996

MAIL ORDER CUT OFF COUPON **HC11**

Please add £6 per item for insured Securicor deliveries.

Please supply (make/model)

I enclose £..... Payable "Hyper-fi"

Access or Barclaycard No.

Name

Address

Postcode

Daytime/Works Tel: (STD CODE) No

EXPIRY DATE / /

USE COUPON TO CLAIM SIX FREE C.D. DISCS WITH ALL STAR * PURCHASE C.D. PLAYERS AT PRICE LIST ABOVE

SONY CELLPHONE CMH333 £UNPRINTABLE

OPENING TIMES MON - SAT 9-6 pm LATE FRIDAY 7 pm CLOSED THURSDAYS OPEN THURSDAYS FROM 28th OCTOBER

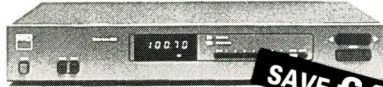
EXTRA £5.00 OFF PUBLISHED PRICES ONLY FOR HI-FI CHOICE READERS

HOTEL TELEPHONE 081-591-6961



SAVE £100

KENWOOD KA5040R AMPLIFIER
2 x 80W RMS, R/C, Source Direct,
MM-MC, A/B Spk O/P
WAS £299.95 NOW £199.95



SAVE £40

NAD 4225 TUNER
HIGH QUALITY
(SAVE £40) AM/FM, 14 Presets
WAS £159.95 NOW £119.95



SAVE £80

MARANTZ SD62 CASSETTE DECK
3 HEAD/PERMALLOY, HX-PRO, DOLBY
B/C,
(SAVE £80) Manual Bias, Full Logic Control
WAS £249.90 NOW £169.90



SAVE £100

KENWOOD KA7020
2 x 100w RMS Multi Input
S/Direct, MM/MC, 2 pr Speakers
WAS £349.95 NOW £249.95



SAVE £120

MARANTZ PM40SE
Audophile 2X 50W RMS, Bi-wire spk o/p
WAS £249.90 NOW ONLY £129.95

CLEARANCE ITEMS

Loudspeakers:

AR152 BK, was £399.95 NOW £179.95
Boston A60, was £139.95 NOW £99.95
Castle Warwick (BK), was £229.95
NOW £139.95
Celestion 3000/5000, was £1,099.95
NOW £499.95
Celestion 3rd Dimension, was £189.00
NOW £145.00
JBL TLX & LX Ex Demo Series TO CLEAR
Infinity Ref. 20, was £249.95
NOW £149.95
Infinity Ref. 40 was £399.95
NOW £249.95
JPW Mini Monitors NOW £59.95
Tannoy 603, 5, 7, 13, 15 mk1 TO CLEAR

Amplifiers:

Marantz SC/SM80 Pre+Pwr,
was £999.00 NOW £589.00
Marantz PM40SE Amp, was £229.90
NOW £129.95
NAD 1000 Pre-amp, was £179.95
NOW £149.95
NAD 2400 Power-amp, was £419.95
NOW £359.95
ROTEL RA940BX, was £249.95
NOW £209.95
ROTEL RA960BX, was £299.95
NOW £259.95
Sony TAF440E was £199.95
NOW £149.95

CD Players:

Denon DCD590, was £179.95
NOW £139.95
Marantz CD62, was £299.95
NOW £219.95
Marantz CD72, was £399.95
NOW £299.95
NAD 5440, was £299.95 NOW £169.95
Pioneer PDM601, was £249.95
NOW £209.95
Pioneer PDS801, was £329.95
NOW £269.95
Onkyo DX-1500, £99.00
Rotel RCD955AX, was £279.95
NOW £229.95
Yamaha CDX560, was £199.95
NOW £149.95

SOUTH LONDON



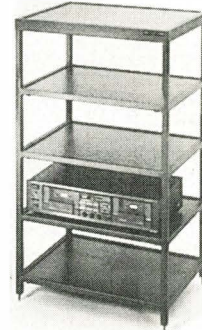
210 BRIXTON HILL · LONDON SW2 1HE
Tel: 081-674 4433/2033 · Fax: 081-674 1521

344 COLDHARBOUR LANE
LONDON SW9
Tel: 071-733 6893

161 CENTRAL ROAD
WORCESTER PARK, SURREY
Tel: 081-330 2018

- * Authorised Agents of many leading brands
- * Please call for the best prices of single items and system packages.
- * MAIL-ORDER & EXPORT facilities avail. (Mainland deliveries 24hrs)
- * Listen before you buy!! (Demo avail)
- * 0% CREDIT & EXTENDED FINANCE to personal callers.
- * For high quality and friendly service CALL US NOW!!!
- * OPEN 9.00AM-6.00PM Mon to Sat.

★ **NAD 705 RECEIVER** ★
(BEST BUY!!)
AM/FM-39 Presets, R/C, 2 x 40W, AB Spk, Pre IN/OUT,
£329.95
NOW IN STOCK!



Alphason, Apollo, Pivotelli and Target
Racks & speaker stands...
all available at competitive prices.

AIWA, B&W, CELESTION, DENON, KENWOOD, MARANTZ,
MISSION, NAD, NAKAMICHI, PIONEER, ROTEL, TANNOY,
WHARFEDALE, YAMAHA and many others available from stock.

PLEASE CALL FOR THE BEST PRICES OF SINGLE ITEMS AND SYSTEM PACKAGES

Suggested Systems

The following suggested system package includes the NAD 5120 Turntable. Alternative items: ie CD Player/Turntable/Cassette deck are available options.

SPEAKERS	JPW Sonata Wharfedale DIA.4 Celestion 1 Mission 760i	Tannoy 603 Celestion 3 Boston HD5	Mission 761i BW DM600i Tannoy605 AR 152 Infinity Ref/20	Tannoy 607 Mission 780 Boston HD8	BW DM610i Mission 762i Rogers LS 282 Infinity Ref/40	Rogers LS4A2 BW DM620i (add £100) Mission 763i Celestion 3/6000 (add £200)	T/T & C.D. PLAYER OPTIONS Aiwa XC750, £89.00 Denon DC6695, add £89.00 Denon DCD1290, add £209.00 Marantz CD42/2, add £39.00 Marantz CD52/2, add £120.00 Marantz CD72, add £199.00 NAD 502, add £99.00 Pioneer PD3801, add £189.00 Dual CS303-2, add £68.00 Dual CS306-4, add £95.00 Project 1, add £50.00 Thorens TD280V, add £120.00 Systemdek 11X900, add £329.00 Many others available on request
AMPS							
Kenwood KA3020	£295.95	£309.95	£345.95	£369.95	£409.95	£429.95	
Kenwood KA5040R	£349.95	£369.95	£419.95	£429.95	£459.95	£482.95	
Marantz PM40SE	£316.95	£335.95	£379.95	£399.95	£429.95	£460.95	
Pioneer A300X	£349.95	£369.95	£419.95	£429.95	£459.95	£489.95	
Pioneer A400	£409.95	£419.95	£459.95	£479.95	£509.95	£539.95	

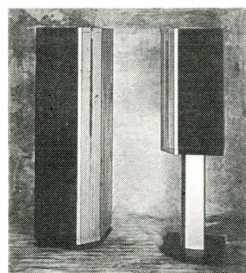
CELESTION
3000 BK/5000 WNT
HIGH QUALITY LOUDSPEAKER
Acoustic Ribbon Technology
100w Bi-wired, real wood veneer
INC 'K' Stands
WAS £1,099.00, NOW £499.00

Amplifiers
Aiwa XA950 £229.95
Denon PMA480R £219.99
Harman Kardon HK6250 £279.95
Marantz PM44SE NEW! £199.95
NAD302 £169.95
Pioneer A400X £299.95
RA 935BX £199.95

CD Players
Aiwa XC.750 £199.95
Denon DCD695 £199.95
Kenwood DP7050 £349.95
Marantz CD52SEmk2 £299.90
Sherwood CD5010R £139.95
Rotel RCD965BX £299.95
Technics SLPS620A £299.95

Cassette Decks:
Kenwood KX.66HX, was £169.95
NOW £99.95
NAD 6100, was £299.95 NOW £259.95
Kenwood KX5030, was £199.95
NOW £149.95
Kenwood KX3030, was £139.95
NOW £89.95
Marantz SD62, 3HD, HX PRO was £249.90
NOW £169.90
Yamaha KX.360, was £199.95
NOW £169.95

- * MAIL ORDER CHEQUE PAYMENTS/ Allow 7 days for Clearance
- * All systems include speaker cable
- * Postage & packing inc on certain items, call for details



- Aiwa ADF410 £119.95
- Aiwa ADF810 3HD £229.99
- Denon DRS810 3HD £299.99
- Denon DRW760 Twin £249.99
- Kenwood KX-5050 £229.95
- Nakamichi DR3 £349.95
- Sony TCK-611S 3HD £299.95
- Yamaha KX-650 3HD £259.95

- Tuners:**
- Denon TU260L £119.99
 - Denon TU580RD/RDS £219.99
 - Marantz ST40L £119.90
 - NAD 402 £149.95
 - NAD 4225, was £159.95 NOW £119.95
 - Rotel RT930AX £159.95
 - Rotel RT950BX £199.95
 - Sony STS311LB £179.95

- AV Amps/Receivers:**
- Denon AVC3020 £729.99
 - Denon DRA345R £249.95
 - Denon DRA645RD/RDS £319.95
 - Kenwood KRV8500 £699.95
 - Kenwood KRA4050 £229.95
 - Kenwood KRV6050 RDS £349.95
 - Kenwood KRV7050 RDS £399.95
 - Marantz PM700AV £449.90
 - NAD705 £329.95
 - Yamaha DSP E200 £369.95
 - Yamaha DSP A500 £449.95
 - Yamaha DSP A1000 £899.95

- Turntables:**
- Dual CS430 £119.95
 - Dual CS503-2 £179.95
 - Dual CS505-4 £229.95
 - Project 1 Ort.510 cart £159.95
 - Project 2 Ort.520 cart £219.95
 - Systemdek 11X900 + RB250 £329.95
 - Systemdek 11XE900 exc T/A £329.95
 - Thorens TS180 + AT91 £159.95
 - Thorens TD166 V1 + Rega RB250 £299.95
 - Thorens TD280 1V + AT95E £269.95

- Loudspeakers:**
- Bose AM3 Mk2 STOCKED
 - Bose AM5 Mk2 STOCKED
 - B&W DM600i, 610i, 620i STOCKED
 - Boston HD3, 5, 7, 8, 9/SW10 STOCKED
 - Celestion 5 £159.95
 - Cerwin Vega AT/DC Series STOCKED
 - Jamo Pro 200/300/400 STOCKED
 - Mission 760i SE Demo £99.00
 - Mission 760i/EX £149.95
 - Rogers LS2A/2 £229.95
 - Rogers LS8A £499.95
 - Tannoy SIXES Mk 2 STOCKED
- And many others, call for further details!

WE ARE ALWAYS COMPETITIVE – TELL US IF YOU CAN BUY CHEAPER. FREE STANDS WITH SELECTED SPEAKERS, DELIVERY CHARGED ON CERTAIN PURCHASES. MAIL-ORDER ENQUIRIES PHONE BRIXTON HILL BRANCH FOR DETAILS



AIWA NSX-360
Mini Hi-Fi
2x 30w, FM, AM, LW, CD 3-Mode DSP,
EQ, TWIN Cass. Full Range Available
FRPM £329.99



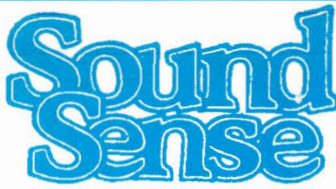
MARANTZ CD42 Mk2
Bitstream Conversion, Digital o/p
Full Function RC, FTS 1 & 2, D. Bus Sync record
WAS £199.90 NOW £169.90



CASTLE WARWICK
High Quality 2 Way Speaker
10" 75W, black finish (LIMITED STOCK)
WAS £229.95 NOW ONLY £139.95

Loudspeakers continued

Product	EPrice	Comments	Size: HxWxD (cm)	Bass from (Hz)	Site close to wall Sensitivity (dB)	Site in free space Sensitivity (dB)	Floorstanding	Issue No.
▲ Naim SBL	1584	G+ Impressive scale, full bandwidth, coherent, attractively discrete, coloured midband, very well balanced and agile	88x26.5x17-27	25	86	•	•	102
▲ Neat Petite	525	G+ Far from perfect, but one of the most entertaining and enjoyable speakers around, colorations notwithstanding.	30.5x20x18	33	86	•	•	102
Nobis DM7	560	G Pretty US bookshelf model has more than enough speed, timing and coherence to make up for a measure of coloration	38x21.5x28.5	25	85	•	•	110
▲ Origin Live OL2A	469	G Compact floorstander sounds open, transparent and evenly balanced; needs a big amp but enjoys hard driving	82x19x19	25	85	•	•	122
Origin Live OL1	499	G Luxury miniature has very good overall balance, sacrificing sensitivity to achieve remarkable bass extension for the box size	30.5x19x21	25	82	•	•	106
Philips FB820	470	A Big-but-less-than-beautiful three-way is well enough balanced but lacks communication skills in the time domain	86x27x35	28	87	•	•	98
▲ Philips FB825	700	G Generous sounding and impressively uncongested, loudness and bass extension don't quite match plastically looks	110x29x41	25	88	•	•	90
Pioneer S-4UK	250	A+ Carefully developed minimalist audiophile design has some vigour but suffers an intrusive upper mid peak	37x21x28	50	87	•	•	122
▲ Pro Mon Co LB1	998	G+ Delightful smoothness and transparency, though bass extension and sensitivity are both limited	53.5x18x26	33	86	•	•	110
Professional Monitor Co AB1	1600	G Bulky stand-mount transmission line has lovely panel-like transparency, slightly shut in balance, and needs a big room	79x27x43	22	89	•	•	114
QLN Model One	700	A Model One exaggerates the Signature's rich and heavy midbass and lacks its velvet smoothness	35x25x27	28	85	•	•	82
QLN Signature	1100	G Luxury compact has a rather laid back and 'heavy' sound, but coloration is low and stereo imaging very good	37x18x36	30	83	•	•	78
▲ Quad ESL-63	2384	G+ This classic electrostatic may not be punchy in the bass, but has strengths that some can't live without	92x66x27	34	84	•	•	60
▲ Rega EL8	298	G Kite drivers in compact floorstander give more bass but a shade less coherence; good for small rooms and budget systems	75x16.5x21	55	86	•	•	122
▲ Rega ELA	405	G Very compact floorstander with integral stand has serious coherence and dynamics, but a measure of brightness and untidiness	84.5x20x30	30	86	•	•	110
▲▲ Rega Kyte	198	G Has splendid timing and coherence, sounds very explicit and informative, if a bit bright and short of grunt	31x19x20	50	87	•	•	114
Richard Allan CD5	176	A- Neatly presented small reflex design can sound engagingly communicative, but is flawed sonically and technically	38x19x23	80	88	•	•	68
▲▲ Rogers LS2a/2	220	G Balance is a bit warm and rich but 2a/2 has delightful mid-to-treble coherence and transparency, and more welly than Mk1	35.5x23x22	30	84	•	•	106
Rogers LS4a/2	300	A+ Civilised but a trifle lazy, this large bookshelf model hasn't quite the timing or agility to be particularly engrossing	43x25.5x25.5	25	86	•	•	110
Rogers LS6a/2	350	G Largish stand-mount is well built, measures well, good material value, but sounds a bit heavy and lacklustre	51x28x29.5	22	87	•	•	114
Rogers LS8a	450	A+ A mixed bag, with plenty of scale and welly but lacking the subtlety, clarity and agility delivered by some rivals	89x25.5x25	48	91	•	•	102
▲ Rogers Studio 3	450	G Pricey LS3/5A-derived wall-mount sub-miniature is excitingly coherent if a bit lightweight; no real loudness capabilities	31x19x17	30	83	•	•	118
▲ Rogers Studio 1a	599	G- Classic BBC monitor sound sensitively updated – transparent and natural with fine stereo, but a touch 'heavy' in balance	63.5x30.5x30.5	36	87	•	•	66
▲ Rogers Studio 7	880	G+ Latest variation on classic BBC-monitor theme looks old fashioned but has beautifully voiced, laid back sound	63x30.5x30.5	30	88	•	•	122
▲ Roksan Darius	1895	G+ Provides an exceptionally impressive combination of transparency and delicacy with fine information retrieval and speed	47x27x40	20	82	•	•	86
Royd Topaz	173	A+ Cheerful, articulate and essentially communicative miniature can also sound a trifle scrappy and shut in; well worth trying	30.5x20.5x19	50	87	•	•	114
Royd Abbot	666	A+ Engaging and dramatic dynamics and fine transient coherence are hampered by a rather coloured mid-forward balance	83x20x34	43	88	•	•	118
Ruark Swordsman Plus	299	A Real wood variation on the Swordsman theme looks and measures rather better than it sounds	38x20x28	27	84	•	•	98
Ruark Templar	479	A+ Compact floorstander with striking baffle has decent bass/mid but dull treble; could tame over-bright system	73x19x27	25	85	•	•	122
▲ Ruark Talisman 2	700	G Less ideologically committed than some compact floorstanding rivals, its key strength lies in fine all round compromise	86x25x31	30	86	•	•	118
SD Acoustics Ribbon	2295	G+ Amplifier sensitive, Ribbon is a lively and loud hybrid marred by some colorations; some like it, others don't	152x30x(15-30)	30	91	•	•	81
▲ SD Acoustics SD1	1650	G+ A large scale, airy and unusually detailed system with excellent dynamics. A warmer balance than original model	123.5x38.2x32	50	90	•	•	60
▲ SD Acoustics SD3	399	G Port firmly blocked, the new SD3 has the agility and charm of a quality miniature, with good bass extension but low sensitivity	38x19.5x29	25	83	•	•	106
SD Acoustics SD4	699	G Tall slim floorstander has fine balance, good bass extension and lovely open midband transparency	100.5x20x30.5	25	85	•	•	114
Sequence 30	200	A Radical slimline hang-it-on-the-wall design has performance comparable to a typical miniature, with reasonable overall balance	87x25x7	50	85	•	•	114
Shahinian Arc	1062	G Unusual and occasionally wonderful small floorstanding omni; too bright but exceptionally coherent and revealing	69x35x25	24	85	•	•	110
Snell Jill	770	G Dated styling belied by fine sensitivity and bass extension, and a lively if slightly untidy and not quite coherent sound	58x33x25	30	89	•	•	118
▲ Sony APM-101ES	120	A Big hearted sound from small bookshelf model, sounds a little untidy at frequency extremes, so suits CD better than vinyl	39.5x22.5x23.5	52	86	•	•	71
Sony APM-121ES	170	A- Good perceived value, but balance has an artificial 'loudness', too rich in the bass and too strong in the treble	43x25x28	25	86	•	•	86
Sony APM-181ES	350	A Big, beefy, fat and bass heavy, has table strengths but lacks transparency and sounds better at lower levels	57.5x29x36	40	87	•	•	71
▲ Spendor S20	535	G Maintains Spendor's tradition for peerless mid-to-treble coherence and perspectives. Bass is rather unconvincing.	38x22x26	25	83	•	•	102
Spica Angelus	1295	A A little bass shy and soft in the bass and lower mid, otherwise tidy, extremely lively and fluid, if uneven overall	116.8x53.3x26	50	86	•	•	60
Spica TC50	599	G This triangular-profile 'grown up' miniature is a shade boxy and laid back but has good rhythmic and musical integrity	40.5x33x29	55	88	•	•	71
Spica TC50SE	799	G A heavily UK-modified TC50, the SE sounds less boxy and more spacious, but lacks some of the urgency of the standard model	40.5x33x29	55	88	•	•	71
▲ TDL Monitor	1999	G+ Fine solidity and good accuracy, with great bass extension. Needs a big room and can sound a bit lazy and a shade tinkly	118.5x30x47	28	85	•	•	66
TDL Studio 0.5	450	G Tiny floorstanding transmission line has good agility but doesn't provide the coherence or even balance of Studio 1	55x20x30	40	85	•	•	94
▲ TDL Studio 1	650	G Genuinely extended bass from a compact enclosure, very detailed but a shade clinical and detached in presentation	76x23x33	25	84	•	•	78
▲ TDL Studio 1M	900	G+ Transmission line helps bring the best from metal cone driver: lovely transparency and fine bass extension	81x23x33	<20	84	•	•	118
▲ Tannoy 607 MkII	220	A Large bookshelf, smart hexagonal box has fine bass for the price, but treble sounds rather shut in	50x32x24	25	88	•	•	122
▲ Tannoy Westminster	6000	G+ These awesome horn loaded speakers are remarkably controlled and impressive, if only suited to a few pockets and rooms	Huge	38	96	•	•	Col
Technics SB-EX2	180	A Nicely presented, well built and decent size enclosure sounds solid but somewhat dull	48x23.5x27	20	86	•	•	98
▲ Technics SB-RX50	650	A+ A smooth and well balanced loudspeaker, its minor weakness being a mildly excessive low bass	48x30x26	40	86	•	•	46
▲ Thiel SCS	1069	G+ Luxury piano-gloss compact sets class-leading standards for coherence and communication, can sound a shade dark and shut in	40x22x23	45	87	•	•	114
Thiel CS1.2	1219	G Elegant compact floorstander has fine balance and dynamic range, but transient timing and dynamics are less convincing	94x27x27	30	86	•	•	118
▲ Totem Model One	995	G Utterly delightful but exasperatingly expensive luxury miniature sets the benchmark for its size	31x16.5x23	28	86	•	•	122
Vandersteen Model One	1395	G+ This compact American floorstander's elegant staggered baffle arrangement contributes to a refreshing freedom from boxiness	100x30.7x25.6	23	87	•	•	86
Visonik David 6001	173	P Sharp styling but the complex grillework worsens a sound which starts off with too much top and not enough bottom	20x12x13	130	87	•	•	74
▲ Wharfedale 425	200	A+ Large bookshelf size 505 heir shows fine control and a conservative balance ideally suited to quality systems on a budget	40x27x26	45	87	•	•	118
▲ Wharfedale 515	260	G An update on the 505 theme, this is still more evenhanded, with better bass extension and smoother treble.	40x25.5x30	28	85	•	•	106
Wharfedale 517	400	A Half as big again as the 515, should offer an improvement, but somehow has a less effective overall subjective balance	53x26.5x34	25	86	•	•	110
▲▲ Wharfedale Delta 30.2	100	A Has a bigger main driver than many, and so packs a bit more welly and loudness. Coloration is rather obvious, but timing is good	38x22x17	48	88	•	•	98
▲▲ Wharfedale CRS3	110	A+ Loads of fun — a remarkably coherent and lively performer at any price; pity it doesn't look prettier	38x22x18	50	88	•	•	122
Wharfedale Diamond V	130	A This miniature is smoother than most, but rather stodgy with it, inspiring little enthusiasm among our listeners	27x18x20	50	86	•	•	114
▲ Yamaha NS 1000M	1100	G+ Living up to its monitor label, and tonally well suited to digital material, it's superbly crafted and capable of high levels	67.5x37.5x32.5	40	90	•	•	46
▲ Zyp A1	199	A+ Cute metal cased micro-miniature is quite coloured but great fun, with surprising dynamics and fine wall-loaded room balance	22.5x14.5x13	30	85	•	•	110



350 EDGWARE ROAD, LONDON W2 1EA
Tel: 071-402 2100 Fax: 071-724 7750

Est^d 1976

AMPLIFIERS

AUDIO INNOVATIONS	
Series 300	£497.00
Series 500	£999.00
Series 200 PRE	£349.00
Series 200 POW	£499.00
AURA	
VA50	£249.90
VA100	£299.90
VA100C	£349.90
CAMBRIDGE	
P25	£179.90
C70 PRE	£249.90
P70 POW	£249.90
DENON	
PMA250II	£189.90
PMA350II	£219.90
PMA410	£249.90
PMA480e	£219.90
AVC1530	£479.90
ACC2020	£729.90
AVC3530	£999.90
HARMAN KARDON	
HK6150	£199.90
HK6250	£279.90
HK6350R	£399.90
HK6550	£429.90
HK1200	£279.90
AVR30	£1,149.90
KENWOOD	
KA1030	£129.90
KA3020	£159.90
KA30502	£199.90
KA4020	£199.90
KA40400	£249.90
KA50500	£349.90
MARANTZ	
PM30SE	£129.90
PM40SE	£149.90
PM44SE	£199.90
PM700AV	£449.90
MUSICAL FIDELITY	
BI	£229.90
AIMII	£299.90
NAKAMICHI	
IA1	£749.90
IA2	£599.90
IA3	£349.90
NVA	
AP20	£290.00
AP35	£430.00
PIONEER	
A300X	£229.90
A400	£279.90
A400X	£299.90
A602	£349.90
VCA7015	£499.90
ROTEL	
RA920AX	£147.90
RA930AX	£169.90
RA935BX	£199.90
RA940BX	£249.90
RA960BX	£299.90
RA980BX	£399.90
RC960BX	£165.00
RB960BX	£210.00
RC980BX	£325.00
RB980BX	£425.00
SONY	
TAF211B	£149.90
TAF242B	£179.90
TAF442B	£249.90
TAF542B	£299.90
TAAV570B	£399.90
TECHNICS	
SUV2220	£109.90
SUV2320	£134.90
SUA600	£199.90
SUA700	£249.90
SUA800	£329.90
SUA900	£399.90
SUVX920	£394.90
SUVX800	£359.90
YAMAHA	
AX350	£114.90
AX470	£239.90
AX570	£289.90
DSPA500	£469.90
DSPA1000	£899.90
DSPA2070	£1099.90
DSPE200	£369.90
DSPE1000	£669.90

TUNERS

AURA	
TU50	£299.90
DENON	
TU260L	£119.90
TU560L	£159.90
TU580RD	£219.90
HARMAN KARDON	
TU9200	£219.90
TU9400	£299.90
TU9600	£499.90
MARANTZ	
ST40L	£119.90
ST50L	£169.90
NAKAMICHI	
ST-2	£399.90
ST-7	£799.90
PIONEER	
F202L	£129.90
F401RDS	£179.90
F676	£199.90
F550RDS	£229.90
F93	£649.90
ROTEL	
RT7930AX	£159.90
RT950BX	£199.90
RTC950AX	£419.90
SONY	
STS 211 LB	£129.90
STS 311 LB	£179.90
STS505ES	£249.90
TECHNICS	
ST610LK	£129.90
STG630RDS	£159.90
STG550	£189.90
STG650	£229.90
STG70	£249.90
YAMAHA	
TX350L	£129.90
TX470	£159.90

CASSETTE DECKS

ADF410	£119.90
ADF810	£229.90
XK57000	£549.90
ADWX828	£199.90
ADWX929	£229.90
DENON	
DEM510	£159.90
DRS610	£199.90
DRS710	£259.90
DRS810	£290.90
DRW650	£199.90
DRW760	£249.90
KENWOOD	
KX3050	£159.90
KX5050	£229.90
KXW4050	£169.90
KXW6050	£189.90
KXW8050	£249.90
NAKAMICHI	
DR1	£849.90
DR2	£599.90
DR3	£399.90
RX202	£599.90
PIONEER	
CTS220	£169.90
CTS420	£249.90
CTS620	£329.90
CT95	£999.90
CTW420R	£199.90
CTW620R	£249.90
CTW820R	£299.90
ROTEL	
RD955BX	£199.90
RD965BX	£249.90
SONY	
TCFX211	£99.90
TKX311	£149.90
TCK411	£199.90
TCK511	£279.90
TCK611	£329.90
TCW435	£169.90
TCWA535	£199.90
TCW6355	£279.90
TECHNICS	
RSBX404	£179.90
RSBX646	£229.90
RSBX727	£244.90
RSBX747	£299.90
RSTR232	£169.90
RST0333	£189.90
RSTR515	£269.90
RSTR777	£299.90

RSTR979	£359.90
YAMAHA	
KX260	£159.90
KX360	£199.90
KX650	£259.90
KXW262	£199.90
KXW362	£249.90
KXW952	£499.90

TURNTABLES

ALPHASON	
Solo	£439.90
Sonata	£759.90
ARISTON	
Q Deck Pro	£209.90
TECHNICS	
SLBD20	£129.70
SLBD22	£149.90
SLDD33	£159.90
SLRD33	£199.90
SL1210MII	£399.90
THORENS	
TD180	£179.90
TD166 VI	£264.90
TD166 VI REGA	£299.90
TD520	£899.90
TD280	£229.90

CD PLAYERS

AIWA	
XC500	£149.90
XC750	£199.90
XC950	£249.90
XC700	£179.90
DENON	
DCD595	£179.90
DCD890	£269.90
DCD1290	£329.90
HARMAN KARDON	
HD7400II	£199.90
HD7450	£219.90
HD7500II	£259.90
HD7525	£449.90
TL8500	£499.90
KENWOOD	
DP2050	£159.90
DP3050	£199.90
DP5050	£249.90
DP7050	£329.90
DPM6650	£259.90
MARANTZ	
CD42II	£199.90
CD52II	£229.90
CD52IISE	£299.90
CD72	£449.90
CD72SE	£549.90
CD10	£1099.90
NAKAMICHI	
CD4	£379.90
MB3	£649.90
PIONEER	
PDS502	£229.90
PDS702	£299.90
PDS802	£349.90
PDM602	£269.90
PD77	£1099.90
PD95	£2499.90
ROTEL	
RCD945AX	£229.90
RCD955AX	£279.90
RCD965BX	£299.90
RCD965BXD	£349.90
RCD965LE	£379.90
RCD965BXLED	£399.90
SONY	
CDP397	£149.90
CDP311	£169.90
CDP411	£199.90
CDP335	£229.90
CDP711	£249.90
CDP911	£299.90
CDPX306ES	£549.90
TECHNICS	
SLPG320	£119.90
SLPG420	£139.90
SLPG520	£159.90
SLPG620	£179.90
SLPS700	£219.90
SLPS740	£249.90
SLPS840	£419.90
TEAC	
VRDS10	£849.90
VRDS20	£1499.90
CDP3500	£199.90
CDP4500	£279.90

YAMAHA	
CDX460	£149.90
CDX560	£159.90
CDX660	£199.90
CDX860	£239.90

LOUDSPEAKERS

ACOUSTIC ENERGY	
AEI	£763.75
B+W	
2001	£119.90
2002	£179.90
DM600	£179.90
DM610	£239.90
DM620	£399.40
Solid	£229.90
SolidTeam	£129.90
FCM8	£1200.00
SCM8	£1100.00
PCS8	£1500.00
BOSTON	
404V	£99.90
525V	£149.90
CASTLE	
Warwick	£229.90
Pembroke	£379.90
Chester	£599.90
CELESTION	
3	£179.90
9	£269.90
3000	£799.90
DL6	£184.90
CERWIN VEGA	
AT20	£219.90
AT40	£299.90
AT60	£449.90
AT80	£549.90
DC10	£549.90
DC12	£649.90
HARMAN KARDON	
LSO200	£149.90
LSO300	£199.90
LSO500	£299.90
HEYBROOK	
Prima	£119.90
Solo	£169.90
HB1M3	£249.90
INFINITY	
Ref 10	£179.90
Ref 20	£229.90
Ref 30	£329.90
Ref 40	£429.90
Ref 50	£549.90
Ref 60	£749.90
InfiniteSimal	£329.90
JPW	
MINIM	£79.90
Sonata	£114.90
AP2	£179.90
AP3	£224.90
KEF	
K120	£169.90
K140	£239.90
K160	£329.90
Q10	£199.90
Q30	£349.90
Q50	£499.90
Q60	£419.90
Q80	£569.90
Q90	£739.90
M90	£249.90
M100	£349.90
MISSION	
760i	£129.90
760isc	£149.90
762i	£249.90
764i	£479.90
780	£199.90
781	£249.90
MONITOR AUDIO	
MIGold	£189.90
M7-II	£249.90
M9-II	£289.90
M14-II	£469.90
MA1200	£699.90
ROGERS	
LS2 A/2	£229.90
LS4 A/2	£299.90
LS6 A/2	£399.90
SNELL	
TYPE K	£499.90
TYPE J	£769.90
TANNOY	
603 II	£129.90
605 II	£169.90
607	£189.90
609	£259.90
611	£399.90
613 II	£599.90
615 II	£749.90

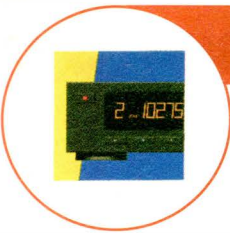
***FREE DELIVERY
THROUGHOUT UK
MAINLAND
ABOVE £250.00**

**HOME CINEMA DOLBY PRO-
LOGIC EQUIPMENT IN STOCK
eg: Kenwood, Yamaha,
Denon, Harman Kardon,
Marantz etc**

**Mail order; simply send your
cheque together with your
name and address, or phone
your access or visa number.**

**Demonstration facilities
available. Goods will be
despatched within 48
hours subject to
availability. All goods are
brand new and fully
guaranteed.**

Tuners



The radio medium operates at a much lower profile than TV, but in areas outside pop music the BBC service is the envy of the world. Live Prom concerts can rival all other sources from a hi-fi perspective.

Only the FM (VHF) bands give stereo hi-fi sound, though AM (MW & LW) are useful for certain transmissions in the UK.

Something of a hi-fi afterthought, tuners are often selected merely to match a chosen ampli-

er cosmetically. However, the task they carry out is far from simple, combining the skills of RF (reception) and audio (signal processing) engineering. The importance of the former will depend on local reception conditions, but money invested in a high quality outside aerial system is well spent.

Tuners come in two basic types. Analogue models tune gradually (and usually manually) across the bands, and can have analogue or digi-

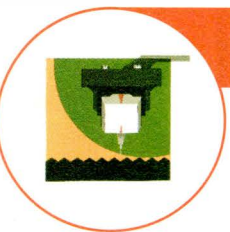
tal displays; they are often preferred for sound quality, and are certainly best for AM bands. Digital tuners offer convenient automatic tune facilities and pre-set memories.

The 'Presets' column heading shows how many different frequencies a tuner can memorise for instant access. FM, LW and MW show which wavebands it can access. 'Signal strength meters' are useful for aerial alignment. 'Automatic tuning' means that a tuner can seek out signals for you.

Tuners

Product	£Price	Comments	Presets	FM	LW	MW	Signal strength meter	Manual tuning	Automatic tuning	Issue No.
Aiwa XT-003	110	A- Economically designed and built in the UK, but trade-offs have a marked influence on FM and AM sound quality.	30	•	•	•	•	•	•	93
▲ Akai AT-93L	280	G+ By AM standards presentable (good) while FM delivers the goods	20	•	•	•	•	•	•	65
▲ Arcam Alpha 2	185	A+ Arcam's cheapest tuner makes up for its lack of features with a sensitive front-end and mellow sound.		•	•	•	•	•	•	93
Arcam Delta 280	350	G+ Fine sound quality marred by mild synthesiser whine; RF performance only average, remote £60 extra	20	•	•	•	•	•	•	120
▲▲ Audiolab 8000T	700	VG Unusually combines fine sound quality and RF performance (inc AM); superb ergonomics are a joy to use	39	•	•	•	•	•	•	120
Aura TU-50	260	G Tonally neutral, but with rather poor imaging and a certain woodenness to the sound.	16	•	•	•	•	•	•	109
Creek T40S3	250	A Analogue tuner. Sample was hampered by an obvious bass 'hump', production units are said to be cured		•	•	•	•	•	•	93
▲▲ Denon TU-260L	120	G+ Bare minimum of features. Careful designwork promises a surprisingly open and vivacious sound, so don't overlook it!	20	•	•	•	•	•	•	93
▲ Denon TU-580RD	220	G Fine feature package including remote and RDS, plus excellent RF performance and decent sound quality	30	•	•	•	•	•	•	120
Harman Kardon TU9200	200	A The listening panel appreciated its liveliness, but found it a little muddled.	32	•	•	•	•	•	•	109
▲ Harman Kardon TU9400	270	G+ Striking in appearance and with a sound to match, it comfortably exceeded our expectations. On stereo FM it's HK's best yet.	24	•	•	•	•	•	•	93
Harman Kardon TU9600	380	G Good bass and detail, and good - perhaps slightly enhanced dynamics	24	•	•	•	•	•	•	109
Kenwood KT-3050L	170	A Excellent RF performance and plenty of features including RDS, but did sound rather ordinary under our conditions	39	•	•	•	•	•	•	120
▲ Linn Kremlin	1779	E Controversially good sound at a very high price. The reviewer's saving up but you should check it out for yourself	80	•	•	•	•	•	•	120
▲ Magnum Dynalab FT101	795	G+ Although expensive for its fairly minimum set of facilities, its excellent sound makes up for what it lacks elsewhere		•	•	•	•	•	•	72
▲ Marantz ST-40L	120	G Slow to tune but provides a meaty and dynamic sound on FM. AM too has a little extra bite to its performance	30	•	•	•	•	•	•	93
Meridian 204	660	G Pleasant sounding with a fine finish but does not make the grade at this price	18	•	•	•	•	•	•	55
▲ Meridian 604	1350	VG Unique digital convertor makes most sense in Meridian system context; smooth sweet sound with fine front end	30	•	•	•	•	•	•	120
▲ Naim NAT 01	1425	E There may be better sounding tuners in the world, but we have yet to hear one		•	•	•	•	•	•	50
Nakamichi ST-7E	765	G+ Exceptionally good for weak-signal areas, and good all round	16	•	•	•	•	•	•	55
▲ Pioneer F-676	200	VG A tuner that's detailed and clean-sounding. Perhaps a little bright, but not unpleasant.	36	•	•	•	•	•	•	108
▲ Quad FM4	424	G+ Fine sound, excellent ease of use, good build and finish and a more than satisfactory technical performance	7	•	•	•	•	•	•	50
Quad 66	519	G+ Very pretty and compact but technically unadventurous. Smooth sound but only makes sense in Quad system context	19	•	•	•	•	•	•	120
▲ Rotel RT-930AX	160	G- A competent rather than exciting performer, with low audible interference though slightly compressed and muddled sound.	20	•	•	•	•	•	•	108
▲ Rotel RT-950BX	200	G+ Fine fast and coherent sound quality for price, but RF performance only adequate and sample build was suspect	20	•	•	•	•	•	•	120
Sherwood TX-3010C	120	A Lots of features and fine RF discrimination for price. Sound is communicative but inconsistently tacky	30	•	•	•	•	•	•	120
Sony ST-S570ES	230	A A host of features, but the sound is muddled, compressed and lacking in frequency extremes.	30	•	•	•	•	•	•	109
▲ Technics ST-G70L	200	G+ Another very polite and refined-sounding tuner but one that does retain just enough sparkle to keep your interest. Plenty of widgets	39	•	•	•	•	•	•	93
▲ Yamaha TX-950	260	G+ Very clean and civilised, tonal balance, detail and clarity are all very good, lots of useful features	40	•	•	•	•	•	•	108

Turntables - cartridges



Cartridges fall into two groups: high output models, capable of working directly into most amplifiers and categorised as having a normal (N) output, and more expensive low and very low output models (L, VL). Stereotypically, low output cartridges use the moving coil principle of operation, have better mechanical integrity and tighter tolerances, and

give better performance but at much higher cost. With CD now the dominant medium many amplifiers are no longer equipped with the necessary phono input for a cartridge and a separate phono stage is necessary. Valve designs need either an extra head amp or transformer to cope with the low output of moving coil cartridges.

Cartridge/amplifier interfacing can be very

subtle, but even basic high output MM designs benefit in overall balance from optimised amplifier capacitance loading. The mechanical characteristic of cantilever compliance ('springiness') needs to be considered in the light of the effective mass of the tonearm, and to achieve a good match compare the effective mass requirements figures with the actual effective mass of specific arms.

Turntables - cartridges

Product	£Price	Comments	Arm effective mass (g)	Output	MM	MC	Issue No.
▲▲ Arcam C77	30	A+ A sensible moving magnet package with good bounce at a competitive price	6-16	N	•		48
▲▲ Arcam C77Mg	40	A Punchy sound quality with plenty of extra energy to liven things up. The solid body seems well worth the extra £10	4-8	N	•		67
▲ Arcam E77Mg	60	A Our sample had a disappointing stylus, but gave a coherent, rich and laid back sound, with good 'scale'	3-8	N	•		48
▲ Arcam P77Mg	73	A+ Preferred to its cheaper partner by virtue of a better tip. Channel balance could have been better	4-9	N	•		48
▲ Audio Note IO IIV	1395	E One of the best, giving 'an extraordinarily relaxing midrange clarity', needs a transformer	8-18	VL		•	100



Myers Audio

EST, 1972

6-7 Central Parade Hoe Street
Walthamstow London E17 4RT

EXPORT ANYWHERE

081-520 7277

PRICE PROMISE

Our prices are Always competitive but should a product be available at a Lower price from an authorised dealer. **We will match it**

PIONEER
AUTHORIZED DEALER

A300X

AMPLIFIERS

A-102 30w pch	£119.99
A-202 40w pch	£159.99
A-300X Award	£199.00
A-400X 50w pch	£279.99
A-602 80w pch	£329.99
C-73 Preamplifier	£519.99
H-73 Poweramp	£709.99
A-302R 30w pch	£189.99
A-502R 70w pch	£279.99
A-502R Gold	£289.99

TUNERS

F-202L	£119.99
F-401L	£169.99
F-301RDS	£189.99
F-502RDS	£229.99
F-502RDS Gold	£239.99
F-93	£599.99

CASSETTE DECKS

CT-S220 SR	£159.99
CT-S320 SR	£189.99
CT-S420 SR	£229.99
CT-S520 Sound Eq	£259.99
CT-S620 SR	£309.99
CT-S620G Gold	£319.99
CT-S920S Dolby S	£349.99
CT-S95 Dolby S	£349.99
CT-W420R Twin	£189.99
CT-W620R	£229.99
CT-W820R	£279.99
CT-M601R Multiplay	£359.99

NAD
AUTHORIZED DEALER

AMPLIFIERS

302 25w pch	£159.99
304 35w pch	£219.99
306 50w pch	£309.99

PREAMPS

1000	£189.99
1000S	£299.99
1700	£479.99

POWER AMPS

902	£199.99
906	£469.99
2100	£279.99
2400	£399.99
2700	£429.99
208	£759.99

TUNERS

402	£149.99
4100	£199.99

CASSETTE DECKS

602	£189.99
6100	£279.99

CD PLAYERS

502	£199.99
505 Multiplay	£279.99
5000	£289.99

KENWOOD
AUTHORIZED DEALER

AMPLIFIERS

KA2030	£139.99
KA3020	£169.99
KA3050R	£199.99
KA4050R	£279.99
KA5020	£229.99
KA5050R	£349.99
KA5050R	£499.99
KA9010	£599.99
AV8500	£699.99
KRA4050	£229.99
KRV6050	£349.99
KRV7050	£399.99

TUNERS

KT1050L	£119.99
KT2050L	£149.99
KT3050L	£179.99
KT6050	£299.99

CASSETTE DECKS

KX3050	£169.99
KX5050	£229.99
KX7050	£329.99
KX7050S	£399.99
KXW4050	£169.99
KXY6050	£199.99
KXW8050	£259.99

CD PLAYERS

DP2050	£169.99
DP3050	£199.99
DP5050	£269.99
DPM6650	£269.99
DP7050	£349.99
GE7030	£229.99
GE7030	£159.99

DAT

DX7030	£699.99
DX7	£499.99

SYSTEMS

UD3017551	£409.99/£459.99
UD5017551	£569.99/£619.99
UD701751	£709.99/£759.99
UD901951	£949.99/£999.99
M27	£499.99
M47	£679.99
M56G/57MG	£759.99/£809.99
M76G/77MG	£909.99/£949.99
M97/97M	£1099.99/£1149.99
MSA7	£369.99

SONY
AUTHORIZED DEALER

TCK 611 Dolby S
RRP £289.99

AMPLIFIERS

TAF211B	£139.99
TAF242B	£179.99
TAF452E	£229.99
TAF452E	£289.99
TAAV570B	£379.99

RECEIVERS

STRD311	£229.99
STRD511	£279.99
STRD511	£299.99

CASSETTE DECKS

TCF211B	£99.99
TCK311B	£149.99
TCK411B	£179.99
TCK511B	£279.99
TCK611S	£289.99
TCW435B	£169.99
TCWR535B	£189.99
TCWR635S	£279.99

TUNERS

STS211LB	£119.99
STS311L	£179.99
STS505ES	£229.99

DAT

WMDDT1	£259.99
TCD-D7	£399.99
TCD-D3	£549.99

SYSTEMS

Compact 108CD	£349.99
Compact 109CD	£399.99
Compact 150CD	£449.99
Compact 209CD	£479.99
Compact 259CD	£529.99
Compact 359CD	£579.99
Compact 559CD	£749.99
Compact 759CD	£999.99
MHC 510CD	£379.99
MHC 710CD	£449.99
MHC 2800CD	£549.99
MHC 3800CD	£699.99
MHC C50CD	£499.99
MHC C70CD	£599.99

MINI DVC

MDS 101	£649.99
MDS M21	£499.99
MDS ZS-M1	£549.99
CDs CDP311	£159.99
CDs CDP411	£189.99
CDs CDP335	£219.99
CDs CDP711E	£229.99
CDs CDP911E	£299.99
CDs CDP303ES	£499.99

TANNOY
AUTHORIZED DEALER

SPEAKERS

603 II	£129.99
605 II	£159.99
607 II	£209.99
609 II	£279.99
611 II	£419.99
613 II	£579.99
615 II	£709.99
Tannoy Stand	£79.99
Tannoy Base	£44.99

CELESTION
AUTHORIZED DEALER

1	£99.99
3	£119.99
5	£159.99
7	£209.99
9	£259.99
11	£279.99
15	£69.99

BOSE
AUTHORIZED DEALER

AMS

AMPLIFIERS

Compact 108CD	£349.99
Compact 109CD	£399.99
Compact 150CD	£449.99
Compact 209CD	£479.99
Compact 259CD	£529.99
Compact 359CD	£579.99
Compact 559CD	£749.99
Compact 759CD	£999.99
MHC 510CD	£379.99
MHC 710CD	£449.99
MHC 2800CD	£549.99
MHC 3800CD	£699.99
MHC C50CD	£499.99
MHC C70CD	£599.99

LOUDSPEAKERS
AUTHORIZED DEALER

7601	£129.99
7601SE	£149.99
7621	£249.99
7631	£379.99
7641	£479.99
7651	£679.99
780	£199.99
DACS	£299.99
DACS	£299.99
781	£249.99

B & W
AUTHORIZED DEALER

AMPLIFIERS

2001	£109.99
2002	£149.99
2003	£179.99
2004	£229.99
DM6001	£169.99
DM6101	£229.99
DM6201	£379.99
DM6300	£519.99
DM6401	£799.99

B & W SOLID SERIES

Solid Monitor	£219.99
Single Solid	£109.99
Solid Team	each £69.99
Solid Bass Speaker	£329.99
Solid Twin Bass	£189.99
Solid Team Bass	£139.99
Solid Oval	£279.99
Solid Verticale	£379.99
Solid Array	£89.99

PIONEER
AUTHORIZED DEALER

AMPLIFIERS

PD-102	£139.99
PD-202	£159.99
PD-S502	£219.99
PD-S602	£259.99
PD-S702	£279.99
PD-S802	£289.99
PD-S902	£329.99
PD-S901	£469.99
PD-77	£999.99
PD-95	£2299.99

CD PLAYERS

PD-M601 Multipay	£309.99
PD-M701 Multipay	£309.99
PD-M901 DSP	£419.99
PD-DM802 12 Disc	£419.99
PD-TM3 18 Disc	£469.99

RECEIVERS

SX-102	£209.99
SX-202R	£229.99
SX-302	£279.99

LASER DISC

CLD-800	£379.99
CLD-1850	£549.99
CLD-2850	£659.99
CLD-M5	£569.99
CLD-150K	£799.99

SYSTEMS

J10/10M	£519.99/£569.99
J20/20M	£619.99/£659.99
J30/30M	£719.99/£759.99
J40M/40M	£899.99/£949.99
J50M/50M	£1099.99/£1139.99
N-33/33M	£359.99/£409.99
N-53/53M	£469.99/£519.99
N-63T	£519.99
N-73/73M	£639.99/£689.99
N-93/93M	£949.99/£999.99

MARANTZ
AUTHORIZED DEALER

CD 52 II SE

AMPLIFIERS

PM 32 40w pch	£129.99
PM 52 70w pch	£219.99
PM 62 70w pch	£309.99

TUNERS

ST40L	£109.99
ST50L	£159.99
ST72L	£239.99

CASSETTE DECKS

SD 52	£169.99
SD 415	£179.99
SD 62	£249.99

CD PLAYERS

CD 42 II	£199.99
CD 52 II	£299.99
CD 52 II Award	£229.99
CD 72	£429.99
CD 72 SE	£539.99
CD 10	£1049.99
CD 11	£2249.99
CD 12	£2599.99

GRAPHIC EQUALIZER

EQ 515	£189.99
--------	---------

DUAL TIME
AUTHORIZED DEALER

TURNTABLES

CS3700	£79.99
CS430	£119.99
CS5032	£159.99
CS2215	£169.99
CS5054	£199.99
CS7501	£319.99
GS GOLD1	£469.99

HEADPHONES

HD 35 Headmax	£21.95
HD 55	£29.95
HD 435 Vegas	£21.95
HD 440 II	£29.95
HD 330	£35.95
HD 340	£49.95
HD 520 II	£84.95
HD 530 II	£89.95
HD 540 II	£109.95
HD 560 II	£129.95
HD 580 Precision	£179.95
HD 250 II	£119.95
HD 25	£129.95
Orpheus	£95.99

JVC
AUTHORIZED DEALER

AMPLIFIERS

AX-21010TN	£619.99
AX-R742BK	£339.99
AX-R742S	£339.99
AX-A662BK	£259.99
AX-A562XBK	£239.99
AX-A472BK	£189.99
AX-A442BK	£189.99
AX-A342XBK	£159.99

TUNERS

FX-1010TN	£279.99
FX-362BK	£129.99
TD-X52BK	£139.99
TD-W08BK Twin	£219.99
TD-W308BK Twin	£169.99

CD PLAYERS

XL-Z1050TN	£469.99
XL-M508BK	£259.99
XL-M408BK	£229.99
XL-Z464BK	£189.99
XL-V264BK	£149.99
XL-V164BK	£129.99

SYSTEMS

G9	£949.99
G7	£759.99
S6	£539.99
S4	£429.99
S2	£379.99
S2	£329.99
MX-77	£619.99
MX-55M	£439.99
W7842BK	£659.99
W76CD	£569.99
W58CD	£449.99
W37CD	£339.99
UX-A5	£339.99

NAKAMICHI
AUTHORIZED DEALER

AMPLIFIERS

1A-1 80w pch	£619.99
1A-2 50w pch	£519.99
1A-3 40w pch	£329.99

TUNERS

ST-2	£359.99
ST-7	£759.99

CASSETTE DECKS

DR-1 Azimuth Adj	£739.99
DR-2 3 Head	£549.99
DR-3	£329.99

CD PLAYERS

MB-1	£1139.99
MB-2	£739.99
MB-3	£549.99
CD-4	£329.99

JBL
AUTHORIZED DEALER

SPEAKERS

HTS 1	£609.00
HTS 2	£1199.00
Control 1	£219.99
TLX110	£139.99
TLX120	£169.99
TLX130	£239.99
TLX140	£339.99
TLX150	£289.99
TLX160	£379.99
TLX170	£429.99
TLX180	£529.99

AMPLIFIERS

XL1000	£109.95
XL2000	£149.95
XL3000	£169.99
XL4000	£209.95
AM3 II	£469.99
AM5 II	£599.99
AM3 II Powered	£569.99
AM5 II Powered	£1029.99
AM7	£789.99
101	£179.99

Canon
AUTHORIZED DEALER

AMPLIFIERS

S-30 W1S Speaker	£169.99
S-50 W1S Speaker	£329.99
S-70 W1S Speaker	£659.99
V-100 WD Speaker	£199.99

SUGGESTED SYSTEMS

MARANTZ CD52+	
NAD 302+	
MISSION 7601SE	= £369.99

PIONEER

A300+	
MISSION 7621+	
NAD 502 CD Player	= £499.00

PIONEER

A400+	
MISSION 7621+	
MARANTZ CD52SEM2	= £699.00

SONY

TA442E+	
TANNOY 60911+	
PIONEER PDS802	= £669.00

NAD

1000 Pree+	
2400 Power Amp+	
BOSE ACC 5M2+	
MARANTZ 52SEM2	= £1,399.00

SYSTEMS

KENWOOD UD900	£699.00
KENWOOD UD300	£399.00
SONY MHC 500	£279.00
SONY MHC 6600	£749.00
KENWOOD UD700	£669.00
KENWOOD UD500	£559.00
SONY TAF270	£149.00
SONY TAF270	£149.00
SONY STRD390	£149.00
SANSUI TU301L	£199.00
KENWOOD KS5030	£159.0

Turntables – cartridges continued

Product	£Price	Comments	Arm effective mass (g)	Output	MM	MC	Issue No.
▲ Audio-Technica ART1	850	VG This is a delicate and very fluid-sounding MC that tracks well, offers very low distortion and exceptionally good separation	9-18	L		•	72
▲▲ Audio-Technica AT-420E	36	A Better suited to pop recordings, this MM bears some of the sonic hallmarks of the Linn K5	7-14	N	•		67
▲▲ Audio-Technica AT-95E	20	A Clear, dynamic if richly balanced, the magnetic '95E is a definite Best Buy	8-14	N	•		48
▲ Audio-Technica OC-10	320	G+ Good treble and good detail too, but some congestion and coloration reduces its informativeness.	4-12	L		•	103
▲ Audio-Technica OC-5	130	G For the price, it's unusually effortless and detailed, but it tends to become rather relentless and tiring after a while.	5-14	L		•	103
Audioquest AQ 404-L	500	G+ Slight harshness detracted from the performance of this otherwise clear-sounding and detailed cartridge	8-16	L		•	84
Audioquest AQ 7000	1300	G+ Stunning stereo imaging and good detail at low levels are spoiled by less-than-perfect tracking and high sensitivity to arms.	6-20	L		•	91
Denon DL103	99	A+ Good performance in bass and general 'life' is seriously let down by its spherical stylus which kills subtle details.	9-22	L		•	103
▲▲ Denon DL110	69	G Firmly recommended as a fine all-rounder, this high-output MC model is likely to perform well in nearly all circumstances	6-16	N		•	48
Denon DL160	90	G Although listeners just preferred the 110, its brother here proved a twin in lab tests and is still "thoroughly competent"	6-16	N		•	43
▲ Denon DL304	200	VG Uncolored, detailed, neutral, superb tracking; top notch altogether, and a top notch bargain too.	4-12	L		•	103
▲ Dynavector 17D2	298	VG Clear, detailed, neutral and generally very informative - excellent	6-18	L		•	91
▲ Dynavector DV10X IV	138	A+ Fine sounding and realistically priced, damping is recommended to ensure successful tracking ability	8-18	N		•	48
Dynavector XX-1	698	G+ Good, but not immensely competitive at the price, and not helped by comparison with the low output version	7-15	N		•	84
▲ Dynavector XX-1L	698	VG Very clear, very detailed, no troubles with tracking; response lift around 20kHz seems to do no harm	7-13	L		•	84
Empire Benz Micro MC-Gold	150	G Nothing is obviously wrong, but nothing is stunningly right either. Safe, but perhaps a little too safe	7-17	L		•	103
▲ Empire Benz Micro MC-Silver	150	G Ultimately not the peer of the MC Gold is more appropriate to the sort of equipment it's likely to be partnered with	8-18	N		•	103
▲ Empire Benz-Micro MC-3	800	G+ Offers a warmer and very transparent account of the music. Its tracking prowess is slightly limited	5-12	L		•	72
Glanz GMC-10LX	80	A+ Bearing some of the hallmarks of the '10EH, the '10LX is still less competitive in the sonic stakes	7-15	L		•	67
▲ Glanz GMC-20E	129	G+ Very good tracking, smooth sound and good detail. Very slight surface noise enhancement	5-10	L		•	91
▲ Goldring 1012	50	G Slightly harsh sound but plenty of life and quite good detail. Some very high frequency coloration apparent	6-12	N	•		85
▲ Goldring 1022	70	G As with 1012, a touch harsh; detail and transient purity improved, though, and it goes well with electric guitar!	5-11	N	•		85
Goldring 1042	90	G Not terribly subtle, and not such good value alongside 1012 and 1022. Quite lively, though	7-12	N	•		91
▲ Goldring Elan	20	A A lightweight and frisky-sounding MM that appears to be based upon the same body as the Nagaoka mm4	7-15	N	•		67
Goldring Elite	200	G The basics are right, and it will cheerfully tackle any source material, but its sound possesses a certain dirtiness	8-18	L		•	103
Goldring Eroica H	100	G- More confused and coloured than low-output LX, high output less of an issue these days	8-15	N		•	84
▲ Goldring Eroica LX	100	G Not the most subtle cartridge in the world; can sound edgy at times, but lively and informative	8-14	L		•	84
Goldring Excel	549	G Errs on the warm and heavy side of neutral. Strong bass lines are its forte, but resolution of subtle treble details is weak	6-13	L		•	72
Goldring Excel GS	600	G+ True high end quality in its lack of colorations, but tracking seems indifferent and high levels tend to sound rough and edgy.	9-20	L		•	103
Kiseki Blackheart	1995	G Demonstrated refined poise and a delicate but at once potent security, however, the price did seem a little on the high side	6-16	L		•	60
Kiseki Blue Goldspot	499	G+ Good bass and imaging, but hints of spit and coloration let the side down slightly	8-15	L		•	84
Kiseki Lapis Lazuli	5000	G+ Combining very sensible design concepts at a silly price, combines the detail of the MC3000 and the fluidity of the Clearaudios	4-12	L		•	60
Kiseki Purpleheart Sapphire	899	G+ Rare, beautiful to look at and sweet to listen to, our review of this high-flyer conjured up images of Japanese art	5-14	L		•	48
▲ Linn K5	49	A+ Not as crisply focused as the costlier Linn magnetics, the K5 offers a smoother presentation	7-16	N	•		67
▲▲ Linn K9	'98	G Linn threw this model into the leading pack by beefing up the Basik's bodywork and adding a super stylus	6-15	N	•		Col
London Maroon	199	A+ Now manufactured under the London brand name this Decca cartridge is as iconoclastic as ever	9-20	N	•		67
London Super Gold	339	A- Immediate and detailed, but very coloured, very nonlinear and questionable effect on records. Devotees swear by it	9-15	N	•		84
▲ Militek Aurora	299	G+ An overall feeling of relaxed ease characterised this clear and atmospheric Kiseki-built cartridge	8-16	N		•	Col
▲ Nagaoka MP10	19	A High frequencies sounded "shut-in" with this spherical-stylus model, but mid and mass were energetic, bouncy and punchy	5-13	N	•		48
▲ Ortofon 510	30	G+ For the price, a good blend of virtues weight, clarity and neutrality.	3-11	N	•		85
▲ Ortofon 520	50	A+ Very sensitive to load capacitance this new Ortofon maintains the company tradition for a lively, effervescent SQ	7-16	N	•		67
▲ Ortofon 530	80	G+ Very clean and assured sound; transients not quite perfectly pure but plenty of detail.	4-11	N	•		85
Ortofon 540	100	A Graced with FGII stylus but possessed of too high a compliance for broad arm matching. It could also sound a little unforgiving	3-8	N	•		67
▲▲ Ortofon MC10 Super	80	G "What a delightfully sweet-sounding cartridge this is . . ." we said	5-15	L		•	48
▲▲ Ortofon MC15 Super	100	G+ A good all-rounder, with outstanding performance in detail retrieval, even if it can be very slightly bright and close-up	10-24	L		•	103
▲ Ortofon MC3 Turbo	110	G Not terribly subtle, but it obviously doesn't aim at that. The 3 Turbo is bright, cheerful and bouncy - take it as it comes!	10-24	N		•	103
▲ Ortofon MC3000 MkII	900	E Low levels of body resonance are a real ear-opener. Nothing to criticise elsewhere; one of the very best	9-16	VL		•	84
Ortofon MC5000	1500	G Review sample could not be fully run-in, limited tracking ability, bright and forward sound, though imaging is excellent	12-20	VL		•	91
▲ Ortofon Quartz	140	G Lively, quite detailed, and a touch bright, the Quartz has many qualities of the much dearer Quasar	3-12	L		•	91
▲ Ortofon Quasar	350	G+ Many of the qualities of the MC3000, although a touch bright. Good detail and delicacy	8-15	L		•	84
Ortofon Quattro	210	G+ Undoubtedly a competent performer. Generally neutral, but can be edgy and bright in loud passages.	6-18	L		•	103
Rega Bias	34	A+ Difficult to mount in some arms due to its shallow build, the bias offers a gentle, refined SQ	4-10	N	•		67
▲ Rega Elys	74	G Clearly superior to the Bias, despite their common heritage, the Elys is both more detailed, accurate and musically convincing	8-15	N	•		67
▲ Revolver	20	A This modified AT-95E enjoys a very lively mid and treble even if the bass is somewhat "slower" in comparison. A firm budget buy	8-16	N	•		67
▲ Roksan Corus Black	130	G Recognisably related to Corus Blue, but distinctly more civilised and smoother.	7-12	N	•		91
Roksan Corus Blue	75	G Roksan-specified modified Goldring 1012; slight harshness detracts from otherwise good sound	7-12	N	•		91
▲ Shure ME97HE	55	A+ It won't turn a sow's ear of a turntable into a silk purse, but will at least keep going and produce an acceptable result	8-20	N	•		48
Shure V15 VMR	220	A+ Initial listening gave promising results, but extended familiarity gave the feeling of a lack of energy and a "shut-in" sound	5-12	N	•		38
▲ van den Hul MC One	975	G+ This extended all the positive qualities of the '10 but added greater authority and scale worth it for the extra money	6-12	L		•	60
van den Hul MC One Super	1100	G+ Slight softening on transients was the only real flaw, but it didn't quite seem to have that special touch one expects	8-15	L		•	84
▲ van den Hul MC Two	1300	G+ Connected directly to any standard MM input it rewards with a highly detailed yet fluid and musically convincing portrayal	6-13	N		•	72
▲ van den Hul MC10	775	G+ A neutral balanced performer giving transparent midrange, fine depth and focus with firm extended bass. Gosh!	5-10	L		•	60
▲ van den Hul MM1	275	G+ If woody midrange coloration could be tamed, the excellent imaging and admirable security would make it excellent	7-15	L		•	103

Do you want to choose your hifi in a comfortable and relaxing environment? . . .

Do you want friendly and helpful advice (and a cup of tea)? . . .

Do you want to buy your system based on what you hear (and not what somebody tells you)? . . .

Do you live in GUILDFORD? . . .

. . . or Addlestone, Aldershot, Ashford (Middx), Bagshot, Basingstoke, Bracknell, Camberley, Chertsey, Cranleigh, Dorking, Epsom, Esher, Farnborough, Farnham, Frimley, Godalming, Haslemere, Hook, Horsham, Liphook, Leatherhead, Odiham, Petersfield, Reading, Reigate, Redhill, Shepperton, Virginia Water, West Byfleet, Weybridge, Windsor, Working?

Nobody else in these areas stocks all the following major brands: Acoustic Energy, Arcam, Audio Innovations, Audiolab, Aura, B&W, Celestion, Creek, Cyrus, Dali, Epos, Deltec, Finestra/Lectern, Furukawa, Harman Kardon, Heybrook, Infinity, JPW, KEF (Reference), Linn Products (including records), Marantz, Meridian, Mission, Musical Fidelity, NAD, Nakamichi, Onix, QED (Systemline), Quad, Revox, Rogers, Rotel, Sony, Supra, Sound Org, Target, Yamaha & Top Tape, Rega products are now in stock!

Audio Technica AT637 Electronic Stylus Cleaner available by mail order exclusively!!!

Visit us first and you won't need to go anywhere else, we have superb demonstration rooms, where you can decide in comfort, and we will deliver and install free of charge (and part exchange is possible).

Complete service — We are the only outlet in the area to offer the *complete* service. As well as stocking selected items from the above manufacturers we are able to serve and/or repair *on the premises* all the above brands (and others also).

The Hi Fi Shop

Guildford's only REAL Hi-Fi shop

We are at:

3 BRIDGE STREET, GUILDFORD

(by the traffic lights —

next door to Alfred Marks)



0483 504801 · 0483 304756



Access · Visa · Switch. Open Monday-Saturday 9am-6pm (later by appointment)



Turntables and tonearms

Specialist turntables are what high fidelity sound is all about. CD may offer silent backrounds and flat frequency responses but they can't match the dynamics and superlative timing that serious turntable users take for granted. Turntables at the cheaper end of the market (sub-£350) tend to be supplied with matching tonearm, and often include a 'starter' cartridge. Still better quality is found at higher prices

amongst the separate motor units and tonearms. Careful partnering and set-up is essential for these components, but 'sympathetic' combinations exist.

The columns show from left to right, 'arm effective mass' which relates to cartridge compliance and is explained in the 'Cartridges' introduction. 'Suspended subchassis' - decks which have some form of internal isolation, generally in the

form of springs but occasionally more solid materials such as rubber. 'Manual' and 'Automatic' refer to the operational tendencies of the deck/arm combination - automatic high end turntables are as rare as hens teeth. 'Cartridge' - if one is supplied. 'Belt drive' as opposed to direct drive is the preferred method in most quality decks. An 'Electronic PSU' offers switchable speed change and a 'smoother' power supply, and better sound.

Turntables - integrated

Product	£Price	Comments	Suspended subchassis	Manual	Automatic	Cartridge	Belt drive	Electronic PSU	Issue No.
▲ Alphason Sonata/HR100S MCS	1785	G+ Good sound in all areas - bass, clarity and neutrality all in the top class and bettered by very few decks at price	13	•	•			•	79
▲ Dual CS-503-2	160	A Not wholly inspiring; generally coarse and wooly sound is at least not offensive, but easily bettered by the CS505-4	10			•	•	•	91
▲ Dual CS-505-4	200	A Consistent sounding and well isolated turntable. It is slightly lacking in balls, compensates with a consistently unmuddled presentation	10			•	•	•	103
▲ Dual CS430	120	A- Ragged, sometimes unpleasant cartridge mixes with a modest pleasing player in a very sharply priced package	5			•	•	•	67
▲ Kuzma Stabi/Stogi Reference	2000	G+ Beautifully made solid oak plinth, the Stabi also sounds very clear, detailed and extended. Stogi Reference is very capable.	12	•	•			•	91
Linn Axis/Akito	535	A+ A neat, attractive and well-made package which delivers a rather harsh sound with a 'one-note' effect in the bass	10	•	•			•	79
▲ Linn Basik	299	A+ Strong midband analysis and imagery, clean if sharp treble is matched to a good if occasionally wooden bass	10	•			•	•	103
▲ Linn LP12 Basik/Akito	855	G Trails the full LP12 significantly, but pace, rhythm, timing etc. still in top class, and bass tauter than of old	10	•	•			•	103
▲ Linn LP12-Lingo/Ekos	2642	G+ The classic reference is improved by the Lingo but charming character remains. Ekos is well made and suited to many decks	9	•	•			•	91
▲▲ Rega Planar 2	185	G A remarkable product at the price, surprisingly articulate and confident	11.5		•			•	48
▲▲ Rega Planar 3	250	G A long time leader in its category, the '3 (with excellent RB300 arm) sounded nicely 'musical' in a balanced and coherent manner	11.5		•			•	48
▲ Revolver Rebel	185	G- Quite lively and detailed but not the strongest on subtlety, with slightly lumpy bass. Motor breakthrough audible	12	•	•	•		•	91
▲ Roksan Radius/Tabriz zi	740	G Design is subtle, refined and easy on the eye. Musically it offers exceptional performance with a minimum of fuss	9		•			•	103
Roksan Xerxes 33/Tabriz zi	990	G At its optimum with a relatively inexpensive arm/cartridge unless upgrade to full Xerxes is contemplated. XPSII PSU	9		•			•	103
▲ Roksan Xerxes/Artemiz/Artaxerxes	2114	E Superb, highly integrated and synergistic in nature, suitable for use with any good MC. Will not suit all tastes, however	8		•			•	103
▲ Systemdek 1.920	235	A- The motor unit is derivative of the Rega Planar 2 with a Moth arm. Up tempo even bright at times but never lacks enthusiasm	12		•			•	115
▲▲ Technics SL-DD33	150	A As with the QD33 though better value. P-mount cartridge	7.5			•	•		48
▲ Technics SL-QD33	180	A Quartz controlled version of the DD is short on sound quality but not features. But it did have fair focus and some depth	7.5			•	•	•	48
▲ Thorens TD-3001/TP90SF	760	G Excellent middle ranking esoterica, with strong all round abilities rather than excellence in particular areas		•	•			•	103
▲ Thorens TD166 V/UK/RB250	280	A- Refined and articulate sound with well focused imagery, suitable for use with good MM and budget MC cartridges	11.5	•	•			•	103
Thorens TD2001	650	G- Similar to TD320 but much dearer - why? Sound is comfortable but not very detailed	15	•		•		•	91
▲ Voyd Reference	5950	E Voyd's flagship, equipped with three substantial motors, a Lexan platter and brute PS. A strong contender for world's best		•	•			•	C91
▲ Well Tempered WTAT	1690	G+ Intriguing/challenging design. Musically it is not ideal, but has a limp quality and a lack of artificiality that sets standards	7.5		•			•	67

Motor units

Product	£Price	Comments	Suspended subchassis	Solid plinth	Belt drive	Electronic PSU	Issue No.
▲ Michell Gyrodec	697	G Sweet and natural sounding player, well suited to Rega RB300. Aesthetics, and the acres of clear acrylic are very distinctive		•		•	55
▲ Michell Syncro	325	G A happy blend of qualities endows the stylish Syncro with a blend of subtlety and force - the mailed fist in the velvet glove		•		•	67
Origin Live Oasis A	495	G- Rather coarse sound lacking resolving power - but lively sound may appeal. Industrial appearance		•		•	79
▲ Pink Triangle Anniversary	1495	E Possibly the most detailed, clear and neutral deck around. Likeness to master tape is uncanny		•		•	91
▲ Pink Triangle Export	890	E The PT TOO with built in PS. Retains features of great transparency and neutrality. Review sample had highish motor noise		•		•	91
▲ Pink Triangle Little Pink Thing	500	G+ Semi suspended, leads the field for clarity and neutrality at the price. It also looks good: Excellent value				•	79
Revolver	200	A Nicely balanced, but unimpressive timing and lightweight bass made this deck rather average for the price			•	•	48
▲▲ Systemdek IIX/900	230	G A high performance budget turntable which is particularly strong at fine detail resolution and imagery		•		•	103
▲ Systemdek IIXE/900AP	388	G+ The acrylic platter'd IIXE is one of the most capable budget decks on the market, good resolution, dynamics and timing		•		•	103
▲ Voyd 0.5	3368	E Halfway between standard and Reference Voyds with the latter's platter and bearing. Superb finish, colourful and dynamic sound		•		•	72
▲ Voyd Valdi	955	VG Acrylic plattered twin motor deck is remarkably capable, revealing and neutral. For dynamics it's hard to beat at the price		•		•	79

Tonearms

Product	£Price	Comments	Effective mass (g)	Height adjustment	Parallel tracking	Pivoted	Issue No.
▲ Airtangent 1B	3000	E A complex but superbly built arm for high quality systems, giving excellent stereo and resolution	7.5	•		•	60
▲ Alphason HR100S	490	VG S-shaped arm sounds smooth, but nevertheless reproduces transients with fine attack	10	•	•		C85
▲▲ Moth arm	95	G+ The ultimate budget arm? Refined, detailed, sweet and natural	12			•	60
▲▲ Rega RB300	139	VG Despite its modest price it sets exceptional performance standards and could be used on many high end turntables	11.5			•	60
▲ Roksan Tabriz	190	G+ Targetted at the Xerxes, this is a good alternative to the Rega arms in many cases - a trifle bright	9	•	•		91
▲ SME 309	568	VG Beautifully made and finished, fully adjustable, a highly neutral performer	10	•	•		79
▲ SME Series V	1232	E Excellent in all respects, this arm arguably sets the standard for pivoted arms regardless of price	10.5	•	•		60

Choice accessories

Let our fine range of accessories help boost your system performance

Isolation cones

Supplied in packs of four, these cones are ideal for supporting just about any item of hi-fi, from sub-woofers through to amplifiers and CD players. The cones provide effective isolation and decoupling, thereby increasing the stereo image and fidelity. Available in precision turned brass or black anodized aluminium, some experimentation will reward the listener with improved sound quality, at a minimal cost.

Order ref: JE12A £14.00

4 Isolation cones (brass)

Order ref: JE11A £14.00

4 Isolating cones (black coated aluminium)

Goldring Magic Record Cleaner

Kit consisting of a double-sided velvet brush and spray on Goldring Magic record rejuvenating fluid.

Order ref: JE13A £11.95

Technics Auto CD Cleaner

A powered wet/dry CD cleaner that can be run off batteries or the mains. It works by rotating the disc and applying the wet cleaner first (cleaning solution is supplied, then reversing direction and dry cleaning it. The whole process takes just 40 seconds and a set of batteries should clean 80 discs.

Order ref: JE20A £39.95

Kontak Cleaning Solution

A two stage contact cleaner for all audio and mains connections. All connections are susceptible to oxidation and contamination which impairs electron flow and thus affects sound quality.



Here's what Paul Messenger had to say when he tried some on his system:

"The effect on the power amps alone was so astonishing I had to carry on and cover the whole system. By the time I was finished the system was utterly transformed. Timing and coherence were back with a vengeance; surface noise and coloration were both much less audible and the soundstage had liberated itself from the boxes".

Order ref: JE17A £19.90

The Purifier

A ferrite cable clamp designed to reduce RF induced noise in audio, video and computer systems. The clamps will accept single or multiple cables of up to half an inch in diameter and can be used on both signal and mains cables. Can be particularly beneficial for digital interconnects.

Order ref: JE14A £16.90 per pair

Nagaoka Anti-Static Record Sleeves No 102

Packs of 50 plastic record sleeves that can be used on their own or inserted into an existing card or paper sleeve. The sleeves keep records dust free and eliminate static.

Order ref: JE15A £6.99

Gold Plated 4mm Banana Plugs

Top quality solderless gold plated banana plugs for use with speaker cables. Simply push the speaker cable into the body of the plug and tighten for a perfect connection. This Furukawa plug accepts cables up to 4mm in diameter. Sold in packs of four.

Order ref: JE24A £7.95

Audio Technica CD Lens Cleaner AT-6078

The focusing assembly for the laser head of a CD player is a very delicate affair and yet it requires cleaning from time to time to give of its best. Rather than fumbling about with cotton buds, we would suggest you employ an Audio Technica AT-6978 CD lens cleaner.

This is a standard size disc with a set of eight tiny brushes set into it. To clean your laser, just apply a drop of cleaning fluid on to one of the brushes, place the cleaning disc in to your player and press play.

Ten seconds later, a clean laser assembly and a cleaner sound from your Compact Discs.

Order ref: JE21A £16.95

CD Jewel Case (Five Pack)

Everyone has them, now replace broken CD jewel cases and ensure your discs are properly protected.

Order ref: JE33A £5.00

DISC CLEANING AND MAINTENANCE

Last SF-100 Extra Strength Record Cleaner

Designed to remove the stubborn mould release compounds present in every LP from the pressing process. Use to deep clean new records as well as to revitalise older vinyl.

Order ref: JE25A £22.50

Last SF-200 Record Preservative

Last SF-200 interfaces with the vinyl and prevents gouging, fracturing and wear of the groove wall. A single application will maintain LPs in 'brand new' condition for 200 plays or more. The use of Last 100 and 200 improves fidelity and maintains precious LPs.

Order ref: JE26A £25.00

Last SF-300 Record Cleaner

SF-300 is the cleaner to use on a day-to-day basis on LPs which have been treated with SF-100 and SF-200.

Order ref: JE27A £18.50

Last SF-600 CD Clean And Protect

Yes CDs do need cleaning and Last have introduced a specially formulated cleaner and polish for CDs which removes grease, dirt and finger marks. The kit provides vinyl covers for the continued protection of cleaned CDs. Clean CDs sound better.

Order ref: JE29A £20.00

Last SF-601 CD Cleaner

Exactly the same as CD-600, but without the vinyl protective covers.

Order ref: JE30A £16.00

Last RCM Record Cleaning Machine Fluid

Last Record Cleaning machine fluid is formulated for use in conjunction with proprietary record cleaning machines, for the removal of grease, dirt and grime from Vinyl LP's.

JE35A £18.00

In order to introduce vinyl users to a meaningful protection and maintenance system, we have negotiated a special price on a full size bottle of SF-100 and SF-200 (SC012) complete with applicators for just £38.50. **Trial Pack, SF-100 And 200 (Full Size) Order ref: JE31A £38.50**

We've also secured trial samples of all three products, SL-123 and these are available at only £26.00. We sincerely recommend the use of these products to all who wish to maintain their record collections in pristine condition.

Trial Pack, SF-100, 200 and 300 Order ref: JE32A £26.00

HI-FI CHOICE SWEATSHIRTS

Improve the sound of your system for a mere £15

Ever wondered why some people get taken seriously in hi-fi shops while others get the runaround? Wonder no more. The answer to all your hi-fi problems is the ALL NEW Hi-Fi Choice Sweatshirt.



These gloriously hip garments are tastefully printed in white and red on navy blue. As well as being this year's most crucial fashion accessory, a Hi-Fi Choice sweatshirt will readily identify you as a reader of Britain's fastest growing hi-fi magazine.

As a result you'll almost certainly be taken more seriously and end up with a better system - and all for a mere £15.

We can supply the shirts in two sizes - large and extra large.

Order ref: JE22A

Best seller!

Special offer

Choice sounds

Choose from our superb selection of specialist label recordings.

KLAVIER

MASSENET: BALLET MUSIC 'LE CID' & SCENES PITTORESQUES. THE BIRMINGHAM SYMPHONY ORCHESTRA, LOUIS FREMAUX CONDUCTING.

The ballet provides the opportunity for much seductive, exotic and Spanish flavoured music and includes wide contrasts in dynamics. This is probably the recording of Le Cid, and it's available on 180 gram vinyl or CD. Includes : MASSENET: Scenes Pittoresques - OFFENBACH: La Belle Helene. - MASSENET: The Last Sleep of the Virgin from 'La Vierge' - BERLIOZ: Minuet of the Will-O-The-Wisps.

Order Ref: **KCD-I1007** £13.99
KS-522 180gm HQ LP £25.00

PIPE ORGAN SPECTACULAR: THE GREAT ORGAN OF LIVERPOOL CATHEDRAL

Can you find the 16 cycle note? The Liverpool organ is the largest Cathedral organ in the world. Will your woofers cope with this? Take care to set your volume control properly on the first play. The CD contains: LISZT: Fantasy on 'B-A-C-H' - REGER: Benedictus. - REGER: Toccata in D minor. - REUBKE: Sonata on the 94th Psalm. - FRANCKL Choral in A minor: Finale, Op.21.

Order ref: **KCD-I1036** £13.99

OFFENBACH OVERTURES: THE BIRMINGHAM SYMPHONY ORCHESTRA

The ebullient Offenbach overtures (including the CAN-CAN!) are played here with precision and verve that few orchestras can match. The CD contains: OFFENBACH: Orpheus in the Underworld. - The Grand Duchess of Gerolstein. - La Belle Helene - Barbe-Blue & La Vie Parisienne. BERLIOZ: Overture to 'Roman Carnival.' Op.9.

Order ref: **KCD-I1040** £13.99

CINCINNATI WIND SYMPHONY: EUGENE CORPORON

Here's one to demonstrate your equipment. Try the Copland/Hinsley (track four). The Candide overture is an outstanding recording. The CD contains: BERNSTEIN/GRUNDMAN: Overture to Candide. - SCHUMAN George Washington Bridge - COPLAND: An Outdoor Overture. - COPLAND/HINDSLEY: Salon Mexico - SCHUMAN: Chester - REED: La Fiesta Mexicana.

Order Ref: **KCD-I1048** £13.99

KLAVIER SAMPLER

Hear some of the best KLAVIER Classical and Jazz titles on this cost-effective sampler.

Order ref: **KCD-1990** £13.99

REFERENCE RECORDINGS

BACH: ALBERT FULLER

Bach wrote for an instrument which is now so rare as to be almost unknown: the Harpsichord. Albert Fuller is one of the world's leading exponents of this most expressive instrument. Listen to Bach on the instrument for which he wrote the compositions. BACH: Italian Concerto. - Prelude & Fugue in f minor, WTC I I. - Prelude & Fugue in D, WTC I I - French Suite No.6 in E - Anna Magdalena Bach Notebook-1725.

Order ref: **RR-51CD** £13.99
RR-51LP £21.50

TRITTICO: THE DALLAS WIND SYMPHONY

An HDCD Recording. Trittico is the first Dallas Wind Symphony Recording to receive the patented HDCD recording system. (see HFC No 117, 4/93 for details). As with all HDCD discs, this recording displays superior

or resolution and spatial characteristics. VACLAV NELHYBEL: Trittico - ISAAC ALBINEZ: Feast day in Saville. - NORMAN DELLO JOIO: Variants on a Medieval Theme - EDVARD GREIG: Funeral March for Rikard Nordraak.

Order Ref: **RR-52CD** £13.99



THE OXNARD SESSIONS BOL I I: MIKE GARSON.

An HDCD Recording. Mike Garson is the quintessential keyboardist and composer whose most famous collaboration to date was with rock star David Bowie. "Mike Garson is the best rock and roll pianist I know" commented Bowie after working with him on 'Alladin Sane'. This CD contains two recordings which were pre-HDCD.

Order ref: **RR-53CD** £13.99

HD COMPATIBLE SAMPLER.

An HDCD Recording. The HDCD process provides a recording that is at least equal in resolution and freedom from distortion to the finest analogue master tapes, yet is compatible with all CD playback equipment. Hear the improvement with this cost effective sampler.

Order Ref: **RR-S3CD** £11.99

Other HDCD recordings include:

TESTEMENT: THE TURTLE CREEK CHORALE.

A stirring programme of American music. (See HFC Issue 117 4/93 for full details).

Order Ref: **RR-49CD** £13.99
RR-49LP £21.50

DICK HYAM PLAYS ELLINGTON.

Not only is this an HDCD recording, it's also a direct-to-disc, gold CD. (see HFC 117 4/93 for full details).

Order Ref: **RR-50DCD** £35.99

DICK HYAM PLAYS WALLER.

The world's first DCD Direct to CD recording. THE DCD is a limited edition, numbered collectors item, but buy it for the great sounds and fast transients from the Bosendorfer piano. Includes such greats as: Ain't Misbehavin' - Honeysuckle Rose - Handful of Keys - Sweet Savannah Sue and more.

Order Ref: **RR-33DCD** £35.99
RR-33CD £13.99
RR-33LP £21.50

EILEEN FARRELL SINGS ARLEN

Let's Fall in love - I've got the World on a String - Come Rain or Come Shine - Last Night When We Were Young, and many more.

Order Ref: **RR-30CD** £13.99
RR-30LP £21.50

EILEEN FARRELL SINGS ROGERS & HART

I Could Write A Book - I Wish I were in Love Again - Love Me Tonight - Mountain

Greenery - Lover, and many more.

Order Ref: **RR-32CD** £13.99
RR-32LP £21.50

EILEEN FARRELL SINGS ALEC WILDER

It's so Peaceful in the Country - The Lady Sings The Blues - 'S Gonna Be a Cold, Cold Day, and many more.

Order Ref: **RR-36CD** £13.99
RR-36LP £21.50

EILEEN FARRELL SINGS TORCH SONGS

Stormy Weather - When Your Lover Has Gone - The End of a Love Affair - I Get Along Without You Very Well, and many more.

Order Ref: **RR-34CD** £13.99
RR-34LP £21.50



EILEEN FARRELL: THIS TIME IT'S LOVE. ROBERT FARNON & HIS ORCHESTRA.

The More I see You - My Foolish Heart - The Nearness of You - More Than You Know, and more.

Order Ref: **RR-42CD** £13.99

EILEEN FARRELL SINGS JOHNNY MERCER

Too Marvellous for Words - Moon River - Laura - Day In, Day Out - Autumn Leaves, and many more.

Order Ref: **RR-44CD** £13.99

EILEEN FARRELL: IT'S OVER. ROBERT FARNON AND HIS ORCHESTRA

I Get The Blues When It Rains - How About Me? - I'll Remember April - The Shining Sea - Lush Life, and many more.

Order Ref: **RR-46CD** £13.99

REFERENCE JAZZ SAMPLER

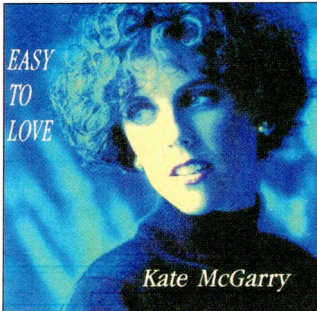
Listen to some great music, great artists and wonderful recordings on this sampler.

Order Ref: **RR-S2CD** £11.99

REFERENCE CLASSICS SAMPLER

This sample is designed to introduce the listener to selected titles from the Reference classics catalogue.

Order Ref: **RR-S1CD** £11.99



FONE

RAFFAEL CALACE: MUSICA da CAMERA per strumenti a pizzico

Chamber music for mandolin and guitar with the 'City of Brescia Mandolin Orchestra' and the "Quintetto a plectro Raffael Calace". A natural sound recording by Giulio Cesare Ricci. This CD exhibits exceptional dynamic range with a huge spatial effect. The music is an absolute delight and the recording excellent...buy it and discover what the Italian hi-fi magazines have raved over, you won't be disappointed.

Order Ref: **91-F-02** £12.99

I. VIADANA: VESPERS FOR THE ASSUMPTION OF THE VIRGIN MARY, OPUS No. 27 (Verine 1612).

This is the only recording of these 17th century Psalms, performed by four choirs and AMALTEA, an original instrument ensemble. The CD contains a wonderful ambience, from a full, rich and totally natural recording by Giulio Cesare Ricci. The exquisite sound and the quality of this CD demands attention and places it firmly in the 'must buy' status.

Order Ref: **92-F-08** £12.99

FONE SAMPLER

Fone have a huge catalogue of titles, many of which are unique. This sampler is designed to introduce the listener to FONE's audiophile catalogue. We urge you to hear some of these landmark recordings and enjoy!

Order Ref: **90-F-23** £11.99

SHEFFIELD LABS

PAT COIL: JUST AHEAD

Sheffield's latest CD, produced live-to-two track by Clair Marlo, with special guests: Gerald Albright, John Beasley, Luis Conte, George Doering, Brandon Fields, Jimmy Johnson and more. In this his second outing (see also available CD-31 Pat Coil: Steps at 13.99), pianist Pat Coil brews up another hot collection of original jazz and pop instrumentalists plus a pair of poignant ballads. Pat Coil fans, jazz lovers and hi-fi enthusiasts will not want to miss this 'cooking' CD!

Order Ref: **CD-34** £21.50

THE SHEFFIELD DRUM & TRACK RECORD

Drummers Jim Keltner and Ron Tutt, each feature in a solo seven minute improvisation which will test the limits of your hi-fi system and perhaps your neighbour's patience. Designed as an ultra high resolution playback source to enable you to evaluate your audio system's ability to produce bass, transients, crest factor and dynamic range. The CD contains the material from both albums.

Order Ref: **CD14/20** £21.50
LAB-14 The Drum Record £21.50
LAB-20 The Track Record £21.50

KODO: HEARTBEAT DRUMMERS OF JAPAN

The World renowned Kodo percussion troupe has thrilled audiences all over the world. A variety of traditional Japanese percussion instruments are featured in this recording. Please note these tunes span the entire dynamic range from soft playing at the bare limits of audibility to the thunder of the mighty 800 pound o-daiko drum and are extremely challenging to play back correctly.

Order Ref: **CD-KODO** £21.50

VTL - THE VITAL SOUND

KATE Mc GARRY: EASY TO LOVE

My Heart Stood Still - The Night Has A Thousand Eyes - Autumn Nocturne - Just

You Just Me - and more. V.T.L. recordings are lovingly produced by David Manley of Vacuum Tube Logic. Kate chose to sing some of her favourite tunes for this outing, and picked the musical accompanists she most enjoys working with. The musical synergy is very clear on this extremely high standard audiophile recording.

Order Ref: VTL-015 £21.50

VICKIE: VICKIE LEIGH
Take Me To The River - Talk of Love - Welcome Home Blues - When Love Comes In - and more. In this rock/blues CD, Vickie is an amazingly consistent performer with tireless energy.

She combines all her vocal abilities with still more great skill - she knows how to make her singing tell us the story behind the song.

Order Ref: VTL-012 £21.50

VTL SAMPLERS

VTL CD's are made for audiophiles in David Manley's customised studio, we urge you to hear these great jazz and blues numbers, recorded without equalisation, with Maley's own Vacuum Tube Logic equipment.

VTL are among the best recorded CDs available and should feature in all dedicated Hi Fi listener's collections.

Order Ref:
VTL-Sam 010 (CD) £18.50
VTL-Sam 020 (CD) £18.50

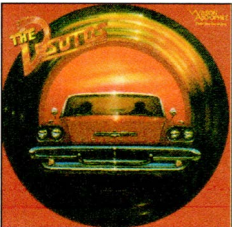
WILSON

CRUISIN' WITH THE DESOTOS

The perspective and sonic character of Rock and Roll recordings from the late Fifties and early Sixties is quite different from that of the pop recordings of the early Eighties and Nineties.

This recording was made to remind you of the sound you may have heard in an auditorium back around 1962. Tracks include such Rock and Roll greats as Good Lovin' - Hang on Sloopy - Whole Lotta Shakin' Goin' On - Runaway, and more.

Order Ref:
WCD-9026 £18.50
W-9026 (LP) £21.50



CENTRE STAGE: THE NATIONAL SYMPHONIC WINDS, LOWELL GRAHAM CONDUCTING

The National Symphonic Winds, strut their stuff in a great recording made by David Wilson (of Wilson Watts and Puppy fame).

The music is light and the stereo height, width and depth have to be heard to be believed. Tracks include: Selections from OKLAHOMA - Selections from BARNUM - Selections from MARY POPPINS - Selections from WEST SIDE STORY

Order Ref:
WCD-8824 £18.50
W-8824(LP) £21.50

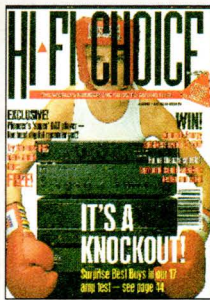
HI-FI CHOICE BACK ISSUES

All the issues you wish you'd never missed. Back issues are priced at £4.00 each (UK) £6.95 each (Overseas) including postage and packing.

May 1993 - Issue 118
SPEAKERS - 22 models on test plus SME Series 20 and a visit to JVC to discuss MiniDisc and DCC.
Order ref AE18B

June 1993 - Issue 119
CD PLAYERS - 20 CD players reviewed plus eight in-wall loudspeakers.
Order ref: AE19B

July 1993 - Issue 120
CD TRANSPORTS AND DACS eight combinations reviewed, plus nine tuners and three laserdisc players.
Order ref: AE20B



August 1993 - Issue 121
AMPLIFIERS - 17 new-models, plus a look at surround sound speakers.
Order ref: AE21B

September 1993 - Issue



122 - SPEAKERS - 22 speakers reviewed, plus a look at THX.
Order ref AE22B

October 1993 - Issue 123 AWARDS SPECIAL - The ten finest hi-fi prod-



ucts in Europe. Plus ten cassette decks, a feature on amps and a DAT test.
Order ref: AE23B

PRIORITY ORDERING

Just enter on the coupon the items you require from both Choice Accessories and Choice Sounds using the correct code. Then clip out and send with the correct payment to: DENNIS DIRECT, PO BOX 2505, ALCESTER B50 4JU. Prices shown include VAT and fulfilment in the UK. Please add postage as detailed at the bottom of this form. Be aware that all items on offer are subject to availability and a maximum of 28 days should be allowed for delivery.

OVERSEAS ORDERS: Please add £1 0.00 (Europe) or £12.00 (Rest of the World) to your order total to cover the additional postage. Please note that we can only accept Visa/MasterCard and EuroCheques in £s sterling and sterling cheques drawn on a London bank.

Important: To prevent any delay with processing your order, please enter the correct codes clearly! If necessary, please use a separate sheet.

CHOICE ACCESSORIES

Code	Description	Price	Quantity
JE__A	£.....
JE__A	£.....
JE__A	£.....
JE__A	£.....
JE__A	£.....

BACK ISSUES

AE17B	Hi Fi Choice April 93	£.....	.....
AE18B	Hi Fi Choice May 93	£.....	.....
AE19B	Hi Fi Choice June 93	£.....	.....
AE20B	Hi Fi Choice July 93	£.....	.....
AE21B	Hi Fi Choice August 93	£.....	.....
AE22B	Hi Fi Choice Sept 93	£.....	.....
AE23B	Hi-Fi Choice Oct 93	£.....	.....
HiFi Choice binders	LE01A	£.....	.....

HI-FI CHOICE SWEATSHIRTS

JE22A/L	Hi Fi Choice Sweatshirt - Large	£.....	.....
JE22A/XL	Hi Fi Choice Sweatshirt - X Large	£.....	.....

CHOICE SOUNDS

Order reference	Description	price	qty
.....	£.....
.....	£.....
.....	£.....
.....	£.....
.....	£.....
.....	£.....
.....	£.....
.....	£.....
.....	£.....
.....	£.....

Total number of items ordered **Order total** £.....

For UK add £2.00 per order for postage **Order Total** £.....

For Europe add £10.00 per order for postage **Order Total** £.....

For Rest of World add £12.00 per order for postage **Order Total** £.....

I enclose a cheque made payable to Dennis Direct for £.....

Please charge my Visa MasterCard (Access) for £.....

Credit Card number

Expiry date / Signature

Mr/Mrs/Ms Surname.....Initials.....

Address.....

.....Postcode.....

Daytime telephone number.....

Please send me a VAT receipt
 The above information may be added to our mailing list. Please tick the box if you would prefer not to receive details of special offers. Dennis Direct is a division of Dennis Publishing Ltd. 05-93-11

SAVE TIME...USE THE FAX!
You can now speed your order along by faxing it to us on 0789 490878. (Only available for customers ordering by credit card).

EUROPEAN IMAGING & SOUND
ASSOCIATION AWARDS

The Winners available from Bartletts

Mission 753 loudspeakers
NAD 302 amplifier
Yamaha DSPA 2070 DSP amplifier

The HiFi Choice Recommendations & Best Buys available from Bartletts

Amplifiers

Denon PMA 450
Harman Kardon 6150
NAD 304

Turntables

Revolver Rebel
Thorens TD 166/RB 250
Systemdek 11X900/RB 250

Cassette Decks

Aiwa ADF 410
Aiwa ADF 810
Yamaha KX 260

CD Players

Marantz CD 52 II
Marantz CD 52 II SE
NAD 502

Loudspeakers

B&W DM 620i
Epos ES II
Tannoy 609

Tuners

Audiolab 8000 T
Denon TU 260 L
Harman Kardon TU 9400

Bartletts Suggested Systems

The Bartletts Suggested Systems listed below are supplied with the Marantz CD 52II, an alternative CD player or Turntable are available, see below for price details. All systems are supplied with 8 metres of 79 strand loudspeaker cable. QED 4mm plugs are available at a cost of £1.00 each. Carriage charge for delivery to an address on the UK mainland is £12.00 per order. All items are sent fully insured. Prices were correct at time of printing but are subject to change without notice. E&OE.

	Celestion 1	Mission 760i Celestion 3 Tannoy 603	Tannoy 605	Mission 761i B&W DM 600i Celestion 5	Tannoy 607 B&W DM 610i Celestion 7	Rogers LS 2 A2	Mission 762i	Rogers LS 4 A2 Tannoy 609
Marantz PM 44 SE	414.95	459.95	487.95	499.95	533.95	541.95	557.95	590.95
Marantz PM 32	365.95	404.95	435.95	443.95	477.95	489.95	505.95	529.95
Marantz PM 30 SE	381.95	429.95	459.95	469.95	499.95	509.95	524.95	549.95
Marantz PM 40 SE	373.95	413.95	419.95	449.95	481.95	497.95	513.95	559.95
Nad 302	389.95	426.95	454.95	462.95	494.95	510.95	526.95	550.95
Nad 304	439.95	485.95	513.95	521.95	553.95	569.95	575.95	609.95
Harman Kardon 6150	414.95	445.95	475.95	488.95	521.95	529.95	545.95	569.95
Harman Kardon 1200	479.95	512.95	541.95	553.95	586.95	594.95	611.95	652.95

Choices. The following CD players or Turntables can be ordered instead of the Marantz CD 52II in the above systems.

CD Players

Aiwa XC 300	Deduct £90.00
Denon DCD 595	Deduct £50.00
Denon DCD 695	Deduct £30.00
Denon DCD 890	Add £40.00
Denon DCD 1290	Add £100.00

Marantz CD 42 II	Deduct £50.00
Marantz CD 52 II SE	Add £70.00
Nad 502	Deduct £10.00
Philips CD 930	Deduct £50.00

Turntables

Nad 5120	Deduct £129.00
Dual CS 503-2	Deduct £70.00
Dual CS 505-4	Deduct £30.00
Thorens TD 280 IV	Deduct £22.00
Systemdek IIX 900 inc.RB 250 AT 110e	Add £95.00

Bartletts Super Savers

	Normal Price	Saver Price
Marantz CD 42 II CD player	199.90	169.90
Celestion One Loudspeakers	109.90	79.90
Micromega Logic CD player	568.90	299.90
Micromega Leader CD player	849.90	499.90

Bartletts System of the Month

Marantz CD 42 II CD player	£299.90
Marantz PM 40 SE amplifier	
Celestion One Loudspeakers	
8m 79 strand cable	

Carriage for the above system £20

Bartletts HI-FI

PRICES

071 607 2148

071 607 2296

Phone today

MAIL ORDER

071 607 2148

071 607 2296

Fax: 071 609 0536

N. London Only

DEMOS

North London

071 607 2148

DEMOS

Woking

0483 771175

STORES AT

North London

175 Holloway Road

London, N7 8LX

Woking

11 The Broadway,

Woking, Surrey, GU21 5AP

Opening Times: 9.30am - 6pm

Monday -

Saturday



STOCKISTS OF:

Aiwa, Adcom, Arcam, Audiolab, Audio Source, Audio Technica, Aura, B&W, Cable Talk, Celestion, Cerwin-Vega, Copland, Creek, Cyrus, Dali, Denon, Dual, Exposure, Furakawa, Harman Kardon, JPW, Marantz, Michell, Micromega, Mission, NAD, Nakamichi, Panasonic, Philips, Pioneer, ProAc, Quad, Rogers, Rotel, Royd, Sennheiser, Sony, Systemdek, Tannoy, Target, Technics, Tripod, Wharfedale, Yamaha.

music made live...

music made live...

The shape of screens to come

Like many hi-fi people, I'm currently keeping a pretty close eye on what's happening in the emerging AV surround sound world. When the house isn't full of loudspeakers for *Choice*, televisions for our sibling magazine *Home Entertainment* take their place.

I don't plan to fill this column with recycled *HE* television reviews, but some of the broader issues should certainly interest *Choice* readers who, like me, are struggling to come to terms with an increasingly video oriented world.

One quite literally broader issue first surfaced a couple of years ago, and the widescreen (16x9 rather than 4x3 shaped) TV has been finding life a bit of a struggle ever since. One reason is that the MAC satellite transmission system (which can and does send lovely high resolution 'widescreen' pictures) no longer looks like being the natural successor to our current PAL television format. Instead the future has been temporarily consigned to limbo while various all-digital alternatives are explored.

The situation is still more confused by the fact that there are two quite different kinds of 'widescreen' pictures. To serious satellite broadcasters it's a full (625 line) resolution, laterally compressed image. These rarities can only be viewed on the latest sets (both 16x9 and 4x3), which restore normal geometry and full 16x9 glory at the push of a button.

To the purveyors of pre-recorded videotapes and Laserdiscs, 'widescreen' should more properly be described as a 'letterbox' scan, which maintains normal geometry (and hence compatibility with all TV sets), but by so doing chucks away something like 20 per cent of the available vertical resolution (which is all too obvious when the image is blown up big).

All of which might seem somewhat irrelevant when ninety nine point something of our television programmes follow the conventional 4x3 format shape. Certainly you don't buy a widescreen TV just to watch the trivial number of 16x9 transmissions, of whatever resolution. The crucial point is whether a widescreen set is any damn use at all with normal 4x3 pictures. The answer, rather to my surprise, is that it is.

There are various options for displaying 4x3 pictures

on a 16x9 set. The simplest is either to leave a few inches either side of the image black, or 'zoom' the picture and slice a few inches off the top and bottom of the image. Even the full-width zoom, which loses about 20 per cent of total picture height, proves surprisingly acceptable in practice across a wide range of programming, while intermediate positions (available only on 50Hz sets, not flicker-free 100Hz models) is caught out (by captions and the like) only very rarely indeed. Philips is about to introduce an interesting new JVC-inspired technique known as 'panorama', which I haven't yet tried. This cleverly stretches just the outside edges of a 4x3 picture to fill up the 16x9 picture area, maintaining full height and normal geometry across 70 per cent of the width.

The intellectual case for widescreen may still be weak, but practically and emotionally I've found it altogether very satisfactory — and satisfying — indeed. The two conventional direct view 16x9s I've tried both have screens which are noticeably less flat and more bulbous than current good quality 4x3s, especially along the vertical axis. But that is the only significant drawback.

In broad brush stroke approximations, conventional large screen 4x3s come in 21inch, 24/25inch, 28inch, 33in and 37inch sizes, and a decent quality Nicam stereo set will typically (on average) cost around £500, £650, £800, £1,500 and £2,500 respectively. Widescreen 16x9 sets currently come in 28inch, 32inch and 36inch screen sizes, costing typically £1,250, £1,700 and £2,500 respectively.

Although significantly more expensive area for area than an equivalent 4x3, widescreen sets have the major twin advantages of looking much less bulky than the nominal screen size suggests, alongside the magnification of the zoom feature.

Those who don't like big tellies will therefore appreciate the 28inch size widescreens, which fall halfway between 21inch and 25/25inch 4x3s in height, but which in 'movie expand' mode

give a magnification factor that is halfway between a 28inch and a 33inch 4x3 set. At the other extreme the lovely 36inch 16x9 Philips I'm currently using doesn't look any bulkier than a 33inch conventional set, but expands a letterbox movie to an image several per cent larger than even a 37inch 4x3 can manage.

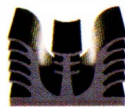
All of which means that the Great British Public, who have a peculiar aversion to installing large anything in their homes, can continue to enjoy relatively tiny TVs, but can at least get extra scale when the right programme comes along by choosing the widescreen option.



Paul Messenger is keeping a close eye on the AV world and enjoying the letterbox experience.

A 28inch example of the breed; Philips' 8916 letterbox style widescreen tellie made extra wide by its speakers.





THE F SERIES: F22-REMOTE CONTROL TUBE PREAMPLIFIER. F15-100 WATTS PER CHANNEL HYBRID STEREO POWER AMPLIFIER WITH TUBE BALANCED INPUTS. F18-220 WATTS PER CHANNEL HYBRID STEREO POWER AMPLIFIER WITH TUBE BALANCED INPUTS. FX-90 WATTS PER CHANNEL STEREO POWER AMPLIFIER.

The F22. Made by fanatics, for fanatics.

