COMPETITION
WIN AN AUDIOLAB 8000 PRE-AMP, POWER AMP AND 8000T TUNER

NEW QUAD 606 POWER AMPLIFIER

DIY SUPPLEMENT No.4 banded to this issue

NEW MAXIM FROM GOODMAN'S LOUDSPEAKERS

NEW PHILIPS DCC600 DIGITAL RECORDER

SONY ST-S211 BUDGET TUNER

METAL TECHNOLOGY JPW RUBY LOUDSPEAKER

Only £2.00
The truth, 
the whole truth, 
and nothing but the truth . . .

It is a truth universally acknowledged, that clarity of sound allows true involvement with music.

Recognised Hi-Fi critics throughout the world have consistently praised DPA’s products for their unrivalled clarity and transparency of sound reproduction. This inevitably leads to more profound musical experiences.

After years of development, the 200S pre and power amplifiers have been perfected. The amplifiers share the technology that has so inspired reviewer’s praise in the past. The 200S combination at £1,250 gives state of the art performance at a reasonable price.

If you crave musical truth, contact DPA so we can help.

DPA Digital Ltd., Unit 7, Willowbrook Tech. Units, Crickhowell Rd., St. Mellons, Cardiff CF3 0E1 Tel (0222) 795621 Fax (0222) 794267
Contents

THIS MONTH'S REVIEWS

AMPLIFIERS

ROTEL MICHI. The Michi power amplifier, with its matching pre-amplifier and phono stage gives over 200 watts of power output, but does this high end Japanese amplifier have subtlety as well as brute force? 30

QUAD 606. The old die-casting tool wore out, so Quad took advantage of this to give the 606 a face-lift and a welcome tune-up. 41

AUDIO SYNTHESIS PASSION. An ultra high quality passive pre-amplifier could be the way forwards for line level systems. Does the Passion provide purity? 49

CASSETTE

MARANTZ DD-82 and PHILIPS DCC 600. Both of these recorders are new additions to DCC technology - we see how their virtues compare. 25

LOUDSPEAKERS

GLL MAXIM. Our favourite loudspeaker just been revised for re-launch under newly formed Goodmans Loudspeakers Ltd. Can the Maxim get any better? 20

B&W DM 610. Improved. B&W have improved the DM 610 with some fine tuning of the crossover. With a price increase, can it give better value? 52

COMPACT DISC

MONARCHY MODEL 22A. This Digital Convertor from across the Atlantic features balanced connectors, a high level output option for passive pre-amplifiers and a discrete output stage. 32

MARANTZ DD-82 and PHILIPS DCC 600. Both of these recorders are new additions to DCC technology - we see how their virtues compare. 25

CASSETTE

MARANTZ DD-82 and PHILIPS DCC 600. Both of these recorders are new additions to DCC technology - we see how their virtues compare. 25

LOUDSPEAKERS

GLL MAXIM. Our favourite loudspeaker just been revised for re-launch under newly formed Goodmans Loudspeakers Ltd. Can the Maxim get any better? 20

B&W DM 610. Improved. B&W have improved the DM 610 with some fine tuning of the crossover. With a price increase, can it give better value? 52

COMPACT DISC

MONARCHY MODEL 22A. This Digital Convertor from across the Atlantic features balanced connectors, a high level output option for passive pre-amplifiers and a discrete output stage. 32

TUNER

KENWOOD DP-5050. For a CD player to establish itself in the £200 to £300 price bracket it has to be exceptional - has the new Kenwood player got what it takes? 110

SONY ST-S211. This tuner is one of the first in a new breed of Sony products - it has been designed especially for the U.K. market. 50

MORE SEE PAGE 5

HI-FI WORLD AUGUST 1993

Editor
Noel Keywood
Assistant Editor
Dominic Baker
Music Editor
Jonathan Jordan
Production Editor
Mark Winfield
Marketing Manager
Akila LinghaM
Marketing Assistant
Richard Johnson
Contributors
Eric Braithwaite
Richard Brice
Peter Herring
Simon Hopkins
Malcolm Steward
Dominic Todd
David Berriman
Cartoonists
Freddy Ahmet
David Simonds
Advertising Director
Caroline Knott
Advertising Tel: 071-266 0969

Distributed by:
COMAG, Twickel Road, West Drayton, Middlesex, UB7 7QH
Tel: 0895 444055

Origination by:
Minerva, SAC, Newnham Road, London NW10 9PJ
Tel: 081 764 4045

Printed by:
Southernprint, Poole, Dorset.
Tel: 0202 622226

AUDIO PUBLISHING LTD.,
64 Castellain Road, Maida Vale, London W9 1FL
Tel: 071-289 3535

Subscription Rates:
UK: £22
Overseas Surface: £29, Airmail: £42
(Europe & Middle East), American and Canadian Subscriptions - see page 69
£62 (Australia, Japan & China).

No material may be reproduced from this magazine without the publisher's permission. © Audio Publishing Ltd

AMERICAN
and
CANADIAN SUBSCRIPTIONS
- see page 69
Even flat records are slightly warped. A true if somewhat cynical statement! Sometimes the degree of warp can challenge even the best cartridge and pick-up causing extraneous noise, distorted stereo imaging and speed variations as fore and aft stylus modifies groove velocity. Fortunately these problems can be dramatically improved by this new record clamp originally designed for the SME Model 30 turntable described by Germany's Audio Magazine as 'the best turntable of all time'. Working on the reflex principle, the clamp deflects the record, smoothing out much of the warp and ensuring the largest possible contact with the platter.

Suitable for all non-detachable record spindles from 10 to 17mm length.

Available from leading audio stockists. Further information from:
SME LIMITED • STEYNING • SUSSEX • BN44 3GY

Tel 0903 814321  Fax 0903 814269
DIY SUPPLEMENT

This month's DIY Supplement is better than ever before, and it's still FREE.

Articles include:
Part 2 of the 3-way DIY loudspeaker design, this month we finish off the bass bins and give useful tuning tips.

Part 1 of a very special 300B triode valve amplifier which uses no feedback around the output stage. This design is brand new, not a re-hash of a vintage design and offers superb transparency and detail.

Origin Live have just launched a kit turntable based upon their £900 Oasis. We build and listen to the Ultra kit.

Our Mullard 5-20 circuit has proved extremely popular, however we have learnt a few tricks since the original. We are now able to offer a new design with similar properties using Russian Military Spec valves and on a convenient stereo chassis.

And much, much more!

REGULARS

NEWS: Hi-Fi's 'News at Ten' gives you every headline
LETTERS: You can bite back for the price of a stamp!
COLUMNS: Personal opinions are given an airing.
QUERIES: We offer advice on how to get the best from your hi-fi.
SPECIAL OFFERS: Whatever your budget, our mail order section has a wide range of accessories for the hi-fi enthusiast.

Next Issue: Along with sunglasses and suntan oil the only other essential for the Summer is our September Issue.

READERS CLASSIFIED: Hi-fi's best notice board gives you the chance to buy and sell.
DIAL A DEALER: Your colour coded, area by area reference to finding a specialised hi-fi dealer.
MEET YOUR MAKER: A growing guide to who makes what and where.
ADVERTISERS INDEX
AERIAL REFERENCE: The airwaves are packed full of music - our aerial guide tells you how to get them.
WORLD FAVOURITES

FEATURES

K.A.L VISIT Kammerzelt Audio Labs, the German valve specialists, have just opened a shop in Folkestone. We visit to find out what treats are available.

HOUSE OF COMMONS REPORT: The National Heritage Select Committee say CDs cost too much. We ask for the industry's opinion.

READER'S SYSTEM: An amazing system from the heart of Australia.

COMPETITION

An Award winning combination of Audiolab components, worth £1630, is up for grabs in this month's competition. See Page 66.
The Ruby Series from JPW

RUBY 2 ▲  RUBY 1 ▲

The perfect complement to the Ruby 1 and 2, the HS1 and HS2 stands.

JPW Loudspeakers
World Radio History
The JPW Ruby loudspeaker series set new standards for the serious listener. Using state of the art technology their aluminium diaphragm drive units guarantee pure piston motion beyond their operating frequencies resulting in a transfer of superbly accurate detailed information.

For more information contact (0752) 607000
JPW Loudspeakers Ltd, Ocean Quay, Richmond Walk, Stonehouse, Plymouth PL1 4LL, Devon, England
Look at this...I told you there'd be a new improved version of the DM620!

Indeed, we could talk for hours. Because after 25 years making some of the world's finest domestic and professional monitors, we believe that the 600 series is our best yet.

All models in the range are fitted with a new magnetic-fluid cooled metal dome tweeter, first developed for our world famous 801 studio monitors and capable of handling the high level transients of today's digital systems. Careful attention has been paid to the bass/midrange drivers which have excellent powerful magnets coupled with low mass, helping to provide a faster dynamic response. Each 600 series model has been styled by Kenneth Grange to ensure that their looks match their high performance. With this careful attention to detail each model in the range represents the ultimate in contemporary acoustic design.

The 600 series is at your local B&W dealer now. So call in for a demonstration, because once you've heard them, there's really nothing left to say.
ROSE WITH SIX DOZEN WATTS
Rose Industries have just launched their RP-I90 stereo power amplifier which claims to produce over seventy watts of continuous power into an eight ohm load. This affordable amplifier retails at £495 and can be easily converted into a monoblock with ninety five watts continuous output. It uses transistorised circuits, but its design embraces only the absolute minimum use of feedback for a valve life fluidity to match their RV-23S pre-amp.

Rose Industries Limited, P.O.Box 13, Abingdon, Oxon. OX14 4XE. Tel: 0235 847023.

ADDING TO THEIR MAXIM
Goodmans Loudspeakers Limited (GLL) are now developing two loudspeakers which will partner their new Maxim. The Mezzo and the Magnum are planned for launch in August. Both feature a nineteen millimetre aluminium dome tweeter and reflex loaded bass/mid range unit. They should partner a wide range of amplifiers, due to an impedance of around six ohms and a sensitivity of over 88dB.

Goodmans Loudspeakers Ltd, 3 Ridgeway, Havant. Hants. PO9 IJS. Tel: 0705 492777.

SEVEN SIXES TIMES TWO
Tannoy have re-launched an improved Sixes range: christening them the Sixes II. They all feature fully anodised aluminium dome tweeters and the use of oxygen free copper (OFC) in the internal wiring. Seven models make up the complete range: the junior entry level 'speaker is the £140 two-way 603 II, while the three-way 615 II tops the range at £750.

Tannoy Ltd, Rosehall Industrial Estate, Coatbridge, Strathclyde. ML5 4TF. Tel: 0236 420199.
KESWICK DEVELOP SUB-WOOFERS
Keswick Audio Research (KAR) are currently developing a subwoofer to partner their Figaro miniature monitor. It can be tuned using a multi-position switch. This not only allows better matching for different acoustics but also allows the bass to be modified to suit an individual’s taste. The Alto, as it is called, will also be KAR’s first product to use in-house custom designed drive units. KAR also hope to use their own drive units on all future models. The Alto is planned for launch at the Penta hi-fi show and base model price is expected to be around £1200 a pair.

KESWICK DEVELOP SUB-WOOFERS
Keswick Audio Research, Unit C, Glasshuoghton Industries Centre, Glasshuoghton, Castleford. West Yorks. WF10 4QH. Tel: 0977 603836.

TEAC BOXING CLEVER
The replacement for the P500 CD transport, the P700, is now available from TEAC and it features VRDS (Vibration-free Disc-clamping System) technology. Other upgrades also include a high density chassis and BMC (Bulk Moulded Compound) base. The P-700 will retail for £899 and the matching DAC, the D-700, uses four twenty-bit DAC’s and an eight-times oversampling digital filter. It retails for £599.

TEAC U.K. Ltd. 5 Marlin House, The Croxley Centre, Watford, Herts. WD1 8YA. Tel: 0923 819630.

NAIMING CEREMONY
Naim Audio, the Salisbury based specialist hi-fi manufacturer, have just announced a number of new products. The first is the £500 Nait 3 integrated amplifier. It offers up-rated power output and good flexibility, being supplied with either moving coil or moving magnet phono inputs, or alternatively as a line level only amplifier. It can also be used as a separate pre-amplifier, which is handy for those future upgrades.

Naim have also announced replacements for the NAC 62 pre-amplifier and NAP 90 power amplifier: the £405 NAC92 and the £396 NAP 90/3. This amplifier combination claims to offer lower noise and greater stability, plus updated styling.

There is also an addition to Naim’s acclaimed range of tuners: the NAT03 which retails at just under £500. The '03 has circuitry based upon other NAT models and Naim claim that “the sophisticated power supply and toroidal transformer ensure that its sound quality is unmatched by other tuners in its price range.”

Naim Audio Ltd. Southampton Road, Salisbury. SP1 2LN. Tel: 0722 332266.

SPEAKING NOUGHTS AND ONES
Meridian Audio have developed a new pair of digital speakers, the DSP5000s which retail for £2,950 in black, or for £3,070 in rosewood. They are equipped to handle sampling rates between 32 and 48kHz and use eighteen bit Delta Sigma converters with twin phase lock-loops. Each driver is also equipped with a seventy watt power amplifier that they claim produces a sound pressure level of more than 108dB.

Meridian Audio Ltd, 14 Clifton Road, Huntingdon, Cambs. PE18 7EJ. Tel: 0480 52144.

MID RANGE UPGRADE
Well its not a G1, an SE or even a Turbo - instead Denon have given their new upgraded PMA-350 the II suffix. The PMA-350 II has improvements that consist of a new main circuit board and it also caters for all tastes by including a switched tone control and a phono stage. This amplifier is also fully compatible with bi-wiring applications and costs a competitive £219.99.

Hayden Laboratories, Chiltern Hill, Chalfont St. Peter, Gerrards Cross, Bucks. SL9 9UG. Tel: 0753 888447.
REFLEX TRANSMISSION LINES
TDL Electronics have introduced a range of more affordable loudspeakers which are based on the transmission line principle. Entitled ‘Reflex Transmission Lines’, there are four models which vary from a small bookshelf design up to a floorstanding unit. Prices for the new range are between £99.95 and £399.95.

TDL Electronics. P.O. Box98, High Wycombe, Bucks. HP12 3AB. Tel: 0494 441191.

HOME GROWN HARMANS
Harman Audio have just released their first U.K. designed and built loudspeakers to bear the Harman Kardon badge. The new ‘LS’ range is made up of three models which all use an Audax soft dome tweeter and either paper or glass-fibre bass/mid range units. Prices of the models range between £169 and £299. Harman Audio have also relocated to the new address listed below.

Harman Audio, Unit 2, Borehamwood Industrial park, Rowley Lane, Borehamwood, Herts. WD6 5PZ. Tel: 081 207 4572.

POWERFUL AVI AMPLIFIER
AVI have just launched their series 2000 power amplifier. Weighing over fifty pounds, this hefty amp costs £1399, but boasts a mighty power output of 250 watts per channel into eight ohms. The design uses bi-polar output devices and claims to offer high open-loop linearity and minimal distortion.

A V International Ltd. Unit F3C3, Bath Road Trading Estate, Stroud, Glous. GL5 3QF. Tel: 0329 231773.

STOP PRESS

DOLBY SURROUND ON THE BOX
The BBC have started to broadcast in Dolby Surround. The first production, a documentary on the Battle of the Atlantic, was broadcast at the end of May. This allowed the multi channel information to relayed to those with Dolby Pro Logic equipment, adding further refinement to stereo TV broadcasts. Further broadcasts are set to follow in the near future.

GIVE YOUR CDS A TREAT
Goldring products have developed a specialist treatment for CDs which claims to fully clean the disc and to also reduce refractions off the disc’s surface. The product, called ‘Perfect Sound CD Control’ costs £14.99 for a tube of treatment solution.

Goldring products Ltd, 8 Greyfriars Road, Bury St. Edmunds, Suffolk. IP32 7DX. Tel: 0284 701101.

MONOPOLIES AND MERGERS COMMISSION ACT ON CD PRICING.
Following a request by Sir Bryan Carsberg, Director General of the Office of Fair Trading, the Monopolies and Mergers Commission (MMC) has started their investigation into the supply of recorded music in the U.K. The MMC inquiry is headed by Graeme Odgers, a former managing director of British Telecom. The MMC is due to report their findings to the Secretary of State for Trade and Industry on 31st March 1994.
This is not a complete list of QUAD retailers.
Visit your Quad dealer for full details of the Quad range of products including the new Quad 67 CD player, some subwoofers for both the ESL-63 pleasant surprises and original ESL and speaker cables.

contact Quad
30 St Peter’s Road
Huntingdon PE18 7DB
Telephone 0480 52561
Fax 0480 413403
The Trophy
A TRUE AUDIOPHILE STAND AT AN AFFORDABLE PRICE
Designed for bookshelf type speakers, the partington trophy brings out the full potential of your loudspeakers, whether they be budget or high-end.

Size: 60cm High
Top Plate: 16.5cm x 16.5cm

Please phone for details on the full range of Partington Stands and Accessories

Partington and Company
UNIT 9 KESTNER INDUSTRIAL ESTATE
KING EDWARD ROAD,
GREENHITHE, KENT,
DA9 9AP ENGLAND
TEL: 0322 383712
FAX: 0322 381117

The new fuller’s audio SULTAN loudspeakers bring you the standard of reproduction you expect at a price you can afford.

For only £329 you get a fully integrated, high performance loudspeaker. A two way twin reflex port design with hard wire crossover yields a clean extended bass with an overall lively and involving presentation.

For further information and a demonstration visit your local dealer, or contact us direct.

I would like to know more
Name ____________________________________________
Address __________________________________________

fuller’s audio, 20 Tunbridge Road,
Southend-on-Sea, Essex SS2 6LT 0702 612116

HiFi Bargains

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Condition</th>
<th>Was</th>
<th>Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arcam Black Box III</td>
<td>DAC</td>
<td>Ex Dem</td>
<td>£300</td>
<td>£199</td>
</tr>
<tr>
<td>Audiolab 8000</td>
<td>DAC</td>
<td>Brand New</td>
<td>£700</td>
<td>£560</td>
</tr>
<tr>
<td>Creek 4045S2</td>
<td>Amplifier</td>
<td>Ex Dem</td>
<td>£230</td>
<td>£160</td>
</tr>
<tr>
<td>Denon 480R</td>
<td>Amplifier</td>
<td>Ex Dem</td>
<td>£220</td>
<td>£179</td>
</tr>
<tr>
<td>Linn LK1</td>
<td>Pre Amp</td>
<td>S/Hand</td>
<td>£300</td>
<td>£200</td>
</tr>
<tr>
<td>Meridian 203 DAC7</td>
<td>DAC</td>
<td>Ex Dem</td>
<td>£560</td>
<td>£350</td>
</tr>
<tr>
<td>Exposure XV</td>
<td>Amplifier</td>
<td>Ex Dem</td>
<td>£650</td>
<td>£420</td>
</tr>
<tr>
<td>Quad 606</td>
<td>Power Amp</td>
<td>Ex Dem</td>
<td>£680</td>
<td>£500</td>
</tr>
<tr>
<td>Cyrus PSX</td>
<td>Power Supply</td>
<td>Ex Dem</td>
<td>£300</td>
<td>£250</td>
</tr>
<tr>
<td>Cyrus</td>
<td>Tuner</td>
<td>Ex Dem</td>
<td>£300</td>
<td>£250</td>
</tr>
<tr>
<td>Cyrus Two</td>
<td>Amplifier</td>
<td>Ex Dem</td>
<td>£280</td>
<td>£289</td>
</tr>
<tr>
<td>Tannoy 611</td>
<td>Speakers</td>
<td>Ex Dem</td>
<td>£420</td>
<td>£299</td>
</tr>
<tr>
<td>Tannoy 609</td>
<td>Speaker+Stand</td>
<td>Ex Dem</td>
<td>£370</td>
<td>£279</td>
</tr>
<tr>
<td>Tannoy 605</td>
<td>Speaker+Stand</td>
<td>Ex Dem</td>
<td>£255</td>
<td>£179</td>
</tr>
<tr>
<td>Denon PMA350</td>
<td>Amplifier</td>
<td>Ex Dem</td>
<td>£230</td>
<td>£150</td>
</tr>
<tr>
<td>Denon DRW650</td>
<td>Twin Cassette</td>
<td>Ex Dem</td>
<td>£220</td>
<td>£179</td>
</tr>
<tr>
<td>Heybrook HB1.3</td>
<td>Speakers</td>
<td>Ex Dem</td>
<td>£260</td>
<td>£229</td>
</tr>
<tr>
<td>JPF Sonata Plus</td>
<td>Speakers</td>
<td>Ex Dem</td>
<td>£135</td>
<td>£99</td>
</tr>
<tr>
<td>Rotel 980BX</td>
<td>Amplifier</td>
<td>Ex Dem</td>
<td>£400</td>
<td>£319</td>
</tr>
<tr>
<td>Denon D100X</td>
<td>Mini System</td>
<td>Ex Dem</td>
<td>£770</td>
<td>£599</td>
</tr>
<tr>
<td>MicroMega Leader</td>
<td>CD Player</td>
<td>Ex Dem</td>
<td>£850</td>
<td>£650</td>
</tr>
<tr>
<td>MicroMega Micro</td>
<td>DAC</td>
<td>Ex Dem</td>
<td>£300</td>
<td>£225</td>
</tr>
<tr>
<td>Deltec Little Bit</td>
<td>DAC</td>
<td>Ex Dem</td>
<td>£400</td>
<td>£300</td>
</tr>
<tr>
<td>QED Digit</td>
<td>DAC</td>
<td>Ex Dem</td>
<td>£139</td>
<td>£90</td>
</tr>
<tr>
<td>DELTA 170.3</td>
<td>CD</td>
<td>Ex Dem</td>
<td>£700</td>
<td>£499</td>
</tr>
<tr>
<td>Black Box 5</td>
<td>DAC</td>
<td>Ex Dem</td>
<td>£300</td>
<td>£239</td>
</tr>
<tr>
<td>DELTA 70.3</td>
<td>CD</td>
<td>Ex Dem</td>
<td>£700</td>
<td>£489</td>
</tr>
</tbody>
</table>

RADFORD HiFi
43 King Edward Court, Windsor.
Tel 0753 856931

A NEW REFERENCE

fuller’s audio combining innovation with classic design
A big hole in a cliff face, lots of international flags and acres of new railway sidings greeted us, but we ended up trundling down a steep cobbled street just one-vehicle wide and lined with Ye Olde Worlde shops leaning this way and that. Those are the contrasting sights of Folkestone, where the old lives on in quiet tranquillity, in stark contrast to the intrusively new bursting forth from the ground just a few miles away - the Channel Tunnel.

There could hardly have been greater contrasts; beside the road on the way in sits a giant boring machine, the machine that finally - after many attempts over hundreds of years - managed to drill a tunnel under the English Channel. All around it, painfully so, are massive machines altering the landscape, but our preoccupation wasn’t with the mayhem of the new, nor with the ugly scars it was producing, but with gentler and more readily appreciated technologies down within Folkestone’s old town. There lay olde worlde valves, from as far back as 1919, courtesy of Friedrich Kammerzeit. He has bravely started a hi-fi shop on Britain’s South Coast, whilst continuing to live and run a parallel business in Hockenheim, South West Germany.

Bravely? Britain’s South East shore line once had popular holiday resorts and busy ports. It’s attractions faded when people found it was cheaper and easier to take a / 47 to the Costa Brava than struggle down a tiny road to be greeted by uncertain weather and dowdy resorts where the only certainty were the restaurants with Formica table tops and a menu dominated by tinned peas. These days commerce from the port thunders through in the form of heavy trucks, whose only natural habitat is the motorway. So whilst the Channel Tunnel joins forces with the M20 and the ferry to bring Folkestone into prominence, down in the old high street, which once bustled with trade, shops now stand grimly empty.

Friedrich is unperturbed by this. His shop has been renovated and sits like a little time capsule, built in another time when doorways were barely six foot high and stairways were a tight squeeze for a cat. In spite of this, accompanied by a lot of grunting and manoeuvring, we managed to haul the KAL 211 amplifier - heavy for two men to lift - up a flight of stairs to a demo room. Since Friedrich had been enthusiastic and dedicated enough to drive all the way from Germany with it in the first place, we thought it only reasonable to journey down to deepest Folkstone to return it, and take a look at Friedrich’s new shop.

A dedicated valve amplifier lover and audiophile, Friedrich insists that Britain appreciates the valve amplifier better than most places in Europe, an observation I’ve encountered before. Perhaps it’s because Britain’s electronics industry was at its strongest, turning out TVs, hi-fi, record players and radiograms when the valve was king. An empathy for the thermionic valve remains. Transistors are soulless little things in comparison; they’re suited to mass manufacture, to stack systems, to commodity market status where advertising and marketing, rather than product performance, determine sales.

That’s not the world of Friedrich or Kammerzeit Audio Labs, in the The Old High Street, Folkstone. They stock specialist British hi-fi, his own valve amplifiers and loudspeakers and a range of high quality cables and connectors brought in from Germany - plus the giant KAL 211 valve amplifier featured on the front cover of our June ’93 issue. If you want to see or hear this unique amplifier, take a trip to the South Coast. Ignore the hole in the cliff face and the grandiose civil engineering project; it’s about time too after hundreds of years of failure! Down in the Old Town, Folkestone has something to be really proud about.

K.A.L. (UK) Ltd.,
45 The Old High Street,
Folkestone, Kent CT20 1RN.
Tel: 0303-245005

Valves & Vinyl
at KAL U.K.

Valves and vinyl find favour with Friedrich; here a Linn LP12 with modified amplifiers from conrad-johnson and Papworth feed KAL’s own loudspeakers.
DAT NOT DCC

Let’s hope Richard Brice is wrong in his interesting prognosis for DCC (recorded message left in the March issue on page 45).

DCC still leaves much to be desired. The DCC format was indeed bold - the general trend in digital storage and retrieval towards more data and higher resolution was very cunningly reversed (making DCC almost useless for any other application) and the result is unfortunately distinctly audible.

The format has the other drawback of exceptional lethargy. Rewinding a 90 minute DCC tape after 45 minutes of playback takes two and a half minutes (my DAT deck will rewind 45 minutes of tape in 16 seconds), reminding one of some of the early cassette decks of the 1970s (today’s budget analogue decks are faster).

As prices for DAT equipment continue to fall and the drawbacks (or rather lack of advantages) of DCC become more apparent, DAT could well experience a come-back.

A rather poor replacement for the cassette, DCC may quite possibly fool some of the people all of the time, but let’s hope that at least some more discerning listeners will give the new generation of DAT decks the auditioning they deserve - it’s well worth the search!

Douglas Shaw
Portsmouth,
Hants.
P.S. Anyone considering an upgrade to their CD-Player to take advantage of the better D/A Converters now available should buy one of the new generation of DAT Decks. Using the digital input of the DAT deck one can make use of its internal DA Converter. To do this just press the record button. When no cassette is inserted the cassette transport remains stationary thus avoiding unnecessary wear and tear.

DCC should not be discounted quite so easily; their appeal certainly seems to have persuaded some people. Consider the music lover who has large number of pre-recorded and home recorded analogue cassettes and a collection of valuable vinyl that he wishes to convert to tape to avoid wear. DCC is an ideal medium for this customer. It will play back all analogue tapes and provide a reasonably cheap, high quality digital recording from vinyl.

DAT on the other hand will not allow older analogue tapes to be replayed. It may offer higher quality recordings, but from my experience with DAT, recording from an analogue source could prove an unwieldy task for the average music listener.

I agree with you that it is worth auditioning the latest generation of DAT players which offer a level of performance close to that of the best CD players. They do forward-wind and re-wind tapes extremely quickly and recording from a digital source is a dodgy, with all of the track information automatically supplied from the original. Each medium suits a different person’s music requirements.

One final note, using the internal DAC of a DAT machine is not the wisest thing to do. For £300 or so one could buy an external DAC and improve the performance of the DAT player CD player and any other digital source.

Yep! From experience I find the best way to improve the sound of DAT is to use an external convertor.

Nk

WIN FURUKAWA FA-2010 BALANCED ANALOGUE INTERCONNECT CABLES

The winner of the most interesting or funniest letter will receive a free set of Furukawa FA-2010 “balanced analogue” interconnect cables, worth £95.

Letter of

I read with great interest that you intend to re-introduce the hobby element into your coverage of HiFi. I very much approve of this trend. For too long now, things have been getting too serious. Half the fun in ‘The Good Old Days’ was the tweaking and bodging of stuff to achieve a tiny increase (or not) in fidelity. Those of us who still build our own speakers, turntables etc. are, I trust, not a dying breed.

I spent a fascinating day with Tim de Paravicini whilst he made a decoder (he didn’t have any completed ones in stock) and tuned up my Trafomatic (now run on a proper aerial, you’ll be pleased to know). The guy is obviously a genius, he could rebuild a Leak in his sleep. We had to pop to his home for his stereo generator and he drives the same way I do: sideways everywhere in a BMW. The people on the industrial estate looked up in horror at the shrieking tyres until they saw who it was and seemed to say “Oh, it’s only Tim”.

Send your letters to: Hi-Fi World Letters Page,
FINDING EXCALIBUR

I have been purchasing your fine "Hi-Fi World" audio magazine off the news stand here in the United States and love it. I plan to subscribe, but don't know what the costs would be in U.S. dollars. Inform me in your response.

I write this letter in hopes that you will print it in your "Letters" column. While working in West Germany for the Army, I travelled to good ole England to buy a turntable and finally decided on Max Townshend's "Elite Rock" turntable. This machine required a "silicon viscous damping fluid" in the turntable bearing and tonearm. Upon my return to the United States, I shipped the turntable sans fluid. To make a long story short, that fluid got lost in the mail, so I need to know where I can purchase more of this fluid, or where I can find Mr. Max Townshend these days, since I would also like to get my turntable and Excalibur tonearm upgraded if possible.

Robert Williams, Baltimore, Maryland, U.S.A.

Max Townshend has been a dedicated player in the UK hi-fi business for over a decade and his products have always been backed up by good customer service. Townshend Audio can be contacted at: Tims Boatyard, Tims Way, Staines, Middlesex TW18 3JY. Tel: 0784-455866

Continued on page 39...
Partington Toppers can be used with your loudspeakers, and a variety of other Hi Fi Equipment - CD Players, Pre Amps, Etc, to greatly improve sound quality. Use Toppers on your loudspeaker stands for enhanced focus and bass control.

**IMPROVE PERFORMANCE FOR MERE POCKET MONEY**

Prices:
- Toppers Pack of 6: £5.95
- Toppers Pack of 8: £7.95
- Big Toppers Pack of 4: £7.95

*** Another sound investment form Partington ***

Please phone for details on the full range of Partington Stands and Accessories.

**Wilmslow Audio**

**THE ULTIMATE HI-FI EXPERIENCE**

- Arcam
- Aiwa
- Audiolab
- B&W Castle
- Denon
- Dual
- Heybrook
- Kef
- Marantz
- Monitor Audio
- Mordaunt-Short
- Nakamichi
- Qed
- Revolver
- Rogers
- Tannoy
- Target
- Teac

Britain's leading loudspeaker kit and drive unit suppliers

Catalogue of our full range £2.00

*Four demonstration rooms*

Wellington Close, Parkgate Trading Estate, Knutsford, Cheshire WA16 8DX

(Dpt HFW)

No appointment necessary  Closed Monday

**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.

---

**Ortofon (UK) Limited,**

Chiltern Hill, Chalfont St Peter, Bucks SL9 9UG.

Tel: 0753 889949.
PRESENTING SOME OF THE FINEST EQUIPMENT MONEY CAN BUY

Monarchy Audio M 22 A digital to analogue convertor
From £995

"The Monarchy Model 22 thoroughly trounces the PS Audio Ultralink and the Audio Research DAC1 which cost double and triple the amount of the Monarchy".

Paul Cervantes
The Audio Observatory
November 1992

Clements Spatial Image Loudspeakers Model Si 300
From £645

"All of our panelists thought we were listening to Loudspeakers in the $1,200 to $1,500 range... so far the 300's are the best we have come across in their price range. A 'must listen for all those who take their music seriously' "

The Inner Ear Report
Summer 1992

AVAILABLE SOON DT 40 A TRANSPORT £1,495

WOLLATON AUDIO, NOTTINGHAM TELEPHONE / FAX: (0602) 284147

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-back' for panel-pin fixing.

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK 100</td>
<td>Twin-core white cable, each core with 130 copper strands (total 260 strands).</td>
</tr>
<tr>
<td>SPK 200</td>
<td>Triple-core grey cable for bi-wiring with twin-core treble (260 strands) and 3-core bass (576 strands).</td>
</tr>
<tr>
<td>SPK 300</td>
<td>3-core blue cable having 12 strands per core (total 36 strands). Requires soldering.</td>
</tr>
</tbody>
</table>

You'd better hound us for the name of your nearest stocks!

Ortofon (UK) Limited, Chiltern Hill, Chalfont St Peter, Bucks SL9 9UG. Tel: 0753 889949.
One of our favourite budget loudspeakers, the Goodmans Maxim, has just been updated. It took us by surprise because of all Britain’s loudspeakers, this one is least in need of improvement, but improve it they have. Why? Was there a problem? Yes, but not with the Maxim. Britain’s oldest loudspeaker company has just metamorphosed from a trading group selling speakers alongside microwaves, back to its core business of loudspeakers alone. The Maxim has been re-launched as the first model of a new range.

I got the impression, talking to Goodmans, that the outgoing Maxim 3 we liked so much, was submerged by being sold with rack systems imported from the East. This prevented it from receiving recognition as a high quality budget miniature in its own right. I have also noticed in the recent past that whilst current Goodmans loudspeakers displayed the same sort of exceptional value they have always done (my memory goes back to the Magister, Mezzo and - especially - the Magnum K of the Seventies), their visibility in the marketplace was poor. We tried to get review samples, but were deflected; they weren’t really being marketed as stand-alone items.

Independence for the Maxim

Now the importers of microwaves and rack systems have departed, going independent as Goodmans Industries. Staying within the T.G.I. Group (Tannoy Goodmans International, who include Mordaunt Short) are Goodmans Loudspeakers Ltd, or GLL. They’re no small manufacturer. Goodmans have always mass produced on a large scale. Their Havant (Portsmouth) factory has drive unit production lines upstairs and cabinet lines plus warehousing downstairs. These days, mass production applies mostly to in-car drivers, a business they share with Elac in Wales. But real hi-fi is going to be given more prominence once again.

The Maxim has always been a balanced but lively sounding little loudspeaker. The first one was designed around twenty-five years ago by Laurie Fincham (see my column this month) before he went to KEF. The second one, Maxim 2, was fast and lively, but it had a treble sting. The third, Maxim 3, was launched last year and became an instant favourite with us. It managed to combine smoothness with liveliness; it was an accurate speaker, yet an entertaining one. At around £120 that seemed almost too much to expect.

Goodmans have comprehensive test facilities and their chief engineer, Geoff Hill, also happens to be a proper dyed-in-the-wool hi-fi enthusiast, which is always a good sign. There’s more to hi-fi than simply meeting conventional engineering criteria, such as flat frequency response, low distortion and what have you. The final assessment has to be made by listening tests, a point at which every engineer ought to be able to surrender the certainties of research to the uncertainties of listening. Being an astute and seasoned listener sharpens the perceptions and strengthens the decisions. The best hi-fi engineers are good listeners; it’s an art, not a job.

The new speaker is just called Maxim. And it isn’t radically different from Maxim 3, so much as a careful development. A small degree of mid-range emphasis has been removed, giving an even flatter frequency response than before. Bass has been extended downward a little by retuning and the electrolytic capacitor in the crossover has been replaced by a film capacitor more suited to high frequency work. This is a tweak we recommended for the Maxim 3 in the December 1992 issue.

I haven’t been through any description of the speaker yet, because there isn’t so much to describe. The size is 270mm high, 170mm wide and 208mm deep, weight 7lbs. There’s small...
Noel Keywood looks for the changes.

polypropylene coned bass/mid-range unit and an aluminium dome tweeter with ferrofluid cooling and damping. The cabinet is covered with a synthetic black ash veneer and it has a port at the rear. That's it! You don't get a lot of woodwork or metalwork at this price; to work well a good budget speaker must be elegantly engineered from a few simple elements.

Goodmans recommend the Maxim is used with amplifiers rated from 20watts up to 100watts. The speaker should be used close to a rear wall in order to enhance low bass; Goodmans recommend 10-20cms. We wouldn't disagree; the rear firing port needs some rear clearance, but used a foot or two in front of a wall, on stands, I found low bass was in short supply. The speaker should be used on rigid stands, it is of such high quality that it deserves them.

Our polypropylene capacitor tweak for the Maxim 3 made a big difference, but we felt that treble could become a little sharp at times. Goodmans concurred. Their view was that electrolytics might smooth over the treble, but this was no bad thing with coarse sounding budget amplifiers. The new Maxim lacks this defence, making it more revealing at high frequencies. I was surprised at just how good its tweeter is listening to Peter Hammil's 'Primo on the Parapet', from the Noise album. Starting with slow deliberation, the spinet-like plucked guitar strings are well delineated, their threat fully conveyed. As Hammil moves the track upward in intensity, bringing in other instruments and raising the pace, clarity was so well maintained that amongst the swelling instrumentation a delicately struck triangle was easy to discern; positioned exactly between the speakers, it rang delicately in the background. Fine, low level resolution like this isn't a common property in budget loudspeakers. The Maxim has a good tweeter, inexpensive but effective, and free of nasties.

More Bass!

There was a discernible changeover in character from the polypropylene bass/mid-range unit to this tweeter, partly due to a small dip in the crossover region and to their differing natures - plastic and metal. Properties I hadn't noticed before were a small amount of box boom behind vocals - emphasising and overhanging the natural resonance in male vocals in particular. I wondered whether the deeper bass was gained by lessening damping and so making return-energy a little more obvious, since I don't find this phenomenon in the Maxim 3 - and we did a lot of listening and experimenting with it. It was when I disconnected our own 300B no-feedback triode valve amplifier - a very specialised beast - and connected up an Audiolab 8000C/P combination, which serve to represent good solid-state amplification, that this condition started to resolve itself. Often - but not always - the Audiolab sounds tight in the bass. In this case the 300B was tighter and deeper, especially when the Maxims were pulled away from the rear wall. With the Audiolab, which is far more representative of the sort of amplifier the Maxim will see in everyday use, the bass became softer and larger. Goodmans have loosened it to get more downward extension and in this they have succeeded, at the expense of bass quality and natural balance on vocals, especially deep male vocals. It was Scott Walker's rich tones on 'No Regrets' that gave me most regret - he really set the new Maxim humming down at low frequencies. We had our own modified Maxim 3s to hand for comparison and the differences became clear upon changing over. The old ones had less deep bass, but more control and certainly better overall balance. We clearly preferred the original balance.

There was a just-discernible but not disconcerting change of perspectives in contrast to the old Maxim.
Kiss my Aura, Dora

Frank Zappa, '74

AURA VA100 EVOLUTION

For details and stockists of the AURA range of hi-fi phone 0903-750750

UK Distribution: B&W Loudspeakers (UK Sales) Ltd., Marlborough Road, Lancing, West Sussex, BN11 8TR

World Radio History
vocalists moving back on the sound stage slightly, the warmth of the lower mid-range becoming a little more apparent. This added some body and smoothness to the sound, but the Maxim was always a smooth and even sounding speaker, obviously free of peaks and dips and unnatural distorting emphases, so it has just become a little smoother and easier.

After our own speaker, which has a dedicated high performance mid-

"it paints up clear stereo images between the speakers and sounds beautifully cohesive in its delivery"

range unit that is brutally revealing, the new Maxim had a certain easiness, almost a casual air to its sound. It has become a little less challenging to listen to; vocalists have a smooth fullness to their voices that I found a little warming in effect, but then I am using monitor standard criteria here, on a speaker that costs £119.95.

Small loudspeakers can and do give fast bass, but their upper bass is composed of harmonics and weak on fundamentals. As often as not, strong bass doubling occurs which alters timbre, transferring energy out of fundamentals and pushing it into the harmonics. The new Maxim gives deep bass, but its small drive unit struggles manfully to do this and there's little note differentiation. Deep bass of good quality just does not come from a small drive unit in a small box and no amount of conjuring will tease it out. Goodmans could well reconsider this matter.

In spite of my reservations about the new balance of the Maxim at low frequencies, and the boom that results, it's still an exceptional budget loudspeaker. In being critical, I've forgotten to mention that it paints up clear stereo images between the speakers and sounds beautifully cohesive in its delivery, this is the benefit of being a small 'point source' loudspeaker. As budget loudspeakers go, the new Maxims continue to offer superb results, well above their price league. They remain one of Britain's best budget loudspeakers.

---

**MEASURED PERFORMANCE**

The Maxims are back, not that they ever left, but this time they are aimed at the audiophile market rather than at discount, high-street chain stores. The tweeter has changed colour and they are now badged as GLL Maxims, standing for Goodmans Loudspeakers Ltd. What hasn't changed however, is their remarkably flat frequency response. The new Maxims do have a little more bass than the old '3s so they should be able to deliver some real clout.

Through the vital midrange region the Maxims are extremely flat, the tweeter integrating very smoothly with the bass/mid driver. There is a small dip between 6-8kHz where the ear is most sensitive. This ensures that any distortions such as ringing that occur within this region will be restrained rather than emphasised. Even with this taken into account the frequency response stays within 2dB limits from 125Hz up to 16kHz and is almost ruler flat for the majority of the time. This means the Maxims will sound neutral, smooth and coherent.

There's sensitivity remains unchanged at 85dB for a nominal 1 watt input, which is about average. The new Maxim doesn't present such an easy load to an amplifier as the Maxim 3, the overall impedance being 5Ω lower, at 7Ω overall, than the original. This means that the new Maxim will demand more power from the amplifier, especially where the impedance curve dips below 5Ω. This makes it a fairly heavy load to drive, considering it will be used with budget amplifiers. However, most modern solid-state amplifiers will be more than able to provide the necessary current required for full power.

Goodmans Loudspeakers Ltd claim to have launched the new Maxim as a serious audiophile loudspeaker. In measurement terms there was little they could do to improve upon the Maxim 3, but the addition of higher quality capacitors and a little more bass extension should beef up the Maxim still further and keep the competition on its toes.

---

**Frequency Response**

A response flatness that most other manufacturers would envy.

**Impedance**

Overall impedance of the new Maxim is lower than that of the '3s.
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.

ABERDEEN
HOLBORN HI FI 0224 585713

BELFAST
L.R.G 0232 451301
ZEUS AUDIO 0232 332522

BIRMINGHAM
PETERS Hi Fi 051 647 5626
HORNTONS ELECTRONICS 021 643 0972

BLACKBURN
ROMERS Hi Fi 0256 807999

BOLTON
CLEARTONE Hi Fi 0204 31423

BRADFORD
CLEARTONE Hi Fi 0274 89266

Bristol
AUDIO EXCELLENCE 0272 264975
PAUL ROBERTS 0272 250790
RADFORD Hi Fi 0272 240797

CARDIFF
AUDIO EXCELLENCE 0222 238965
CARLISLE
PETER TYSON 0228 218691

CHESTER
PETERS Hi Fi 0244 320603

CROYDON
SEVENOAKS Hi Fi 081 666 1203
ZEBRA Hi Fi 081 688 2203

DERBY
ACTIVE AUDIO 0332 385185

CASTLEH 110 AUDIO 0701 21827

EDINBURGH
IN Hi Fi 031 225 8054

ENFIELD
SEVENOAKS Hi Fi 081 342 1973

GATESHEAD
LINTUNE AUDIO 091 477 4167

GERMANY
MUSIC ROOM 041 332 2712
HARROGATE
HARRINGTON Hi Fi 0425 504274

HOONSLAW
MUSICAL IMAGES 081 509 5802

HULL
SUPERS 0482 4041

LEEDS
20TH CENTURY 0709 81818

LEICESTER
LEICESTER Hi Fi 0113 339153

LIVERPOOL
BEAVER RADIO 051 709 4889

LONDON
BARTLETT Hi Fi 071 607 2296
COVENT GARDEN RECORDS 071 359 7635
Hi Fi EXPERIENCE 071 580 3535
Hi SPEAK 081 349 1166
SPATIAL AUDIO 071 637 8702

Maidenhead
B AND B Hi Fi 0628 73420

MANCHESTER
PRACTICAL Hi Fi 0861 839 8864

NEWCASTLE
LINTUNE AUDIO 091 232 3994

NEWTON LE WILLOWS
TOMORROWS STUDIOS 0925 601154

NORTHWOOD
NORTHWOOD AUDIO 0923 820077

NORWICH
BENNETS RETAIL 0603 630111
NOTTINGHAM
NOTTINGHAM Hi Fi 0602 786919

OXFORD
AUDIO CONSULTANTS 0865 790879

Preston
NORMAN AUDIO 0772 53052
PRACTICAL Hi Fi 0772 539358

READING
B AND B Hi Fi 0734 585350
SEVENOAKS
SEVENOAKS Hi Fi 0134 499555

TAMWORTH
ACTIVE AUDIO 0827 5355

TORQUAY
RADFORD Hi Fi 0903 326723

WORTHING
PHASE THREE Hi Fi 0903 24655
DCC is gathering pace with the arrival of Philips' second recorder, the DCC 600 and the continuing success of Marantz's DD-82.

Jonathan Jordan investigates their worth.

Less than nine months ago, Philips launched their first Digital Compact Cassette recorder, the DCC 900. It became the standard bearer for this evolutionary cassette system, albeit a lone one. Now extra troops are gathering behind the flag. Such examples are the newly designed Philips DCC 600 and the two eighteen-bit recorders produced by Philips' Japanese subsidiary, Marantz.

The Marantz DD-82 and the technically similar DD-92 are distinguished by being eighteen-bit recorders, the main differences between them being appearance and the use of better output circuitry on the '92. The recorder on test, the '82, retails at £649.90 and is, I feel, more visually attractive than the original Philips recorder. It is not, however, any smaller, its height alone making it difficult to slide into the most generous slot offered by my Target equipment rack.

The connections to the DD-82 are comprehensive: it has optical and coaxial inputs and outputs, along with gold plated analogue connections. In addition to the fixed line output, there is a variable output which gives remote control volume.

Philips DCC 600 seems to have heeded the criticisms levelled at its older brother, being significantly smaller and lighter than both the DCC 900 and the DD-82. Its price is also more competitive, although £499.99 is still higher than most quality cassette decks.

"Digital tape formats are surprisingly complex to use"

Philips' model comes complete with digital and analogue coaxial inputs, but no optical connectors. This makes its use with newer Japanese CD players limited due to their use of optical outputs only. A full function remote control is also provided which gives welcome 'armchair' operation.

Digital tape formats are surprisingly complex to use. All of them require some familiarisation before tapes can be properly compiled so that the tracks are sequentially numbered and an unbroken time code runs through the length of the tape. Both the DD-82 and DCC 600 instruction manuals help with this, but they cannot magically eliminate the innate complexity of many of the functions. It takes concentration to learn how to use these machines if every function and format the recorders have to offer is fully understood; this is a problem with DAT (Digital Audio Tape) too.

Although the main functions involving playback of pre-recorded cassettes can be mastered in a matter of seconds, the more complex recording functions require several practice runs before they become familiar. For simplicity, the track numbering facility can be ignored and recordings made in similar fashion to a normal tape deck, but this will result in slower track access times.

The Philips DCC 900 (reviewed in the September 1992 issue) introduced a range of features provided by DCC. Text information gives details of the pre-recorded software; album title, the artist's name and track titles can be scrolled across the display during playback.

Then there are various inaudible markers that can be recorded onto...
of setting levels is removed, and even when recording from an analogue source the Marantz provides 'over' indicators that provide an easy way of accurately setting record level. The 'append' feature searches a tape for the end of the last recording. After a new recording has been made, 'Reset' allows the track to be sequentially identified and marked so that direct track access and the time facilities (track time, time remaining etc) work properly.

A novel technique introduced by DCC - one that isn't entirely popular amongst purists - is the use of data compression. It removes information that is deemed unimportant to the human ear. The PASC (Precision Adaptive Sub-band Coding) system, as it is called, reduces the amount of digital data that has to be recorded so that the code can fit onto an inexpensive cassette. A digital compact cassette can only store about a quarter of the digital information contained on a CD, for example, so complex processes involving psycho-acoustical theory have been developed to enable this reduction of the data to be achieved, and remain undetected by the human ear.

**MARANTZ DD-82**

In conjunction with Philips' engineers, Marantz have produced what they term "a further enhancement to DCC" in the DD-82. Analogue signals are digitised to eighteen-bit resolution we are told, before being recorded digitally. Most Digital Audio applications use sixteen-bit code (CD and DAT for example). The use of more bits results in more information (262,144 discrete levels compared to 65,536 for sixteen bit) being passed to the PASC data compressors. Since the purpose of PASC is to reduce this digital data so that it can fit onto an ordinary cassette tape, throwing four times as much information at it seems like a curious thing to do.

I asked Marantz and Philips how this apparent contradiction was resolved, but no-one could provide a satisfactory explanation. Was the eighteen-bit word simply truncated? Did PASC have to throw a lot more information away? Does the ADC operate at eighteen bits internally but output a sixteen-bit code?

The explanations offered by Marantz left me confused, as apparently the system can accommodate 24 bit resolution! The final judgement I made was that either the eighteen-bit description is a misleading number trick or that the PASC system is ultimately more powerful than I initially anticipated.

**Analogue Recording**

Using the recorder's comprehensive recording features, I soon managed to compile seventy minutes of various types of music which were all direct copies from analogue sources. One of my first selections was 'Va Pensiero' from Verdi's Nabucco. This was reproduced with a surprising degree of warmth and mid-range clarity and I was particularly impressed by the way the Marantz managed to track the choral transient. It showed only slight strain in the upper mid-range. 'Don't Stand so Close to Me' by The Police also managed to sound suitably well proportioned and the image quality was very good, the clarity of Stewart Copland's drum kit and Sting's bass and vocals projected forwards.

The standard metaphors and expressions used to describe the sound of mediocre CD players - clinical, sterile, coarse, harsh, thin and lacking in warmth - could not be applied to this recorder's reproduction of analogue recordings. The DD-82 managed to move away from the aura of digital sound and reproduce recordings with a sound I can only describe as 'analogue'. The recorder could not quite match the clarity and precision of the originals, but only slight losses in the bass, treble focus and transient attack of the midband served as noticeable discrepancies between the originals and the recordings. This did not detract, however, from the pleasure of compiling my own collection of Mozart, Mussorgsky, Pink Floyd, Rachmaninov, Fleetwood Mac, David Gray, Bryan Ferry and Verdi all on one cassette.

**Digital Recording**

It seems that the eighteen-bit system successfully allows theory to become practice when making recordings from an analogue source. Unfortunately, direct digital transfers from CD did not match the quality of the analogue recordings. Zakiya Hooker's 'Mean, Mean Wee Man' which she performed with her father, John Lee, had the two sets of vocals well balanced, but the guitars sounded vague and ill-defined. Likewise, the drums lost their knife edged attack and the cymbals and high hat seemed to blend into a dull "tis-tis" sound. The bass response was gutsy and powerful, the definition however, was very lazy and the timing of the notes seemed to drift slightly, causing some loss of impact.

Rachmaninov's Piano Concertos were acceptable with the piano unaccompanied, but as the orchestra entered the general character changed and it felt like a set of cushions were being pressed over my ears. The recorder did not return to the harshness of early sixteen-bit CD recorders, instead it seemed to produce a muddy, muffled and swirling sound that was smooth but simply undefined. Billy Joel's title track from 'An Innocent Man' was relaxed, smooth and easy to listen to, but little additions like the clicking of fingers were cruelly neglected. The user-created digital recordings were not unpleasant, but instead the atmosphere and charisma of the music had been by-passed.

The soundstage seemed to reduce dramatically with digital transfers; instruments were confined to a limited area. The vision of a whole orchestra or band standing on a podium in my listening room flashed through my mind. It was almost as if the music was reduced to a fraction of its former self, like a river inhibited by a huge electronic dam which held back the majority of the music and only allowed a trickle to pass through.

**DCC Playback**

These problems were not apparent with pre-recorded software. My ever increasing selection of DCC albums seemed to have a very pleasant air to them. The DD-82 in particular gave an ambience and orientation of Sting's new album: 'Ten Summoner's Tales'. The musical performance had panache; the Marantz managed to exhibit an...
individual musical character and expression that distanced it from the Philips machine.

Interestingly enough, digital recordings prepared on the DCC 600 were also reproduced with a glowing fluidity on the Marantz. It seemed ironic that tracks recorded on the Philips recorder were not only played back with more musically on the Marantz than on the Philips, but also sounded better than the recordings made on the DD-82. This suggests two things: firstly the Philips DCC 600 makes better digital recordings than the Marantz DD-82, and secondly that the Marantz has better output circuitry.

Analogue Playback

The DD-82 also received my approval for playback of analogue cassettes. It has Dolby B and C noise reduction and managed to perform well with all tapes. Pre-recorded tapes sounded clean and high quality recordings I prepared on a Nakamichi DR-1 were enthusiastically reproduced. Understandably, playback was not in the same league as the DR-1, but apart from a slight loss of treble definition and an emptiness in the lower registers, the Marantz performed beautifully. It was good to see that the Marantz had been designed with attention to analogue play back.

PHILIPS DCC 600

Philips, as the inventors of DCC, are understandably keen to produce a machine that promotes all the features of this medium. The first model produced, the DCC 900, was designed to match the 900 range of separates, but the design of the '600 suggests that it is aimed to blend with a component system.

The DCC 600 is also easy to use - more so than the DD-82 - as its logic functions are slightly better explained in the instruction manual. Philips' engineers also proved that their control circuitry was error free: the DCC 600 never malfunctioned whereas the DD-82 wound backwards and forwards searching for markers on a couple of occasions. Upgraded motors are also found on the DCC 600; it managed to rewind a cassette several seconds quicker than its rival. Slow winding was a problem with the original '900.

Analogue Recording

The first few analogue recordings that I made on the DCC 600 were notably different from the Marantz - the Philips gave a very heavy and powerful tint to the music. The low frequency content was boosted, with each note of the bass guitar intruding readily and lingering for longer than on the original recordings. This powerful bass was not particularly exact; I found it could bleed out detail in the mid-range. A recording of Grace Jones' 'Pars' from the Warm Leatherette album had so much gusto and power in the bass that the vocals were overpowered, being lost under the heavy instrumentation. Not only did the bass suffer with analogue recordings, but the treble was also subject to mild truncations. The percussion was moderately close to the original vinyl recording, but a small loss of delicacy indicated that similarities between the recording and original were not being totally preserved.

The Philips DCC 600 showed no weaknesses in other areas - the soundstage was always maintained and the image only rarely suffered with more complicated orchestral pieces. Despite the minor inaccuracies, the Philips was pleasant to listen to; it has a definite level of musical competence built in.

Digital Recording

The DCC-600 turned in more inspiring results when it was given the chance to make digital recordings or transfers. Play-back of these recordings was far more favourable and faithful to the originals. Problems like boomy bass did not strike me initially, but close inspection showed that it still existed, albeit to a smaller degree. The most enlightening feature of these digital recordings, compared to the Marantz, was that the arena of sound had not been shrunk to a holographic miniature of the original. I found the '600 was totally competent at making digital recordings - only with heavy classical pieces like Mahler's Symphony No 3 did it give me cause for concern. In these instances it seemed that the music was starved of nutrition and that the orchestra was not performing in total harmony.

Contemporary music, in particular Rock, gave the Philips a chance to shine: some early Dire Straits tracks seemed well proportioned with the beat happily blasting away, ample in rhythm and amplitude.

DCC Playback

With pre-recorded DCCs it was easy to sit back and enjoy the '600; its reproduction was relaxing and subtle. Only when I consciously pricked up my ears did I notice some impression.

A direct comparison with the Marantz showed that the recorder could be a little lacking in warmth and texture - especially when the music was rooted in the upper mid to high frequency ranges. Although the refinement of the Marantz with analogue cassettes was not matched by the '600, its overall performance impressed me.

Analogue Playback

Like the DD-82, the DCC 600 is equipped with Dolby B and C noise reduction and this function operated well with good quality cassettes. Provided that the tape was not stiff or badly spooled, the search facilities gave no cause for concern and the access of tracks worked well every time.

The faults that exist in the Philips recorder are probably partly attributable to the analogue output circuitry. The recurrent problem of poor definition in the bass and thinness in the upper mid was also detectable with analogue cassette.

CONCLUSION

The DD-82 has a long list of attributes: it offers a serious alternative to Digital Audio Tape for recording from analogue sources. There remains, however, one role that extinguishes any fire that may glow in the heart of this recorder. The DD-82 does not produce good digital copies. In theory, this should be the simplest and most effective form of recording music, but the Marantz DD-82 just couldn't give suitable resolution to these recordings. It is the one area where the Philips DCC 600 is clearly in a different category.

Perhaps it is because the PASC system has been optimised for sixteen-bit digital code - at the expense of sixteen-bit code. The Philips DCC 600 offers a steadier performance. Its presentation with digital recordings was more accurate and musical than those offered by the Marantz, but in other areas it lacked warmth and detail. This new model undercuts the Marantz significantly in price; it's compact and visually more acceptable than the DD-82. Although the DCC 600 does not excel in any specific area, it does well overall. It can definitely be considered as a good ambassador for the new technology •
Design & Development Studio 11 Penfold Cottages Penfold Lane
Holmer Green Bucks HP15 6XR Tel: (0494) 714058

Specialist in valve amps and speakers.
ALPHASON, AMC, ART AUDIO, ALCHEMY, AURA, B&W, DIGITEK, DPA, INFINITY, STUDIO, MONITOR AUDIO, NAD, NAKAMICHI, NOTTINGHAM
ANALOGUE STUDIOS, QED, ROTEL, TARGET, SHURE, SME

MOBILE FIDELITY, SOUNDLABS, AMERICAN GRAMAPHONE, TELARIC, SHEFFIELD LABS, ANALOGUE PRODUCTIONS, DELOS, WILSON, THREE BUND MICE...

45 OLD HIGH ST, FOLKESTONE, KENT
(0303) 245005
Demonstration Available
Record Cleaning Service

BANDOR
MINIATURE LOUDSPKERS
THE SOUND OF EXCELLENCE

ROMULUS
BY C.R. Developments Ltd.

The ROMULUS line level integrated stereo valve amplifier, a small step backward in technology, a giant leap forward in sound sense.

Available direct from
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
Newark Notts
0777 870372
HERTFORD MUSIC
0992 700900

Phone for an early demonstration
DCC MEASURED PERFORMANCE

MEASURED PERFORMANCE

The PASC data removal system has to be tested with a music-like signal if any sensible correlation with real life performance and sound quality is to be made. After trying all available options I've settled on using pink noise, commonly used to represent music during loudspeaker testing; it sounds like strong hiss with a roaring quality to it.

The first generation player from Philips, the DCC900, possessed some peculiarities due to PASC. There's an internal bandwidth threshold within the system set at around 14kHz. Whilst high level signals are faithfully recorded right up to 20kHz, low level ones are not. Bandwidth contracts to 14kHz maximum at -30dB below full record level, for example. I checked this with Philips' chief engineer in Holland and he confirmed that my findings were correct and representative of the PASC system's true performance. The ear cannot easily hear up above 14kHz at low signal levels he told me, and what the ear cannot hear, PASC removes - permanently. That's why the word 'data compression' when applied to PASC is misleading, it's a data removal system, albeit a very sophisticated one operating on digital information.

Because a pink noise test signal must be used, third-octave analysis has to be applied, resulting in the uneven looking, block-contoured frequency response analysis seen in this report. At high recording levels (around -10dB) both the Marantz and Philips reached 20kHz; at low levels (-30dB down) both made it no higher than 14kHz. So although the data removal strategy of PASC can be constantly re-tuned for best results, Philips haven't seen fit to do this yet.

There was a difference in the distortion patterns produced by each machine. Philips' DCC 600 had higher distortion (0.04%) with harmonics lower down in the audio band; the Marantz had lower distortion (0.03%) but with a wider spread of harmonics. The analyses (-30dB signal level) clearly show these differences between the recorders. I suspect they use different convertor chips or digital filters. Distortion on the Philips DCC 600 would be a little more audible, but both match Compact Disc performance pretty closely. Each can resolve down to -90dB - right down to the noise floor.

DCC suffers more from noise than CD, but at around -90dB it's low enough to be inaudible. Both recorders were much the same in this respect. Both also gave around 2Volts output - the Philips CD standard.

I noticed that Philips have improved the motors within their transport. It has quicker fast winding and it's quieter too. I found the DCC 600 easier and more gratifying to use than either the DCC 900 I reviewed in the September 1992 issue, or the Marantz, which also has a confusingly complex front panel. Otherwise, both these recorders are much alike in measured performance, similar to the DCC 900 and perfectly adequate in every parameter. NK.

Both have coaxial digital and analogue sockets, but only the Marantz has optical.

TEST RESULTS

<table>
<thead>
<tr>
<th>MARANTZ DD-82</th>
<th>PHILIPS DCC 600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency response</td>
<td>2Hz-2kHz</td>
</tr>
<tr>
<td>Distortion %</td>
<td>-6dB 0.005 0.006</td>
</tr>
<tr>
<td></td>
<td>-30dB 0.025 0.03</td>
</tr>
<tr>
<td></td>
<td>-60dB 0.8 0.9</td>
</tr>
<tr>
<td></td>
<td>-90 7 8</td>
</tr>
<tr>
<td>Separation dB</td>
<td>left 75</td>
</tr>
<tr>
<td>Noise</td>
<td>-90dB</td>
</tr>
<tr>
<td>Output</td>
<td>2.2V</td>
</tr>
</tbody>
</table>

**Frequency Response**

At high level both the Philips and the Marantz reach 20kHz. At low level where PASC starts working, high frequency information is discarded.

Distortion

0.03%

0.03%

The step in the noise floor is the frequency where PASC starts to take effect.
A Graceful Statement

Rotel’s high end Michi amplifiers certainly look the part, but Eric Braithwaite asks whether they have finesse.

You can guarantee that any Far Eastern hi-fi with piano-lacquered end-cheeks is a ‘statement’. Rotel’s Michi range - RHQ-10 disc stage, RHA-10 line-level pre-amp and RHB-10 power amplifier, all have high-gloss side cheeks of ripe cherry red. Along with a satin finish to the fascias and metalwork best described as ‘gunmetal gold’ in colour; Rotel are certainly making a highish-end statement; it’s also a highish figure on a bank statement, too, adding up to three and a half grand.

While, in sonic terms, the division is perfectly even-handed, with the Michi components extremely well-balanced, no individual outshining another, all perfectly complementary, the monetary spoils are not quite as perfectly divided as Caesar’s Gaul. The power amplifier, a massive and weighty affair, surely calculated to appeal to the Krell-conscious with large heatsinks behind the cheeks, will set the purchaser back £1,550 for its two hundred watts. Suitcase-like, it has a spare set of feet so it can be stood on end - a neat touch. Partner it with the pre-amp and the bank manager will either smile or grimace at the price tag of £975. If you are the old-fashioned sort, like me, with groaning shelves of vinyl, the disc stage adds another £975.

While this is not entirely stratospheric, any pain in the cheque-signing hand will certainly be soothed by the build quality. The casework is exemplary, all input and output sockets (even the tonearm earthing post on the disc stage) are gold-plated. They are even protected by rubber caps when not in use - handy if you are not bi-amping from the pre’s spare pair of outputs - and the sizeable speaker binding posts on the power amplifier have transparent plastic covers, so a carelessly-dropped screwdriver won’t short the inputs. Protection is provided: when the power amplifier is switched on, a small red LED glows briefly above the red-illuminated switch to indicate it is muting to avoid switch-on thumps. The pre-amplifier is normally in standby mode; it also mutes as it’s switched on, the power indicator changing from green to red. A neat touch is a red light which shows the position of the volume control: elegant and self-effacing.

Bells and whistles are there none. The fascia of the RHA-10 is sparse.
MEASURED PERFORMANCE

The Michi power amplifier is enormously heavy, much of the weight lying in the steel of the mains transformer. The reason lies in its current capacity: a high output of 220 watts is delivered into eight ohms and this nearly doubles into four ohms, giving the power amplifier real grunt. It will easily drive any load and from my experience of such amplifiers, their huge power supplies usually give them solid bass and the ability to go endlessly loud, providing the speakers can boogie with equal ability. Giant Tannoy or such like are usually required to absorb the output of a machine like this.

The large-area external heatsinks run quite warm even at idle so this unit is likely biased into Class A mode up to modest output. At low and high levels and at high frequencies there was little distortion, so as likely as not the Michi relies heavily on feedback to linearise its output. I measured no more than 0.008% distortion, this level being a worst case figure for high power delivery at high frequencies - always an arduous task. All inputs have a wide bandwidth of 8Hz-72kHz. There's enough downward extension to complement Compact Disc, but the upper limit is on the high side. With high power amplifiers in particular I have some reservations about providing a lot of gain above 20kHz because of the unwanted outputs in this region both from tuners and CD.

Noise was low at -94dB, especially since the inputs are very sensitive at 150mV for full output. The disc stage, which I measured independently, is an all-discrete design - there isn't a silicon chip in sight. Rotel have used parallelled input transistors to reduce noise, scores of voltage regulators to isolate stages, a large mains supply with screened toroidal transformer to eliminate any likelihood of hum and funny little manual bridging links to change load and gain to suit moving magnet (MM) or moving coil (MC) cartridges. Input capacitance, which measured 220pF can't be changed. Loading for MC measured 100ohms and that for MM 47kohms. The unit has enormous gain, possessing an unusually high input sensitivity of 0.45mV for MM and 0.06mV for MC, both about four times more sensitive than usual when combined with the other Michi components. The output would swing 22volts rms before overload, equivalent to 70mV and 8.5mV input overload levels for MM and MC respectively, a sound of total neutrality with a smooth satin sheen like the equipment's exterior. 'Toujours la politesse' is the Michi's motto; if you value detail above dynamics and delicacy more than drummers wearing Doc Martens, this threesome could not be more ideal.

TEST RESULTS

| Power | 220 watts |
| CD/tuner/aux | 8Hz-72kHz |
| Frequency response | 70dB |
| Separation | Noise |
| Noise | -94dB |
| Distortion | 0.006% |
| Sensitivity | 50mV |
| dc offset | 13/14mV |
| Disc MM | Frequency response |
| Frequency response | 14Hz-83kHz |
| Separation | Noise |
| Noise | -82.5dB |
| Distortion | 0.005% |
| Sensitivity | 0.45mV |
| Overload | 70mV |
| Disc MC | Frequency response |
| Frequency response | 14Hz-83kHz |
| Separation | Noise |
| Noise | -75dB |
| Distortion | 0.005% |
| Sensitivity | 0.06mV |
| Overload | 8.5mV |

Minimal distortion most likely caused by high levels of negative feedback.
Digital to analogue convertors that stand out from the crowd are few and far between at the moment, so to widen our search we have looked towards the shores of America, courtesy of Wollaton Audio, the importers of Monarchy Audio. The £995 Monarchy Model 22A digital to analogue convertor, or £1095 if you opt for the balanced version as we did, has a number of useful features built in, the most obvious being the 0-180 phase reversal switch on the front panel. A flick of this switch has the same effect as reversing the loudspeaker wires, which is the same as changing the absolute phase. This is useful because on some recordings a notable difference can be heard between one phase and another, suggesting the phase of the recording has been muddled somewhere along the line. It takes very little effort to provide this facility and it does have some practical use.

Two rather more important facilities that the Model 22A has are the inclusion of balanced XLR outputs and an internal shorting plug on the circuit board that can be removed to double the output voltage. Monarchy claim the output voltage of the 22A in standard configuration to be 3V, so removing the shorting plug will bring the output level up to 6V. This does not mean that your system will go any louder with the 22A, but it does give a passive pre-amp the extra headroom that is often needed to directly drive a power amplifier to full volume. This is something that I hope we will see more of in Britain in future, due to the increasing number of first rate passive pre-amplifiers available.

Balanced operation is used mainly in the professional Public Address business where long cable runs with minimum noise are required. However, it has its advantages within a high quality domestic system as well. A truly balanced output rejects common mode interference, so a glitch picked up by the audio interconnecting cable, caused by interference from nearby mains cables for example, is cancelled out and the signal passed on undisturbed.

Audio Synthesis have just revealed their Pro Passion passive pre-amp which, with its balanced inputs and output could take full advantage of the Model 22A's 'hi' output facility and balanced XLR outputs. Unfortunately, one was not available in time for this review, but if it is anything like as good as the standard Passion it would be well worth an audition with the Monarchy DAC.

Wiring up the Monarchy Model 22A between a Micromega transport and DPA Digital's new 2005 pre/power amplifiers I found that something was missing. The Model 22A has no power switch, so I presume it is intended that the DAC is left on at all times to keep the circuits at their optimum. There are connectors for both coaxial digital and optical inputs, switched on the front panel. I quickly found the optical input preferable with the Model 22A. In my system coaxial sounded a little too hard and aggressive. The optical gave a smoother, warmer balance, but certainly not a dull one.

In fact even with the optical input this DAC could certainly not be described as soft hearted, it has a fast, lean, dry presentation that reveals the inadequacies of recordings and the coldness of a studio atmosphere. It is the kind of sound that doesn't
This is why the Crystal digital converter chip scores with its big, soft, and rich balance, which partly explains its popularity with manufacturers. The Monarchy doesn’t use Crystal though, instead it uses two Burr Brown PCM63 20-bit DAC chips per channel in a complementary arrangement which is said to produce an extremely linear output. The result is a DAC that won’t smooth over the rough edges of a recording; it delivers those edges hard and without disguise. For example, on P. J. Harvey’s new album, Rid of Me, that vigorous, raw metal guitar work can really pierce the ears - great stuff if you’re preparing to go out to a gig, but when you’ve just got in from work?

One area where caution is needed when considering the Monarchy 22A is in the treble. It is not overbright or harsh in a balanced system, but should there be a resonant ring in that metal dome tweeter, or a little distortion in that monstrous transistor amplifier you are using, it will find it, and when it does your ears will certainly know. In a balanced system the treble is fast, delicate and well focused, sharing a common leanness and unexaggerated quality with the mid and bass.

Monarchy audio have proved to be a good find. For those who feel the Da Capo’s expression of Da Capo, and the Micromega Duo Pro too analytical, there is the Model 22A. And if you are a fan of passive pre-amplifiers and balanced interconnects, the 22A is one of the few DACs that will take full advantage of this kind of set up. My summary has to be a little harsh though; I would prefer to have either the Duo Pro’s breath taking clarity and space, or the depth of expression of Da Capo, than to give up both for a compromise. Harsh? Yes, because this view appears to reject the notion of balance in favour of speciality. Like many though, I enjoy being surprised by exceptional talents, even when they are confined to a narrow area, rather than to be given a polished all round performance that fails to be exceptional. But that’s my view; others may prefer this new converter’s balance.
It wasn't so long ago that metal dome tweeters were a novelty. Recently, however, they've become commonplace. A cynic might even suggest that they're virtually fashion accessories and that a speaker isn't desirable if it doesn't have one.

At the risk of seeming anachronistic, I have to say that I am not greatly impressed by most speakers that use them. I still find that the sound of good fabric or plastic dome tweeters falls more naturally and comfortably on the ear. However, I recognise that the better metal domes have attractive qualities - speed and detail resolution being foremost among them.

Two problems in particular afflict the metal-tweetered speakers that I don't enjoy: one is the subjective difference between the time domain response of the metal dome tweeter and that of the paper or plastic bass-mid-range driver with which it co-exists; the other is the conspicuous nature of the treble produced by many such tweeters. One of the few exceptions is the Epos ES11, whose timing coherence and tonal naturalness are exemplary when the speaker is partnered with appropriate amplification and source components.

It might seem like a massive oversimplification of the complexities of speaker design, but it seems logical to me that if you're using a metal-dome tweeter it might be best to use a bass-mid-range driver fashioned from similar materials. This ought to remove some of the disparities between the units and so provide a better chance of attaining a sound that is consistent across the speaker's bandwidth. Manufacturers such as Acoustic Energy and Monitor Audio have already adopted this approach successfully, as has America's Boston Acoustics for its new Lynnfield 300L and 500L high-end models.

A new entrant into the full-metal-driver scene is Britain's JPW, a company best known for outstandingly well built budget speakers such as the Minim and Sonata. Where the price of most all-alloy diaphragm designs is comfortably removed from the budget sector, the JPW Ruby I manages to scrape in under £500 in black, oak, mahogany or walnut veneers. If you must have Santos rosewood there's a £60 premium. I'm not especially keen on rosewood and would be quite happy living with the oak-veneered review samples, which were exquisitely finished and looked superb.

The Ruby 1s are compact, reflex-ported bookshelf speakers that JPW recommend for use in a "limited listening environment. If that mid-Atlantic verbiage means a small room then the company will doubtless be surprised that they provided satisfactory - i.e., realistic - listening levels in my listening environment, which is in no way limited. I always play music while I'm working and on those occasions I sit more than twenty-five feet away from the speakers.

The company supplies a four-pillar, welded stand, the £129 HS1, for the Ruby I. I didn't have a pair of these to hand and so used the speakers on Slate Audio stands instead. I find that these elegant but expensive supports have minimal inherent character and provide an exceptionally neutral support. This gives speakers that are suitably clean in the mid-range an unrivalled opportunity to disappear.

Experimenting with different couplings between the speakers and stands showed that Black-Tak was preferable to cones, spikes or Slate Audio's standard metal domes. With the speaker attached by four small peas of Black-Tak its sound shook off a slightly intrusive edge that robbed it of a degree of naturalness and warmth with heavily processed rock tracks, Matt Johnson's Dusk being one of the discs that benefited most. However, if you favour speakers whose presentation is gentle or reserved I'd still suggest that you give the Ruby Is a miss; they have a forthright, demonstrative sound that's definitely on the ascetic, sharply etched side of cuddly, easy-going and warm.
I drove them with Naim amplification - a NAC52 pre-amplifier and NAP250 power amplifier - with my Naim CDS CD player and battery-powered, Pink Triangle-modified LINN Sondek LP12 with Naim ARO tone-arm and Audio Note lo IV and LINN Troika cartridges. Loudspeaker cables was Naim NAC A5 and everything bar the speakers was supported by Mania Acoustics' Reference tables. This set-up complemented their scrupulous, overtly dynamic character and resulted in a sound that positively hi-jacked your attention. Even at low playback levels, you couldn't ignore the music; these could never be background music speakers.

They appreciated a longer running-in period than the five hours recommended by the manufacturer. Straight out of the box they sounded rather steely and unsubtle; as time passed their sound eased considerably. They retained their markedly fast transient response but where music had previously been dominated by leading edge information, the remaining part of note envelopes started to come into view. After a day or two's playing-in, the sound of an acoustic guitar, for example, achieved a much improved sense of completeness; following the attack of spectrum on string, the build-up of the note as the string's vibration set the instrument resonating two's playing-in, the sound of an acoustic guitar, for example, achieved a much improved sense of completeness; following the attack of spectrum on string, the build-up of the note as the string's vibration set the instrument resonating two's playing-in, the sound of an acoustic guitar, for example, achieved a much improved sense of completeness; following the attack of spectrum on string, the build-up of the note as the string's vibration set the instrument resonating.

They went beyond the point of simply playing in time, revealing small but significant details that highlighted the way musicians interacted during performances. With recordings such as Art Pepper's 1957 album, Art Pepper Meets the Rhythm Section, they clearly demonstrated what was so special about the union between Pepper and the band, in particular bass player, Paul Chambers and drummer, Philly Joe Jones. Even a so-so speaker tells you that this band was cooking, but the Ruby Is tell you how and why in explicit, graphic terms. The rhythmic switches in Jones' hard but beautifully measured drumming on 'Tin Tin Deo' couldn't have been more obvious. When the speaker was cold and spike-mounted, bass guitar sounded too hollow or lacking in punch, but they do have a wee bit of character that won't suit all listeners tastes. While I appreciated their insight and zeal I sometimes felt a yearning for a more forgiving sound, one with a little more warmth and body. My personal feeling, as someone who has long since stopped using small speakers, and who listens at high playback levels, is that they'd benefit from a more substantial low end to balance their impressive mid-range punch and speed, which rather emphasises their bass dryness. If, however, you're better attuned to small speaker performance, listening to the Ruby Is could prove a very enlightening and musically rewarding experience.

The Rubys have a reasonably well engineered response. The two drivers are smoothly integrated with no significant response dip or peak. Treble is rolled off by a few dB from 16kHz upwards which is no bad thing, helping lessen any sharpness present in digital sources.

There is a dip in the lower mid/upper bass between 200-500Hz which may make them sound a little hollow or lacking in punch, but rhythmic and timing nuances. They went beyond the point of simply playing in time, revealing small but significant details that highlighted the way musicians interacted during performances. With recordings such as Art Pepper's 1957 album, Art Pepper Meets the Rhythm Section, they clearly demonstrated what was so special about the union between Pepper and the band, in particular bass player, Paul Chambers and drummer, Philly Joe Jones. Even a so-so speaker tells you that this band was cooking, but the Ruby Is tell you how and why in explicit, graphic terms. The rhythmic switches in Jones' hard but beautifully measured drumming on 'Tin Tin Deo' couldn't have been more obvious. When the speaker was cold and spike-mounted, bass guitar sounded too hollow or lacking in punch, but they do have a wee bit of character that won't suit all listeners tastes. While I appreciated their insight and zeal I sometimes felt a yearning for a more forgiving sound, one with a little more warmth and body. My personal feeling, as someone who has long since stopped using small speakers, and who listens at high playback levels, is that they'd benefit from a more substantial low end to balance their impressive mid-range punch and speed, which rather emphasises their bass dryness. If, however, you're better attuned to small speaker performance, listening to the Ruby Is could prove a very enlightening and musically rewarding experience.

TEST RESULTS
One of the problems of using a metal dome tweeter is its matching to a bass/mid driver. The material of the cone or dome is responsible for a lot of the character of a loudspeaker. If a metal dome is used with a paper or plastic bass/mid driver, the change of character between the two materials will be audible, a phenomenon often perceived as poor integration.

To match a metal dome tweeter a bass/mid driver should use a similar cone material. This is exactly what JPW have done with the Ruby. I would therefore expect them to sound cohesive and the transition from the tweeter to the bass/mid driver through the crossover region to be clean. The frequency response plot shows that the Rubys have a reasonably well engineered response. The two drivers are smoothly integrated with no significant response dip or peak. Treble is rolled off by a few dB from 16kHz upwards which is no bad thing, helping lessen any sharpness present in digital sources. There is a dip in the lower mid/upper bass between 200-500Hz which may make them sound a little hollow or lacking in punch, but rhythmic and timing nuances. They went beyond the point of simply playing in time, revealing small but significant details that highlighted the way musicians interacted during performances. With recordings such as Art Pepper's 1957 album, Art Pepper Meets the Rhythm Section, they clearly demonstrated what was so special about the union between Pepper and the band, in particular bass player, Paul Chambers and drummer, Philly Joe Jones. Even a so-so speaker tells you that this band was cooking, but the Ruby Is tell you how and why in explicit, graphic terms. The rhythmic switches in Jones' hard but beautifully measured drumming on 'Tin Tin Deo' couldn't have been more obvious. When the speaker was cold and spike-mounted, bass guitar sounded too hollow or lacking in punch, but they do have a wee bit of character that won't suit all listeners tastes. While I appreciated their insight and zeal I sometimes felt a yearning for a more forgiving sound, one with a little more warmth and body. My personal feeling, as someone who has long since stopped using small speakers, and who listens at high playback levels, is that they'd benefit from a more substantial low end to balance their impressive mid-range punch and speed, which rather emphasises their bass dryness. If, however, you're better attuned to small speaker performance, listening to the Ruby Is could prove a very enlightening and musically rewarding experience.

The Rubys are of average sensitivity, producing 85dB sound pressure level at I m for a 2.83V (1w nominal) input. Although this will produce 85dB sound pressure level at I m for a 2.83V (1w nominal) input. Although this will production 85dB sound pressure level at I m for a 2.83V (1w nominal) input. Although this will encourage volume winding the Rubys should not be too reactive a load. I measured was a normal 10S2 which appears to have good power handling; any heat generated by the manufacturer. Stressed for an extended period than the five hours recommended by the manufacturer. Straight out of the box they sounded rather steely and unsubtle; as time passed their sound eased considerably.

<table>
<thead>
<tr>
<th>Frequency Response</th>
<th>Impedance</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 kHz</td>
<td>0.5</td>
</tr>
<tr>
<td>20 kHz</td>
<td>0.5</td>
</tr>
<tr>
<td>20 kHz</td>
<td>0.5</td>
</tr>
</tbody>
</table>

The Rubys are very smooth across the mid-band.

This track also showed another quality that the better metal dome treble units exhibit. When Jones played cymbal patterns - delicate or otherwise - the Ruby Is followed every stick or brush stroke, tracking its dynamics accurately and revealing the slightest change in tonal colour with alacrity. Essentially, these speakers struck me as being more music than presentation oriented, and I'll never argue against that design approach. Their presentation is nonetheless clear, clean and devoid of intrusive colourations, but they do have a wee bit of character that won't suit all listeners tastes. While I appreciated their insight and zeal I sometimes felt a yearning for a more forgiving sound, one with a little more warmth and body. My personal feeling, as someone who has long since stopped using small speakers, and who listens at high playback levels, is that they'd benefit from a more substantial low end to balance their impressive mid-range punch and speed, which rather emphasises their bass dryness. If, however, you're better attuned to small speaker performance, listening to the Ruby Is could prove a very enlightening and musically rewarding experience.

indicate that the Rubys will not drain too much current from the amplifier. However, the impedance curve shows that impedance does in fact dip down as low as 5Ω in places, and at these points more current will be demanded.

The curve itself is reasonably flat, so the Rubys should not be too reactive a load. I would suggest that solid state amplifiers of around 50 watts or so should be more than capable of driving these speakers to very respectable levels. DB
The House of Commons says:

CDS ARE TOO EXPENSIVE

The National Heritage Committee, after a thorough investigation into the pricing of CDs, has concluded that the price must fall by at least £2. Jonathan Jordan investigates both sides of the argument.

"This committee believes that such a reduction -£2- is the minimum that is required". That was the conclusion of the National Heritage Select Committee in its report on CD pricing. After lengthy hearings by an all-party group of MPs who formed the committee, the cost of a CD has finally been judged as excessive. Following publication of this damning report the Monopolies and Mergers Commission (MMC) are now poised to investigate in full, the operation of the record companies. The Select Committee held three hearings at the House of Commons during April 1993 at which evidence was given by independent and major record companies, retailers, the Consumers' Association and by the artists themselves. Over thirty witnesses offered oral evidence to the committee and there were over sixty submissions of written evidence. The committee also visited the United States to observe their pricing policy. Summarising, the committee noted that links between the retailers and record companies were strong. The report stated that "While the Committee found no evidence of formal or overt collusion, it considers that the major record companies and the retailers are effectively cartels, and indeed partly interlocking cartels". The committee also added that the music industry was "an
industry in which there is no serious price competition between the recording companies and there is no serious price competition between the major retailers".

Further evidence supplied by the British Phonographic Industry suggested that import restrictions, condoned by Copyright legislation, removed an important element of competition that might help keep prices down. The Committee recommended that "the Department of Trade and Industry re-examine current legislation on copyright with particular reference to its anti-competitive effects in the recorded music industry".

These damning findings have caused earthquakes of panic within the record industry. Reactions to this judgement range from shocked disbelief to confidence that an MMC investigation will clear up the matter justly, once and for all. Record companies are blaming the retailers, the retailers are blaming the record companies and both are blaming the Select Committee for increasing consumer resistance to the purchase of CDs.

I called several major record companies in the wake of the report, but none of them were prepared to comment officially. A senior industry spokesman who wished to remain anonymous did tell me that "only a professional investigation, such as an MMC investigation, can offer an unblinded view of the whole situation and that we (a major record company) feel that only such an investigation can silence the growing consumer dissatisfaction on what is a fair pricing practice".

A spokesman for the British Phonographic Industry (BPI) echoed this view: "Although the MMC investigation would be a drain of resources, it will at least be a level playing field on which to present our case". He added that if a £2 cut was enforced it would probably decimate the independent, or 'indy' sector of the market.

The major labels continue to claim that the price is already low and that comparisons to the U.S. market and possible investigations into copyright are irrelevant and could prove damaging to the industry. The BPI for example, provided me with audited figures from 1990 which claimed that little more than 4% profit was being made. I also got the impression that the record companies thought the Committee's report was amateur and biased.

An A&R man for a large record label suggested that any price reduction may cause the bigger record companies to limit their investment to major acts like David Bowie, Elton John, Tina Turner and Sting, artists guaranteed to make money - termed 'bankers' by the industry. The fear is that the already limited investment into new acts will be reduced to a minimum.

The major record companies already feel that they have had their arguments ignored and many smaller companies are concerned about the risk of being placed in the same boat. Although the committee heard evidence from smaller labels, they are concerned that any forced cut in the price of a CD could destroy their business.

Hywel Davies, the managing director of a small specialist classical label, ASV, told us that "although our new release CDs retail for around £1.33, we also sell a wide range of older recordings for between £4.50 and £5". Mr. Davies felt the high cost of a new release was perfectly justified as a small production run of between two and three thousand would be required and the high initial cost of making the recording had to be recouped. "The budget range", he said, "represent excellent value - but equally it is fair that new, limited recordings should carry a premium." He added that full price CDs made very little, if any profit and that the budget lines kept his company ticking over as they sold in higher volumes and the recording costs of these older titles had already been recouped. But the new material was essential to his business, because concentrating solely on the budget lines would be like running a sale all year round.

Paddy Prendegast of Grapevine records, another independent, was aggrieved at being tarred with the same brush as the majors and he told us that he thought the Select Committee judgement was "a joke". His retort to their findings was that the major record companies must have presented their facts very badly for the suggestion of any cut - let alone a two pound cut - to be made. It could not be tolerated by companies such as his own.

He claimed that after the cost of manufacture, distribution, royalties and copyright are subtracted from the dealer price, their remaining cut was around £3, which had to cover marketing, A&R and recording costs.

According to Mr Prendegast, retailers have a better deal as they can make around £4 to £5 profit from a full price CD with little or no risk. He told us he took more risks and could barely break even. He said that "the big retailers are
earning more at the moment for the simple reason that they do not need the record companies - they have other forms of income such as books and computer games - but the small record companies desperately need them. He also raised the view that "when people start talking manufacturing costs they should take a long look at Sega CD games - the manufacturing costs are identical but they cost a good deal more than a CD".

So where does the industry stand now? Much of it is dominated by the majors: 54% of UK retail record stores are under the control of three companies and 75% of record production is dominated by five companies. But there are still numerous small operations claiming their future business will be ruined by this judgement. If companies like EMI, who manufacture, produce, distribute and sell their products through their own HMV chain with maximum efficiency claim to make little profit, the independents must make even less, but still manage to survive.

The big companies claim that they work efficiently, but in spite of this and economies scale they still do not undercut the independents.

For their part, independent labels claim they have in the past significantly reduced dealer prices, but these reductions have not been passed on to the public.

Not all, however, feel that the record industry is as unbalanced as it has been painted: Roger Webb, the owner of Bristol Classical Discs, an independent retailer, told us that the classical selection on offer now is better than it has ever been. He sells his full price CDs for £12.99, which undercuts major retailers such as W H Smith. He feels that this is a fair balance for new recordings, but stresses that budget lines are available that offer different performances of the same titles for significantly less. He also felt that if CD dealer prices were cut, it would initially be good news for his customers as prices could be cut to around £10, but his specialist repertoire of rare recordings could suffer due to the margins of the independents being slashed.

The Heritage Committee only reached their conclusions after hearing evidence from all parties. Ed Bicknell for example, the manager of Dire Straits, gave evidence to explain the musicians view of this situation. When I spoke to him for this report he claimed that in giving evidence he wanted to clarify certain misconceptions about the contribution an artist makes towards the cost of a CD.

Record companies are keen to give cost breakdowns but "the figures quoted are often nonsense". According to Mr. Bicknell the only factors contributing to the price of a CD that are fixed are VAT at 17.5% and the mechanical copyright at 8.52%. The rest, he claims, varies according to individual agreements and most figures that relate to what artists earn. He added "artists never have and never will understand why their prices are justified, or alternatively reduce them by a suitable margin, CD sales are unlikely to pick up. The current decline in music sales must be tackled, because until it is, neither the record companies, the retailers, the performers or ultimately consumers will be either happy or prosperous."

The flurries of bad publicity dogging CD are acting as a deterrent to music purchases. The retailers and major record companies, through greed, lack of judgement or perhaps arrogance have inadvertently produced one of the most negative public relations coups ever. Until they reasonably explain why their prices are justified, or otherwise reduce them by a suitable margin, CD sales are unlikely to pick up. The current decline in music sales must be tackled, because until it is, neither the record companies, the retailers, the performers or ultimately consumers will be either happy or prosperous.

The National Heritage Committee fifth report on The Price of Compact Discs is available for £5.95 from:
HMSO Publications Centre
P.O. Box 276, London SW8 5DT
Telephone Orders: 071 873 0011
General Enquiries: 071 873 0011

"The flurries of bad publicity dogging CD are acting as a deterrent to music purchases"
We have passed your request on to him directly, so you should have received a reply by the time this reaches print. If any of our many U.S. readers have any difficulty with parts, accessories or supply of U.K. products, we'll generally be able to help. If possible, send a fax with a U.S. fax return number. NK

WHAT'S IN A VALVE?
To be a proud owner of a valve-ampifier can be a double-edged pleasure. The auditive and visual excitement is, in my case, often accompanied by the gnawing thought: "It could sound even better with new valves!", which leads me to the following questions: In which connection stand valves and brands with valve production plants? The number of brands is enormous, but who is still producing valves and in which countries? What does, for example, Made in USA (really) stand for? Which electrical parameters can be measured on a valve, which of these are relevant for its tonal quality and to which parameters do companies refer when they are stating that their valves are selected and matched? Why do companies not name the results of their measurements on the packaging?

Are the tonal differences between valves of different brands as great as one might suggest when comparing their prices? Which of the most common types are interchangeable and what tonal difference does it make to exchange, for example, an EL34 against a 6CA7, 6L6 or a KT77? What does it mean when it says "improved version" or "new design" etc. in connection with certain types? Do you know a case where valves of the same name/type can look different from each other (I ask on the background of personal experience)?

The experts I have talked to are blaming each other for rip-off and tip-offs. I don't guarantee their accuracy (for example I believe there are no valve manufacturers in the U.K., but this isn't certain).

By common consent, Russian valves are said to be the best of those currently in manufacture. We know many amplifier manufacturers who swear by them, saying they are the most consistent, have the best performance and the longest life, but supply can be a problem. Every time there's a space shot, there's a shortage!

Legendary manufacturers are British Mullard and G.E.C., and in the U.S. Westinghouse and General Electric. These are the valves the Japanese buy at almost any price, when a batch appears that is. Typically, when an old enthusiast pops his clogs a potting shed full of rarities will come onto the market. Last month you may have seen a picture we ran of a packing crate full of U.S. Signal Corps 211s (VT-4C) abandoned war stock from 1940, found in a scrapyard, either in France or Greece, according to which version of the tale you heard.

We'll probably be testing valves in the end - things are going that way, I think we may well get a few valve hints and tips in soon. Just watch this space, as they say. N.K.

There are plenty of party true rumours going around the valve market. When something says Made in the U.S.A. this refers to new valves which are old stock, made in America in the 1950s and released by the American military after twenty-five years. When a valve is said to be matched, it means that the anode current and current gain of the two valves are similar, usually within 10% of each other.

Selected versions are those with an acceptably high voltage gain and current gain.

Generally, if you pay more for a valve there will be a noticeable sound difference. However, it may not be worth spending many hundreds of pounds on super quality valves for a low quality amplifier.

Valves of the same name/type can have different appearances. Most valve producers changed the construction several times during the 1950s-60s and 70s, and indeed still do so today. This is partly dependent upon parts available and partly due to improvements brought about by field trials and commercial pressures.

There is nobody manufacturing audio valves in the U.K., although certain huge industrial and transmitter valves are still manufactured to special order.

We feel that Russian valves offer very good quality at a reasonable price. They seem to have very low microphony and long life. Mullard West European manufacture are probably best of all, but they are rarely available. Of the 211, Billington Export Ltd should have one hundred VT4C military versions arriving some time in August.

Martin Billington, Billington Export Ltd. Billingham, Sussex.

The experts I have talked to are blaming each other for rip-off and tip-offs. I don't guarantee their accuracy (for example I believe there are no valve manufacturers in the U.K., but this isn't certain).

By common consent, Russian valves are said to be the best of those currently in manufacture. We know many amplifier manufacturers who swear by them, saying they are the most consistent, have the best performance and the longest life, but supply can be a problem. Every time there's a space shot, there's a shortage!

Legendary manufacturers are British Mullard and G.E.C., and in the U.S. Westinghouse and General Electric. These are the valves the Japanese buy at almost any price, when a batch appears that is. Typically, when an old enthusiast pops his clogs a potting shed full of rarities will come onto the market. Last month you may have seen a picture we ran of a packing crate full of U.S. Signal Corps 211s (VT-4C) abandoned war stock from 1940, found in a scrapyard, either in France or Greece, according to which version of the tale you heard.

We'll probably be testing valves in the end - things are going that way, I think we may well get a few valve hints and tips in soon. Just watch this space, as they say. N.K.

There are plenty of party true rumours going around the valve market. When something says Made in the U.S.A. this refers to new valves which are old stock, made in America in the 1950s and released by the American military after twenty-five years. When a valve is said to be matched, it means that the anode current and current gain of the two valves are similar, usually within 10% of each other.

Selected versions are those with an acceptably high voltage gain and current gain.

Generally, if you pay more for a valve there will be a noticeable sound difference. However, it may not be worth spending many hundreds of pounds on super quality valves for a low quality amplifier.

Valves of the same name/type can have different appearances. Most valve producers changed the construction several times during the 1950s-60s and 70s, and indeed still do so today. This is partly dependent upon parts available and partly due to improvements brought about by field trials and commercial pressures.

There is nobody manufacturing audio valves in the U.K., although certain huge industrial and transmitter valves are still manufactured to special order.

We feel that Russian valves offer very good quality at a reasonable price. They seem to have very low microphony and long life. Mullard West European manufacture are probably best of all, but they are rarely available. Of the 211, Billington Export Ltd should have one hundred VT4C military versions arriving some time in August.

Martin Billington, Billington Export Ltd. Billingham, Sussex.

The Russian 5881 valve is a high quality equivalent of the 6L6.
Has the Pioneer A400 been forgotten?

Black sound nasal and ‘cuppy’. However this is probably as much to do with the Rega tonearm I was using as the amp itself. The lowest bass notes also lacked a little. But again this can be put down to the 82dB sensitivity of the SL600 speakers. Use of a more sensitive speaker, such as Snell, alleviates this.

On the CD input, the A-400 showed-off the qualities of the 16X16 Cambridge magnificently. The midrange was punchy and vibrant, whilst the slightly coarse treble of the CD player wasn’t emphasised to an annoying degree. The soundstage had huge width, but lacked a little depth in comparison with vinyl (again a criticism of the CD player in its day). The treble became creamy smooth when the latest AMC CD player was used, but it lacked a little of the Cambridge’s kick in the midrange, yet on both CD and vinyl it was difficult to analyse the performance as it was so musical and involving.

The Pioneer is still a force to be reckoned with, and in my opinion still the best amplifier at its £300 price point (£279.95), provided that its ancillaries are carefully selected. The only problem that Pioneer and Mazda now face is that the task of replacing either will be daunting, and their replacements will probably not have the same ‘rightness’ as the originals.

Mr D. Todd
Scarborough
Lancs

The A-400 is indeed a very good amplifier when used in the right context. Sadly, all too often products are overhyped and find their way into systems disposable income in thirty seconds! Closer to reality? - I don’t go to many concerts. 'Better than transistors. closed boxes. transmission lines etc?' - I don’t know. The difference is a genuinely alternative presentation which would humbly suggest your readers try before perhaps continuing along their present path. For myself it is the easy-breathing, tactile sense of life in the music which makes the presentation downright sensual. Forty hours of listening and I still haven’t bothered to move the speakers from where I first dumped them. A sure sign of satisfaction.

Thanks to Definitive Audio Cornwall. Like most enthusiasts, an evangelist, but if you have found some answers, so what. (Name and address withheld)

Different sounds suit different people. Some prefer the hard fast and dynamic sound of transistors and box loudspeakers, some the sound of electrostatics, some, like you, the sound of horns and valves. It can often take a long time to find the sound that you are after, but once you do the enjoyment is worth every penny. I cannot stress too much the importance of finding a good hi-fi dealer, one that is happy to let you listen to horns, transmission lines, electrostatics etc and can assess what you are after and point you in the right direction. I wish you many happy hours of listening with your new system. DB

GARRARD BEARING

I was surprised to read, in your article on the Garrard 401, that there is a modification to the main bearing as recommended by Martin Bastin. If I understand the editorial correctly, it implies that this modification is necessary to eliminate rumble. If this is the case it is misleading; in fact the main bearing is the least likely cause of rumble in the 301 and 401.

In my long experience with both of these motor units the cause of rumble is the intermediate wheel or the motor. Replacing the intermediate wheel will usually eliminate 90% of the problem, the remaining 10% can usually be attributed to incorrect mounting of the motor unit. In my view, the only way to completely eradicate rumble and feedback is to use a solid, heavy plinth, preferably made from dense non-resonant material such as slate or marble.

I would strongly recommend that no modification is made to the bearing. In fact, this bearing is so good that you need only replace the thrust pad once every few years and ensure that the spindle is well oiled. Anyone who owns a Garrard would be well advised to leave well alone and concentrate on finding the correct plinth, as this will be of greatest benefit.

Peter Soper,
Slate Audio.
Quad 606 Update

Eric Braithwaite listens to Quad's revised 606 power amplifier

development in the torso. Imaging is tighter, too, and the stage broader; driving ESL-63s I always preferred the 306, finding the 606's fuzzier edges of individual instruments and singers detracting from its superb tonal clarity in the mid-range. It's especially good - then and now - on vocals and acoustic instruments, vide Elvis Costello's Juliet Letters, which through lesser equipment sounds more of a pastiche.

Acoustics in general come over well; listening to Martin Best's Nimbus recording of Riquier, he was truthfully well back in Nimbus's reverberant and hollow-sounding hall, and so were some of his players. There's a great bass drum thwack at the beginning of that CD which should shock you out of your seat, but it wasn't really sharp and quick enough. At a similar price, I've heard an LED Powerstage do it with more spine-chilling attack. On the other hand, the 606 has a warmer, less analytical, but less clinical style.

Quad's older 606 had more of an affinity with BBC-type loudspeaker designs, I've often felt. Mark Two really scored with a pair of Harbeth HL-P3s, which are pathetically inefficient and horribly hungry for current. Listening to the Mauzer/EMI recording of Showboat again reminded me what a superb theatrical recording it is, the 606 now imaging precisely, reproducing the life, characterisations and ambience perfectly.

The tighter the input, the tighter the 606 becomes; switching to a very clean Micromega Duo CD/2 Duo Pro combination as source produced a very clear, and reasonably transparent sound, though with some lack of true, fine discrimination between orchestral sections. Only one warning: it's designed with Quad's own pre-amps in mind. Others, like the Argo I used, have a higher output which will blow your socks off before the volume control even approaches 9 o'clock.

New, improved - even ecologically friendly, because Quad use non-toxic paint - the 606 now washes that bit whiter, to be better value. At £5 a watt (or fifty a kilo) it's a bargain.

### MEASURED PERFORMANCE

The new Quad 606 measures very much as it did before. There is a little distortion at low levels but certainly not enough to worry about. It still produces masses of power, 128 watts, for its size and price, the power nearly doubling into 4 ohms, showing excellent power supply regulation. But Quad have continued to use current limiting which limits output into 2 ohms.

In all other areas the new 606 measures very competently. It should be able to drive any loudspeaker except those dipping below 3 ohms.

### AMPLIFIER TEST RESULTS

- **Power**: 128 watts
- **CD/tuner/aux.**
  - Frequency response: 8 Hz - 37 kHz
  - Separation: 87 dB
  - Noise: -98 dB
  - Distortion 1 kHz: 0.004%
  - Sensitivity: 480 mV
  - dc offset: 0.3 mV
- **Distortion**: A small amount of distortion.

---

**World Radio History**
Reflections from Noel Keywood

Kaleidoscope

Chances are, you won't have heard of Laurie Fincham, yet you may be listening to him now. You'd join a lot of others — in fact anyone who had ever bought or listened to a KEF loudspeaker (not to mention Goodmans). You see, Laurie Fincham joined KEF, as chief engineer 25 years ago and was quickly made Technical Director. He has designed, or has overseen the design of all their loudspeakers. He helped build up KEF in conjunction with its founder Raymond Cooke, he's written influential research papers about loudspeakers, lectured around the world and has all but become Mr Loudspeaker (UK) Ltd. So I was more than a little surprised to learn that now, after all these years, Laurie is off to the U.S. of A. To be precise, he's joining Infinity Loudspeakers in California.

Laurie's departure brings to an end a phase in British loudspeaker manufacturing. For me it possesses a certain symbolism. KEF are credited with helping popularise the small, quality loudspeaker in the U.K., but they have always been advocates of research-based development, spending disproportionately large sums in this area. Some may argue that in fact they concentrated a little too much on theory and as a result suffered commercially.

But let's look at the other side of the coin for a moment. Raymond Cooke and Laurie Fincham were two single-minded and determined engineers who believed unwaveringly in producing a well researched, quality product. That's the basis on which they built KEF into the world respected name it is today. Whilst other companies may have put almost as much into research, few have been so energetic for so long in demonstrating and sharing its benefits. The names Cooke and Fincham have already become imprinted into the history of the audio industry as great contributors to the art of loudspeaker design, people who researched sensibly to move loudspeaker design firmly ahead.

In retrospect, there was in the early Seventies a sudden surge in the research applied to U.K. speakers. The three big names behind this were KEF, Wharfedale and B&W, all of whom moved enthusiastically into laser interferometry, delayed resonance testing and the use of heavy computing power. This brought a degree of measurement and analysis to loudspeaker research not seen or surpassed anywhere around the world. KEF installed an impressive Hewlett Packard Fast Fourier Transform analyser that took up a whole room, filling it with steel cabinets, hooded monitor screens and huge spinning tape reels. It looked like part of NASA's space research programme.

It put KEF at the forefront of loudspeaker research and Laurie Fincham helped cement this image by loudspeaker research, held at quite some expense and effort at a Park Lane hotel in Central London. Those lectures were packed; no one became 'ill' or had more pressing engagements. The KEF lecture was a high point, made that way not so much by the generosity of the event, but by its worthy content.

Whilst sometimes becoming a little exasperated by some journalist's refusal to completely acquiesce to their way of seeing things (understandable when you're dealing with the stubbornly critical - er - myself!), KEF did everything possible to try and raise the general level of awareness and discussion about loudspeaker technology in Britain. It took two strong, single-minded and determined people to do this; Laurie Fincham was one of them.

So Laurie's departure is a symbolic end to an era. Yes, loudspeakers are more heavily researched than ever in Britain, but he was instrumental in ensuring that this should be so. Laurie set standards and pursued them unflinchingly. I knew I could always phone him to get any question I had about loudspeakers answered intelligently, and he was willing to debate topics vigorously in a way that many at the top of their profession are not.

This has had a valuable long term influence - one I'm well acquainted with. Roundly berated for being equipped with no more than an "Ayo with a bent needle" (Raymond Cooke, circa 1978!), KEF have envolved technical reviewers such as myself into doing better. I've felt obliged to reach a high standard of competence before being able to justify reviewing a KEF loudspeaker. But in this KEF have been helpful. Now we use a Fast Fourier Transform (FFT) analyser to measure loudspeakers, plus a very accurate B&K measuring microphone, and KEF have in the past verified the accuracy of our measurements and have given us every assistance - as they still do. Our kit loudspeaker has a ruler flat frequency response, because that's the standard that has been set, indirectly, by KEF. I'm still amazed that imported loudspeakers commonly have wild measured characteristics, but then they come from KEF-free zones. I acceded to the need for a good measured performance being prerequisite to achieving a high standard of sound quality. Laurie Fincham has helped to explain why this is important and how it can be achieved.

So goodbye Laurie Fincham! KEF's 'opening phase', one that has lasted twenty odd years, fuelled by your efforts, has now ended. Many of us have listened to your loudspeakers — and to your lectures as well. I think we're all wiser and better off for it.
If I told you I had an idea for an upgrade which would revitalise your entire record and CD collection, would you be interested? If I told you that this upgrade would alert you to previously hidden subtle shades of orchestral colour and detail so that you would notice small string figurations and nuances of woodwind writing which you had previously missed, might you be prepared to dig deep into your pockets to buy it?

Furthermore, if I told you that my suggested upgrade can be bought gradually - a few pounds at a time, would you believe me? Well I believe there is such an upgrade. It works just as well with a top-end, Class A, triode-valve, mortgage-busting system as with a more modest set-up. It's called 'following the musical score'. Already I sense your questions and protestations!

"That's not for the likes of me, that's for the likes of a Mackerras, a Solti, a Levine"

I hear you say. No, that's not true. There's a world of difference between following an orchestral score and reading a score. Conductors read scores and that requires a knowledge of harmony, rhythm and counterpoint and orchestration as well as the history of music. Following a score is much easier. Anyone can do it with little more than a memory of secondary-school music. Following a score only requires being a spectator, not a sportsman. For instance, I can follow and enjoy a game of world-class cricket but I couldn't play in it - I couldn't even commentate on it, but it's not a closed book to me.

The recorded message

Left by Richard Brice

...
The music lovers of Great Britain are no longer strangers to the concept of ‘High End Audio’. When Absolute Sounds was founded quality audio components did not exist, back in the late 70’s we pioneered the concept of high quality music systems.

Our years of experience have contributed in making us the absolute leaders in the field, with a reputation of refining and matching high quality hi-fi systems worldwide.

Absolute Sounds was created for the purpose of making your choice a wise one. To provide equipment worthy of the connoisseur, Absolute Sounds has searched the world for components without equal and tested them for excellence.
big symphony will cost about £10 - but these editions represent the best value. And there's a cheaper option still. My big symphony will cost about £10 - but continued from page 43

I believe the answer is no, not unless you have exceptional powers of auditory concentration. Psychologists know humans receive 80 percent of our sensory input from our eyes - that doesn't leave much for the ears alone. Add to that worries of the office, fatigue, next-door's television and upgrade-itis and I'm sure you'll know how easy it is for the mind to wander when listening to the hi-fi. Following a score helps concentrate the mind on listening.

"All this sounds like so much musical snobbery"

I'm not being a snob. There is, of course, a very good place for music as an aid to woolgathering. It's nonsense to suggest as some superior people do that not a single note should pass you by without the full force of your mind being brought to bear on it. Music is so rich an artform, and so important to our lives, because it fulfils such a myriad of roles. It functions as both a pleasant anodyne and as a stimulant - an opiate and an amphetamine. Perhaps (you play your games and I'll play mine) even as an aphrodisiac. But that isn't necessarily their fault or the industry's. When someone, like myself, shows a fairly high level of interest and technical knowledge regarding hi-fi equipment, they shouldn't be made to feel like an oddity or, worse, misconstrued and joked fun at.

This is a generalisation but not an exaggeration. Whilst many manufacturers and distributors are fair and see everyone, regardless of their sex, as potential and serious customers, there are those that don't. I've taken to showing off just lately, wearing my Hi-Fi World T-Shirt and strutting along the Edgware Road like I know a thing or two (well enough to get by). It is amazing the reaction I get. Especially when I say I'm the new Editor (just kidding Noel!).

Not every woman owns a Hi-Fi World T-Shirt (Although they could...see our mail order on page 75). This doesn't really solve the overall problem anyway. So what is the solution?

Here's a short term one. I have compiled a short list of do's and don't's for the more condescending manufacturers and distributors to take note of:

1. Don't say "Is it for your husband / boyfriend / brother when your female customer asks for information on a more esoteric level.
2. Don't blind them with a whole lot of technical jargon, as this can dissuade your customer, or more likely send them to sleep on the spot.

3. Do listen to your customer and what they have to say without flashing the all knowing smile which basically says "and what do you know anyway, lady?"
4. Don't talk down or use over simplistic terms like "The sound is rich and full". "It's like the sound of a large loudspeaker." The bass seemed a little heavy and when commenting thus, was told "we can carry it to the car for you".
5. Do act courteously if a slip up is made. Pointing out the error to your colleagues in a shop full of customers, whilst roaring with hearty mirth will not put your customer at ease.
6. Finally, remember which sex have more faults or the industry.

"All this sounds like so much musical snobbery"

I'm not being a snob. There is, of course, a very good place for music as an aid to woolgathering. It's nonsense to suggest as some superior people do that not a single note should pass you by without the full force of your mind being brought to bear on it. Music is so rich an artform, and so important to our lives, because it fulfils such a myriad of roles. It functions as both a pleasant anodyne and as a stimulant - an opiate and an amphetamine. Perhaps (you play your games and I'll play mine) even as an aphrodisiac. But that isn't necessarily their fault or the industry's. When someone, like myself, shows a fairly high level of interest and technical knowledge regarding hi-fi equipment, they shouldn't be made to feel like an oddity or, worse, misconstrued and joked fun at.

This is a generalisation but not an exaggeration. Whilst many manufacturers and distributors are fair and see everyone, regardless of their sex, as potential and serious customers, there are those that don't. I've taken to showing off just lately, wearing my Hi-Fi World T-Shirt and strutting along the Edgware Road like I know a thing or two (well enough to get by). It is amazing the reaction I get. Especially when I say I'm the new Editor (just kidding Noel!).

Not every woman owns a Hi-Fi World T-Shirt (Although they could...see our mail order on page 75). This doesn't really solve the overall problem anyway. So what is the solution?

Here's a short term one. I have compiled a short list of do's and don'ts for the more condescending manufacturers and distributors to take note of:

1. Don't say "Is it for your husband / boyfriend / brother when your female customer asks for information on a more esoteric level.
2. Don't blind them with a whole lot of technical jargon, as this can
TEST RESULTS

Puzzled? Want to know more? So do we. That is why we choose to measure every piece of hi-fi that we review. For years now battles have raged about the significance of measured test results. One side claim that there is no link between a good sound and a particular set of measured results and believe that all that is necessary is a subjective analysis. The other side would respond "how can it possibly sound good if it doesn't have a flat frequency response and low distortion?" As is the case with most arguments, I believe the true answer lies somewhere in-between. An accurate subjective analysis can not be achieved without measurement, but measurement is not adequate on its own. One very good example of this is the combination of a valve amplifier with a loudspeaker. A valve amplifier could very easily be damaged if the loudspeaker used with it was not selected specifically for its compatibility with valve amplifiers. The impedance curve of a loudspeaker describes what kind of load the 'speaker will present to an amplifier at a particular frequency. The lower the impedance at that given frequency, the more current is demanded from the amplifier. The output voltage of the amplifier falls to meet the current demand, affecting frequency response. For a loudspeaker to work well with a valve amplifier, it needs to have a reasonably flat impedance curve that, ideally, should match the stated output impedance - usually four and eight ohms.

Whilst evaluating a valve amplifier recently, I slung a pair of loudspeakers into the system that had a big impedance dip in the treble. The system sounded terrible, the amplifier couldn't drive the loudspeakers at high frequencies and sounded dull and compressed as a result. In this case the subjective analysis would not have been favourable, but

Dominic Baker

dB on the level

by measuring the amplifier I knew that it had a flat frequency response and was not to blame for the dull sound. Changing the loudspeakers to ones with a flatter, higher impedance curve brought about a complete change, the conclusion being that it was one of the best amplifiers I had ever heard.

The Measured Performance section of a review is, amongst other things, about system matching and can point you in a direction that will give better sound quality and balance than blindly wiring one piece of hi-fi to another. No piece of hi-fi equipment is perfect; all items have a character to their sound, some more so than others. If you couple a CD player with treble lift and distortion to an amplifier also producing high frequency distortion and a loudspeaker using a metal dome tweeter having a raised response, the system will sound harsh and aggressive, to say the least. If each piece of equipment was reviewed separately in a soft, warm sounding system, all could quite easily come out with 'rave' reviews. And it is quite possible that each component may be a class leader in a suitable system. But without the guidance offered by measured performance, you would not know this and could quite easily waste a great deal of money on a poorly matched system.

At the other end of the frequency scale imagine the combination of a Nakamichi cassette deck, Pioneer A400 amplifier and a pair of floorstanding KEF107s. All three products are excellent in their own right, but all are also renowned for their strong bass. The result would be a system that sounded bloated and lacked control in the bass. As I mentioned earlier, no hi-fi is perfect. But, a near ideal balance can be achieved by carefully matching quality components. If you particularly like a CD player for its resolution of detail and tonal colour, but it has a raised treble making it a little bright, it isn't a problem. As long as the amplifier you choose does not exhibit excessive distortion and your loudspeaker has rolled off upper treble, one will cancel out the other, the net result being a system with an accurate frequency balance.

Another reason why we choose to measure everything that we review is that the results can quickly tell us whether the designer knows what he is doing, or whether it was a fluke that his product sounded good. You may say that it doesn't matter that it was a fluke as long as the end result is satisfying. But, if he has made mistakes in one area, he could well have done so in others. For example, using under-rated components which would compromise reliability, or consistency from one batch to another.

I hope that this has explained and justified the reasons why we measure equipment, and why you should read the results. It can be a little daunting to be confronted with technical talk, but we do try and keep explanations jargon free and provide understandable conclusions. If you don't understand anything, you can write in and ask and I will do my level best to explain in simple terms.

Many of the problems that you write in with when your system sounds too bright, too dull or lacking in other areas could have been avoided with careful selection based upon a combination of subjective analysis and measured performance. You can never know too much about something that you are about to spend your hard earned cash on. It is well worth trying to understand the results because a wider knowledge of the product and its likely reaction in your system could save you a lot of money in the long run.
H
drew how hi-fi equipment emerges from the depths of someone's mind, onto the drawing board, into production and then your home? Ever thought about the choices of sonic characteristics which are involved? There's not one item in the hi-fi chain untouched by the philosophies of those who design and market the products you own.

Which way forward

To my mind, one of the biggest conundrums in hi-fi is the rift between opposing philosophies. There are systems which offer a well-balanced, natural sound and those, on the other hand, which have excellent timing, sound dynamic and play 'tunes'. For example, it is quite feasible to produce a loudspeaker which hops along nicely when listening to rock music and yet sound horribly wrong when listening to anything recorded naturally, such as classical music.

Conversely, it is possible to design a loudspeaker which sounds very natural and well integrated, tonally correct, with excellent stereo imaging and depth, which is bland and uninteresting with all types of music. It would be a mistake, in my view, to label hi-fi either 'suitable for rock' or 'suitable for classical', but that is often what happens. Reproducing rhythm and emotion are just as important for classical as for music produced in a modern studio.

The designer of the first system outlined above may tell you that it doesn't matter if the sound it makes is tonally unnatural, because it's the tune which is vital. Considerations like naturalness, good stereo and a sense of space and depth are 'unimportant' to him. The designer of the second system may tell you that the designer of the first is talking absolute rubbish, doesn't know or understand what real music, with real instruments sounds like, that his is correct because it is tonally right - and that is all that matters.

So who is right? Who is the guardian of the true and only way? Twenty or thirty odd years ago the second of the two philosophies was held to be correct with unshaken determination and belief. Anything else would have been heresy. Then in the mid 70s an alternative philosophy grew in strength, offering a new solution, a new 'answer'. Gradually the 'correctness' of this new philosophy, which exalts the playing of tunes and the tapping of feet, giving them greatest priority, took hold as the one true way and became firmly rooted.

But is the 'new' truth any more valid than the old? Does it hold all the answers? Has it brought perfection? The answer, of course, is that it has not, so much as introduced a new route to the same apparent goal. This 'new' philosophy is arguably now as firmly entrenched as the one before, and is strongest in its birthplace - the U.K.

My own, perhaps simplistic, view is that the ideal hi-fi system should satisfy all requirements simultaneously. It should offer natural portrayal for lovers of classical and acoustic instruments, while having excellent rhythm, timing and dynamic shading - the sort of characteristics which allow the pulse and emotion to flow in all sorts of music.

To achieve all these aims in one package is difficult, but it is surely better than trying to perfect one aspect at the expense of all the others. I am not saying that hearing tunes or rhythms is not important; they are plainly vital, since without them music would lose all meaning. What I am saying is that surely there is more to music that these alone.

A recent experience demonstrated to me how a designer or marketing manager typically decides on the sound of the product he is to build or sell. With a loudspeaker one can start with the same drive units and achieve opposite results, simply by adjusting the crossover. In a speaker I was working on, the simplest crossover you could possibly imagine gave the most dynamic, punchy sound, with a touch of crudeness and brightness thrown in. The speaker fairly 'leapt out' and was most impressive. Increasing crossover complexity slightly gave a much more natural sound balance in which subtle musical information became more audible, but at the expense of punch. A more complex network still, while sounding better on complex vocals, took away much of the drive and dynamics.

This was not a new discovery, and is something I have experienced many times before. In the commercial world, a choice has to be made. The middle option was the most musically informative and would seem to be the best overall compromise. It should surely be the one to choose, certainly for long-term enjoyment.

But wait: the shops like a punchy 'foot-tapping' sound to sell. The punchy sounding product is exciting, has fewer parts in it and is cheaper to make, and there's likely to be more profit too, perhaps slightly less sensitive, which does not leap out, is at a disadvantage in the shop. So the tendency towards immediacy and away from naturalness is bound to continue - at least at the bottom of the market.

Something even handed, which does not excise in one area but does all things pretty well may be the answer. The danger is, that may be seen as neither one thing nor the other - kind of wishy-washy Lib Dem compromise and therefore a non-starter. Without wishing to shoot my argument in the metaphorical foot, I sense that this trend has already started, with divergent British sound philosophies creeping towards some kind of consensus. This is often less to do with fidelity and music than marketing.

Is this what people want? The danger of course, is that in trying to appeal to everyone, the product ends up bland and unappealing - rather like those modern cars which are as boring to look at, as they are to drive. I'm weary of impressive hi-fi, but don't want to be bored by it. I want my emotions to be stirred, but not my guts wrenched. I want my body to sway to the true sound of music - and I don't want it to cost a fortune. I hope others do too.

Speaking Out

Dave Berriman voices his opinion

To my mind, one of the biggest conundrums in hi-fi is the rift between opposing philosophies. There are systems which offer a well-balanced, natural sound and those, on the other hand, which have excellent timing, sound dynamic and play 'tunes'. For example, it is quite feasible to produce a loudspeaker which hops along nicely when listening to rock music and yet sound horribly wrong when listening to anything recorded naturally, such as classical music.

Conversely, it is possible to design a loudspeaker which sounds very natural and well integrated, tonally correct, with excellent stereo imaging and depth, which is bland and uninteresting with all types of music. It would be a mistake, in my view, to label hi-fi either 'suitable for rock' or 'suitable for classical', but that is often what happens. Reproducing rhythm and emotion are just as important for classical as for music produced in a modern studio.

To achieve all these aims in one package is difficult, but it is surely better than trying to perfect one aspect at the expense of all the others. I am not saying that hearing tunes or rhythms is not important; they are plainly vital, since without them music would lose all meaning. What I am saying is that surely there is more to music that these alone.

A recent experience demonstrated to me how a designer or marketing manager typically decides on the sound of the product he is to build or sell. With a loudspeaker one can start with the same drive units and achieve opposite results, simply by adjusting the crossover. In a speaker I was working on, the simplest crossover you could possibly imagine gave the most dynamic, punchy sound, with a touch of crudeness and brightness thrown in. The speaker fairly 'leapt out' and was most impressive. Increasing crossover complexity slightly gave a much more natural sound balance in which subtle musical information became more audible, but at the expense of punch. A more complex network still, while sounding better on complex vocals, took away much of the drive and dynamics.

This was not a new discovery, and is something I have experienced many times before. In the commercial world, a choice has to be made. The middle option was the most musically informative and would seem to be the best overall compromise. It should surely be the one to choose, certainly for long-term enjoyment.

But wait: the shops like a punchy 'foot-tapping' sound to sell. The punchy sounding product is exciting, has fewer parts in it and is cheaper to make, and there's likely to be more profit too, perhaps slightly less sensitive, which does not leap out, is at a disadvantage in the shop. So the tendency towards immediacy and away from naturalness is bound to continue - at least at the bottom of the market.

Something even handed, which does not excise in one area but does all things pretty well may be the answer. The danger is, that may be seen as neither one thing nor the other - kind of wishy-washy Lib Dem compromise and therefore a non-starter. Without wishing to shoot my argument in the metaphorical foot, I sense that this trend has already started, with divergent British sound philosophies creeping towards some kind of consensus. This is often less to do with fidelity and music than marketing.

Is this what people want? The danger of course, is that in trying to appeal to everyone, the product ends up bland and unappealing - rather like those modern cars which are as boring to look at, as they are to drive. I'm weary of impressive hi-fi, but don't want to be bored by it. I want my emotions to be stirred, but not my guts wrenched. I want my body to sway to the true sound of music - and I don't want it to cost a fortune. I hope others do too.
## Golden Dragon Precision Audio Tubes

### RETAIL PRICE LIST

**Golden Dragon Pre-Amplifier Tubes**

<table>
<thead>
<tr>
<th>Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>*6087/ECC85</td>
<td>£6.50</td>
</tr>
<tr>
<td>12AT7/E88CC/ECC81</td>
<td>£6.50</td>
</tr>
<tr>
<td>12AU9/E88CC/ECC82</td>
<td>£6.50</td>
</tr>
<tr>
<td>12AX7/E88CC/ECC83</td>
<td>£6.50</td>
</tr>
<tr>
<td>60JB/E88CC/ECC88</td>
<td>£10.95</td>
</tr>
<tr>
<td>6SL7GT/ECC85</td>
<td>£7.50</td>
</tr>
<tr>
<td>6SN7GT/ECC83</td>
<td>£8.50</td>
</tr>
</tbody>
</table>

**Special Quality Golden Dragon Pre-Amplifier Tubes**

<table>
<thead>
<tr>
<th>Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>*E81CC-01 Gold Pins</td>
<td>£9.50</td>
</tr>
<tr>
<td>E82CC-01 Gold Pins</td>
<td>£9.50</td>
</tr>
<tr>
<td>*E83CC-01 Gold Pins</td>
<td>£9.50</td>
</tr>
<tr>
<td>*E88CC-01 Gold Pins</td>
<td>£14.50</td>
</tr>
</tbody>
</table>

**Golden Dragon Select Tubes**

<table>
<thead>
<tr>
<th>Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>5AR4</td>
<td>£9.50</td>
</tr>
<tr>
<td>5U4G</td>
<td>£8.50</td>
</tr>
<tr>
<td>85A2</td>
<td>£8.50</td>
</tr>
<tr>
<td>ECL82</td>
<td>£4.50</td>
</tr>
<tr>
<td>ECL88</td>
<td>£4.50</td>
</tr>
<tr>
<td>EL34</td>
<td>£7.50</td>
</tr>
<tr>
<td>PL568</td>
<td>£7.50</td>
</tr>
<tr>
<td>12E1</td>
<td>£25.00</td>
</tr>
<tr>
<td>13E1</td>
<td>£125.00</td>
</tr>
<tr>
<td>310A</td>
<td>£20.00</td>
</tr>
<tr>
<td>5728</td>
<td>£45.00</td>
</tr>
<tr>
<td>5687</td>
<td>£8.50</td>
</tr>
<tr>
<td>6550 Special, per pair</td>
<td>£75.00</td>
</tr>
</tbody>
</table>

**Golden Dragon Triondes**

<table>
<thead>
<tr>
<th>Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A3 4PIN</td>
<td>£22.50</td>
</tr>
<tr>
<td>2A3 OCTA</td>
<td>£22.50</td>
</tr>
<tr>
<td>211</td>
<td>£28.50</td>
</tr>
<tr>
<td>3008</td>
<td>£39.00</td>
</tr>
<tr>
<td>811A</td>
<td>£11.50</td>
</tr>
<tr>
<td>845</td>
<td>£36.50</td>
</tr>
<tr>
<td>805</td>
<td>£36.50</td>
</tr>
</tbody>
</table>

**Golden Dragon Power Tubes**

<table>
<thead>
<tr>
<th>Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL34/6CA7</td>
<td>£18.50</td>
</tr>
<tr>
<td>*E34S/CA7S</td>
<td>£25.00</td>
</tr>
<tr>
<td>EL84/6DS5</td>
<td>£8.50</td>
</tr>
<tr>
<td>E841/7189A</td>
<td>£12.50</td>
</tr>
<tr>
<td>KT66</td>
<td>£25.00</td>
</tr>
<tr>
<td>KT88</td>
<td>£49.50</td>
</tr>
<tr>
<td>*KT88 SUPER</td>
<td>£59.00</td>
</tr>
<tr>
<td>6L6GC</td>
<td>£15.00</td>
</tr>
<tr>
<td>6550A</td>
<td>£39.50</td>
</tr>
<tr>
<td>50CA10</td>
<td>£75.00</td>
</tr>
<tr>
<td>6L6V8</td>
<td>£25.00</td>
</tr>
<tr>
<td>807</td>
<td>£25.00</td>
</tr>
</tbody>
</table>

**Gold Plated Ceramic Valve Bases**

<table>
<thead>
<tr>
<th>Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 PIN UX4</td>
<td>£3.50</td>
</tr>
<tr>
<td>4 PIN JUMBO GOLD PLATED</td>
<td>£25.00</td>
</tr>
<tr>
<td>7 PIN B7G CHASSIS</td>
<td>£3.50</td>
</tr>
<tr>
<td>8 PIN OCTAL PCB</td>
<td>£3.50</td>
</tr>
<tr>
<td>8 PIN 89A CHASSIS</td>
<td>£2.50</td>
</tr>
<tr>
<td>GOLD PLATED ECC83 SCREENING CAN &amp; SKIRT</td>
<td>£8.50</td>
</tr>
<tr>
<td>GOLD PLATED ECC83 DAMPING CAN</td>
<td>£4.50</td>
</tr>
</tbody>
</table>

**Golden Dragon Power Tubes**

### Carriage charge £2.50 on any order. All prices plus VAT @ 17.5%. Payment: Cash with order or Visa - Mastercard - American Express 24 Hour Answerphone Services

We also have available ceramic valve sockets and holders for the entire Golden Dragon range. For further details please contact us.

---

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECC81 BRIMAR</td>
<td>4.50</td>
</tr>
<tr>
<td>MULARD 3.50</td>
<td></td>
</tr>
<tr>
<td>ECC82 GE</td>
<td>4.50</td>
</tr>
<tr>
<td>ECC82 RFT</td>
<td>4.50</td>
</tr>
<tr>
<td>ECL82 TEONEX</td>
<td>3.50</td>
</tr>
<tr>
<td>ECL82 TEONEX</td>
<td>3.50</td>
</tr>
<tr>
<td>ECL85 TEONEX</td>
<td>3.50</td>
</tr>
<tr>
<td>ECL86 TEONEX</td>
<td>3.50</td>
</tr>
<tr>
<td>ECL88 BRIMAR</td>
<td>4.50</td>
</tr>
<tr>
<td>ECL88 GE</td>
<td>5.50</td>
</tr>
<tr>
<td>ECL88 TEONEX</td>
<td>4.50</td>
</tr>
<tr>
<td>EF86 TEONEX</td>
<td>4.50</td>
</tr>
<tr>
<td>EF864S TELEPUNKEN</td>
<td>25.00</td>
</tr>
<tr>
<td>EL32 MULARD</td>
<td>4.50</td>
</tr>
<tr>
<td>EL85 MULARD</td>
<td>4.50</td>
</tr>
<tr>
<td>EL86 MULARD</td>
<td>4.50</td>
</tr>
<tr>
<td>EL504 TEONEX</td>
<td>3.50</td>
</tr>
<tr>
<td>EL509 TEONEX</td>
<td>5.50</td>
</tr>
<tr>
<td>EM84 TEONEX</td>
<td>3.50</td>
</tr>
<tr>
<td>GZ32 MULARD</td>
<td>8.50</td>
</tr>
<tr>
<td>GZ33 MULARD</td>
<td>5.50</td>
</tr>
<tr>
<td>GZ34 MULARD</td>
<td>12.50</td>
</tr>
<tr>
<td>GZ37 MULARD</td>
<td>4.50</td>
</tr>
<tr>
<td>GZ38 MULARD</td>
<td>8.00</td>
</tr>
<tr>
<td>GZ32 MULARD</td>
<td>12.50</td>
</tr>
<tr>
<td>GZ37 MULARD</td>
<td>4.50</td>
</tr>
<tr>
<td>KT66 GE</td>
<td>16.50</td>
</tr>
</tbody>
</table>

### Export Welcome

P.M. COMPONENTS LTD., Springfield Enterprise Park, Springfield Road, Gravesend, Kent DA11 8HD, England

Tel: 0474 560521.  TELEX: 966371 TOS-PM-GM.  Fax: 0474 333762
he Audio Synthesis Passion is a passive pre-amplifier designed for use between a line level source, such as a CD player, and a power amplifier. The advent of high output line level sources has made the use of passive attenuators a popular alternative to the active or powered pre-amplifier.

The passive pre-amp is basically an attenuator. The output of a CD player is high enough, when fed directly into a power amplifier to produce full power output. So the signal from the CD player needs no gain, only attenuation. The Passion achieves this via a 31 step switch which selects pairs of resistors that are used to divide the signal, giving 31 selectable output levels. The signal you listen to only goes through one pair of resistors and high quality bulk foil types are used for maximum quality.

Two Forms
Audio Synthesis offer the Passion attenuator in two forms. Like all their products, it can be bought ready built or in kit form, offering a £145 saving over the completed version's £475 price tag. Also available is a kit version using standard gold plated phons rather than costly WBTs; this is available for £275. The kit comes with everything required to complete the Passion, apart from a soldering iron, and it offers a relatively simple project for the DIY audiophile to get to grips with.

The Passion uses high quality Vishay bulk foil resistors, silver cable, WBT input and output sockets and silver alloy switches, all of which adds up to a very high specification. The casework is very well finished and looks extremely smart with its high gloss black rounded front panel. The Passion has two controls on the fascia, one for the stepped attenuator volume control and one to select the inputs. It has three inputs, plus one labelled mute/direct. This corresponds to the tape output or direct input socket on the rear, into which the record leads of a cassette deck can be connected, or any source that you may wish to play at full output. With a cassette deck, or with nothing connected to these sockets, I found that selecting them served as a useful mute position.

The main disadvantage with passive attenuators is the resistor-capacitor filter they form with the output cable to the power amplifier. Every cable has a capacitance, normally quoted in picofarads per meter length of cable. This capacitance is in parallel with the input of the power amplifier, forming a filter with the resistance of the Passion which rolls off the treble response. Because of this, short cable lengths have to be used, say no more than 1m to be on the safe side, and the last few steps of the volume control should be avoided.

I tried the Passion with a large variety of power amplifiers. Cable used was a 3/4m length of DPA Digital's Black Slink which has a very low capacitance and the new 'First' graphite interconnect from van den Hul. Some care is required when using the Passion because some power amps may not be sensitive enough to get to full output from an un-amplified line level source. I am now a bit lost for what to say next. Having listened to the Passion extensively I have come to the conclusion that if suitable precautions with cable and power amplifier matching are observed, then it has about as much influence on the sound as the cable you are using. It does tend to add a slight hardness to the sound, a metallic sort of quality, but this is so minor that it is hardly worth mentioning.

It simply adds no character of its own to the music even at positions close to full volume (the straight through position). With the short length of Black Slink or van den Hul I was using, the treble roll off was unnoticeable. It seems a lot of money to pay for something that has no sound, but after all, this is the ultimate aim of high fidelity!
The new Sony ST-S211 tuner has been tuned into the U.K. sound.
Dave Berrimam uses British ears to assess Sony's claim.

SONY TUNE IN

No doubt spurred on by the success of companies such as Rotel and latterly Pioneer, who have adopted a policy of designing for the UK, Sony have been selecting key models for 'UK Sound' treatment. This involves either tweaking existing equipment, or designing specifically for U.K. ears. Quite why the rest of the world is not deemed worthy of special treatment is not clear, but we are apparently a notoriously finicky lot. Surprisingly, we like our hi-fi to sound, well, er, rather like music!

Sony's ST-211 is a true digital synthesiser tuner (not a normal tuner with a digital display) and thus offers very stable, accurate tuning. It falls into the 'tweaked for UK ears' category, with input from both Sony's British staff and European design engineers. (What they do to the tuner is not revealed.) Outwardly, it looks much like any other tuner, with a black, gently sculpted metal front panel, digital display, various buttons, and a rotary tuning control. The tuner's other main claim to fame is its station naming system. This is a kind of poor man's RDS, in which the user programs in the station's four-character identification, to be displayed in alpha-numeric form on the clear blue digital display.

The tuner covers FM and AM on medium and long wave, has 30 user-programable presets and the usual auto/manual tuning and preset scanning (it hops from one preset station to the next).

When I received the tuner there were no instructions, so I had no idea of how to program station names into the memory. I had assumed it would be cumbersome - like programming a VCR for next Thursday week. The reality couldn't be more different. Once the station is tuned in and entered as a preset station, you simply push the character button, spin the tuning knob (which doubles up its function) until the character is shown at the flashing cursor in the display, push the character button again and repeat for each character.

As with tuning, the rotary action enables very rapid selection, so the whole process can be completed very quickly. When the station identification is done,

MEASURED PERFORMANCE

Like most modern tuners, Sony's new ST-S211 has a ruler flat frequency response. However, as with CD players, tuners invariably display a basic sonic character determined by quite fine variations in response balance. In this case, the complete absence of treble lift and a slight roll down in output above 8kHz is likely to ensure the ST-S211 has a slightly mellow or even soft sound; I'd not expect it to sound hard or bright for example.

The basic response characteristic is good as current tuner technology goes, especially in light of the fact that a high rejection MPX filter rolls off output rapidly above 15kHz to notch out the 19kHz pilot tone, which could otherwise cause Dolby to mistrack when recording. Both pilot at 19kHz and sub-carrier at 38kHz were almost completely absent, so the ST-S211 has a clean output.

Distortion was a little higher on left and right channels than on sum and difference signals, a slightly peculiar state of affairs. However, at 0.2% overall, comprising mainly second harmonic (in the analysis), I wouldn't expect distortion to colour or degrade sound quality. What was a little disturbing was this tuner's sensitivity to pilot tone phase. Channel separation and output level varied more than usual with even small changes in phase. This will make the tuner sensitive to factory set-up accuracy and to transmitted pilot tone phase.

Good sensitivity allowed hiss to reach a minimum of -70dB with just 0.6μV from the aerial. That's a relatively low signal level to give what is termed 'full quieting', allowing the tuner to give good results from an aerial with a few elements, unless very distant from a transmitter. Most modern tuners manage -72dB, so the ST-S211 isn't as quiet as many, but I know from experience that at -70dB hiss will barely be audible even during extended Radio 3 silences.

The standard IHF sensitivity figures, which give the signal needed for hissy reception...
pressing MEMORY records this on a bit of silicon chip deep in the bowels of the tuner. It can then be switched to show either the tuned frequency, or station identification (e.g. BBC2, BBC3, etc.) automatically, provided it is selected by a station memory push-button. You may think it's a gimmick, but I can never remember which frequency is which station. With this system, once you've programed the data in, it's obvious at a glance. You can switch the signal strength meter and other display areas off, to leave just the station name or frequency, and even dull the display to look more discrete.

The rotary tuning knob is also a delight. I loath those push buttons which make you wait while the tuner scans up or down. With this tuner you can whizz up and down the 'dial' to locate a station of known frequency very quickly. It's much more ergonomic than a pair of cold unyielding buttons. It will also auto-scan when switched to this mode - just a quick flick of the knob to left or right initiates station search. The knob turns smoothly and, like the black brushed metal front panel, has a nice solid feel to it.

So what about performance and sound quality? After locking on to and committing the strongest FM transmissions to the tuner's memory, listening commenced. Radio 3, all the way from Wrotham, some 63 miles distant and on a humble 4-element aerial illuminated all ten bars of the display (i.e. at least 320µV) but as the test results on the signal-strength meter show, there was no way of me knowing how near the aerial signal was to the 600µV required for full quieting. Despite this unknown quantity, I enjoyed excellent low-noise interference-free reception of this BBC station and others which fully filled the display. A higher aerial signal may well have reduced noise a tad, but I wasn't aware of any, other than that of the programme source.

Tuning into weaker stations did provide noiser reception, as you'd expect, with those half-filling the display noticeably hissy, but those which almost made the top of the scale sounding quite acceptable. Sound quality when listening to classical music in FM stereo (BBC Radio 3) was very good, with a sense of depth and space with clean highs, free of the bright edginess which is so often the hallmark of cheap tuners. Bass from this tuner is good, firm and weighty. By comparison, a typical budget tuner sounded lifeless, flat and two dimensional with the kind of artificial clarity which comes with a sharp and bright treble.

Though not a great fan of medium wave, I conducted some listening on this waveband too, using the compact loop antenna provided. This indicated quite a reasonable performance, a good sound balance (apart from the total lack of treble in the broadcasts) and little interference. Considering the limitations of A.M. reception I had nothing to complain about here.

Returning to the FM performance, I'm not saying the ST-S211 is in the very top class, but it is very good. I could (and did) listen to it for hours on end enjoying every minute, and had no urge to swap it for something better. When I commenced listening I had no idea of the Sony's cost. When analysing sound quality I had assumed a higher price, with the delights of proper rotary tuning and station identification thrown in as benefits. When I learned it was the bottom of the range and costs just £130, I was pleasantly surprised. All in all, a very good budget tuner, which can be highly recommended from sonic and ergonomic viewpoints. Pity about the signal-strength display, though, just make sure the signal at least fills up all the bars for a good noise performance.

TUNER TEST RESULTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency response</td>
<td>4Hz-13kHz</td>
</tr>
<tr>
<td>Stereo separation</td>
<td>40dB</td>
</tr>
<tr>
<td>Distortion (50% mod.)</td>
<td>0.2%</td>
</tr>
<tr>
<td>Hiss (CCIR)</td>
<td>-70dB</td>
</tr>
<tr>
<td>Signal for minimum hiss</td>
<td>0.6µmV</td>
</tr>
<tr>
<td>Selectivity (at 0.4MHz)</td>
<td>80dBF</td>
</tr>
<tr>
<td>Sensitivity</td>
<td></td>
</tr>
<tr>
<td>mono</td>
<td>1.6µmV</td>
</tr>
<tr>
<td>stereo</td>
<td>25µmV</td>
</tr>
<tr>
<td>selectivity</td>
<td>80dBF</td>
</tr>
<tr>
<td>Signal Strength meter</td>
<td></td>
</tr>
<tr>
<td>Segment level (µV)</td>
<td>Segment level</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>125</td>
</tr>
<tr>
<td>8</td>
<td>160</td>
</tr>
<tr>
<td>9</td>
<td>200</td>
</tr>
<tr>
<td>10</td>
<td>320</td>
</tr>
</tbody>
</table>

Slight treble roll off.

"I enjoyed excellent low-noise interference-free reception"
Looking for Inspiration

B & W have just updated their DM 610 loudspeaker.
Dominic Todd listens for improvements.

Competent, but never inspirational. That was the general view of the previous B&W DM 610. Despite its qualities it never lived up to its smaller brother, the '600. However, fundamentally it was not a bad speaker. With the improved version B&W set about rectifying the main failing of the original - notably, a lack of driver integration and a slight colouration and clumsiness, which didn't lend the speaker to classical music.

"Improved" versions seem to be in vogue at the moment. There are SEs, LEs and Mark IIs, but B&W so far seem to have a monopoly on the suffix "improved". Whilst the improvements aren't extensive they do at least tackle one of the weakest areas of the previous '610, notably the crossover. This is now hard wired and should lead to better driver integration and less system dependence, according to B&W. There are also nickel plated, high purity copper shorting links. The rest stays as before - an eight inch polypropylene woofer, one inch metal dome tweeter, bi-wirable crossover and a rather lightweight chipboard cabinet with stylish moulded baffle. This makes the price rise of forty pounds to £239.95 seem a little steep. However, B&W will no doubt say it also has something to do with the devaluation of the pound.

With likely partnering components in mind, I auditioned the speakers with a Pioneer A-300X amplifier and sources in the form of a Marantz CDS25E MkII and Systemdeck IIX900 with Moth arm. Although the Aura and Rotel amps work well with most B&W speakers, I felt the '610s needed something a little more incisive and revealing. The Cyrus One has always worked well with them, but because it has been discontinued I opted for the similarly detailed and coherent A-300X. The CD player and turntable I also felt gave the speakers a chance to shine, as they are both noted for their accuracy, fine imagery and high resolution of detail. At the same time neither would ruthlessly expose and exaggerate any flaws in the speakers.
To test the speaker's limits I used Lumley Reference monoblocks and pre-amp, combined with a Sonographe CD player. They're out of keeping with the speaker's likely partners, but necessary to reveal any otherwise hidden virtues. The speakers aren't too fussy about positioning, but I found they worked best on low, open stands about 6'-12" into a room. After the '610s had been well run in, I started listening with the A-300X and CD52 MkII. At this point it is worth pointing out that the sound still benefits from the improved linking pins.

On "Spanish Jack" by Willy De Ville the warm blue/rock atmosphere seemed accurately portrayed. The strong bass had plenty of depth and surprising detail, and the mid and top frequencies seemed to integrate well. The whole effect was well balanced with no particular frequency dominating. However with anything more upbeat and lively, a boxyness and slight bass boom set in, which seemed to particularly effect female vocalists. Julia Fordham's "Genius" illustrated this. Whilst the speaker had no problem with the complex rhythm and the diversity of instruments, Julia Fordham's vocals were somewhat lost in the track, sounding slightly restrained and unnatural "cuppy".

Unfortunatley, classical music tended to compound this problem. Simple quartets and small orchestral pieces sounded detailed and realistic. However, a larger orchestral piece, such as Berioz's Symphonie Fantasique, showed the speaker to have a rather muddled bass which could too easily become congested with more complex orchestral works. Clearly though, the speakers did show better integration than their predecessors.

The transition between upper mid and lower treble was more seamless than before, which I am sure has helped improve the imaging (although others such as the Cyrus 780 are still better here). Moving to vinyl seemed to suit the '610s as the depth increased further and there appeared to be slightly less boxyness. The sound was less "shut-in". The bass extension displayed with "The Brand New Heavies - Put the funk back in II" was exceptional for a speaker costing just £240. With this type of music it could have easily passed for a compact floorstander.

In truth the high-end system didn't glean an awful lot more from the '610s. The imaging became tighter and more focused, and the soundstage was wider. Dynamics were excellent, but one still got the impression that what was being presented was an adaptation of the truth. An enjoyable one, but still a lack of accuracy, none the less.

**Conclusion**

The improvements do seem to have brought a much needed integration and presence to the sound of the '610 yet on balance it remains too uneven a speaker to deserve whole hearted recommendation. It still isn't a front-runner and those looking to play large orchestral pieces or female vocalists would be advised to consider alternatives, such as the Heybrook Solo, Cyrus 780, and Tannoy 607. However, for pop, rock and anything with a strong bass line, B&W's new loudspeaker is worth auditioning. Even at its new price of £240, there are few other speakers which provide such an extended bass and sense of dynamics properties that may well win over listeners to whom such strengths appeal.

MEASURED PERFORMANCE

B&W are no newcomers to loudspeakers. For years now they have been mass producing well engineered designs. The DM 610, already established as one of the leading middle market speakers has just been updated, or as B&W prefer to call it, improved. Visually nothing has changed, the only indication that there may have been some change being the small 'improved' sticker on one corner of the cardboard packing box. The changes made are internal, and concern the crossover.

The response is quite even in nature with only a small dip of 2-3dB at 3kHz where the bass/midrange unics crosses over to the metal dome tweeter. The bass rises slightly to 60Hz before finally falling sharply off below this frequency. The treble is well extended, but aimed at the very top to prevent any sharpness occurring.

After measuring frequency response I measured sensitivity, feeding the DM 610s with one nominal watt (2.83V) of pink noise and measuring from one metre distance. The B&W's turned in an impressive 90dB which suggests that they will take little volume before blasing you off your seat. However, the overall impedance value and impedance curve explain why. The low overall impedance of 7.5Ω shows that these are more current hungry than most budget loudspeakers, which in Britain commonly measure around 10Ω nominal impedance.

Below 200Hz, apart from the characteristic single hump of a sealed box loudspeaker, the impedance curve sits on the 3.6Ω line. This is low enough to cause most triode valve amplifiers trouble and even transistor amplifiers. Higher up, between 200Hz and 20kHz there is a large hump centred around 2kHz, followed by a strong dip. This indicates that these new DM 610s are a reactive load and one that will cause a weak amplifier some trouble. The response of the new DM 610s is a smooth and even one, but care should be taken to ensure that your amplifier will be up to the job of driving them. I would recommend a transistor amplifier of 50 watts as the minimum requirement for satisfactory results. DB
Specialist Hi-Fi Dealers

audio eXellence
WHERE THE MUSIC MATTERS

WEST & WALES

BRISTOL
65 Park Street, Bristol BS1 5PB
Tel: (0272) 284657

SWANSEA
9 High Street, Swansea
W. Glamorgan SA1 1LE
Tel: (0792) 474668

CARDIFF
1246 Cwmcarn Road, Cardiff, S. Glamorgan
Tel: (0222) 230065

GLoucester
58 Bristol Road, Gloucester GL1 5SD
Tel: (0452) 300046

LONDON & SOUTH EAST

Audio South

We are probably the only specialist Hi-Fi Dealers who have sold audio equipment as well as listened to live music. "What impressed me most was Audio South's obvious love of music, the demonstration was both a pleasure and an education - again well worth a visit."

Audiophile with Hi-Fi Answers October 1990

0% FINANCE AVAILABLE ON MOST EQUIPMENT OVER 6 TO 18 MONTHS
Please ring for further details.

Doby Pro Logic Surround sound through your Hi-Fi will give you cinema sound in your home.

EX-DEM AND SECONDHAND EQUIPMENT AVAILABLE ON SPECIAL OFFER, RING FOR DETAILS

24 (The Woolmead) East Street, Farnham, Surrey GU9 7TT. Tel (0252) 714555
Open Monday-Saturday 11am-6pm. Closed Tuesday

Demonstrations, preferably by appointment.

Spaldings

Established in Sound

081-654 1231/2040
352/4 Lower Addiscombe Rd.
Croydon, Surrey

The Hi-Fi Shop

GUILDFORD'S SPECIALIST SINCE 1950
We are at:
3 BRIDGE STREET, GUILDFORD
(For the traffic lights - next door to Alfred Marks)
0483504801 • 0483 304756
Access • Visa • Switch

Open Monday-Saturday 9am-6pm. (Later by appointment)

Newbury-audio
WHERE MUSIC MATTERS MOST

Limb • Naim • Rotik • Creek • Linn • Royd • Eapos • Dual
Ruark • JPW • Aura • Audioniche • Nakamichi • Denon
Roksan • Definitive Technologies • Beyer • Semiforte
Tripath • Car/Open

2 WEAVERS WALK • NORTHBROOK STREET
NEWBURY • BERKSHIRE RG13 1AL
TEL (0635) 33929

Front End Problems?

contact -
The Cartridge Man

It doesn't have to cost an arm and a leg to get the best - listen to my Koetsu - and - Decca - eater.

Also agents for Croft, Sugden, Thorens, Pentachord Speakers & Nottingham Analogue.

plus cartridge re-tipping service
081-688 6565
Station Sounds

For a selection of valve amplifiers and other older quality equipment

Valve amplifiers (combos and hi-fi) overhauled at sensible rates.
Audio Note speakers and used Audio innovations amplifiers stocked.
Valve and other equipment always wanted.
Mike Pointer 0903 239980 (including Fax)

Down platform Worthingham Station Sussex

Frank Harvey
Hi-Fi Excellence
163 Spoon Street, Coventry, CV1 3BB Tel: 0203 825 2500
Mon to Sat 9.30 to 5.30. Closed Thursday
Much More Than Hi-Fi
We Are A Bad Dealer


Mail order - Export - Home Trials
3 floors. 3 Dem rooms. 3000 sq feet in the pursuit of Hi-Fi Excellence

THE MOST EXCLUSIVE

Hi Fi Studio

The internal atmosphere and easy access make it so much more exciting choosing your hi-fi from the finest audio products available.

Just off the High Street, Bloxwich, nr. Walsall. West Midlands.
(Ample free parking)

OFF M6 JUNCTION (10)

T: 0922 493 499 - 473 499

INTEREST FREE

(For Ltd Period) APR 0%
Written details on request.

Licensed Credit Broker
Switch card accepted

THE AUDIO SPECIALISTS

for the most exciting range of equipment available in the Midlands which includes:
Arcam, Akai, Alphason, Apollo, Arcam, Audiolab, Audioquest, Audio Innovations, Audio Technica, Aura, Beyer, Cambridge Audio, Canon, Celestion, Chord, Cyrus, Deltec, Denon, Dual, Epos, Exposure, Heco, Impulse, Infinity, KEF, Luxman, Marantz, Meridian, Micromega, Mission, Quad, Mordaunt-Short, Monitor Audio, Monster, Musical Fidelity, Nakamichi, NVA, Panasonic, Pink Triangle, Pro-AC, Revox, Rogers, Rotel, Royd, Sansui, Sansui, Scandyna, Sennheiser, SHURE, Systemdek, Target, Technics, Thorens, Wharfedale, Yamaha etc.

OPENING TIMES:
Tues-Thurs 10.30-6.00
Friday 10.30-8.00
Saturday 10.30-5.00
Demonstration by Appointment

351 Hagley Road, Edgbaston.
Birmingham B17 8DL
Tel: 021-429-2111

156/7 Lower High Street
Stourbridge, West Midlands DY8 1TS
Tel: 0384 444 164

Jeffries

69 London Road
Brighton
0273 309431

Tel: 0342 314569

WEST SUSSEX

3 Floors. 3 Dem rooms. 3000 sq feet in the pursuit of Hi-Fi Excellence

MIDLANDS

Creative Audio
9 Dogpole, Shrewsbury, Shropshire
Tel: (0743) 241924
Closed Mondays

- Comfortable listening rooms
- Home demonstrations available
- Part exchange welcome
- Free home installation
- Interest free credit

Customer reviews for the most exciting range of equipment available.

Just off the High Street, Bloxwich, nr. Walsall. West Midlands.
(Ample free parking)

T: 0922 493 499 - 473 499

INTEREST FREE

(For Ltd Period) APR 0%
Written details on request.

Licensed Credit Broker
Switch card accepted

THE MOST EXCLUSIVE

Hi-Fi Studio

The internal atmosphere and easy access make it so much more exciting choosing your hi-fi from the finest audio products available.

Just off the High Street, Bloxwich, nr. Walsall. West Midlands.
(Ample free parking)

OFF M6 JUNCTION (10)

T: 0922 493 499 - 473 499

INTEREST FREE

(For Ltd Period) APR 0%
Written details on request.

Licensed Credit Broker
Switch card accepted

THE MOST EXCLUSIVE

Hi-Fi Studio

The internal atmosphere and easy access make it so much more exciting choosing your hi-fi from the finest audio products available.

Just off the High Street, Bloxwich, nr. Walsall. West Midlands.
(Ample free parking)

OFF M6 JUNCTION (10)

T: 0922 493 499 - 473 499

INTEREST FREE

(For Ltd Period) APR 0%
Written details on request.

Licensed Credit Broker
Switch card accepted

Frank Harvey
Hi-Fi Excellence
163 Spoon Street, Coventry, CV1 3BB Tel: 0203 825 2500
Mon to Sat 9.30 to 5.30. Closed Thursday
Much More Than Hi-Fi
We Are A Bad Dealer


Mail order - Export - Home Trials
3 floors. 3 Dem rooms. 3000 sq feet in the pursuit of Hi-Fi Excellence
Specialist Hi-Fi Dealers

If you like the hi-fi equipment you have but want a better performance, don't change it.

**UPGRADE IT!**

You can build better than you can buy and we offer kits, parts and instructions for everything from simple component upgrades to complete rebuilds, plus kits to build high end equipment from scratch.

**New upgrading service**

If you are daunted at the prospect of taking the lid off your prize possession, send it to us and we can upgrade it for you. We will advise on cost and feasibility before starting work and upgrade to the level of performance you require and can afford. We have a secure, low-cost door to door collection and delivery service covering the UK and Europe.

Upgrades to: Audio Research, Celestion, KEF, Krel, Linn, Meridian, Nairn, Nytech, Quad, Leak, Radford...

Everything!

NOW FOR FULL DETAILS AND A COPY OF OUR NEW 1993 DIOPHILE COMPONENTS CATALOGUE.

Edge Bank House, Skelsmergh, Kendal, Westmorland, LA8 9AS

Telephone: 0539 823247

STRAD

"Classic Loudspeaker Enclosures
Handcrafted from Authentic Blueprints"  
Thomas Henry Wostencroft, 29 Meadowfield, Whaley Bridge, Stockport, Cheshire

Tel: 0663 733383

Audio Components Catalogue

Everything for the DIY audiophile!  
D/A Converters, Digital Filters and Interfacing Kits, Audiophile Op-amps, Capacitors, Resistors, Boxes, Optical devices, Crystals, Kits for Power Amplifiers, DAC's etc.

Send today for our free catalogue of components, kits and application advice!  
Norwood Electronics, Unit 8, % Bush Rd, South Lowestoft Industrial Estate, Lowestoft, Suffolk, NR33 7NL.

GT AUDIO

Graham Tricker carries out professional repair & renovation work sympathetically to all types of classic Hi-Fi. Also a limited stock of classic equipment is available including LEAK, QUAD, RADFORD, CHAPMAN, GARRARD TROUGHLINE tuners and many other rare tuners. Original valves can be supplied ie: GZ32, GZ34, EL34, etc.

Tel: 0895 833099

EIRE

Aeo 93p4e, roen.

67 Mountjoy Street, Dublin Tel: 305633 Fax: 305839


PART EXCHANGE - CREDIT CARDS ACCEPTED

DEMONSTRATION ROOMS.

DECEMBER/JANUARY SALE OF USED AND DEMO STOCK

HI-FI WORLD SPECIALIST DEALER DIRECTORY ORDER

**BOOK 12 MONTHS FOR A 30% DISCOUNT!! OR 6 MONTHS FOR A 20% DISCOUNT.**

I wish to be included in Hi-Fi World's Specialist Dealer Directory starting the ___ issue for a total of ___ insertions

Please find enclosed my artwork/copy details. I wish to book ___ column centimetres at £12.50 per col. cm.

Name

Company

Address

Postcode

Telephone No.

Please return to: Caroline Knott, Hi-Fi World, 64 Castellain Road, London W9 1EX
Some months ago we received a fascinating letter from C. Lamb, an ex-pat from Wales struggling to come to terms with Australia in the summer. Boy is it hot - especially when you are into valve amplifiers! That's not all he's into though. Here's the latest from Bellingen, roughly two hundred and fifty miles north of Sydney on Australia's rugged East coast, where roos deliver Hi-Fi World and Quad electrostatics can be built from flooded gum timber. Makes hi-fi in the U.K. seem dull by comparison!

A six foot kangaroo stood at my door step; I was cagey as to whether he had come to box my ears. However, he had the March issue Hi-Fi World - thank you for your reply to my plea for help.

This is how my system stands now. Although not in the photograph, the Deitec 50S pre-amp has been replaced with an Audio Research 2S2 line level pre-amp. This has totally changed the system for me, it sounds superb. However, I am looking at valve amps now I've talked on to this exquisite valve sound.

For all those readers that have Quad electrostatic 'speakers and those who are contemplating buying some, I built these stacked Quads from flooded gum timber; and they are fully adjustable in any plane. I originally built the standard curvature for the panels, however on my re-design they can be mounted flat which does away with many of the problems of bending three individual layers evenly, and of the dust covers coming into contact with the panels.

I ordered all the parts for my Quads as spares; unfortunately the casings for the power supply are not available. However, your local aluminium specialist should be able to make some up very easily. Try and specify to Quad that you require the correct mounting bolts for the audio transformers, otherwise just re-tap them to fit five millimetre hex heads.

The h.t cable can be made from solid core spark plug lead. And since you can mount the panels flat, ask Quad to heat shrink them for you as this is a real fun and games ordeal not recommended for the light hearted. Make the rear shelf for the transformers larger, it will give you more room to work with. The car h.t leads are bulky, so if you can obtain the original from Quad all the better.

The dreaded holes that seem to appear in the plastic covering? Ask Quad how you can obtain acoustical plastic, if it is not readily available use a plastic bag, not the crinkly kind. A simple repair can be effected if you spread a thin layer of silicon on a patch of plastic bag and gently press on to the offending split. Remember to give a half inch overlap, this does a much better job than tape. Don't push too hard otherwise you will chase the 'spirt of the spirit.

Be aware that things don't always go to plan. Be prepared to find the best people and ask for quotes first. Add up the totals, you might be better off buying a new pair of ESL-63s.

The whole thing was a lot of fun for me, if not a tad frustrating at times. Be willing to have setbacks - persevere. It's worth it - and don't forget that if you have kids, fence the 'speakers off or don't attempt it.

I get a real high building this stuff. Remember that the Quad ESL-63 here in Aussie costs £5000 sterling.

My next project is to attempt to build two Audio Note Ongaku power amps using the finest possible components. Omitting the twelve kilos of silver wired transformer, it seems to me that the quality of any one item one can produce depends upon two things: its basic circuit and its components. If you want high-end sound at mid-range prices, build it yourself, using the best components you can afford and using the best circuit you can obtain. Even if you use technicians to do the work for you, it's got to be cheaper.

---

**Reader's System**

**BELLINGEN**

**SYDNEY**

---

**HI-FI WORLD AUGUST 1993**
What we are all after, is it not is to enjoy the music we listen to and not to look and listen to the faults. For all those readers trying to find that "sound", I would suggest listening to every system you can lay your ears on and steer clear of systems that initially strike you as great. The sound that we are often looking for is the one that creeps up on us slowly. When you find you do not want to leave the room after four hours of listening, the chances are you've found your goal.

Well my wish came true in response to my plea for help in the March issue, I wanted to walk in the drizzle, but the last three days I've been singing in the rain.

C. Lamb,
Thora Valley,
Bellingen 2454,
New South Wales,
AUSTRALIA.

P.S. For all those wondering about my face, yes, I just had three wisdom teeth removed under general anaesthetic.

I think that the kangaroo must have punched me while I was out.
Owwh it hurts!

Thanks for your letter. We know how you feel about building it yourself - but hold on. Very special silver wound output transformers are being brewed up by us at this very minute. They should be available on a range of valve amplifiers we aim to offer soon, including high quality single-endeds. Onkaku of Japan have got it right, but they're not the only ones who can build a decent valve amp - we're at it too! Our unique 300B amplifier is a first example - and it sounds gorgeous.

Why don't you hook the Quad power supply up to a wire fence - that'll keep the roo away. NK

DANGER
The Quad Electrostatic loudspeaker has lethal voltages (2500V) internally. It's complex and potentially very dangerous. Don't even think about building one unless you really do understand about high voltage electrostatics (e.g. the polarising voltage won't kill you; the stepped up audio voltage will), especially all the necessary safety precautions. The plastic 'bags' are lightweight industrial clingfilm, so use Clingfilm for repairs.

Coming in our September Issue

MICROMEGA'S MICRO RANGE
Europe just seems to be getting smaller and smaller. The latest product to cross the Channel from France is the mid-priced, micro sized Micromega system, comprising Microdrive transport featuring Philips' excellent CDM-9 mechanism, the Variovac digital convertor with variable output and switching for one other line level input and the Microamp power amp. We find out if they are as welcome as a good Chateau Lafritte.

MICHIEL ALECTO STEREO
Does this stereo power amplifier offer better value than a pair of Alecto Monoblocks? Just how well two fit into one is carefully investigated.

TANNONY 607 II
The whole Tannoy Sixes range has just been given an overhaul. The new range claims numerous improvements over the former models. We listen to the competitively priced two-way 607 II to see what refinements have been made.

TECHNICS ST-GT550L
Tuners equipped with RDS (Radio Data System) are arriving from the Far East with increasing regularity. This time we see what surprises a £190 Technics brings.

SUMMER SOUNDS COMPARISON TEST
On the beach, in a train, or on a long car journey, summer means the hi-fi stays at home. Get a good personal stereo instead - we test six to see what exciting sounds can be found on the move.

COMPETITION
Win a pair of Morel Bassmaster 602 Loudspeakers, complete with stands worth over £1200.

Hi-Fi World is still only £2 and increasing in size every issue. With the most enthusiastic and expert editorial team in hi-fi journalism, can you afford to miss it? Make sure you don't miss your copy by filling in this order form and handing it to your local newsagent.

Please reserve/deliver* Hi-Fi World on a regular basis, commencing with the next issue, until further notice.

Name: ____________________________
Address: __________________________

Signed: ____________________________
Date: ____________________________

Distributed to the news trade by
MAGAZINE MARKETING

World Radio History

World Radio History
GOING FOR SILVER

My system consists of:
1. Forsell Airbearing Turntable and arm with Koetsu Silver cartridge.
2. Micromega CDF I CD player and Audiolab 8000 DAC.
3. One pair of Quad 11 power amps modified by Peter Lindley.
5. Pair of Dynaudio 1.8 Contour speakers with "OCOS" speaker cable.
6. Interconnects are:
   - CD to DAC - Audioplan Digitenna.
   - DAC to pre amp - Choral Symphony (American).
   - Pre to Power Amps - Myst.
   - Turntable to pre amp - Forsell leads incorporated in turntable.

Write in with your problems to Hi-Fi World, 64 Castellain Road, Maida Vale, London W9 1EX.

Our panel of experts will endeavour to solve them or at least offer some practical advice.

My room is 17' by 12' and I listen to a wide variety of music. Although my system sounds very good, I would appreciate your advice on the following:

a) I feel my present interconnects are letting the side down. My local dealer (Zeus Audio) kindly lent me some interconnects from XLO and Audionote which made a substantial improvement, removing grain, improving imagery, transparency, etc. I would appreciate your comments on these leads or others you would recommend to improve my system's overall performance, particularly with imagery and transparency in mind. My budget is £550.

b) I would like to buy a tuner for my system and have the Audiolab 8000T in mind. Can I buy the same level of performance at a cheaper price? Also, what aerial should I consider?

---

F G Kavanagh,
Derry,
Northern Ireland.

I've no quarrel with the leads you suggest, only a personal preference for sticking to one type throughout rather than mixing too much. I'd also suggest you try out the Sterling cables from Micromega U.K., which I have a hunch may also be a viable alternative.

On the tuner, the answer is "Yes and No". For one thing, the Audiolab includes an extremely good AM section. If this is a factor in your choice, then the answer must be to go for the Audiolab. If FM, then the Quad FM4, although its lower output may mean having to wind the volume control round further than usual with other sources, which will result in a leap to turn it down when switching to other sources. If you can accept a slight drop in quality, but one that is very acceptable, then audition Harman Kardon's TU-9400.

As to the aerial, here, local installer advice is essential and the aerial itself is determined by the usage. See below for more info. EB

Londonderry (or Derry) has its own transmitter, sited on Sherriff's Mountain, due East a few miles. This transmits BBC Radios 1, 2, 3 and 4, Radio Foyle (BBC local) and Downtown Radio (IBA local). If that's all you want, then you'll probably need no more than a two or three element aerial, to get a signal of 1mV or more. An indoor dipole might do if you are in a very good site (i.e. close to the transmitter and with no obstructions in between).

If you'd like to pick up distant stations, like Cool FM or perhaps stations in the Republic, then you'll need to find a good local aerial fitter with knowledge of the geography and reception conditions. He'll almost certainly recommend a large array for long distance work, in which case you might have to consider an attenuator when pointing at Sherriff's Mountain. There are other solutions, such as multiple diplexed aerials for DX work, but again your local fitter should be consulted. NK
SOUND OF MUSIC

I appreciate the "sound" and "music" side of Hi-Fi. Therefore, I am striving to achieve the best "sound" and "music" from my CDs through my Hi-Fi components which consist of the following:

- Marantz CD-94 II
- Marantz CDA-94 DAC
- Marantz SC-80 / SM-80
- Nakamichi CR-7

I am using a pair of Celestion 5s. My speakers do not exactly match the rest of my components in terms of performance (the reproduction of "sound" and "music").

I would like to upgrade my Hi-Fi and your advice would be appreciated once again!

I am happy with my CD-94 II and CDA-94 DAC. However, I am not sure of the potential of my SC-80/SM-80 because I am pairing them up to those low-end, yet, satisfying Celestion 5 speakers.

If you think the SC-80/SM-80 are good with my DAC-94, then I will just upgrade my speakers. The speaker I have in mind is the Celestion SL-700 SE. My room is 17 by 20 by 8 feet. I do have curtains behind my listening position and the floor is covered with good carpets.


I like my sound and music to be natural and reveal what's on the CDs.

So does the SL-700 fit my sound and music needs? If it does, then I will get another SM-80 and go Mono! Somehow, I feel that my SC-80/2XSM-80 will not push out the best of SL-700 (given that you think they are good).

Somehow, I came up with this possibility:

My original Marantz CD-94II/CDA-94 (both bought in April '92) feeding into a Michell Argo (on Hera power supplies) into 2 x Michell Alectro monoblocks and into a pair of KEFs. What do you think? Or SL-700SE?

I use Audioquest Quartz and interconnect between DAC-94 and SC-80; optical links supplied originally between Marantz CD-94 and CDA-94; and "sound" and "music" from my CDs through my Hi-Fi best "sound" and "music" from SOUND OF MUSIC.

I appreciate the "sound" and "music". ;]

As to speakers, I'm in something of a quandary. While the Alectros should drive the 700SEs quite satisfactorily (they need both watts and current!), given your taste in music I cannot really imagine them to be suitable. You really do need something with a more driving bass, and if you stick with the Marantz amplifiers, a loudspeaker that is rather more efficient. This is where a shortage of information about what is available in Australia leads to difficulties and a long list. Castle Chester - or Winchesters; Heybrook Sextets; KEF Q90 or 104/2; Monitor Audio Studio 20; Origin Live OL2; Ruark Talisman; TDL Studio 1. Take your pick, but listen first! EB

COME IN NO 55

Perhaps you can provide me with some info about the turntable I have bought. It's made by C J Walker, no. QJ55. I have never read anything about this make. It has a wooden sub-chassis and seems to have some kind of acrylic platter. It is fitted with a Mission tone arm and a Shure VST-V.

The sound is much more lean in the mid and treble than my old EB101 but seems somewhat bass shy. I would like to know when it was made, if the maker still exists, what the platter is really made out of and how to tweak it up for maximum performance? Is the Mission tone arm good enough to keep? The arm is in perfect working order; the sound is a vast improvement over the EB101, but I would like to get as much out of it as I can. The rest of my system consists of:

- Musical Fidelity A200
- Musical Fidelity +1
- Onkyo CD DX5500
- KEF 103/4
- Audioquest Monitor PC
- Cardas cables
- Pioneer CTF 1250 cassette deck

I hope you can shed some light on my turntable. Thank you in advance.

Paul Zalh
Brussels

Yes, I do remember the Walker deck, though some of the details are a bit hazy. If I remember rightly, it was manufactured in the early Eighties and very frequently partnered with the Mission arm, though I now feel a Rega RB300 might be a better bet. I think I would go for one of the richer Goldrings rather than the Shure to beef up the bass a bit; try a 1022.

As to tweaking, not having access to one, I would be chary of making suggestions. Colin Walker, however, is still around, though he became somewhat disenfranchised with the hi-fi business at one time. I last heard of him in connection with the design of Castle's Chester loudspeakers: perhaps Castle Acoustics.
Hi-Fi World August 1993

queries

Shortbank Road, Skipton, N.Yorks BD23 2TT, England (fax: 0756-795335) would be able to pass on a letter: EB

PURE AND NATURAL

My system is: Sugden A488 amplifier, Arcam Alpha plus CD player, Pioneer PL12D/ Shure M75 ED/2 deck, Arcam Delta 80 tuner, Celestion Ditton 1S speakers. I have recently upgraded my amplifier (from a Sansui AU 101) and added tuner and CD player - I mainly listen to classical and light rock music. Which speakers would suit the system? Perhaps Rogers LS4a or LS6a (or 8a)? I can spend up to £500. I am interested in a pure, natural sound. The room measures 20' x 12' x 8'.

P A Banks
Manchester

Almost any BBC-ish speaker is the answer. I'd go for the or to get rid of the metal tweeter, which I am sure is the culprit.

I was not sure if I had made the right decision in buying the SME V. Before it, I had an Audiotone arm. What do you think?

I like a sound which you can look into. Do you think changing from the Musical Fidelity MVT Mk1 pre amp to an Audio Innovations Pre 200 series would be a good move or not? Or is the Voyd my problem, because I have heard the Pink Triangle Anniversary and liked it a lot, but that was fitted with an SME V and Ortofon 5000C? Please help!

Jonathan Manders
Edgbaston
Birmingham

Yes; change to the Audio Innovations pre and go for AudioNote K or J speakers, which I am frequently told go together beautifully. EB.

Front End First?

Firstly may I congratulate you on an excellent magazine, one that I feel is not afraid to review and discuss products and topics that other publications seem to try avoiding, i.e. 'High End' and especially 'Vintage' gear. Always provid-

The Rega Planar 2 is an excellent budget turntable.

4a. I think, while also trying a Heybrook Quartet, perhaps. But please upgrade your turntable if you are still playing vinyl: a Rega Planar 2 or, better, a 3 with a good Goldring cartridge or an Elys would make a very great improvement. EB

Looking into the Sound

I have a system consisting of a Voyd (standard), SME V silver wired (recently purchased), Audio-Technica OC10, MVT pre amp MK1, Audio Innovations Series 1000 monoblocks and a pair of Rogers LS 7t 'speakers with Deltec Black Slink between pre/power and Ortofon multi stand speaker cable. The problem is one of tonal balance. I am not sure if I need a new cartridge, new 'speakers, You don't clearly identify exactly what you feel is wrong with your system, only that it is wrong. I'll make some educated (well, I like to think so!) guesses that might help.

Don't fret about the SME V; its the very best. Just be aware that it is more neutral than some other arms. I worry about the combination of Rogers LS 7t speakers with a valve amp and, like Eric, feel you ought to try alternative speakers. Valve amplifiers are speaker sensitive because their feedback can be upset by a very reactive load and because high output impedance results in response changes. Having said that, the Series 1000 monoblocks better match modern loudspeakers than most. Speaker matching with valve amps is a subject in itself, one we must tackle shortly.

Try listening to the excellent Heybrook Quartets, which I have used now with feedback and non-feedback valve amps. These speakers reveal the magic of a valve amp more fully than any other loudspeaker I know. NK

Vinyl Convert

Believe it or not, I am a recent convert to vinyl, having heard a Rega Planar 3 and Rogers Corsus Blue while auditioning for a new CD player last year. As all my CDs, LPs and Cassettes had just been stolen (ouch!) the choice of format made little difference, and I have found it easier to find old vinyl than CD reissues of my former music collection - and back-catalogue vinyl has proved to be considerably cheaper.

I also took the opportunity to upgrade my amplifier to a Rotel RC/RB 960BX pre-power combination. I reside in a small room, so for the time being my Mission 700LE loudspeakers continue to push out the soundwaves. Having rebuilt a small but precious record collection, I need to know when the stylus might need replacing, and whether a simultaneous upgrade to a Corsus Black would be worthwhile, in the light of my present system. When I upgrade my 'speakers (to something like the Neat Petite) I also intend to add another Rotel power amp, or would I require another calibre of amplifier as well?

Finally, as my music library is now quite limited, much of my listening is to radio, both to pop stations (Capital, Radio 1), and Radio 3 & 4. Could you recommend a tuner to replace my Yamaha R7 receiver which now serves as my tuner source? I would be willing to spend £250-350, but would be loathe to give up the remote control function.

Jeroen L. Devos
Henne Hill
London

Syllis replacement times vary, according to the make and the profile, but they should generally be replaced at least once every two years, and ideally every year. Listen for signs of wear: channel imbalance, a dull treble, or decrease in spatial information. Examine it regularly, too: if, under a stylus microscope the point looks like a lump of coal instead of a pointed diamond, it should be replaced at once! It's worth upgrading. If you upgrade to the Neats, then an additional power amp is well worth considering. The tuner is a bit more of a problem: in your price bracket it has to be Harman-Kardon's TU-9600 for remote control. EB

Harman's TU-9600, bigger brother of the '9400 with remote control.

Continued on page 63...
TARGET
by Mail!

CARRIAGE FREE U.K. MAINLAND (N. IRELAND £10)
Most items can now be stocked all the range of equipment racks and speaker stands made by
Target Audio. It can therefore be quicker and simpler to have what you need sent by mail. It costs no
extra, there's no hassle, the carrier brings them to your door.

(After allow 10-14 days for delivery.

AER EQUIPMENT RACKS
Tubular welded construction with adjustable spiked feet (with the
option of castors if spikes are unacceptable). The upper shell is
supported on 4 adjustable spikes for improved decoupling. Shell size
505 x 165mm (W x D). Shelves 465 x 355mm (W x D).

<table>
<thead>
<tr>
<th>Type</th>
<th>Height</th>
<th>No. of Shelves</th>
<th>Distance</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>AER 2</td>
<td>355mm</td>
<td>2</td>
<td>300mm</td>
<td>£110.00</td>
</tr>
<tr>
<td>AER 3</td>
<td>515mm</td>
<td>3</td>
<td>165mm</td>
<td>£106.00</td>
</tr>
<tr>
<td>AER 4</td>
<td>680mm</td>
<td>4</td>
<td>155mm</td>
<td>£125.00</td>
</tr>
<tr>
<td>AER 5</td>
<td>845mm</td>
<td>5</td>
<td>155mm</td>
<td>£130.00</td>
</tr>
<tr>
<td>AER 3TV</td>
<td>3</td>
<td>3</td>
<td>150mm</td>
<td>£125.00</td>
</tr>
</tbody>
</table>

TT SPEAKER STANDS
No. between Type Distance
465mm 395mm

Depth
Self Supplied in flat pack for easy self assembly.

kit £9.99 extra Distance between columns 465mm 395mm

modules as required. Supplied with spiked feet (optional castors
added to suit varying equipment heights. Finished in black ash
effect.

TT5 795mm 5 155mm £115.00 £138.00
TT4 620mm 4 155mm £102.00 £115.00
TT3 515mm 3 155mm £99.00 £112.00
TT2 460mm 2 155mm £90.00 £102.00

MODULAR "M" SERIES RACKS
A very versatile system with option allowing modules to be
added to suit varying equipment heights. Finished in black ash
effect or glass shelves. Select the basic module and add shell
modules as required. Supplied with spiked feet. Optional castors

<table>
<thead>
<tr>
<th>Type</th>
<th>Height</th>
<th>No. of Shelves</th>
<th>Distance</th>
<th>Self Assembly Welded</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTW1</td>
<td>Wall</td>
<td>1</td>
<td>305mm</td>
<td>£33.00</td>
</tr>
<tr>
<td>TTW2</td>
<td>Wall</td>
<td>2</td>
<td>305mm</td>
<td>£65.00</td>
</tr>
<tr>
<td>TT2</td>
<td>490mm</td>
<td>2</td>
<td>380mm</td>
<td>£67.00</td>
</tr>
<tr>
<td>TT4</td>
<td>620mm</td>
<td>4</td>
<td>155mm</td>
<td>£115.00</td>
</tr>
<tr>
<td>TT5</td>
<td>795mm</td>
<td>3</td>
<td>325mm</td>
<td>£100.00</td>
</tr>
<tr>
<td>TT3</td>
<td>755mm</td>
<td>3</td>
<td>155mm</td>
<td>£115.00</td>
</tr>
<tr>
<td>TT5T</td>
<td>995mm</td>
<td>5</td>
<td>205mm</td>
<td>£150.00</td>
</tr>
</tbody>
</table>

BASE UNITS
A highly adaptable range of self assembly equipment racks. All models come
supplied with adjustable spikes for improved decoupling. Size
TTW1 TTW2 Wall 1 £53.00 £65.00
TTW2 Wall 2 £65.00 £70.00

Shelf sizes 465 • 355mm (W D). all others 505 . 395mm (W D)

For more details contact:
RINGMAY DEVELOPMENTS
PO BOX 200 BRENTWOOD
ESSEX CM15 8QG
Tel.: 0277 200 210 Fax: 0277 201 225

... 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 Street, London W1V 7HG
(A division of Connection 90' Travel Ltd.)
Continued from page 61

cartridge, Marantz CD65II SE CD player, Teac C-3X cassette, Akai GX760D cassette, Teac A3340s open reel, Revox A76 tuner, Rose RV23S pre amp and a pair of bridged Leak Stereo 20 power amps. I also own a pair of I.M.F. Pro Monitor Transmission Lines. But I am using Mordaunt-Short MS45 Ls at present, due to limited space.

The Systemdek IIIXE/900 should sharpen the source image.

Bearing in mind that I will be using my I.M.F.s as soon as space is available, can you please inform me as to where £750 could be spent most profitably to gain a significant improvement - mainly turntable or CD I suppose.

I listen to most kinds of music except Electronic/Computer dance and opera. I like a good stereo image with plenty of depth. Have you tried the 'Polaris' cartridge alignment protractor from Mr Bastin in Wolverhampton - it's excellently foolproof!

J Clark
Warley
West Midlands

As usual, what degree of upgraded front-end to go for depends on the size and growth of your record collection.

Now, if you only use your silver discs to stop your coffee cups marking the table, the whole outlook changes. This should be the case for anyone, by the way, who has a large vinyl collection, or is continuing to collect it, or has the quality of intervening components you have. Make the best you can of the source you use most - and in the case of turntables, buy one that will last out the century now! Looked at from this angle, the Marantz will suffice until you have saved up another few hundred.

The turntables I suggest will all make a hole in the cash-flow, but it's better not to spare the pennies. The ones to aim for are Michell's Mycro (with RB300, around £450); Systemdek IIIXE/900 with Alphason Xenon MCS (around £700); Thorens TD3001 with Rega RB300 (£740). All these would give you splendidly stable and sharp imaging and depth. The cartridge, too, should be the best you can afford.

At about £70, which should be the minimum, consider the high-output Denon DLI 10 MC, Goldring 1012GX, Rega Elys or Roksan Corus Blue. At the £100 mark: Ortofon's high-output MC15 Super or Goldring 1042. Adding another £30, the Roksan Corus Black or - if you prefer the somewhat brighter aspect, Audio-Technica's OC-3 or OC-5. The Rose is switchable between MC and MM internally, so there is no problem about using an MC cartridge.

If you play CDs more than LPs, all this good advice is redundant! Me, I'd cash in a few BT3 shares and tack on another hundred and fifty pounds or so for the Sugden SDT-I, which has extraordinary good body and depth. (It's become an NK fave.)

Sticking to the budget, however, there's the Arcam Delta 70.3 and Micromega Logic, both allowing for add-on high-quality DACs later. If you can stretch the pennies a little further, try the Pioneer PD-75. If you'd like to go with separate transport and DAC, then there's little in the way of options, but the optical-output only Technics SL-PA10 could be worth trying with QED's optical Digit and power supply, which together come in under the limit.

If you have a smaller store of LPs than CD, but still listen to them, the majority of the money will be best spent on a new CD player. In this case, a small upgrade to arm and cartridge leaving the rest of the funds for a new CD player is the best route. The original Rega arm was long ago superseded by Roy Gandy's straight one. Ideally, your Planar should be fitted with either the Moth (Rega RB250) or Rega RB300. There's not much in the price: £100 - £130. With, say, a Goldring 1012GX at £60, this should keep the black vinyl spinning nicely.

Combining the best of both worlds, upgrade your turntable, arm and cartridge, allowing about £200-£250 for an RB300 and one of the cartridges above, will leave around £400-£500 for a CD player. CD players worth considering are Pioneer's PD-590 (though a new model is on the way), the Marantz CD-77SE; or examine the forthcoming new £500-ish SE model from Sony. Listen first, of course, and good hunting!

I haven't tried the Polaris, but maybe I should navigate that way. EB

You've been dangling your toes in warm waters - ones heated by valve filaments. A Rose preamp and bridged Leaks eh? and you've been talking to Martin Bastin! I sense a man amenable to the potential delights of a Garrard 401, fitted with SME arm. Go on - try it!

Are you really going to try driving those huge IMFs with bridged Leaks? I think it unlikely this will work. In my experience, the big IMFs were best off connected to a power station - a Chord SP1200 might do the trick. I could be wrong; perhaps you don't want to drive them hard. But do try the combination first.

The QED MA16 plugs into the 'speaker terminals to give a headphone output.

Please help, my husband has a one track mind! His dilemma - 'which amplifier to upgrade to?' Our system consists of KEF Q60s on Target stands wired with Audioquest Indigo and an AR AD6 amp, a Meridian 206B, and a Linn Sondek with Valhalla, Ittok and Nagaoka Stilton set up.

We have heard, and like, the Audiolab pre and monoblock set-up but would like some suggestions for other amps (in a similar price range) for comparison.

At present our listening room is 4m x 4.5m and our musical tastes varied. (Rock, classical, blues and jazz.)

I hope you can help so he stops talking about amps and spends more time listening to music instead. PS. A headphone socket is preferable so I don't have to listen to the motor racing.

Sheila Miller,
Swindon

We'll do anything (almost - and no, I don't have a one track mind!) to persuade someone to stop talking about it and start 'em listening to it instead.

The tricky bit is the headphone socket, these not being much favoured. I hesitate to suggest one of the QED switchboxes (which take the signal from the speaker outputs) on the grounds that it is a bit awkward and slightly degrading sonically, but this is one solution. The better one is to exile the husband and the telly to another room when Murray Walker becomes excitable.

I find the Audiolab combination somewhat staid; at a
Continued from page 63

little more I’ve recently much enjoyed the Sentec SC9 (line-level) pre and SM9 monoblock power amplifiers from Sweden (available through Mag Audio), which are small, but clean and clear. Another alternative, less forwardly-projected than the Sentec is the LFD ‘Zero’ series of pre-and power amplifiers.

If you fancy remote control, try Quad’s 66 pre and 606MKII power, at a not dissimilar price to the Audiolabs. Any of these will accept pretty well any source and drive most loudspeakers very satisfactorily. You could even mix and match the Audiolab pre with either Sentec or LFD power amps, but not, ideally, with the Quad.

Next is Naim in various combinations, but not to everyone’s taste and not for all types of speakers. Do arrange a dealer demonstration, however, of the 62/140. Finally, have a listen to Audio Innovations’ Series 200 pre and power combination. Vroom vroom! EB

Buy him his own small portable set, a stick on headphones. It’s great fun - or any toyshop - and a pair of Vroom vroom! EB

Audio Innovations’ Series 200 pre and power combination.

The updated Quad 606 II

arrange a dealer demonstration, however, of the 62/140. Finally, have a listen to Audio Innovations’ Series 200 pre and power combination. Vroom vroom! EB

Buy him his own small portable set, a stick on headphones. It’s great fun - or it was until Nigel got huffy and disappeared. Anyone want to buy a steering wheel? NK

KING KONG

I have a few queries concerning my system, which is based on the GyroDec partnered with Manticore Musician tonearm and AT-OC7 cartridge. Amplifiers are the ISO/ARGO/

QUAD 606 combination driving a pair of bi-wired ProAc Response One S loudspeakers. All the units have their own dedicated power supplies. The amplifiers are placed on a Hi-Fi rack, the ProAc is on one of the cheaper target stands filled with sand, and the GyroDec is also on a Target single-shelved stand placed on top of the Hi-Fi rack. The interconnects used are: DMN cable for the pre-power amps, van den Hul for the ISO/ARGO and Audioquest Midnight Blue for the speakers.

So much about the equipment. Now for the sound, I find it bass light, though firm, but lacking extension. As a whole it is a bit restricted, lacks openness and is less musical than my previous system, which was the Creek 4040 III and the Heybrook HBI Mk I. That combination was highly musical and open, if not informative. I found I enjoyed the music it made.

What’s the problem here? I am looking for something neutral, sweet, yet with pace and scale. As when I listened to the ARGO/QUAD/ProAc setup in my dealer (back in London) the system was very close to what I want, and significantly better then the Heybrook/Creek setup.

I wonder if a change of tonearm and cartridge, as well as the interconnects will help. I’m interested in the SME 309 or IV with one of the ScanTech cartridges. Other than that, I am also very keen about the Alecto monoblocks which I heard in the same demo back in London. As now I am working in Hong Kong, it will be very difficult to audition the above equipment. But I am making a trip to the UK for two weeks, I would be grateful if you can give me some advice to shop around.

Also, I noticed on p27 of the May 93 issue a picture of the Michell system which was housed on a very neat stand, would you please tell me what make it is! Yours sincerely,

Mr S Chan
Kowloon, Hong Kong

I’m a little surprised that the system should sound light, having had a Quad 606/Argo combination around. The Quad rolls off below 20Hz, and you may be missing some weight at the bottom, especially taking the deck/arm/cartridge combination into account. The sound really should be miles ahead of your previous set-up, though the Heybrooks may well have given you a slightly false impression of bass quality. If it’s dry-ish, it doesn’t mean it’s wrong!

I would prescribe a change of pre-power interconnects immediately. I’ve been promising myself for months that I’d sit down and work out the equations, and sort out which cables go best with which amps, but I can’t seem to find the time! However, the Argo/Quad combination will perform better with low-capacitance cable. When you’re in London, nip into Tandy’s and buy the patchcords: they seem to be ideal. Alternatively, specify a 75Ohm screened interconnect from a dealer if you need longer than a metre.

For the Gyrodek, the SMEIV seems to be ideal. One makes slight compromises, but I have lived with it for some time now and can’t go back to anything else. Any Scan-Tech based cartridge fits like a glove: at the moment that means the Lyra; though when you’re in London, ask at KJ Leisure Sound if the new Michell’s fabulous Alecto power amplifiers

A Quad 606 isn’t bass light and, like Eric, I’m a bit baffled by your impressions. The HB-I will have conditioned you to a different sound; Heybrook do like to provide over-generous bass with their small loudspeakers; give yourself a little time to settle in to something more accurate. A Chord SPM1200 delivers the driest, deepest bass I have ever heard; you may like to consider it. Finally, I wonder about listening rooms. If you’ve already heard your chosen system sounding good in another environment, then differences may be attributable to room acoustics. In view of the money you are spending, do insist upon a home demonstration first.

NK
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
BANDRIDGE accessories
BANG & OULFSEN
BEYER Dynamic
BOSE
BOSTON
CABLETALK
CANON
CASTLE
CELESTION
CERWIN VEGA
CREEK
CYRUS
DENON
DUAL
GOLDRING
HARMAN KARDON
HECO
HEYBROOK
INFINITY
JAMO
JPW
JBL
KEF
KENWOOD
KODAK (PHOTO-CD)
LUXMAN
MARANTZ
MAKEL
MACH
MICHEL
MICROMEGA
MISSION

Main Dealers for:
MITSUBISHI
MONITOR AUDIO
MONITOR-cable
MORDAUNT-SHORT
MUSICAL FIDELITY
NAD
NAKAMICHI
ORTOFON
PHILIPS
Pink TRIANGLE
PIONEER
PROJECT turntables
PROJECT QED
QUAD
REVOLVER
REVOX
ROGERS
ROKSAN
ROTEL
RUARK
SANSUI
SCOTCH/3M
SENNHEISER
SHURE
SME
SONY
SOUNDSTYLE
SPENDOR
STAX
SYSTEMDEK
TANNOY Prestige
TARGET
TANNOY
TDK
TEAC
TECHNICS
THORENS
TOHIBA
TRIPOD
Van den HUL
WADIA
WHARFEDALE
YAMAHA
AND MANY MORE

Home Cinema ~ A/V Equipment ~ Specialists

SPECIAL OFFERS

Spend £1000 Claim Goods Worth £150

Spend £500 Claim Goods Worth £70

Demo Rooms
Mail Order
Part Exchange
Sunday Opening

£081-952 5535
£081-569 5802
£081-570 7512

Interest free credit? Ask for details

Promotion valid until 30/9/93, and not with any other offer, nor with interest free credit, nor with special offers, nor with part exchange.
Audiolab are well known for their sturdy, reliable and musical sounding products. This month we are offering some of their top components as a competition prize. One lucky winner will become the proud owner of over £1600 worth of Audiolab hi-fi comprising the 8000C pre-amplifier, the 8000P 100watt power amplifier and a source that requires no software, the 8000T tuner.

The 8000C/P pre and power amplifiers are regarded as one of the best value for money combinations around and have long been favourites of the Hi-Fi World team. When we auditioned them in our June '91 comparison test we found that the pre-amp resolved a level of detail and had an insight unmatched by its rivals; it brought a superb sense of presence to performers and bands. The power amplifier suits the pre-amplifier perfectly, the two offering a sound that was precise, pure and coherent.

We measured the power output of the 8000P power amplifier to be 144watts, which will certainly drive the most obstinate of loads. With a complete absence of distortion it was hardly surprising that the sound was so good we rated it top of the pile.

News hot off the presses is that Audiolab are improving the 8000P; a new '93 model boasting further refinement of this already respected amplifier is on its way. It has an uprated power supply, which Audiolab claim gives the power amplifier cleaner and deeper bass and a sweeter sound. One of the first of these models will be offered as a prize this month.

The 8000T tuner is an ideal source, its flexibility (it covers Medium Wave, Long wave and VHF) will ensure that plenty of musical entertainment can be plucked from the airwaves. When we reviewed the 8000T tuner in the February '93 issue we concluded that its three year development program was definitely well worth the wait. In particular we were impressed by its extremely smooth, natural tonal quality and its ability to conjure up a wide, open soundstage. When listening to a live concert, classical or rock, it was possible to imagine the performers in front of you, such was its ability to reproduce such an event. Also noted was the quality of its AM reproduction. In fact it was so good that it became possible to observe whether a news correspondent's 'phone line was substandard or not!

The development work on the tuner was carried out by Audiolab’s designer, Derek Scotland, and by the Managing Director, Philip Swift. The 8000T incorporates sophisticated electronics that include several 'in-house' parts. The front end was specially developed and utilises a dual-gate MOSFET mixer, whilst the whole tuner benefits from microprocessor control and the unique addition of a real time frequency read out.

The only obstacle preventing this attractive system package, worth £1629.70, from making a one-way journey from Godmanchester to your listening room is the price of a stamp and a little shrewd judgement.

WIN AN AMPLIFIER

COMPETITION ENTRY FORM

1. Audiolab are based in which Cambridgeshire village?
   - Huntingdon
   - Great Raveley
   - Godmanchester
   - Bury

2. The Audiolab 8000T does not cover which frequency band?
   - LW
   - MW
   - VHF
   - ELF

3. The Company that manufactures Audiolab products is?
   - Huntingdon General Electronic Ltd.
   - Cambridge Systems Technology Ltd.
   - Audio Laboratories Ltd.
   - High Fidelity Forever Ltd.

4. What is not, and never has been an Audiolab product?
   - 8000C
   - 8000P
   - 8000T
   - 8000GT

5. Who played a major role in the development of the 8000T?
   - J J Kelvin
   - Derek Scotland
   - Michael Faraday
   - Hammering Onnes

6. How much distortion does the Audiolab amplifier combination produce?
   - 0.1%
   - 1.3%
   - No measurable distortion
   - 0.01%

Name

Address

Postcode

Daytime Tel No: ___________________________

Evening Tel No: ___________________________
Please send your entry form, completed in block capitals, to arrive by 6th September 1993, to:

AUDIOLAB COMPETITION,
Hi-Fi World Magazine,
64 Castellain Road,
London W9 1EX

In the event of more than one entrant submitting all the correct answers, the winner will be plucked from a hat. We will endeavour to publish the results in the October '93 issue. Audio Publishing Ltd reserves the right to publish such entries or parts of entries as the company sees fit. We regret that photocopies of the entry form cannot be accepted. No correspondence about this competition will be entered into and the Editor's decision is final. Employees of Cambridge Systems Technology Ltd. and Audio Publishing Ltd. may not enter.

Audion Silver Night Competition

The Winner

Although Summer is finally here, it did not stop hundreds of entrants competing for the Audion Silver Night monoblocks to warm up their homes. After much deliberation and many smiles, the winner with the most amusing and poetic tie-break was judged to be Peter Stockland of Tadworth in Surrey. Many congratulations to Peter and also many thanks for the thousands of entries which brought mirth to the editorial office. Please keep trying!

EAR Rogers Competition Delivery

Martyn Scott, a Business Practitioner for IBM was presented with the April '93 competition prize by Tim de Paravicini, the designer of the Esoteric Audio Research 834 amplifier.
EXPERIENCE MUSICAL TRUTH

NEW 200S PRE POWER
£1250

Analogue Audio
Waveney House
Bungay Road
Scole, Diss
Norfolk
IP21 4DX
Tel: 0379 740227

Doug Brady Hi Fi
Kingsway Studios
Kingsway North
Warrington
Tel: 0925 828009
(Also at Liverpool, London and Otley, Nr Leeds)

Hi Fi Experience
143 Bath Street
Glasgow
G3 9HE
Tel: 041 226 4268

Steve Boxshall Hi Fi
41 Victoria Road
Cambridge
CB4 3BW
Tel: 0223 68305

KJ Leisuresound
26 New Cavendish Street
London
W1M 7LH
Tel: 071 486 8262

P J Hi Hi
3 Bridge Street
Guildford
Surrey
Tel: 0483 504801

Zeus Audio
Unit 7
Hope Street
Belfast
Northern Ireland
Tel: 0232 332322

Midland Hi Fi
Royal Garden Buildings
Wyleana Street
Wolverhampton
Tel: 0902 771774

Mainway Hi Fi
T/A Sound Academy
152A High Street
Bloxwich
West Midlands
Tel: 0922 493499

Shropshire Hi Fi
St. Michael's Street
Shrewsbury
Shropshire SY1 2ES
Tel: 0743 232317

Shropshire Hi Fi
18A Eldon Street
Twyford, Nr Newark
Nottingham NG22 0LH
Tel: 0777 870372

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
Back Issues

HI-FI WORLD BACK ISSUES ORDER FORM
Please tick the box next to the issue(s) you wish to order
- September 1991 - £2.00
- October 1991 (incl. CD) - £2.80
- December 1991 - £2.00
- January 1992 - £2.00
- March 1992 - £2.00
- June 1992 - £2.00
- September 1992 - £2.00
- October 1992 - £2.00
- November 1992 - £2.00
- December 1992 - £2.00
- January 1993 - £2.00
- February 1993 - £2.00
- March 1993 - £2.00
- May 1993 - £2.00
- June 1993 - £2.00
Total no of issues ordered
Total price

Subscriptions

12 ISSUES FOR ONLY £22 (UK only)

HI-FI WORLD SUBSCRIPTION FORM
Please send me the next 12 issues of Hi-Fi World, starting with the issue I enclose my cheque/postal order for £22 (UK only) made payable to Audio Publishing Ltd.

Name
Address
Daytime Tel No:

Please debit my VISA/ACCESS Card No:

Expire Date: ____________ Tel: 071-266 0461

Send to: Audio Publishing Ltd., 64 Castellain Road, Maida Vale, London W9 1EX.

Overseas subscription rates.
Surface Mail: £29.
Airmail: £42 (Europe & Middle East), £62 (Australia & Japan).

OR
Please charge my Credit Card with the amount indicated.
(All major Credit Cards accepted)

No:
Expire Date:
Signature: ________________________ Name: ________________________
Address:
City: ________________________ State: ________________________ Zip: ________________________

U.S. & Canadian Subscriptions

Hi-Fi World
P.O. Box 754, Manhasset, N.Y. 11030 - 0754
Telephone: 516 627 3836 Fax: 516 627 1972

I wish to subscribe right now - and receive monthly copies of Hi-Fi World Air Speeded direct from the Publisher in London U.K. to the N.Y. Office

I enclose my payment to: FRJ/HI-FI as checked below
1 Year - 12 Issues $66 (U.S.)

U.S. FUNDS ONLY PLEASE - Add $10 U.S. for Canada.

Or Telephone: 516 627 3836
Or Fax: 516 627 1972

World Radio History
No one was ever sorry that they bought the best!

As audiophiles you demand the ultimate. Groove Tubes Performance tested valves certainly measure up every time to those demanding standards. Whatever kind of music you prefer, you'll appreciate it better with Groove Tubes. Simply changing to Groove Tubes will create a whole different set of tonal characteristics to your amplifier, and they are used or approved as the ultimate upgrade to any preamplifier or any power amplifier, by many manufacturers.

Hundreds of professional musicians like Bryan Adams, ZZ Top, Tina Turner, Genesis and Chris Rea use Groove Tubes and G.T. Electronics in their stage and recording amplification.

Now we are introducing the Groove Tubes D.75s power amplifier to the Audiophile market.

This is a professional 75 watts per channel stereo amplifier currently in use in top recording studios around the world and of course it comes complete with Groove Tubes as standard.

So use Groove Tubes, sit back and hear the difference!

For further information and your nearest stockist contact the Groove Tubes Hotline now.

Telephone: 0902-620156
Fax 0902-620207
The Groove Tube Centre, 8 Barn Green, Bradmore, Wolverhampton WV3 7AY England.

Hertford Music

Stockists of High Quality

British Hi-Fi

including:

REL Acoustics sub-woofers
- the only ones that really work

A.C. Magnum amplifiers
- mosfet amplification currently receiving critical acclaim

Lumley valve amplification
- probably the best valve amplifiers in the world.

also, Rotel, Diamond Acoustics

Home demonstrations arranged

Telephone: (0992) 700900
Fax: (0992) 788271
The QED SYSTEMLINE is an advanced Audio switching system. Audio and Video sources can be controlled via infra-red remote control from any room in the house. Each source can be independently monitored and viewed in any room. The SYSTEMLINE controller will work with all makes of equipment. Any makes of loudspeaker can be used in the destination rooms. We highly recommend the KEF Custom Series that can be flush mounted and matched to the decor of each room.

SOUND SIMPLICITY

Sound simplicity can supply, install and maintain the QED Systemline together with source equipment and loudspeakers to suit your home.

For further information on interactive sound and vision systems, please contact Richard on: 081 546 7885 or 0374 163395

For your pleasure we present the new "SILVER NIGHT"

Audion 300B
Push Pull
"SUPER LINEAR"
Direct heated triode Amplifier’s Positively no feedback Pure Class "A"

"Probably the best amplifier in the world!" Under £2000, affordable high end!

Now performing at the following selected dealers

Audion

Audion 300B
Push Pull
"SUPER LINEAR"
Direct heated triode Amplifier’s Positively no feedback Pure Class "A"

"Probably the best amplifier in the world!" Under £2000, affordable high end!

Now performing at the following selected dealers
ANTI-STATIC RECORD SLEEVES
Translucent sleeves, treated to reduce static and dust attraction, supplied in packs of fifty. They will fit inside ordinary printed inners.
LP SLEEVES (50) .... PRICE £7.50

NAGOAKA CD CLEANING KIT
Careful manual cleaning is the most effective way of removing surface contaminants. Nagaoka's kit includes a solvent and chamois leather pad to bring back a pristine shine to Compact Discs.
NAGOAKA CD CLEANING KIT £10.50

AUDIO-TECHNICA CD LENS CLEANER
A disc the size of a CD, with fine brushes - one of which is dampened with cleaning fluid. As the disc spins in the player, the brushes clean the laser lens. It may not suit all machines.
CD LENS CLEANER £16.25

AUDIO-TECHNICA ELECTRONIC STYLUS CLEANER
No need to touch that fragile stylus! Just rest it on the vibrating pad and the cleaner will vibrate the gunge right off the tip. Powered by an AA battery.

LASAWAY GREEN PEN
When red laser light hits the reflective surface of a CD, some of it can be scattered off the edges of the disc, causing optical interference. Applying this green coating, formulated by Japanese company Mitsubishi, to the inner and outer edges of the CD reduces this interference, improving sound quality.
LASAWAY GREEN PEN £8.50

HI-FI WORLD DRY STYLUS CLEANER
Keep your stylus sharp and bright for perfect tracking without using fluid. Cut a strip about the size of a matchbox striker off this sheet of card and draw it gently under the stylus from back to front. One sheet of this card, with its aluminium-oxide micro-abrasive coating, should be enough to clean your stylus at least forty times.
DRIY STYLUS CLEANER £1.95

PIXALL MK II RECORD CLEANER
Made in the UK, this simple record cleaner uses a replaceable roll of sticky tape which lifts dust out of the groove. After use, the dirty length of tape can be peeled off, reducing the risk of any gritty particles picked up being ground back into the vinyl. When the tape runs out, a new roller is simply clipped in.
PIXALL MARK II £10.75
REFILL ROLLER £2.75
ON STYLUS CLEANER
A simple but effective cleaning kit, consisting of a stylus brush and cleaning solution. Used carefully, it will keep your stylus sparkling.
STYLUS CLEANING KIT
£2.50

TDK HEAD CLEANING KIT
TDK's CK-A1 head cleaning kit offers two bottles of cleaning fluid, one for the heads, the other for the rubber pinch wheels, and cotton buds for applying them. The CK-TB kit has a single bottle of dual-purpose fluid.

AUTOMATIC CD CLEANER
About the size of a portable CD player, this battery-operated disc cleaner spins the disc while two replaceable sponges clean it radially. Spray the CD with the cleaning fluid supplied, insert it into the machine, and the cleaning cycle is completed in twenty seconds. Supplied with washable foam cleaning pads and cleaning solution (but not batteries) the cleaner can be powered by any standard transformer like those used for Personals with a 3v dc 350mA output.
AUTOMATIC CD CLEANER
£21.95

RECORD STORAGE CUBE
Designed to hold about a hundred LPs, with an internal width of 37cm, height of 32.5cm and depth of 32cm. The cubes can be stacked or placed alongside each other - and are even strong enough to be used as seats! Made from 15mm MDF (Medium Density Fibreboard) with a smart durable black paint finish, the cube is supplied in flat-pack form ready for home assembly.

RECORD STORGE CUBE £42 EACH

FREE!
20 RECORD SLEEVES WITH 2 CUBES
50 RECORD SLEEVES WITH 4 CUBES
6 CUBES FOR THE PRICE OF FIVE! £210
8 CUBES FOR THE PRICE OF SEVEN! £294

SORBOTHANE CD FEET
Four round rubber feet, 50mm in diameter and 18mm deep, made from an artificial form of rubber known as Sorbothane. These feet have the ability to soak up vibrations and improve sound quality by providing a platform for CD players or any hi-fi sensitive to vibration.
SORBOTHANE CD FEET £27.95
SWEATSHIRTS AND T SHIRTS
Printed with 'Hi-Fi World' and our slogan 'The Magazine for Enthusiasts' front and back to prove to everybody you read probably the best magazine in the universe.
SWEATSHIRTS £ 12.00
HOODED TRACK TOPS £ 15.00
T-SHIRTS £ 7.99

SOUND SWIVEL
A rotating, upright, double-sided, storage cabinet with space for up to 160 Compact Discs, including 8 double jewel-cases. Mounted on an all-steel turntable, it swivels smoothly through 360 degrees giving easy access to the storage compartments either side. Manufactured in durable MDF with a Black Ash effect finish, the Sound swivel comes packed for self assembly with full instructions.
SOUND SWIVEL £ 49.95

MICHELL ENGINEERING PLUGS
Craftsmanship marks out Michell Engineering's range of gold and rhodium plated plugs from the competition. Simple but elegant:
GOLD-PLATED SIDE ENTRY BANANA PLUGS (4) £ 10.00
GOLD-PLATED SURE-LOC BANANA PLUGS (4) £ 14.95
RHODIUM-PLATED SURE-LOC BANANA PLUGS £ 18.95
GOLD-PLATED SPEAKER CABLE CONNECTORS £ 10.00

GOLD PLATED 4MM BANANA PLUGS
We have a new style, heavy-duty, gold-plated banana plug with a unique type of axial solderless connection for loudspeaker cables. The cable is stripped back and pushed into a clamping collar which is then screwed down tight, accepting cable up to 6mm external diameter and 4mm core diameter. Supplied in sets of four.
BANANA PLUGS (4) £ 8.00

GOLD-PLATED SPADE CONNECTOR
A heavy-duty gold-plated spade connector for loudspeaker screw terminals with a unique axial clamp connector which requires no soldering.
SPADE CONNECTOR (4) ... £ 10

NEW FROM HI-FI WORLD!

CD/MC TOWER
Ready built, the CD Tower is of all metal construction with sloe-in side panels finished in either mahogany or black ash. Each of the trays slides out for access to the stored cassettes and discs. Total capacity is 160 CDs and 52 cassettes.
CD/MC TOWER £ 199.90

LIFT JUMBO
This aluminium Compact Disc stacker holds seventy-five CDs, which can be flipped forward by the fingertips to display the insert. Browse through your CD collection without having to squint at the small lettering on the spine.
LIFT JUMBO £ 44.95
MATROW BIASBUG
A fascinating little device no larger than a hand-held remote which allows the user to adjust bias on any cassette deck perfectly for any tape. You can check the state of your cables and connections with it too! Supplied with a cassette test tape and full instructions. (See review, Nov. 1992 issue.)
MATROW BIASBUG £59.99

AUDIOQUEST
OPTICAL LINK Z
A wide-bandwidth, ultra-high performance optical cable for digital links such as that between CD transport and convertor. Available in 1m and 2m lengths with conventional Toslink connectors.
OPTICAL LINK Z (1M) £69
OPTICAL LINK Z (2M) £99

AUDIOQUEST QUARTZ INTERCONNECT CABLES
A fully balanced analogue signal cable with heavy duty welded gold-plated phono plugs and advanced ultra-pure copper Quartz Hyperlitz cables using polypropylene insulation.
AUDIQUEST QUARTZ CABLE
1 METER LENGTHS £79/PAIR
2 METER LENGTHS £120/PAIR

KONTAK
An effective cleaning solution that removes contaminants from electrical connections. after application, a system regains its original life, sparkle and vigour.
KONTAK £21.20

HI-FI WORLD SPECIAL AUDIO ACCESSORIES ORDER FORM
Please send me:
CD sound swivel £49.95
Record storage cube £42.00 each
Sweatshirt (state size and colour) (XL, L, M) £12.00 each
Hooded track-top (one-size) £15.00 each
T-Shirt (state size and colour) (XL, L, M) £7.99 each
Pixall MkII Record Cleaner £10.75 each
Pixall refill roller £2.75 each
Hi-Fi World Dry Stylus Cleaner £1.95 per sheet
Kontak cleaning fluid £21.20 each
CD jewel Case £1.00
Nagaoka Anti-static record sleeves £7.50 (50)
Nagaoka CD cleaning kit £10.50
ON Stylus Cleaning Kit £2.50
Lasaway Green Pen £8.50 each
Laserguide £14.95
Audio Technica CD Lens cleaner £16.25 each
Audio Technica Record Cleaning System £10.50
Audio Technica Green CD Ring Stabilizers £6.50 (Pack of 5)
Audioquest Sorbothane feet £27.95 (4)
Audioquest Optical link Z £69 (1M)
Audioquest Optical link Z £99 (2M)
Audioquest Quartz cable (pair) £79 (1M)
Audioquest Quartz cable (pair) £120 (2M)
TDK Head Cleaning Kit CK-A1 (double bottle) £5.50
TDK Head Cleaning Kit CK-TB (single bottle) £4.65
Gold plated 4mm plugs £8.00 (4)
Gold plated spade connectors £10.00 (4)
Arcam RCA phono plug £15.50 (4)
Automatic CD Cleaner £21.95
Michell Gold-Plated Side Entry Banana Plugs (4) £10.00
Michell Gold-Plated Sure-Loc Banana Plugs (4) £14.95
Michell Rhodium-Plated Sure-Loc Banana Plugs (4) £18.95
Michell Gold-Plated Speaker Cable Connectors £10.00
Matrow Biasbug £59.99
CD/MC Tower £199.90
Lift Jumbo £44.95

All prices include postage & packing in the UK only.

I enclose cheque/PO for £ made payable to Audio Publishing Ltd.
I wish to pay by Visa/Access, please debit my account no:

Expiry date:

Name

Delivery Address

N.B. If delivery address different to the credit card holder's address please supply both.

Please send completed order form together with your cheque/PO to:
HI-FI WORLD,
64 Castellain Road,
Maida Vale,
London W9 1EX.

HI-FI WORLD

Credit Card Orders
Telephone 071-266 0461
Answerphone during evenings and weekends

VISA
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.

Bill Hutchinson Ltd.
HI-FI, AUDIO & CD CENTRES – MAIL ORDER AVAILABLE

HEAR PIONEER'S CD PLAYERS WITH LEGATO LINK

- PIONEER A 300X AMP – Recommended Buy 1992
- MISSION 760i SPEAKER – Recommended Buy 1992
- MARANTZ CD52 MkII CD Player – Recommended Buy 1992
- DENON D70 SYSTEM – Recommended Buy 1992
- KENWOOD KA-V8500 AV Product – Recommended Buy 1992
- ROTEL RT-950BX TUNER – Recommended Buy 1992

Licensed credit broker  Written details on request

ALL WITH 2 YEAR GUARANTEE  BEST PRICES GUARANTEED
A&M's press release wisely describes Canadian singer-songwriter Jann Arden's debut as an emotional combination of lethal love songs and melodic pop gems, with traces of rock, folk and new country thrown into the mix for good measure. This makes more sense than falling into the usual trap of likening her to an established singer, which generally suggests that the newcomer hasn't anything original to offer and is almost certainly preparing for a rapid departure into oblivion.

On the evidence of the material that constitutes this album, Ms Arden clearly has a finely tuned pop sensibility, the ability to write melodies with strikingly tenacious hooks that never skate close to being trite. 'We Do Some Strange Things' provides a classic example of a song that's superficially unexceptional but which echoes round your cranium for days after you first hear it. The track that follows, 'I'm Not Your Lover', will appeal to New Country fans without upsetting the sensibilities of those who cringe at the mention of the 'C-word'.

In fact, the only thing about this album that makes me cringe is Jim Keltner's drumming. I know Keltner is one of the top session players in America, I know he's respected by musicians the world over, I know Arden feels that when Jim started putting his parts down, the fabric of the songs became real, but I still reckon that this demi-god would benefit from a stick of high explosive being placed where his drum stool normally fits. His playing, for me, redefines the term laid-back. Other drummers seem able to play at exactly the same tempo but inject more life into the sounds coming off the kit. Even on up-tempo tracks such as 'Will You Remember Me' Keltner sounds as though he's barely interested.

Nonetheless, Time For Mercy remains a fine debut album and shows that in Jann Arden a, hopefully, significant talent has emerged. The material studiously avoids the clichéd, melancholic, bed-sit-blues aura that surrounds the majority of new female singer-songwriter albums - even on down-beat songs such as 'I Just Don't Love You Anymore' - and it deserves credit for that alone. That Jann Arden has a really effective and powerfully communicative voice comes as a real bonus.

JANN ARDEN
Time for Mercy
A&M 540 071-2

Malcolm Steward's voyage of musical discovery embraces East meeting West while also encountering a pop icon's and an old Police-man's latest offerings.

INDEX

RECORD REVIEWS

ROCK & POP
Malcolm Steward .................. 77
Eric Braithwaite .................. 80

JAZZ
Simon Hopkins ................... 82

CLASSICAL
Peter Herring ................... 85

RECORD MAIL ORDER .................. 97
STING

Ten Summoners Tales
A&M 540 075-2

Before Ten Summoner's Tales, I had real problems with Sting's solo recordings. When he was a Police-man, I came to regard him as a bassist who had a deft touch, a singer with a distinctive and often engaging voice, along with being a songwriter of obvious talent and intelligence. I admired the guy. But as a solo performer, I found his albums tedious at best, self-indulgent and pretentious at worst.

However, I approached Ten Summoner's Tales with renewed, if slightly suspicious interest. The Chaucerian title had a decidedly pseudish resonance, but there was some humour evident in the play on Sting's surname (Sumner). It suggested that he might be going back to being the bloke-next-door-you-like type of pop musician. Listening to the disc repeatedly since it arrived suggests that he is.

This is a masterly assortment of songs, an album that starts strongly with the sublime 'Prologue (If I Ever Lose My Faith In You)' and continues to improve thereafter. Lyrically and musically it is devoid of contrivance and artifice. It's an honest and mature collection of songs that proves satisfying even after you've played it a hundred and one times. It mixes appreciably intelligent and more superficially inviting elements in just the right proportions, with a combination of wry wordplay and tunes that are eminently hummable and memorable.

The playing throughout is superb and some interesting names feature in the list of guest musicians, which spans a wide and intriguing range of musical genres: Larry Adler plays harmonica; ex-Mother of Invention, Vinnie Colaiutt plays drums; contemporary classical composer Dave Heath plays flute (be sure to check out his work, The Frontier, on the London Chamber Orchestra's Virgin Classics CD, Minimalist, LC08); jazz virtuoso David Sancious plays keyboards; while Kathryn Tickell provides violin and Northumbrian pipes. Hugh Padgham's production and engineering marry these outwardly disparate factions seamlessly, with the result that the album's performances are as enjoyable and easy-on-the-ear as is its clean, acceptably involving - for a DDD recording - sound.

This is a consummate pop album and surely the most satisfying record that Sting has made since The Police's 1978 LP Outlandos d'Amour.

DAVID BOWIE

Black Tie White Noise
SAVAGE 74321 13697 2

Even when his music has been through less than thrilling periods, including the time when it plummeted to the level of unmitigated crap - for which read the content of Tin Machine's pitiful eponymous album, I never lost my respect for David Bowie. I might have despaired at the music but I couldn't shake off my admiration for the man who wrote Ziggy Stardust, one of the most magnificent songs penned since mankind emerged from the slime. Lately, however, I've not exactly been brimming with anticipation and enthusiasm at the prospect of a new Bowie release but the title Black Tie White Noise, with its powerful Velvet Underground overtones (White Light, White Heat) struck an inviting chord.

Having heard the disc, I regret having to say that it doesn't do much for me, although admitting why that's so makes me feel hypocritical. Bowie's career, like that of Miles Davis, has centred on change and progression (although that's a dubious word in this instance) and I respect an artist's right to develop and move in different directions. However, while I can enjoy Davis' music no matter what stage of his ever-fluxing career it emerged from, I remain hooked on Bowie's earlier material and resent his slide towards music that, as I interpret it, is less mature and less inspired.

Black Tie White Noise, for the most part, is just too much like disco dross for an old fogey like me, who loathes beat-box rhythms, synths and the monotony and the insipid colours they bring to music. This record has little in the way of drama or dynamics: there's not a single track here that despite its multi-instrumental, latest technology bluster has the emotional edge of, say, spartan songs such as 'The Bewlay Brothers' from Hunky Dory. I resent seeing Bowie the idiosyncratic individual becoming relegated to Bowie the band member, merely one element in a bland wash of synthetic contemporary muzak.

Nile Rodgers co-produced the album with Bowie and his influence is pervasive; everything gets the funky, slap bass, shake your booty treatment regardless of whether it's appropriate. It was fine on 1983's Let's Dance but it most definitely isn't in the case of 'I Feel Free', the fourth track on Black Tie White Noise. I can't imagine why anyone would want to re-hash this relic. In Cream's hands it was a splendid song but it doesn't cover well, sounding mauled when it's performed creatively and like a pastiche when it's not being improved or interpreted. Bowie and Rodgers ought to have let it rest in peace. The title track follows and demonstrates perfectly well, sounding mauled when it's performed creatively and like a pastiche when it's not being improved or interpreted. Bowie and Rodgers ought to have let it rest in peace. The title track follows and demonstrates perfectly
the CD, 'Lucy Can't Dance', and tell Tie White Noise. It isn't nostalgia that five seconds and ought really have want proof listen to the last track on Greatest Hits LP. Even Lester Bowie's appeared on a Luther Vandross' shouldn't last four minutes and fifty-five seconds and ought really have mundane status.

I feel sadly disappointed by Black Tie White Noise. It isn't nostalgia that makes me think that Bowie records ain't what they used to be. If you want proof listen to the last track on the CD, 'Lucy Can't Dance', and tell me it's not appalling, pathetic, turgid and totally without merit. And I say that as someone who will openly admit liking 'The Laughing Gnome'.

**RY COODER & V M BHATT**

**A Meeting by The River**

**WATER LILY ACOUSTICS**

WLA-CS-29-CD

---

The musicians involved, Ry Cooder and Vishwa Mohan Bhatt, seem outwardly to be an unlikely pairing - a guitarist from the American rock scene and an Indian classical musician. This type of cross-continental pairing isn't unique but past ventures of this nature have rarely been successful; fusions only produce worthwhile music when both parties are wholly sympathetic to each other's musical languages and idioms. In this instance, they are and they achieve an astounding level of harmony. Cooder, as well as being a virtuoso slide player, is an avid musicologist and was investigating music outside Western culture long before the concept of World music was born. Bhatt, having begun his musical career studying the sitar under Ravi Shankar, was working in the other direction, having become captivated by the sound of an acoustic guitar that a German student had left at his father's music school.

This led him to design the Mohan Vina used on this recording. This instrument is guitar-like but has drone and sympathetic strings in addition to the nylon strings, which are fretted with a steel slide to create the microtones that characterise Indian music. Cooder plays acoustic bottle neck guitar. He and Bhatt are supported by a two-piece rhythm section comprising Sukhinder, playing tabla, and Ry's teenage son, Joachim, playing dundebiek.

To describe the music, which, you learn from the CD insert, was completely unrehearsed, would take more space than I have available. As an inadequate thumbnail sketch, take Cooder's 'Paris, Texas', and add to it liberal doses of Indian rhythmic and melodic seasoning. That's selling it short because the improvisations that emerged from this session have an unusual blend of tranquil beauty and amazing energy and fire. The two powerful major musical forces here harmonise with astonishing ease. The best compliment I can pay this disc is that the communication and accord between Cooder and Bhatt are such that they sound as though they've always played together. East meets West and you can hardly see the join.

---

**REV. GARY DAVIS**

**Blues & Ragtime**

**SHANACHIE 97024**

- The Reverend Gary Davis is a truly mesmerising guitarist and that's not just the opinion of a failed planksucker; turned hack. Davis can number among those who have studied under him the likes of Stefan Grossman, David Bromberg, Jorma Kaukonen, Ry Cooder and many other respected, virtuoso players. His playing demonstrates that the aphorism those who can do, those who can't teach isn't universally true. Davis is an extraordinarily gifted guitarist and not just in the technical sense, he also has the sensitivity and feel that separates the masters from stylistically challenged also-rans.

He plays with a rare strain of authority that generates a sound big enough to get lost in. If you've ever heard Sonny Rollins and Philly Joe Jones' recording of 'The Surrey With A Fringe On Top' you'll know what I mean; you get to the end of the track thinking that you've been listening to a complete band only to realise that there were just two instruments playing. Davis regularly does the same with just his guitar and voice - oh yeah, he's a mean singer as well. This album will naturally have a special appeal for guitarists and guitar students - the CD liner even includes notation and tablature for five of the sixteen tracks - but just about anyone who enjoys music played on the guitar will regard it as a treasure. I'm not a great fan, for example, of ragtime music but when Gary Davis plays it I find it difficult not to listen and enjoy. It will also be of special interest to blues aficionados who will know that after the 'thirties and his ordination as a minister, Davis sadly took an aversion to playing the devil's music.

---

**RY COODER & V M BHATT**

**A Meeting by The River**

**WATER LILY ACOUSTICS**

WLA-CS-29-CD

---

This month's 'and now for something completely different' offering is indeed something completely different - an audiophile recording that contains music of real worth. Every time I'm subjected to an audiophile disc I come away impressed by the recording but bored witless by what passes for the music it contains. Luckily this isn't the case here.

This recording is as purist as any audio propeller head could wish to hear. It is pure analogue throughout, using custom-built triode valve electronics. The microphones were valve types built by Tim de Paravicini of Esoteric Audio Research, arranged as a Blumlein pair and fed through an EAR microphone pre-amplifier. Tim also designed the two-track recorder used to tape the session.

The musicians involved, Ry Cooder and Vishwa Mohan Bhatt, seem outwardly to be an unlikely pairing - a guitarist from the American rock scene and an Indian classical musician. This type of cross-continental pairing isn't unique but past ventures of this nature have rarely been successful; fusions only produce worthwhile music when both parties are wholly sympathetic to each other's musical languages and idioms. In this instance, they are and they achieve an astounding level of harmony. Cooder, as well as being a virtuoso slide player, is an avid musicologist and was investigating music outside Western culture long before the concept of World music was born. Bhatt, having begun his musical career studying the sitar under Ravi Shankar, was working in the other direction, having become captivated by the sound of an acoustic guitar that a German student had left at his father's music school.

This led him to design the Mohan Vina used on this recording. This instrument is guitar-like but has drone and sympathetic strings in addition to the nylon strings, which are fretted with a steel slide to create the microtones that characterise Indian music. Cooder plays acoustic bottle neck guitar. He and Bhatt are supported by a two-piece rhythm section comprising Sukhinder, playing tabla, and Ry's teenage son, Joachim, playing dundebiek.

To describe the music, which, you learn from the CD insert, was completely unrehearsed, would take more space than I have available. As an inadequate thumbnail sketch, take Cooder's 'Paris, Texas', and add to it liberal doses of Indian rhythmic and melodic seasoning. That's selling it short because the improvisations that emerged from this session have an unusual blend of tranquil beauty and amazing energy and fire. The two powerful major musical forces here harmonise with astonishing ease. The best compliment I can pay this disc is that the communication and accord between Cooder and Bhatt are such that they sound as though they've always played together. East meets West and you can hardly see the join.

---

**REV. GARY DAVIS**

**Blues & Ragtime**

**SHANACHIE 97024**

- The Reverend Gary Davis is a truly mesmerising guitarist and that's not just the opinion of a failed planksucker; turned hack. Davis can number among those who have studied under him the likes of Stefan Grossman, David Bromberg, Jorma Kaukonen, Ry Cooder and many other respected, virtuoso players. His playing demonstrates that the aphorism those who can do, those who can't teach isn't universally true. Davis is an extraordinarily gifted guitarist and not just in the technical sense, he also has the sensitivity and feel that separates the masters from stylistically challenged also-rans.

He plays with a rare strain of authority that generates a sound big enough to get lost in. If you've ever heard Sonny Rollins and Philly Joe Jones' recording of 'The Surrey With A Fringe On Top' you'll know what I mean; you get to the end of the track thinking that you've been listening to a complete band only to realise that there were just two instruments playing. Davis regularly does the same with just his guitar and voice - oh yeah, he's a mean singer as well. This album will naturally have a special appeal for guitarists and guitar students - the CD liner even includes notation and tablature for five of the sixteen tracks - but just about anyone who enjoys music played on the guitar will regard it as a treasure. I'm not a great fan, for example, of ragtime music but when Gary Davis plays it I find it difficult not to listen and enjoy. It will also be of special interest to blues aficionados who will know that after the 'thirties and his ordination as a minister, Davis sadly took an aversion to playing the devil's music.
There have been a few manoeuvres (but not necessarily dark) in this band over the last few years. Four years ago the line-up came unravelled as Paul Humphreys left, handing over the name, for a consideration, as they say, to Andy McCluskey and his new writing-partner Stuart Kershaw in time for '91's Sugar Tax album and a new OMD logo to go with it.

Liberator is nothing to do with B-52s, definitely not the B-52s, not a lot even to do with Enola Gay, but it does sound as though OMD have been freed from the so-so run that started with Dazzle Ships through to The Pacific Age and taken on a new lease of life. And about time too. It's at least a consistent and coherent album - with one exception - though there's no Enola Gay or Joan of Arc on it. That's not a bad thing, though there are 'Arc-ish' and 'Enola-ish' echoes all over the place: diehards can try 'King Of Stone' or 'Christine' for just a spot of reminiscence.

Mostly, though, there's a livelier, tighter, more contemporary beat and a lot less pretentiousness than the former OMD MkI. Synths are lusher, tracks like 'Dream of Me' nearly outdoing ABC: that's the one based on the 'Jurrve' man's 'Love Theme'. I loved Velvet Underground's 'Sunday Morning', (though Undergrounders wouldn't recognise it) rebarbative as it is, right down to some Duane Eddy bass from Stuart Boyle.

There are some good tunes - 'Everyday' could have been the first reject for the Eastenders theme - and a soft-ish centred bit of balladry in 'Best Years of Our Lives'. This one's a bit of a filler, as is the dressed-up-Dance 'Dollar Girl', if I feel, but for all Kershaw's sometimes mawkish teen- love-angst words, there's only one dud track on the album. That is 'Agnus Dei', a pompous little instrumental that sounds as though it's a sample of the Sanctus from the Missa Luba (anybody remember the film 'If?') taken off a short-wave broadcast from the Lower Niger and overlaid with crashing percussion. Mercifully it's soon over.

Although not as musically imaginative as early OMD, the Kershaw/McCluskey axis works well. Liberator parties on after Sugar Tax and I liked it, but if you liked Architecture and Morality or Organisation: the best of OMD MkI, you could find this one a party-pooper, rather than the party-maker that OMD MkII has become.

There's some neat 'Frntny-ey' and 'Plant-ation' work in the playing, even a wah-wah guitar and (bliss!) a melodica solo 'Child of Love'. In the middle of it all you can swoon to the sound of a real Hammond organ. What with Marshall amps and mastering by Doug Sax, who could ask for more? Well, I'd actually ask for something more like a stage than the flat wall-of-sound mix, but never mind.

These guys - apart from writing good wholesome songs - even know how to end a track without resorting to the fader. (Well, almost: the one lemon on this tree, 'Instrumental', the down-tempo track for a couple of minutes' relaxation half-way, shows signs of not going anywhere and is faded out).

It's all good tunes, good hooks, good playing like we all thought had gone out with the Seventies. Such is the guitar-man-ship on 'Let it Loose' it should have been called 'Let it Rip'. If 'Love the Sun' is influenced by 'Here Comes the Sun' and 'Bitter-sweetness' by 'Pinball Wizard' in a kind of live sampling, I for one don't really care. Nor do I bother that Guy Chambers sometimes sounds a bit like Justin Heywood.

I haven't had so much fun since I spent a night reviving my Captain Beefheart albums. Then, I was always a sucker for good bass guitarists, twelve-strings and a melodica. Not to mention the Hammond organ.

If you crave excitement, open this book. "Lemon Tree oh-so-pretty and the lemon flower is sweet ..." The fruit is very evanescent and edible.
The Red House Painters hail from San Francisco; heaven knows what the name's meant to signify, if anything, but singer-songwriter Mark Kozelek is a long way from painting the town red. His colour is deepest, saddest blue.

This is an hour and a quarter on the demise and decay of relationships that makes Leonard Cohen look like a starry-eyed opportunist in blithe spirits. Kozelek, who was into drugs at ten, into rehabilitation at fourteen, lifts up the parietal lid we all hide our worst fears and relational insecurities under, realising the ghosts that haunt us. It might be a House of Usher; defunct people and places he opens up, but it's extraordinarily affecting and cathartic.

Take 'Take Me Out', devastatingly melancholic in early-Cohen mode, with a simple bleak vocal, cold guitar chords, a pared-to-the-bone female backing and a plaintive story line that leaves you almost drained, but hie on anyway.

At the risk of ending up in Pseuds' Corner, Kozelek's lyrics and music are autotelic like few others. He has a knack of painting a verbal landscape, that immediately connects with an emotional one of your own and leaves it raw. He communicates directly to the cortex in a way that makes most so-called lyricists these days sound about as deep as Patience Goodie's 'FM Bore' married her. Maybe he should pick his associates more carefully.

Anyway, Kozelek involves the listener so privately you're left behind with him- sharing and surrounded by the most desolate places of the psyche. It may all sound gloomy and despondency, but Kozelek is a writer, not a psycho; anyone who can slip in a line like "You're an American girl/living in a freckle on the face of the world" has a line in irony that belies the melancholy. If you can take Lou Reed's Magic and Loss, then you should try the House Painters' litre-and-a-half of emotion-painting. You'll need some Kleenex - and, if you have any soul, a quiet hour's introspection afterwards. You'll be better for it.

JEAN-MICHEL JARRE
Chronologie
Disques Dreyfus 519 373-2
(Also available on LP)

Well, I always fancied Charlotte Rampling, but this fellow that I'd like to rename 'J-M Bore' married her. Then there was this big concert: all scaffolding, with millions of fairy lights and fireworks, but it poured down, or perhaps I'd stopped fancying Ms Rampling or something, that's why I didn't go. Oh yeah, the reason was that it was in the Docklands, and look what happened to them. Canary Wharf swallowed whole by the banks. Maybe Jean-Michel should pick his associates more carefully.

Maybe he should pick his musical associations more carefully, as well. At the side of the CD insert (photo courtesy of Madame Jane) there's a brief credit to Stephen Hawkin's 'Brief History of Time'. Heaven help us, there's even a few momentary seconds of clock-ticks and chimes 'a la Dark Side of the Moon' to make the connection (twice, in case you don't connect first time). Time must have been obviously more interesting in Floyd's day. To confuse the issue, Part Seven begins with what sounds like a wasp's nest and degenerates fast into a mare's of muddled ambient.

Chronologie - hey, Monsieur Dreyfus, you wanna quote? - is timeless Jean-Michel Jarre. By my translation, that means yet more of the same - or perhaps worse, Oxygen on Helium at the very best. Chronologie, frankly, is a compendium of Jarre sounds that could have been randomly sampled from an earlier album simply by punching the 'Shuffle Play' key on the Fairlight synthesiser - if there is one.

If using a Fairlight sounds slightly passe; then alas, so does Chronologie. It is a rambling series of Sci-Fi movie soundtracks of vaguely 2001, Solans or even Dr Who vintage, all with a synthetic drum track overlaid on the usual Jarre-ing wails and pseudo-choral rising-scale "Aaah-ah-ahs" in the hope that at least a couple of the tracks (all called 'Parts') might float themselves onto the dance-floor. One combines a 'common-as-muck' drum track with a tune of such simple-minded banality that a three-year-old could have picked it out on a toy piano. Instead it needed a Minimoog, the Fairlight, a few other synthesizers and 'additonal keyboards by three others whom I'm not going to dignify with a mention!

After forty two minutes of sort-of Ambient House Nat King Cole style, this portentous (sorry, I've mispelled myself, I meant pretentious) work, distributed by Polygram, is the best thing this band have done in years.
Improvising guitarists and the mixing of vastly different styles all feature in this month's selection - but the ultimate reverence goes to Billie Holiday's ten CD box set.

EUGENE CHADBOURNE
Strings
INTAKT CD025/1993

- More great improvised guitar. If light years away in approach - in fact barely in the same galaxy - Eugene Chadbourne has been one of the most startling guitarists of the last dozen years or so. Originally a respectable jazz critic (and what could possibly be more respectable?) he launched himself into a career of guitar terrorism with his own group Zeni Geva. That group's three albums or so are possibly be more respectable?) he
launched himself into a career of
guitar terrorism with his own group
Zeni Geva. This has occurred in a way
that, many at least would argue,
hasn't happened to rock music (in
its very broadest sense), the blues
or soul music.

KAZUYUKI K NULL / JIM O'ROURKE
New Kind Of Water
CHARNEL HOUSE PRODUCTIONS
CHCD-6

- I like throwing in the odd tricky-to-find import, just to keep you lot on
you toes, but even if I didn't I'd review
this for all you guitar monsters out
there. Japanese guitarist K K Null has
been making his own very special
noise for a few years now, mostly at
the helm of his own group Zeni Geva.
That group's three albums or so are
on the edge of breakdown, but
nothing if not lovely.)
Where earlier this year, fellow, if
more widely celebrated, Yankee
guitarist Bill Frisell took all kinds of
vernacular American music - Sousa,
Madonna - and put it into context
alongside Ives and Copland,
Chadbourne happily takes the music
of accepted masters and drags it
through the mire of "lesser" musics.
Along the way you get flashes of
virtuosic display (the light speed runs
of the Paul Bowles tribute "Spider's
House"), riotous humour (the spoof
Senator Jesse Helms introduction to
"Coltrane Medley") and barely
contained political anger ("Screw
KKK"). But above all else, this remains
fine, and irrepressibly cutting edge
acoustic guitar music; listen to it side-
by-side with 'New Kind Of Water'
and wonder at anyone ever
pronouncing guitar music dead.

BILLIE HOLIDAY
The Complete Billy Holiday on Verve 1945-1959
VERVE 517 658-2

- This column, might seem to
some to offer up endless theses on
the central eclecticism of all jazz. It's
just that jazz is endlessly eclectic.
Now of course, for any music to
come into being, a whole bunch of
different strands have to come
together. But once that's happened,
so much music begins to ossify. This
isn't generally the fault of any
particular musicians; more that the
process of polishing and honing a
particular style inevitably leads to a
tendency to promote purism. Ry
Cooder, (one of rock music's
greatest eclecticists) has shown just
how this sort of ossification has
robbed the Cajun music of the
Louisianan swamplands of any real
historical force. A series of geo-
ographical and social factors have
turned the music from a folk art of
great vitality, with exponents like
Clifton Chenier -at least an equalolk musician to Robert Johnson or
Woodie Guthrie, into a museum
piece. This has occurred in a way
that, many at least would argue,
hasn't happened to rock music (in
its very broadest sense), the blues
or soul music.

Arguments
It certainly hasn't happened to the
best jazz, and perhaps this owes as
much to the unusual myriad racial,
geographical, as well as purely
musical origins of the music, as to
the valiant efforts of so many of its
finest exponents to constantly bring
in new musical materials. Not that
all jazz musicians, or indeed, jazz
critics, have been quite so valiant.
Each new development in the
music bebop, free, fusion - has led
to acronymous arguments about
the destruction of the music's
purity, and the '80s in particular saw
an alarming number of luddites,
sorry, "neo-classicists", trying
hugely undeserved plaudits.

Meanwhile, taking to the
trenches, the eclectics, the
iconoclasts and the just-plain
trouble makers battled on. When
John Zorn pens a song called 'Jazz
Snob Eat S**t', then dedicates it in
concert to Wynton Marsalis, (the
most conservative and yet most
critically lauded of all neo-classicists)
you'd better believe he dam well
means it. But this attitude is
fortunately not dominant: musicians
as diverse, and arguably as mutually
opposing as free jazz sax monster
Peter Brotzmann, country-thrash
through all genre boundaries to the human being. So many of this defiantly proud, righteous, angry frightened, desperately ill, frail and yet very essence, not just of all music, but of what it is to be a creative musician at the fag end of the 20th century; the likes of Hendrix, Sondheim, Cole and others fit this bill. But Holiday took one thing and, in turning it inside out, revealed what it is to be us, anytime. Which is just why this set, of all Holiday's output, is the most vital, in every sense that the word can convey.

Conveniently for critics and archivists alike, Holiday's career splits neatly into three periods. First, her early dazzling work as one of the most naturally gifted jazz musicians of her time, certainly the finest singer. She easily adopted the dual influence of Bessie Smith and above all Louis Armstrong to both big-band and small combo swing, and she brought an improvisatory intensity and rhythmic ease to jazz singing that was previously unimaginable.

She then happily ditched all that and moved on to a career as torch song singer supreme, pitching her elegant voice against lush strings and presenting herself more as cabaret disease than as a jazz singer per se. Then, after serving a much-publicised jail sentence for possession of narcotics, she signed to Verve. All the work that she did for them, which covered almost a decade and a half—each track a path into the most influential jazz of the post-war period. The singers the beboppers favoured—Sarah Vaughan, Ella Fitzgerald scattered their way around a song's chord changes with no more regard for its sentiments than the instrumentalists had for the melody and tempo.  

**Suffer**

Billie didn't want to get beyond the song, she wanted to live in it, luxuriate or suffer in it. Even supposing she'd wanted to, it's doubtful that her technique would have allowed her to step into the brave new world of bebop. For time had left scars on Billie Holiday. Years of alcohol and heroin addiction, a series of self-destructive relationships had left her voice, if not her spirit, utterly ravaged. Jazz critics at the time, totally, and stupidly, immersed in the quality of musicians' technical skills, practically laughed at Holiday's path into the most influential jazz of this reviewer is overburdened with boxed CD collections, but this set is more lovingly put together than anything I've come across. Something for which Mr. Schaap should be praised beyond the abilities of this column.

The music? Well, technically speaking, Holiday never really got beyond swing. By the time she began to record for Verve, bebop had hit big time. Parker, Roach, Gillespie and Co. were taking the rhythms and chord changes of swing and raping them, forging a path into the most influential jazz of this column. The writer would wish it not so, the writer would wish it not so, the writer would wish it not so. So many of the column's favourite musicians take as many styles as they can muster; pummell them together and say something very real, and very valuable, about what it is to be a creative musician at the fag end of the 20th century; the likes of Hendrix, Sondheim, Cole and others fit this bill. But Holiday took one thing and, in turning it inside out, revealed what it is to be us, anytime. Which is just why this set, of all Holiday's output, is the most vital, in every sense that the word can convey.

Conveniently for critics and archivists alike, Holiday's career splits neatly into three periods. First, her early dazzling work as one of the most naturally gifted jazz musicians of her time, certainly the finest singer. She easily adopted the dual influence of Bessie Smith and above all Louis Armstrong to both big-band and small combo swing, and she brought an improvisatory intensity and rhythmic ease to jazz singing that was previously unimaginable.

She then happily ditched all that and moved on to a career as torch song singer supreme, pitching her elegant voice against lush strings and presenting herself more as cabaret disease than as a jazz singer per se. Then, after serving a much-publicised jail sentence for possession of narcotics, she signed to Verve. All the work that she did for them, which covered almost a decade and a half—each track a path into the most influential jazz of the post-war period. The singers the beboppers favoured—Sarah Vaughan, Ella Fitzgerald scattered their way around a song's chord changes with no more regard for its sentiments than the instrumentalists had for the melody and tempo.
well worth tracking down, with their carefree eliding HM chording. Free jazz guitar solo onslaughts and tortured hardcore screamings. Monstrous and essential stuff.

Fellow guitarist Jim O'Rourke first came to my attention a couple of years back on a duet album with the great San Franciscan guitarist: improver and bandleader Henry Kaiser. Their playing together was a remarkable and almost musically oxymoronic melange of industrial and new age music, with Kaiser's special effects-laden playing contrasting sharply with O'Rourke's dry guitar-to-amp approach. New Kind Of Water, recorded in early 1991 and June 1992, continues in a not dissimilar vein, except that if anything, there's an even greater contrast between the two guitarists. Away from the psychologically driving rhythms of Zeni Geva (the opening cut of their UK debut album, Maximum Money Monster, was sixteen minutes of almost pure rhythm, with an endlessly repeated and brutally slow guitar riff that beat the listener into submission.) Null's playing is almost ethereal, his overdriven, electronically harmonized noise floating above O'Rourke's lush chording. Again: industrial? New age? Jazz, for heaven's sake? Who knows, or cares? This is certainly some of the most vivid and endlessly experimental guitar improvising you're going to have heard for some time.

THE PETER BROTZMANN TENTET
The Marx Combo Live In Wuppertal
FMP FMPCD47

• In months without something like the Billie Holiday opus to review, "The Marx Combo" would demand columns itself. A live recording from February 1992, the set documents the coming together of contemporary jazzers from both sides of the Atlantic. In many ways they are from both sides of an equal aesthetic barrier. The line up is group leader/tenor saxophonist Brotzmann, still one of the most ferocious voices in free jazz; his son Casper, leader of his own free jazz-doom rock outfit Massacre, on guitar; Euro jazzer Werner Ludi and our own Larry Stabbins on saxophones; trombonists Hannes Bauer and Paul Rutherford; NYC downtown sessioner Nicky Skopelitis on guitar; bassist William Parker; Japanese 70s-Milesish trumpet meister Toshinori Kondo; and lastly, but by no means last, drummer: erstwhile Pere Ubu person and Golden Palominos leader, Anton Fier.

With the clashing of so many musical camps, not to mention this unwieldy line up, you might well expect this to be a bit of a mess, but not a bit of it. The band are superbly focused, with all that virtuosic musicianship held firmly in place. This band are out to make a racket, surely, but individual noise making simply contributes more to the huge, gothic tone poem that makes up the three parts of the album's single composition. Pay special notice to the dual guitar work of Skopelitis and Brotzmann; the two couldn't have more radically different approaches. The German HM squalls and heavily distorted, jarring close-voiced tone clusters; the American more cerebral, with tidy, more specifically jazz lines spiraling all over the place. Yet how well they work together is simply a microcosm of how well intergrated the entire tentet is. A highly recommended album, and a fine blueprint for several ways forward for the large scale ensemble in contemporary jazz.

ELLIOTT SHARP/ОРCHESTRA CARBON
Abstract Expressionism I 990-99
VICTO CD019

• Another guitarist more concerned with the melding of "art" music and jazz, or, more specifically: composition and improvisation is Elliott Sharp. A part of New York's "downtown" scene for over a dozen years now, and hence a colleague-cohort of kindred genre-busting spirits like John Zorn, Fred Frith, Laswell and Co., he's nonetheless very much his own musician. But he's not nearly so self-consciously post-modern as a lot of that scene. (Not that this concious post-modernism is regarded as much of a crime by this column.) As much inspired by New York's proto-punk background, Sharp is only peripherally a jazz musician. Over two dozen of his albums have ranged from solo, multi-tracked recordings to string quartets, from collections of short, punkish vignettes to long, through-composed pieces for dance. And from the relatively conventional setting of "prepared" string quartet (witness his binding contriobution to the Kronos Quartet's latest collection on Elektra nonesuch, Short Stories) to last year's magnificent Twister: a battery of home-made instruments. At the core of even his most abstract pieces is a driving, propulsive, almost psychotic sense of rhythm, which goes some way at least towards explaining the perverse accessibility of his work.

Abstract Expressionism is no exception. One of Sharp's most consistently enjoyable settings has been the group Carbon, basically a free jazz/new music-inclined punk group, which has been notable for, among many things, the work of the remarkable electric harpist Zeena Parkins. This piece is supposedly for an enlarged version of Carbon. It's essentially a chamber group of three violins, three cellos, alto, bass, electronic drums and Sharp on custom double-neck bass guitar. Given that this is a nigh-on sixty minute, seven movement piece for predominately acoustic instruments, any link with Carbon might seem fairly nominal. But the essential tone of the group is very similar - all discordant, abrasive harmonies, damn-near bashed into submission by grinding rhythms, and strange flights of improvisation barely getting their head above the general morass. Sharp is as insistent as ever on his use of what he terms "irrational" methods, by which elements of ensemble structure are held in balance with individual musicians' extemporising.

Essential stuff for anyone seriously concerned with the way forward for large group composition in jazz. The big band is dead. Long live the big band.
JOHANN SEBASTIAN
BACH
Toccata and Fugue in D
minor BWV565
Toccata, Adagio and Fugue
in C Major BWV564
Fantasia and Fugue in G
minor BWV542
Prelude and Fugue in C
Major BWV547
Prelude and Fugue in A
Major BWV536
Passacaglia and Fugue in C
minor BWV582
Martin Souter, organ
ISIS RECORDS CD002 (DDD/70.14)
(PRODUCED WITH THE
ASSISTANCE OF QUAD
ELECTROACoustics)

Peter Herring

Music for the stage, the
'comedias' of Renaissance Spain
and Wagner's 'Tristan und
Isolde'; music for the chapels
and churches of England; music
for cello, organ and lute; and
music for all of nature and the
cosmos-the Third Symphony of
Gustav Mahler

Martin Souter's Handel recital,
reviewed last month, was, for me,
far more memorable and treasurable.
As with the Handel issue, this recording
has been produced with the assist-
ance of Quad and, technically, I would
imagine they will be well-satisfied with
its potential for demonstrating the
new sub-woofer!

Hi-Fi World August 1993 85
Music's most powerful psycho-drama is Wagner's Tristan and Isolde. The backdrop is Cornwall of medieval mythology, the plot a heady brew of passion and villainy. Superficially, Tristan appears to belong alongside the early pageant operas such as Tannhauser and Lohengrin. Search deeper, though, and you discover a potent drama of the soul, an incandescent compound of the sexual and the sacred, an exploration of one of life's eternal paradoxes, that which pits the fulfillment of individual desire against the pressure of a wider, social responsibility. Tristan also happens to be one of the most liberating and overwhelming of musical experiences.

Given his place in the pantheon of German music, it is often overlooked that Wagner was at one time banished from the land of his birth because of his violent political outbursts. He first sought refuge with his friend and fellow composer, Franz Liszt but was then taken in by a rich merchant called Wesendonk. He repaid his host's hospitality by seducing his wife. It was this affair which inspired thoughts of a music-drama based on the Tristan legend and it was at a time when Wagner's genius was at its height. The result was the most revolutionary music of its epoch, a work destined to cast a hugely influential shadow over all late nineteenth century western music. Mahler and Schoenberg were just two who benefitted from Wagner's boldly pioneering harmonic radicalism. In Tristan, Wagner fused the orchestral brilliance of Berlioz with the lofty symphonic grandeur of Beethoven and the harmonic daring of Liszt. The ensuing acclaim merely confirmed Wagner's own opinion of himself: that he was the greatest composer in the history of stage music.

**RICHARD WAGNER**  
*Tristan und Isolde*  
Peter Hofman; Hildegard Behrens; Hans Sotin; Bernd Weikl; Ileribert Steinbach; Yvonne Minton; Heinz Zednik; Raimund Grumbach; Thomas Moser; Chorus of the Bavarian Radio; Bavarian Radio Symphony Orchestra; conductor, Leonard Bernstein  
PHILIPS 438 242-2 (4CD SET)  
Now accommodated on four discs instead of the previous five, this is a re-issue of Bernstein's live concert recording from 1981. It was taped at concerts in the Herkulesaal in Munich, at the preceding dress rehearsals, with any retakes and corrections undertaken immediately after the performances. The 'patching', though must surely have been minimal, given the sweeping spontaneity of Bernstein's interpretation.

On hearing Bernstein's Tristan, no less than Karl Bohm—himsalah Wagner conductor—of stature commented:  
"For the first time somebody dares to perform the music as Wagner wrote it. The rest of us never dared to!"

And it remains probably the most spacious and serious Tristan ever recorded. Yet Bernstein's rhythmic acuity ensures that the momentum is maintained and the performance, with is powerful climaxes, is contoured with instinctive judgement. It is a wholly convincing reading, and compelling from start to finish.

The cast is uniformly satisfying, with Hans Sotin incomparable in the role of King Mark. As Isolde, Hildegard Behrens may be outshone by others in terms of tonal beauty, but hers is a voice with the power to meet the dramatic challenge posed by the heroine.

Bernstein is well supported by the Bavarian orchestra, who play supremely well. The string sound especially benefiting from the rich, full recording. Overall, given the forces involved, it is a finely-balanced recording; the detail clear and the perspectives truthful. There is some audience noise but it is of no consequence in what remains one of the great opera recordings of recent times. The combination of Wagner and Bernstein is electrifying: arguably the most subjective of conductors excels in a work where the focus is always on the subjective consciousness of its characters and their relationships. Like Shakespeare, Wagner's plots may be set in distant, mythical times, but his themes remain wholly recognisable. This, Bernstein under-stands to the full. To paraphrase Karl Bohm's comment on the performance, he dared and he won, emphatically.

---

**LOPE DE VEGA**  
Intermedios of the Spanish Baroque  
Montserrat Figueras, soprano; Hesperion XX, director, Jordi Savall (viola da gamba)  
ASTREE AUVIDIS E8729 (DDD/70.30)
Valencia who became a major figure in Spanish keyboard music. The thematic originality, technical richness and structural variety of Cabanilles's art is fully evident from the four pieces recorded here.

This disc is full of such gems, a mixture of instrumental pieces and songs, the latter beautifully sung by Julian Lloyd Webber and has resulted in many eloquent and persuasive interpretations of rarely-heard works.

GUSTAV MAHLER
Symphony No3/*Symphony No 10 (Adagio)

Florence Quivar, mezzo-soprano; Israel Kibbutz Choir; The Israel National Choir 'Rinat'; 'Ankor' Children's Choir*; Israel Philharmonic Orchestra; conductor, Zubin Mehta

The finale is beautifully played, but a shade too restrained for my taste. This movement is so unashamedly gushing that all the expressive stops can be pulled out quite fearlessly, as Abbado does. He lingers nearly four minutes longer than Mehta here, although Horenstein, in his benchmark 1970 recording is marginally quicker than Mehta.

In much other music, Mehta's straightforward and unmanipulated approach would be wholly desirable. But this is a symphony that, if it is to be convincing, needs the conductor to stamp his conviction and personality on the interpretation which Mehta, to me, simply doesn't achieve. It is, though, finely played, even if the Israeli strings are not quite the equal of the Vienna Philharmonic for Abbado.

CHARLES VILLIERS STANFORD
Cello Sonata No2 Op39

FRANK BRIDGE
Elegy for cello and piano*/ 'Scherzetto' for cello and piano

JOHN IRELAND
Cello Sonata in G minor*

The canon of British chamber music holds a strong attraction for Julian Lloyd Webber and has resulted in many eloquent and persuasive interpretations of rarely-heard works.

The finale is beautifully played, but a shade too restrained for my taste. This movement is so unashamedly gushing that all the expressive stops can be pulled out quite fearlessly, as Abbado does. He lingers nearly four minutes longer than Mehta here, although Horenstein, in his benchmark 1970 recording is marginally quicker than Mehta.
by such as Frank Bridge and John Ireland. Four of those interpretations can be enjoyed here, two recorded in St John's Smith Square back in 1977, the others taped at St George's, Brandon Hill, Bristol just last year. The combination of re-issues and new recordings makes for a well-balanced, if not especially generous programme, with two major cello sonatas and two miniatures by Frank Bridge, one of which - the Elegy - despite its brevity is a work of searching intensity. Dating from 1911, its sparse, austere style anticipates Bridge's later music and the aching poignancy of the work does not escape Julian Lloyd Webber, in what is a performance of great commitment and power. Tony Faulkner's recording emphasises the cello, possibly with justification given its richly expressive role in this piece.

Ireland's Cello Sonata is also a work of abundant inspiration, at its heart a slow movement of eloquent beauty. The two outer movements are of a dark-hued intensity and the whole work exploits the emotive potential of the instrument. Again the cello takes centre stage, but this time the contribution of John McCabe to this reading is not overshadowed.

The integration of 'seventies analogue and 'nineties digital has been accomplished almost seamlessly in this transfer and it is easy to appreciate why Julian Lloyd Webber wanted to add the Stanford sonata to his discography. The image of Charles Villiers Stanford as a rather dour Victorian, is utterly belied by so much of his music, including this work. Rhapsodic, lyrical, free-flowing, it is a romantic sonata on the grand scale. There are echoes of Brahms but in most respects it is a work of considerable individuality and depth. As with all the music here, it is well worth getting to know.

**THOMAS TALLIS**

*Spem in Alium* - 40 part motet/In manus tuas/In ejusione et fletu/Te lucis ante terminum (I)/Te lucis ante terminum (II)/Ecce tempus idoneum*/Veni Redemptor gentium*/O nata lux de lumine/Salve mundi*Derelinguat impius*/Videte miraculum*/Organ Lesson*/Sancte Deus*

John Langdon, organ; Andrew Davis*, organ; Cambridge University Musical Society; Choir of King's College, Cambridge; conductor, Sir David Willcocks

**DECCA OVATION 433 676-2**

(ADD/60.46)

One of the most distinguished choral recordings to come from Decca during the 'sixties makes a welcome reappearance on its mid-price Ovation series.

The works here are drawn from two Argo issues (ZRG5436 and ZRG5479) and the subsequent reissue double album ZK30-31, the original omission from the LP programmes being Tallis's setting of the Lamentations of Jeremiah. Yet this remains an outstanding production and a desirable addition to any library of sacred choral music.

It is difficult to believe that this recording is now over twenty-eight years old, having been recorded in the chapel of King's College, Cambridge in March 1965. The highlight, inevitably, is the awe-inspiring forty-part motet* Spem in aium in which the King's choir is augmented by the voices of the Cambridge University Music Society. The sound is thrilling, not just in its scale, but in the degree of clarity which is achieved within such a complex tapisry of interweaving vocal lines. How well the King's chapel acoustic suits this music, and how well it is performed by these forces.

The recording is not blemish-free (what sounds like a poor edit at the beginning of In Manus Tuas, for example), and the focus in some of the small-scale pieces is closer than most balance engineers aim for these days. But what expressive and heartfelt singing.

All the works here had their origins either during Tallis's tenure at Waltham Abbey in Essex or, after the dissolution, from his long career as a musician of the Chapel Royal. It is music that has long been part of the King's tradition and it must have been in the blood of these choristers when these recordings were made, such is the fervour projected here. In a couple of the motets, the balance does over-emphasise the trebles but otherwise there is little to criticise in this new transfer.

**SILVIUS LEOPOLD WEISS**

Sonata in A minor (L'Infidele) Prelude, Fantasia and Fugue in C Major Tombeau for Count Logy

**ANTONIO VIVALDI**

Concerto in F Major

**JOHANN SEBASTIAN BACH**

Chaconne in D minor

Nigel North, lute

**LINN RECORDS CKD006 (DDD/61.16)**

- An attractive recital by one of our leading lutenists, combining two arrangements of popular pieces with three original works for the instrument by the eighteenth century lutenist and composer, Silvius Leopold Weiss. The bulk of Weiss's working life was spent in the service of the court at Dresden but, in 1719, he visited Vienna which, at that time was much enamoured with things oriental, including the music of Turkey which had been absorbed into the vast Hapsburg empire. Weiss, too, fell under the spell and the influence is clear in his A minor sonata (hence its subtitle, The Infidel). Along with this sonata, the most performed of Weiss's works has probably been the haunting Tombeau for Count Logy, surely one of the finest pieces ever written for the lute.

Nigel North, who claims Hank Marvin and the Shadows as a formative influence, along with the lutenist Eugen Dombois, proves a persuasive advocate for Weiss's music. Alongside it, he offers his own arrangement of the F Major Violin Concerto from Vivaldi's Opus 3, L'Estro Armonico (and very effective it is) and his transcription of the evergreen Chaconne from Bach's Partita for Solo Violin, BWV1004. It makes for relaxing, satisfying listening - just the thing to wind down to at night - and is enhanced by a refined and pleasingly intimate recording.
Hi-Fi World Dial-a-Dealer

LANCASHIRE

COTTAGE AUDIO, 17 Bridge Street, Saxilby, Near Lincoln, LN1 2PZ. Tel: (0522) 253340. Umbelievable but true you can audition these brands here. Audion. Access. Visa/Access. Closed Thursdays.


MUSICAL IMAGES, 173 Station Road, Edgeware, Middlesex, Tel: (081) 952 5535. See advert under Middlesex for more information.

MUSICAL IMAGES, 45 High Street, Hounslow, Middlesex. Tel: (081) 559 6802. Fax: (081) 569 653.


BASILLY SOUND, The Old School, Southcroft, Braunton, North Devon, Tel: 0824 592 556. Fax: 0824 592 556. Demo rooms, Home trial, final installations. Visavis, service department.

NOFFOLK

CLASSIC HI-FI & VIDEO, School Lane, Ketton, Rutland, (053) 515766. Repair Musical Fidelity, Wharfedale, Cyrus, NAD, Pioneer, Mission, Maranta, Epos, etc. Service department.

NOTTINGHAMSHIRE

ART AUDIO, 130 Main Street, Calverton, Nottingham NG14 3LU. Tel: 0603 255604. Fax: 0603 237376. Most dealer for all Art Audio amplifiers & Concentrates amplifiers. Mono amp dealer. Home demonstration & installation service.

OXFORDSHIRE

ART AUDIO, 130 Main Street, Calverton, Nottingham NG14 3LU. Tel: 0603 255604. Fax: 0603 237376. Most dealer for all Art Audio amplifiers & Concentrates amplifiers. Mono amp dealer. Home demonstration & installation service.

OXFORDSHIRE

ART AUDIO, 130 Main Street, Calverton, Nottingham NG14 3LU. Tel: 0603 255604. Fax: 0603 237376. Most dealer for all Art Audio amplifiers & Concentrates amplifiers. Mono amp dealer. Home demonstration & installation service.

SHROPSHIRE

AVON HIFI, 12 Baker Street, Shrewsbury, Shropshire. SY1 1GJ. Tel: 0743 233242. Stockists of Musical Fidelity, Abbot Short, Kent, Pioneer, Rotel, DNB. B&W Audio. Products available online 9.30 - 5.30 Mon-Sat.

SOVERSTEPS

MIKE MANNING AUDIO, 110 Middle Street, Yeovil, Somerset. BA20 1NE Tel: (0935) 79361. Fax: (0935) 32923. Naim, Roksan, Pink Triangle, Quad, NAD. Most brands available - see full page advert. Credit facilities. 60 day free credit. Home trial facilities.

STAFFORDSHIRE

MUSIC FOR MUSICAL FIDELITY, 15-17 Bridge Street, Stafford, ST16 2AH. Tel: 0785 554 3166. Also branch at 37 High Street, Audley, nr Walsall. Tel 0922 55154. Also branch at 37 High Street, Audley, nr Walsall. Tel 0922 55154.

VOLUME ONE, 41 Upper Wickham Lane, Welling, Kent, DA13 4QY. Tel: (081) 435 3982. Showing range of records and accessories stocked. Our commitment to standards of service is apparent to our satisfied customers. All demo rooms and home hi-fi instal service available.

LEICESTER

DOUG BRADY HIFI, 401 Smithdown Road, Liverpool, L13 3JJ. Tel: (051) 733 8859. Fair demonstrations and home trial facilities. All credit cards. No early closing.

THE CORNFLAKE SHOP, 37 Windmill Street, London W1. Tel: 071 323 2747. Fax: 071 637 2690. Home trial, face to face sales. 9.30-5.30 Mon-Fri, 10-5.00 Saturdays.


DOUG BRADY HIFI, 18 Monmouth Road, London WC1H 9EB. Tel: (071) 379 4019 or (071) 379 1536. Fair demonstrations and home trial facilities. Wide range of top specialist hi-fi from Britain, America and Japan. Open 6 days.

FRANCIS OF STREATHAM. 139 High Street, Streatham. Tel: (071) 778 6131. Fax: (071) 778 6131. Classical Demonstration Rooms. Home trial facilities. Visa/Access.

DOUG BRADY HIFI, 401 Smithdown Road, Liverpool, L13 3JJ. Tel: (051) 733 6853. Fair demonstrations and home trial facilities. All credit cards. Largest stockist of SME, Systemdek, Tannoy. TDL, Yamaha, Stockists of DCC. Access/Visa. 2pm-7.00pm Mon-Sat. Credit card facilities. Free home trial rooms, free installation.

DOUG BRADY HIFI, 401 Smithdown Road, Liverpool, L13 3JJ. Tel: (051) 733 6853. Fair demonstrations and home trial facilities. All credit cards. Largest stockist of SME, Systemdek, Tannoy. TDL, Yamaha, Stockists of DCC. Access/Visa. 2pm-7.00pm Mon-Sat. Credit card facilities. Free home trial rooms, free installation.

DOUG BRADY HIFI, 401 Smithdown Road, Liverpool, L13 3JJ. Tel: (051) 733 6853. Fair demonstrations and home trial facilities. All credit cards. Largest stockist of SME, Systemdek, Tannoy. TDL, Yamaha, Stockists of DCC. Access/Visa. 2pm-7.00pm Mon-Sat. Credit card facilities. Free home trial rooms, free installation.
Hi-Fi World Dial-a-Dealer

SUFFOLK
BURRY AUDIO, 47 Churchgate Street, Sudbury, Suffolk, IP5 1RS. Tel. 0284 724337.

EASTERN AUDIO, 43 Bishopsgate Road, Ipswich, IP1 2TN. Tel. 0473 217 217. Fax 0473 217 517. Pioneer, Denon, Mission, Mordaunt Short, NAD, Sony, Rogers, Nakamichi, Systemdek, Technics, B&W, Naim, Meridian, Monitor Audio, Wharfedale.

SURREY
P J Hi-Fi, The Hi-Fi Shop, 3 Bridge Street, Guildford, Surrey GU1 3UG. Tel. 0483 830 441.

EASTERN AUDIO, 43 Bishopsgate Road, Ipswich, IP1 2TN. Tel. 0473 217 217. Fax 0473 217 517. Pioneer, Denon, Mission, Mordaunt Short, NAD, Sony, Rogers, Nakamichi, Systemdek, Technics, B&W, Naim, Meridian, Monitor Audio, Wharfedale.

WEST MIDLANDS
FARLEY HARKER Hi-Fi EXCELLENT, 103 Open Street, Droitwich, Worcestershire WR9 9NN. Tel. 01521 361 833. 2 single speaker demo rooms. Appts necessary. Home trial facilities and free install. Service dept. Access/Visa credit card accepted. Tues-Thurs 10.30-5.30, Friday-10.30-6.00, Saturday 11.00-5.30.


STRAWFORD Hi-Fi, 56e Bentley Road, Stratford-upon-Avon, CV31 4DN. Tel. 01789 414193. Pioneer, Denon, Mordaunt Short, NAD, Quad, Musical Fidelity, Monitor Audio, Mission, Quad, TLS, Technics, Selenium - 5 yr guarantee on all hifi products. Appts necessary. Home trial facilities and free install. Credit facilities. Mon-Sat 9.30-5.30. Closed Wed.

SURREY
ROGERS HIFI, 13 Bridge Street, Guildford, Surrey, GU1 3UH. Tel. 0483 610 499.

EASTERN AUDIO, 43 Bishopsgate Road, Ipswich, IP1 2TN. Tel. 0473 217 217. Fax 0473 217 517. Pioneer, Denon, Mission, Mordaunt Short, NAD, Sony, Rogers, Nakamichi, Systemdek, Technics, B&W, Naim, Meridian, Monitor Audio, Wharfedale.

SURREY
ROGERS HIFI, 13 Bridge Street, Guildford, Surrey, GU1 3UH. Tel. 0483 610 499.

EASTERN AUDIO, 43 Bishopsgate Road, Ipswich, IP1 2TN. Tel. 0473 217 217. Fax 0473 217 517. Pioneer, Denon, Mission, Mordaunt Short, NAD, Sony, Rogers, Nakamichi, Systemdek, Technics, B&W, Naim, Meridian, Monitor Audio, Wharfedale.

SURREY
ROGERS HIFI, 13 Bridge Street, Guildford, Surrey, GU1 3UH. Tel. 0483 610 499.

EASTERN AUDIO, 43 Bishopsgate Road, Ipswich, IP1 2TN. Tel. 0473 217 217. Fax 0473 217 517. Pioneer, Denon, Mission, Mordaunt Short, NAD, Sony, Rogers, Nakamichi, Systemdek, Technics, B&W, Naim, Meridian, Monitor Audio, Wharfedale.

SURREY
ROGERS HIFI, 13 Bridge Street, Guildford, Surrey, GU1 3UH. Tel. 0483 610 499.

EASTERN AUDIO, 43 Bishopsgate Road, Ipswich, IP1 2TN. Tel. 0473 217 217. Fax 0473 217 517. Pioneer, Denon, Mission, Mordaunt Short, NAD, Sony, Rogers, Nakamichi, Systemdek, Technics, B&W, Naim, Meridian, Monitor Audio, Wharfedale.

SURREY
ROGERS HIFI, 13 Bridge Street, Guildford, Surrey, GU1 3UH. Tel. 0483 610 499.

EASTERN AUDIO, 43 Bishopsgate Road, Ipswich, IP1 2TN. Tel. 0473 217 217. Fax 0473 217 517. Pioneer, Denon, Mission, Mordaunt Short, NAD, Sony, Rogers, Nakamichi, Systemdek, Technics, B&W, Naim, Meridian, Monitor Audio, Wharfedale.

SURREY
ROGERS HIFI, 13 Bridge Street, Guildford, Surrey, GU1 3UH. Tel. 0483 610 499.

EASTERN AUDIO, 43 Bishopsgate Road, Ipswich, IP1 2TN. Tel. 0473 217 217. Fax 0473 217 517. Pioneer, Denon, Mission, Mordaunt Short, NAD, Sony, Rogers, Nakamichi, Systemdek, Technics, B&W, Naim, Meridian, Monitor Audio, Wharfedale.
ACOUSTIC ENERGY, 3a Alexandra Road, London W13 0NP. Tel. 081 840 6305. Acoustic Energy manufacture the award winning Reference Series AE1 and AE2 loudspeakers and the new Aegis Series Model 1, all of which feature the unique AE metal cone drive units. The AE distribution division offers superb high end products from WADIA, GRYPHON, ENSEMBLE and TARA LABS.

ALCHEMIST PRODUCTS, 4 Rosebury Mews, London N10 2LX. Call us for a list of our dealers in many areas including: London, Kent, Hampshire, Wilts, Milton Keynes and N. Ireland and for product information on the Kraken, Freya, Bragi, Odin, Genesis and more.

ALEMA UK LTD., 25 Montifore Road, Hove, BN3 1RD. Tel. 0273 202637. Audion * Edison * Andersson * (Trade enquiries welcome for our newly extended range).

APPOLLO, The UK based designers and manufacturers of high quality speaker stands and equipment racks have now added to their comprehensive range a modular system ideal for housing audio visual products and CD storage. Please send for our free brochure to Zenith Crown Ltd. Tipton Rd, Dudley, West Midlands, DY14 Tel. 021 5070. Fax. 021 522 2055. - All export trade enquiries welcome.

AUDIONOTE CO, Unit 1, Block C, Hove Business Ctr. Fonthill Road, Hove BN3 6HA. Tel. 0273 220511. Audionote supply a range of very high quality and very expensive audiophile components including valve output transformers.

AUDIO SYNTHESIS, 99 Lapwing Lane, Manchester, M20 0UT. Tel. 061 434 0126. Audiophile design, development and distribution. Please contact us for details of: PASSION the passive controller everyone's talking about. SILVERBLUE pure silver interconnect cable and the ultra analog based dac - DSM.

BANDOR, Studio II, Penfold Cottages, Penfold Lane, Holmer Green, Bucks. HP5 6XR. Tel. 0494 714058. Aluminium anodised cone drivers with only 1.8 gm moving mass giving full detail to sound covering 2/3 of the frequency spectrum.

BANDRIDGE LTD are the premier suppliers of quality audio and video leads, connectors and speaker cables in the UK. In addition to probably the widest range available, including PROFI GOLD, SUPER GOLD and SUPER +, offering a level of quality that meets the needs of the most exacting specification. Bandridge of London Ltd. Premier House, Deer Park Road, Wimborne SW19 081 543 3633.

CAMPAIGN AUDIO DESIGN, Llandudno Road, Cardiff CF3 8PG. Tel. 0222 779 401. Supplies / manufactures mailorder, high purity silver interconnects, loudspeaker cables, internal wires and bespoke mains cables. Generous two week trial period.

CHORD ELECTRONICS, 3 Bower Mount Road, Maidstone, Kent, Tel. 0622 764874. Audition the Chord SPM 1200 at any of the following branches: Doug Brady Hi-fi - Liverpool/Leeds/London/Cheshire, Audio Reflections - Leeds, Music Matters - West Midlands and many others. Please call us for details.

CONNECTIONS, 11 Archer Street, London W1V 7HG. Tel. 081 348 5676. Dealers in: Absolute, Audio note, Audioquest, Deltec, Harmonix, Kimber, Mandrake, MIT, Siltech, Symo, Van den Hul, WBT and others.

DPA DIGITAL, Unit 7, Willowbrook Technical Units, Crickhowell Road, St Mellons, Cardiff, CF3 E0F. Why do reviewers across the world rave about DPA products? Listen to DPA's DACs, transports, amplifiers and cables and discover for yourself.

E J JORDAN DESIGNS, The Oak, Manor Bier, nr Tenby, S Pembrokeshire, SA70 8QR. Tel. 0834 871 209. or Fax. 0834 871 770. Curvilinear metal cones loud speakers were first developed by Ted Jordan in 1963. E J Jordan Designs are now World leaders in foil cone technology. First and foremost.

EMF, 2a Bellevue Road, Friern, Barnet, N11 3ES. Tel. 081 361 6734. Manufacturer of Sequel 50w integrated amplifier and the Crystal D2A converter. Please write in for details.

FOUNDATION AUDIO, 53 Beecroft Way, Dunstable, Beds. LU6 1EE. Tel. 0582 477550 or Fax. 0582 604001. We have long been acknowledged as the market leader in sonically superior stands and major in ' specials'. Send for our brochure and details of your nearest stockists.

FULLERS AUDIO, 20 Tunbridge Road, Southend on Sea, Essex SS2 6LT. Tel. 0702 612116. Fuller's Audio produce a range of loudspeakers priced from £329 to £2499 and a complimentary Pre and Power amp combination (electronic crossover and phono stage).

JORDAN WATTS ACOUSTICS LTD. Cyntra Place, 201 Mare Street, Hackney, London E8 3QE. Tel. 081 985 1646. Jordan Watts Acoustics for Sight AND Sound.

KAL, 45 Old High Street, Folkestone, Kent Tel. 0303245005. Specialists in valve amps & Speakers. Now on demonstration:- KAL VT4c/211. Other products are Alphason, AMC, B&W, DPA and many more.

92
LOCKWOOD AUDIO, Imperial Studios, Maxwell Road, Borehamwood, WD6 1WE. Tel. 061 207 4472/ Fax. 061 207 5283. Tannoy and Lockwood loudspeaker specialist. Suppliers of drive units, cabinets, crossovers, grille-cloths etc... The authorised Tannoy service agent. Dealers in vintage Hifi.

LORICRAFT AUDIO, 4 Big Lane, Goose Green, Lambourn, Berks. RG16 7SQ. Tel. 0446 72267. Specialist restoration of 301s and 401s using genuine spares and re-manufactured parts to original pristine standards in our newly built work shops designed primarily for these purposes.

LYNWOOD ELECTRONICS, Coley Lane Farm, Wentworth, Rotherham, S62 7SQ. Tel. 0709 873667. Lernown Electronics is famous for manufacturing the only range of audio mains cleaners that really work. A complete range is now available to suit every system and every pocket.

MARANTZ HIFI UK LTD., Kingsbridge House, Padbury Oaks, 575-583, Bath Road, Longford, Middlesex UB7 0EH. Tel. 0753 680868 or Fax. 0753 680428. Marantz is a manufacturer of Hi-Fi separate components, including CD, DCC, cassette decks, amplifiers, tuners, receivers and speakers. Also now active in Home Cinema with Pro-Logic amplifiers and receivers, plus Nicam VCR and video projector.

MICHELL, 2 Theobald Street, Boreham Wood, Herts, WD6 4SE. For full information on our full range of excellent products including the Gyrodec, Alecto, Iso, Argo and others please telephone us on 081 933 0771. Michell - Symbol of Precision

MICROMEZA UK. Box No 13, London E18 1EG. Micromezza produce the world's widest range of digital front end products from any one manufacturer. Phone or write for a full colour brochure.

QUANTUM AUDIO LTD. PO Box 26, Kilmarnock, Ayrshire, Scotland, KA1 1BA. Tel. 0563 71122. Audiophile CD's & LP's. The UK's largest specialist: FONE, REFERENCE RECORDINGS, SHEFFIELD LAB, WILSON AUDIO, KLAVIER 7 V.T.L. etc. Write or phone for full listings and prices.

REL ACOUSTICS, Unit 2, New Street, Bridgend Ind Est. Bridgend, Mid Glamorgan, CF31 3UD. Tel. 0656 768 777, international +44 656 768 777. Fax. 0656 766 093, international. +44 656 766 093. The UK's only specialist sub-bass speaker manufacturer. The only one that works. Get your dealer to give you a home demo and find out what the fuss is all about.

RICHARD ALLAN AUDIO, Bradford Road, Comersal, Cleckheaton, W Yorks. BD19 4AZ. Tel. 0274 872442. Fax 0274 869935. Manufacturers of very high quality loudspeaker enclosures and drive units. Examples being the £270 RA8 series 2 as supplied to the BBC and the 5* reviewed Minette 2 at £120.

SAMPELL ENGINEERING LTD. Winston Avenue, Croft, Leicestershire, LE9 6GQ. Tel 0455 283251.

ATACAMA AUDIO SUPPORTS from Sambell Engineering Ltd. We are the sole manufacturers of the "SE" range of speaker stands, consisting of an 8", 12", 16", 20" and the award winning 24" high stand. Also three specialist models for the Tannoy 'sixes' Loudspeakers.

SELECT SYSTEMS, Hanworth Trading Estate, Hampton Road West, Feltham, Middlesex, TW13 6DH. Tel. 081 893 8662. Fax. 081 893 4318. We manufacture the Francistien CD enhancement system, The Dacula DAC and Perfect Digital and Analogue interconnects. Select also provide freelance design, manufacture, prototyping and test, also valve and solidstate designs.

SEQUENCE DESIGN LTD. 24 Brook Street, Mayfair, London W1Y 1AE. Tel. 071 495 0775. Fax 071 495 0281. Slim loudspeakers which stand close to a wall or hang like pictures. "Likely to cause a glint in the audiophile's eye" (Audiophile); "the answer to a prayer...a bargain in the extreme" (HiFi News). Available with light or dark grilles and various solid wood finishes. From £199.95 a pair. Call or write in for an information kit and reviews re-prints.

SHEARN AUDIO, PO Box 22, Stevenage, Herts, SG2 8HF. Tel. 0438740953.

Following the success of John Shearn's Phase 1 pre power combination, reviewed in an earlier issue of HFW, newly launched John Shearn's Phase 2 integrated amp with many of the design features of the Phase 1.

SLATE AUDIO, 47 Gemini Close, Leighton Buzzard, Beds. LU7 8UD. Tel. 0525 384174. Slate have never HAD a bad review. Discover WHY for yourselves. See the excellent review in Hi Fi Choice's latest stands supplement. Contact us now for more information on this and also on our Garrard 401/301 marble plinths. Slate-still the best loudspeaker stands in the world.

THE SPEAKER COMPANY, Unit 9, Waterside Mill, Waterside, Macclesfield, Cheshire, SK11 7HG. Tel. 0625 500507. The Speaker Company are a new company offering a wide range of loud speaker units from Audax, Celestion, KEF, Morel SEAS and many more. Also a wide range of speaker accessories the keen builders.

WOLLATON AUDIO, 134 Parkside, Wollaton, Notts, NG8 2NP. Tel/Fax. 0602 284147. "For those on a budget with a passion for the best:- Choose from our Audio Synthesis Passion pre-amp, Clements Spatial Image 300si loudspeakers, XLO pro interconnects and cables and many more".

WILMSLOW AUDIO LTD. Wellington Close, Parkgate Trading Est. Knutsford, Cheshire, WA16 8DX. Tel. 0565 650560. Extensive range of drive units and over 30 different designs of self-assembly kits. Everything required for the loudspeaker builder and four dem rooms to listen to the kits in built-up form.

To Advertise in this section, please contact Caroline Knott on:

071 266 0969

HI-FI WORLD AUGUST 1993
K5881 KIT
Here's a superb new pure Class A twenty-watt DIY stereo power amplifier. It has been designed around the modern Russian Sovtek 5881 valve, their Military version of the highly regarded, but now obsolete American 6L6 beam tetrode. We've used super-quality output transformers designed, by Tim de Paravicini, to run these valves for super-low distortion. The input stage uses triode working and we have specified a rugged sixteen-gauge all-welded steel chassis.

Balanced and specified carefully for long life and reliability, coupled with excellent sound quality, K5881 is sensitive enough to be used with a passive pre-amplifier or our own line-drive pre-amp, and it matches modern loudspeakers well. We've equipped it with the best choke-regulated power supplies, one per channel, plus heavy 4mm 'speaker terminals that allow for bi-wiring.

This new valve amplifier costs just £395 as a kit of parts. An easy-build version with made-up circuit board and wired mains supply costs £495.

Power 20watts/ch.
Frequency response 16Hz-40kHz
Distortion 0.02%
Noise -94dB
Sensitivity 220mV
Dimensions (mm) 400w,300d,180h

HIGH PERFORMANCE 3-WAY LOUDSPEAKER
Our high performance 3-way DIY loudspeaker featured in Supplement Nos. 3 & 4 is now available as a complete kit. Included in the kit are all drive units, crossover components and tag boards, precision engineered flat pack cabinet, wadding, hardware etc. The cabinet has been designed to be extremely easy to build (even though there are 36 panels for the pair) requiring only wood glue and stretchy carpet tape to clamp the panels in place.

When built, the loudspeaker is comparable to those costing more than twice the price, with a transparancy and openness in the midrange that is unmatched by most. The price for this kit, including V.A.T. and p&p is £729.
VALVE LINE LEVEL PRE-AMPLIFIER
The valve line level pre-amplifier will be available as a complete kit of parts including everything required to finish the project. The kit consists of a high quality aluminium anodised chassis, high quality screened toroidal transformer, Military Spec Russian valves and audiophile quality passive components. The price for this kit, including V.A.T. and p&p, is £249.

ACTIVE LOUDSPEAKER CROSSOVER
For those of you who want to do a professional job in the shortest time we are offering a high quality silk-screened circuit board (PCB) for the active loudspeaker crossover project in the April '93 Supplement. The parts are all easily obtained separately and the constructor can choose whether they want to use standard metal film resistors and polystyrene capacitors or go all out for bulk foils and polypropylene. The p.c.b. only is available for £9.99
If you have limited electronic knowledge, or limited time a fully built version is available, supplied in an attractive black aluminium box with gold phono connections. Price is £69.99

LOUDSPEAKER MEASURING MICROPHONE
Comprising a high quality, calibrated measuring microphone flat within +/-1 dB limits from 20Hz-20kHz, preamplifier and phantom power supply, plus CD with third-octave noise bands and sine wave tones, together with instructions. The preamplifier and phantom power supply are housed in an attractive test equipment style box with a suitable XLR input socket for the microphone and a BNC output. The unit is powered by three PP3 batteries. Price is £440.
This kit, in conjunction with an audio dB meter like the Leader LMV-181A, enables acoustic frequency response measurements of excellent accuracy to be made on loudspeakers. Since professional measurements mics cost around £2,000 and third octave spectrum analysers cost even more, our kit is something of a bargain! And from experience we can tell you how to get accurate results without an anechoic chamber.

WARNING
THESE ARE EXPERT KITS, NOT FOR THE INEXPERIENCED.
THE VALVE KITS CONTAIN LETHAL VOLTAGES. WE WILL NOT BE HELD RESPONSIBLE FOR ANY ERRORS ARISING FROM THE CONSTRUCTION OF THE KITS.

ORDER FORM
Please send your completed order form to: WORLD AUDIO DESIGNS, 64 Castellain Road, Maida Vale, London W9 1EX
Tel: 071 266 0461 Fax: 071 289 5620

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>MODELNO.</th>
<th>QTY</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORLD AUDIO DESIGN KIT VALVE AMPLIFIER</td>
<td>K5881-K</td>
<td></td>
<td>£395</td>
</tr>
<tr>
<td>EASYBUILD KIT VALVE AMPLIFIER</td>
<td>K5881-E</td>
<td></td>
<td>£495</td>
</tr>
<tr>
<td>HIGH PERFORMANCE 3-WAY LOUDSPEAKER</td>
<td>KLS-1</td>
<td></td>
<td>£729</td>
</tr>
<tr>
<td>LINE LEVEL VALVE PRE-AMPLIFIER</td>
<td>KLP-1</td>
<td></td>
<td>£249</td>
</tr>
<tr>
<td>MEASUREMENT MIC + PREAMP &amp; P.S.</td>
<td>3382B</td>
<td></td>
<td>£440</td>
</tr>
<tr>
<td>ACTIVE LOUDSPEAKER CROSSOVER PCB</td>
<td>ALS-1K</td>
<td></td>
<td>£9.99</td>
</tr>
<tr>
<td>ACTIVE LOUDSPEAKER CROSSOVER BUILT</td>
<td>ALS-1B</td>
<td></td>
<td>£69.99</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NAME:_______________________________________________________
ADDRESS:_________________________________________________
POSTCODE:________ TEL:________
CREDIT CARD ORDERS TELEPHONE 071-266 0461 (24 HOURS)

I enclose a cheque/postal order for £_________ made payable to World Audio Designs Ltd.
I wish to pay by Access/Visa, please debit my account no:

Expiry date: ________ ______

World Radio History
Let's take a positive view!

Whilst other dealers are busy clearing stock they can't sell are expanding...

Apart from our established brands listed below we now have on demonstration a whole array of new products. Some really 'hot' amplifiers (and we really do mean hot in every sense of the word) such as...

AUDION — Silver Night triode mono blocks.
AUDION AUDIO INNOVATIONS — 700 int. & mono block amps.
SONIC FRONTIERS — Valve power amps.
PLUS AUDIO RESEARCH — LS5B Line stage Pre-amp.
CROFT — Charistolu Pre-amp.
IMPULSE — H2 & H6 Speakers.
KRELL — KSA 100S Power amp.
MICHELL — Aleceto mono block power amps.
MUSICAL FIDELITY — A100C Integrated amp.
PINK TRIANGLE — DACAPO & ORDINAL DAC's.
SONUS FABER — Minima Amator speakers.
THETA — Data Basic Transport & Cobalt DAC.
HARMONIX — Tuning Devices
(What are they? — magic!).

Where else in London are you going to find a line-up like this all under one roof. A positive Aladdin's cave of hi-fi!

In addition to this great choice we can also offer INTEREST FREE credit with up to 10 months to pay. (0% APR).

Come and have a listen, with all these valve amplifiers around you can be sure of a 'warm' welcome.

Established brands stocked by KJ

Accuphase • Acoustic Energy • Alba • Alchemy • Apogee • Arcam Audio Alchemy • Aurea • Audiolab • Audio Research • BAW • BBAP • Chord Croft • DPA • Dali • Epicon • Gradient • Impulse • Kef • Krell • Marantz Martin Logan • Meridian • Micromega • Michell • Mission Cyrus March • Monitor Audio • Musical Fidelity • Nakamichi • Nitty Gritty Pink Triangle • Pioneer • PS Audio • Pro-Audio • Quad • Rogers • Rotel • Siltech • SME • Sonus Faber • Stax • Spendor • Systemdek Tannoy • Theta • Thiel • Wadia

KJ WEST ONE
26 New Cavendish Street, London W1M 7LH
(Close to Marylebone High Street)
Tel: 071 486 8262/8263 • Fax: 071 487 3452
Open: Mon-Sat 10.00 a.m. - 6.00 p.m. Thurs until 7.00 p.m.

"Good equipment synergy is vital to realistic music reproduction, as are accurate, neutral components. One brand, or one distributor systems can seldom fulfil all requirements.

I'd like to introduce something new - the finest components, carefully matched: the system disappears leaving just the music...

...This is Virtually Real".

PHONE FOR A CHAT OR A DEMONSTRATION
TAUNTON (0823) 325802
DANNY VAN READ
10AM TO 10PM

Linn, Naim, Epos, Heybrook, Arcam, Mission, Royd, Audiolab, Creek, Cyrus, Quad, Denon, Rotel, NAD, Marantz, Kef, Chord Company 
(Naim and Epos Northampton only).
AUDIQUEST RECORDINGS ARE RECORDED AND MASTERS ON VALVE EQUIPMENT - NOT ONLY THAT, BUT USING MICROPHONES, TAPE DECKS AND AMPLIFIERS BUILT OR CUSTOMISED BY OUR OWN FAVOURITE VALVE EXPERT TIM DE PARVICINE NO LESS. COMBINED WITH SIMPLE MIC TECHNIQUES, THESE RELEASES HAVE AN UNREPLICATED PRISTINE PURITY AND CLARITY OF SOUND

CD
WILLIAM CONWAY & PETER EVANS
CELLO SONATAS
ENGLISH CLASSICAL PLAYERS
MOZART 4/TH & SCHUBERT 5TH (D delayed)
£11.99 (LP & CD)
Linn Records LPs £7.99
CDs £1.99
RECUET RECORDS
BEETHOVEN
5TH SYMPHONY £8.99
LINN SELEKT
RECORDS
ROBERT CRAY
FALSE ACCUSATIONS
ABC
LEXICON OF LOVE
THE BEAUTIFUL SOUTH
WELCOME TO...
STAN GETZ/CHARLIE PARKER
JAZZ SAMBA
JONI MITCHELL
CHALK MARK IN THE RAINSTORM
ELLA & LOUIS
ELLA & LOUIS AGAIN
TALKING HEADS
STAY ON TIME
BILLIE HOLIDAY
STORY VOl. 1
ELTON JOHN
ICE ON FIRE
KATE BUSH
THE DREAMING
STEELY DAN
AJA
LISA STANSFIELD
COUNT BASIE
KANSAS CITY SUITE
JACKIE WILSON
GREATEST HITS

A WORKS OF ART sampler £7.99
CD only
ROBERT LUCAS
LSP - MAN BLUES
LUKE & THE LCOMOTIVES
BUILT FOR COMFORT
STRUNZ & FARHAT
HISTORY
TUXEDO COWBOY
WOMAN OF THE HEART

Audioquest LPs and CDs £14.95

LINN RECORDS
HURRY - THERE ARE ONLY LIMITED STOCKS OF LINN VINYL AVAILABLE

THE LINN COLLECTION - 1992 (CD only)
OTIS GRAND & THE DANCE KINGS - ALWAYS HOT
THE HORSEFLEAS - HUMAN BEING
JOHNNY ADAMS
ROOM WITH A VIEW OF THE BLUES
UDUDE TAMANT
17TH CENTURY ITALIAN LOVE SONGS
BLUE NILE
A WALK ACROSS THE ROOFTOPS
HATS
CLAUDE MARTIN
THE HANG GAME
CAROL KIDD
CAROL KIDD
ALL MY TOHORROWS
NICE WORK
THE NIGHT WE CALLED IT A DAY
GLAD WE HAD
DAVID NEWTON
EYE WITNESS
WITH OF CIRCUMSTANCE
MARTIN TAYLOR
DON'T PRET
NIGEL WELSH
BAROQUE LUTE
NEW LONDON CONSORT
MUSIC FROM THE TIME OF COLUMBUS
POLISH CHAMBER ORCH.
MOZART/VALDIEBACH/BARTOK/ELGAR (D)
£11.99 (LP & CD)

HANDEL
WATER MUSIC
CORELLI
CONCERTI GROSSI
KAPSBERGER
PIECES FOR LUTE

R&L THOMPSON
SHOOT OUT THE LIGHTS
HOKEY POKEY
RICHARD THOMPSON
HANDS OF KINDNESS
HENRY THE HUMAN FLY
JUNE TABOR
SOME OTHER TIME
BALKANA
MUSIC OF BULGARIA
All Hi-Res LPs £7.99,
CDs £1.99

HANNIBAL
BOX SETS
SANDY DENNY
WHO KNEW WHERE THE TIME GOES
£33.95
(CD ONLY)
NICK DRAKE
FRUIT TREE
£33.95
(CD ONLY)

DEMON
DUKE ROBILLARD & THE PLEASURE KINGS
DUKE ROBILLARD & THE PLEASURE KINGS
CLIVE GREGSON
STRANGE PERSUASION
GEORGE THOROGOOD & THE DESTROYERS
GEORGE THOROGOOD & THE DESTROYERS
T BONE BURNETT
TRUTH DECAY
CHRISTY MOORE
ORDINARY ROR
RORY GALLAGHER
DEFENDER
IRISH TOUR
JOHN LEE HOOKER
THE DETROIT LION
ELVIS COSTELLO & THE ATTRACTIONS
THIS YEARS MODEL
GET HAPPY
TRUST
PUNCH THE CLOCK
JOHNNY WINTER
JOHNNY WINTER
SECOND WINTER
STEVE NIEVE
KEYBOARD JUNGLE
ELVIS COSTELLO & THE ATTRACTIONS
TEN BLOODY MARYS
AND TEN HOWS YOUR FATHERS
BLOOD AND CHOCOLATE
BILL HILLY (WITH JOHNNY GUITAR)
DOUBLE AGENT
IAN DUNDRY AND THE BLOCKHEADS
SEX & DRUGS & ROCK & ROLL
DO IT YOURSELF
EARL KING & ROOMFUL OF BLUES
GIGGED
JOHNATHAN RICHMAN & THE MODERN LOVERS
HODDIN KODY
GRAHAM PAPER
THE MONA LISS SISTER
JIMMY SOLO
PERCY SLEDGE
WANTED DEAD OR ALIVE
OTIS RUSH
TOP
RIGHT PLACE WRONG TIME
THE BYRDS
SWEETHEART OF THE RODEO
SCREAMIN' JAY HAWKINS
BLACK MUSIC FOR WHITE PEOPLE
TIM BUCKLEY
DREAM LETTER/LIVE IN LONDON (1968)
SELTONA
LOOK AT THE FOOL
BEN E KING
HERE COMES THE NIGHT
THE PARAMOUNTS
VANDERDONK/RYB
DELL SHANNON
GO TO PIECES
JERRY LEWIS
KILLER COUNTRY

THE EVERLY BROTHERS
TWO TAKES IN ENGLAND
PASSE CHIC COQUET & LINDEN
BO DIDDLEY
THE 50th ANNIVERSARY OF ROCK 'N' ROLL
TOM WAITS
THE EARLY YEARS
NILSSON
THE BRIDE
CAPTAIN BEEFHEART & HIS MAGIC BAND
THE BEST OF THE 40TH ANN. SONGS
GERRY RÄFFERTY
BLOOD AND GLORY
AL GREEN
COVER ME GREEN
All Demon LPs £7.99,
CDs £1.99

MOBILE FIDELITY
24 CARAT GOLD PLATED COMPACT DISCS
A unique opportunity to obtain the ultimate in CDs. For high resolution and immortality Mobile Fidelity offers three discs with 24 carat gold. Almost unobtainable elsewhere, they are not cheap - but what price excellence?
Mobile Fidelity Gold Discs offer better sound quality for many reasons, not least in that they are specially manufactured in Japan using real gold as a coating. The gold UltraDisc was developed in conjunction with the Ultech Corporation. It has fewer pinholes, better durability and a more extended life. Accelerated ageing tests have shown that these gold discs outlast normal types by a considerable margin.

ERIC CLAPTON
SLOW HAND
ELTON JOHN
TUMBLER-TUNED CONNECTION
BRYAN ADAMS
RECKLESS
STING
NO KIDS LIKE THE SUN
JOHN COLTRANE
BLUE TRAIN
B B KING
LIVE AT THE REGAL

Brian Adams - Reckless

EARL KLUGH
EVERYDAY THINGS
TOM PETTY
DAMN THE TORPEDOES
CHARLIE MUSSELWHITE
MEMPHIS, TENNESSEE
BELAFONTE
RETURNS TO CARNABY HALL
MAXINE STULLIN
SINGS THE MUSIC OF BURTON LANE
THE WHO
QUADROPHENIA (DOUBLE)

HI-FI WORLD
NEW CLASSIC ROCK ON VINYL - NOW LIMITED STOCKS

FREDDY MERCURY
MR BAD GUYS (LIMITED USA...)

JEAN MICHEL JARRE
OXYGENE

WES MONTGOMERY
FULL HOUSE

COLEMAN HAWKINS
SOUl

CHARLIE PARKER
BIRD ON 52ND STREET

SONNY ROLLINS
TENOR SOUNDS

JOHN COLTRANE
LUSH BAND

JIMMY WITHERSPOON
HAVANA CAIF

TOMMY (DOUBLE)
SUPERTRAMP

BRAHMS
SYMPHONY NO. 2

TCHAIKOVSKY
PIANO CONCERTO NO. 1

HARRY JAMES & HIS BIG BAND
CONCERTO FOR THE HAMBURG SYMPHONY

JIMMY VITAL
DON'T TAPE THE BLUES WITH THE BLUES (LP 117 Y)

OTIS SPANN
THE BLUES NEVER DIE

JOHN LEE HOOKER
THAT'S MY STORY

A TRIBUTE TO MAURICE RAVEL

PAGES FROM THE WATERSTOWN NOTEBOOK

BRADFORD BRUCE
BEST FROM THE FANTASY YEARS

BENNY CARTER
COLLECTORS ITEM

STAN GETZ/GOOSE SIMS THE BROTHERS

ZOOT SIMS QUINTET
ZOOT SIMS

THE BEST OF ZOOT SIMS

THE THLELONIOUS MONK TRIO

THE LONILLON MONK TRIO

THE LONILLON MONK TRIO S/ROLLINS/1970 JAZZ QUARTET

THE BRUCE PETTIS/1970 JAZZ QUARTET

THE BACHMANN HARISSON
SOUL

BILLY TAYLOR
HARRIO JAMES & HIS BIG BAND

JOE KISSEL
STAND UP

THE POLICE
SYNCHRONICITY

MIKE DAVIS
MR BAD GUY (LIMITED USA STOCKS)

THE BEACH BOYS
PYROMANIA

CAT STEVENS
BREAKFAST IN AMERICA

TOMMY (DOUBLE)
TOWN HALL CONCERT

CLARK TERRY
SERENADE TO A BUS SEAT

PHILLY SCAGGS
SO MUCH GUITAR


HARRY JAMES & HIS BIG BAND
BAND

HARRY JAMES & HIS BIG BAND
THE NIGHT & THE DAY

HARRY JAMES & HIS BIG BAND
HARRY JAMES & HIS BIG BAND

HARRY JAMES & HIS BIG BAND
MADMAN ACROSS THE WATER

HARRY JAMES & HIS BIG BAND
LIVE BULLET (DEL)

HARRY JAMES & HIS BIG BAND
BAND

HARRY JAMES & HIS BIG BAND
THE LAST CONCERT IN JAPAN

HARRY JAMES & HIS BIG BAND
THE LAST CONCERT IN JAPAN

HARRY JAMES & HIS BIG BAND
THE LAST CONCERT IN JAPAN

HARRY JAMES & HIS BIG BAND
THE LAST CONCERT IN JAPAN

HARRY JAMES & HIS BIG BAND
THE LAST CONCERT IN JAPAN
Antilles

Ben Sidran

Bop City

Old Songs for the Depression
Antilles CD only £10.99

ECM

Edward Vesala/Sound & Fury
Invisible Storm
Jon Balke
Noneseneration
Arvo Part
Miserere
Peter Maxwell Davies & Philip Glass

Kenny Wheeler
Music for Large & Small Ensembles
Keith Jarrett
J.S. Bach Well-Tempered
Klavier
Jan Garbarek/Mirolav Vitous/Petter Erskine
Star
Eleni Karaindrou
Music for Films
Shankar
Miro
Arlind Andersen
Sagn
Jan Garbarek
Wayfarer
Eventyr

Those Born with Wings
Paths and Prints
Pat Metheny
Travels (DLP)
First Circle
Watercolours
American Garage
Pat Metheny
Travels (Double)
Off Ramp
As Wicta Falls
Live 80/81
American Garage
Chau Taoqua
Watercolours
Bright Size Life
First Circle
Reducing
David Torn
Cloud About Mercury
Chick Corea
TriO Music Live in Europe
Ralph Towner/Gary Burton
SliDe Show
Mark Johnson
Second Sight
Issa Sissoko
Oregon Crossing
Abercrombie/Johnson/Erskine
Live

Keith Jarrett
Celestial Hawk
Paris Concert
Nuwe Ants
Koln Concert (DLP)
Standards Vol 1
Personal Mountains
DARK INTERVALS
Still Live
Changeling
Keith Jarrett Trio
Rye Bye Blackbird
Z. Hussenain/McLinn
Making Music
Ralph Towner/Solstice
Sound & Shadows
Old Friends New Friends
Blue Sun
Chick Corea
TriO Music (Double)
Live 80/81
Gary Burton/Chick Corea
Duet

ECM (single): £9.99
ECM (double): £12.99

Indigo Records

JAY OWENS
The Blues Soul of Jay Owens

JIMMY WITHERSPOON
The Blues, The Whole Blues
And Nothing But The Blues
Lightnin' Slim
Blue Lightning
Honeyboy Edwards
Delta Bluesman
Indigo CDs £10.9

Natasha Imports

Miles Davis, Stan Getz
Tune Up (Live in Germany)
Bill Evans
Live in Europe 65-72
Natasha CDs £10.99

Black Top

Rod Piazza & The Mighty Flyers
Alphabets Blues
Carol Fran & Clarence Hillman
Soul Sensation
Black Top CDs £11.99

Athena

For Audiophiles

Athena have gone back to the beginning when stereo recording meant two microphones and two tracks, with valves everywhere. They have selected a few purist recordings from the Turnabout label, and carefully re-cut them using the original master tapes through refurbished equipment. On virgin vinyl, in limited pressings, these LPs offer a clarity of sound about as close to the master tape it is possible to get without buying one. There might as well be an Ampex studio tape recorder running at thirty inches a second between the speakers - this is the art of the recording engineer: laid bare.


ALSY 10002: Debussy, Ravel: Symphony Orchestra/Vocalise Op. 34: Dallas Symphony Orchestra/Vocalise Op. 34: Dallas Symphony Orchestra (Includes Miles Davis & J.J. Johnson)

ALSY 10003: Prokofiev: Alexander Nevsky: St Louis Symphony Orchestra/Leonard Slatkin

Athena LPs £14.99

Stash

CD only

Memphis Slim
Memphis Blues
John Pizzarelli

Best Of

Charlie Parker
Legendary Dial Masters Vol 1

Legendary Dial Masters Vol 2 (Includes Miles Davis & J.J. Johnson)

The Bird You Never Heard
The Complete Birth of the Bebo

Stash LPs £7.99, CDs £12.99
KRAKEN:
"Every now and then a product comes along that causes a stir in the Hi-Fi industry. I feel the Kraken well built and with a superb sound quality has this potential."
Alan Sircom-Hi-Fi World

GENESIS:
The Genesis amplifiers express dynamic contrasts so dramatically that few British built power amplifiers can match them.
It is refreshing in the realm of the big Krells, heavyweight musical Fidelities and gigantic thresholds, that the Alchemist amplifiers are diminutive by comparison.
Alan Sircom-Hi-Fi World

KRAKEN INTEGRATED £399
KRAKEN/PRE £395
KRAKEN/POWER £380
FREYA PREAMPLIFIER £1020
BRAGI PHONO STAGE £495
ODIN STEREO AMPLIFIER £1020
GENESIS MONO AMPS £1525

OPTIONAL UPGRADES:
KRAKEN MM MODULE £45
KRAKEN MC MODULE £55
UPGRADE P.S.U. £45

FOR MORE INFORMATION
CONTACT
ALCHEMIST PRODUCTS
Tel: 081 883 3008
FAX: 081 883 1160

KRAKEN INTEGRATED £399
KRAKEN/PRE £395
KRAKEN/POWER £380
FREYA PREAMPLIFIER £1020
BRAGI PHONO STAGE £495
ODIN STEREO AMPLIFIER £1020
GENESIS MONO AMPS £1525

OPTIONAL UPGRADES:
KRAKEN MM MODULE £45
KRAKEN MC MODULE £55
UPGRADE P.S.U. £45

For £169 the Seismic Sink provides a more impressive upgrade to the sound of your CD player than adding an outboard D/A converter -- even the Award-winning £700 Audiolab DAC! (WHAT HI-FI, December 1992)

Spikes are essential for speakers, but - contrary to popular belief - are not the solution to equipment isolation. More vibration is fed into the equipment from so-called 'ground' than is taken away.
Reviews to date have shown that the Seismic Sink outperforms Sorbothane, cones, MDF, glass and all spiked tables. The acoustic open circuit afforded by the Seismic Sink eliminates structure-borne vibration, dramatically improving the performance of your CD player, turntable, amplifier (especially valve kit), Laser Disc, VCR - even an outboard DAC.

Standard size: 43cm x 35cm (W x D), takes up to 7Kg
Heavy duty version (£189) takes up to 20Kg
Custom sizes for esoteric audio components available to order.
The ultimate isolation platform, with built-in spirit level and three adjustable feet for precise levelling.

Can be shipped worldwide. Contact your local dealer or Townshend Audio for further information and specifications.

Townshend Audio, Tims Boatyard, Timsway, Stanes, Middx TW18 3JY.
Tel: (44) 0784 455866. Fax: (44) 0784 455044
SLATE AUDIO
HI-FI Design & Cable Services
THE SPEAKERSTAND Custom made to suit any loudspeaker. Solid slate, supremely rigid &
totally stable. F.D.A.

"Immaculately finished, sublimely rigid, on a par with the best stands I've used."
Ken Kessler, Hi-Fi News/RR March '89

"An astonishing degree of environmental separation, stable and intelligible, with great precision and
remarkable poise. The ultimate in high fidelity supports."
David Prakel, Hi-Fi Answers Sept. '89

"Supremely finished, sublimely rigid, on a par with the best stands I've used.
"Immaculately finished, sublimely rigid, on a par with the best stands I've used.
"Immaculately finished, sublimely rigid, on a par with the best stands I've used.

Ken Kessler, Hi-Fi News/RR March '89

"An astonishing degree of instrumental separation, stable and holographic, with great precision and
remarkable poise. The ultimate in high fidelity supports."
David Prakel, Hi-Fi Answers Sept. '89

"The sound quality when using the Slate Audio stands proved to be a revelation, something special."
Paul Messenger, Hi-Fi Choice, May '91

"The finish is excellent, the sound quality magnificent and breathtaking."
Tom Bryant, The Telegraph, June '92

The Finest Speaker Supports In The World!

GARRARD 401/301 PLINTH SYSTEM With 20 years of experience, we are now the
leading experts on the 401/301. In solid marble, this plinth eliminates motor noise, rumble and feedback.
The sound quality from these classic motors have now reached superdeck status £ 349 + £ 25 p/p
THE TURNTABLESLAB Solid slate spiked turntable platform, can be placed anywhere
with remarkable results. Size 17" x 14" £ 175.00
THE TABLESLAB Solid slate shelf which replaces any other shelf normally tined to
equipment racks, dramatically improving your turntable's performance. State size. £ 125.00
THE SPEAKERCABLE LC OFC. Meets the same high standard set for our loudspeaker
stands. A supreme4 neutral and clean sound. Please state length required. £ 15 per metre
THE SPIKEKIT Specially developed to fit directly to floor standing loudspeakers or any
wooden support. Adjustable and very simple to fit. £ 20.00
THE STONESET Spike kit for use with stone, slate or marble only. Fully adjustable. £ 20.03
ALL PRICES INCLUDE PACKING AND FREIGHT I'VE OTHERWISE STATED It k MAL%'LAND
I ENCLOSE A CHEQUE/P.O. for £
Name:
Address:

47 GEMINI CLOSE, LEIGHTON BUZZARD, BEDFORDSHIRE, LU7 8UD. TEL 0525 384174

The SPEAKER
Company
For all your needs in DIY speaker and crossover construction

We offer a large range of speaker chassis and crossover components for hi fi, car audio, public address & studio uses.
The Speaker Company also offers a range of specialist services.

Hi-Fi chassis speakers, crossover's, cabinet kits, cable, cabinet damping materials, spike kits etc
Car Audio chassis speakers, crossover's, sub bass cabinets and amplifiers.

Public Address: chassis speakers, crossover's, mixers, amplifiers, cabinets, microphones and stands.

Plus a comprehensive range of accessories

Chassis speakers by
Audax, Seas, Morel, Rcl, Kef, Elac, Richard Allan, Fane, 
McKenzie, Celestion, Eminence, Peerless, Volt, Altai, Soundlab, P.H.L.

Please phone or post for a copy of our free comprehensive catalogue and price list which includes hints and tips on DIY loudspeaker construction.

Unit 9, Waterside Mill, Waterside
Macclesfield, Cheshire SK 11 7HG
Tel: 0625-500507
Fax: 0625-500508

All goods dispatched within 24 hours subject to availability
Open 9 am to 6 pm Monday to Friday & 9 am to 5 pm Saturday

G.T. AUDIO HAS ON DEMONSTRATION

CROFT AMPLIFICATION. Pre-Amps start from £200 and Power Amps from £549
All units come with a comprehensive 2 year guarantee.

MONARCHY AUDIO Model 22 'jitter free'
Digital to Analogue converter; US award winner using the Burr Brown chip set and balanced outputs, all for £1200

CLEMENTS Loudspeakers. The image of perfection.
The range starts with the 90db 100si at £ 299, and the 89db 300si at £ 645.
These compact speakers give a very natural performance with
extraordinarily good bass performance for their size.

XL ELECTRIC Cables and interconnects
"These cables sound like no cables at all" POA

POSSELT Loudspeakers. "probably, the finest Loudspeaker in the world".
93db efficiency, an excellent match for low power single ended amplification.
Price £ 2000

MATISSE Reference preamplifier and Reference Line stage. Its superb looks and finish is only matched by its sound quality. From £200

ZIKRO AUDIO 600 SE Monoblocks: '20 watts of pure class A using the legendary
300B triodes in single ended operation".

ANALOGUE TRACER I, II, III and IV Reference MM cartridges.
"The new IV is a revelation, taking analogue a step nearer the real thing."

GROOVE TUBES "The only alternative replacement valve."

G T AUDIO CABLES "Loudspeakers and interconnects
made by Graham Tricker to your own requirements".

ATACAMA equipment supports.

We are situated in Buckinghamshire on the borders of London,
5 minutes from junction 16 of the M25/H40 Motorways.

DEMONSTRATION BY APPOINTMENT ONLY Tel 0895 833099

'Were you aware that most
of the worlds most exciting
digital electronics come from
one manufacturer?'

Micromega Digital Audio Ltd., P.O. Box 13,
London E18 1EG
081 989 0692 - 0850 336501

\"For a full colour brochure;\"

Micromega Digital Audio Ltd., P.O. Box 13,
London E18 1EG
081 989 0692 - 0850 336501

G.T. AUDIO
HAS ON DEMONSTRATION

CROFT AMPLIFICATION. Pre-Amps start from £200 and Power Amps from £549
All units come with a comprehensive 2 year guarantee.

MONARCHY AUDIO Model 22 'jitter free'
Digital to Analogue converter; US award winner using the Burr Brown chip set and balanced outputs, all for £1200

CLEMENTS Loudspeakers. The image of perfection.
The range starts with the 90db 100si at £299, and the 89db 300si at £645.
These compact speakers give a very natural performance with
extraordinarily good bass performance for their size.

XL ELECTRIC Cables and interconnects
"These cables sound like no cables at all" POA

POSSELT Loudspeakers. 'probably, the finest Loudspeaker in the world'.
93db efficiency, an excellent match for low power single ended amplification.
Price £2000

MATISSE Reference preamplifier and Reference Line stage. Its superb looks and finish is only matched by its sound quality. From £200

ZIKRO AUDIO 600 SE Monoblocks: '20 watts of pure class A using the legendary
300B triodes in single ended operation'.

ANALOGUE TRACER I, II, III and IV Reference MM cartridges.
"The new IV is a revelation, taking analogue a step nearer the real thing."

GROOVE TUBES 'The only alternative replacement valve."

G T AUDIO CABLES 'Loudspeakers and interconnects
made by Graham Tricker to your own requirements'.

ATACAMA equipment supports.

We are situated in Buckinghamshire on the borders of London,
5 minutes from junction 16 of the M25/H40 Motorways.

DEMONSTRATION BY APPOINTMENT ONLY Tel 0895 833099

World Radio History

HI-FI WORLD AUGUST 1993
AIWA
XC-750 £159

ROTEL
RCD965BX £SALE

MARANTZ
CD82-II £SALE

PIONEER
PDS-801 £249

PIONEER
A-300X £SALE

PIONEER
A-400 £SALE

NOT ALL PRODUCTS LISTED. PHONE FOR OTHER SALES PRICES

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

AIWA
XC300 £125
XC350 £175

KENWOOD
MARANTZ
CD2411 £SALE
CD252 £SALE

NAD
500 £SALE
MARANTZ
PM52 £170

PHILIPS
CD520 £132
NAD
362 £SALE

PIONEER
P2091 £140
P5051 £167
P705 £169
P710 £169

SONY
CDP397 £190
CDP397 £155

TECHNICS
SL-P520 £110

DAT
AIWA
MD5100 £SALE

SOUND
TC-CD3 £SALE

D.C.C.
AIWA
XTD55 £SALE

PHILIPS AND MARANTZ SALES
PRICES ON REQUEST

SONY
MZ-1 £SALE
MZ-2P £SALE

TECHNICS
SL-P520 £110

SONY
CDX86 £169

YAMAHA
AXS50 £129

DAT
AIWA
DAT £110

AIWA
103
SPECIAL OFFER! Now you can advertise in the Classified Section for only £10 (incl. VAT). Maximum length is thirty words, each additional word 50p extra.

NEW!
Display ads -
2.5 cm box,
£15 (incl. VAT).

Telephone and model numbers are treated as one word. All advertisement copy should be typed or written in block capitals and accompanied by the form on this page.

Cheques should be made payable to Audio Publishing Ltd. Please send your copy to:
Hi-Fi World Classified Ads.,
Audio Publishing Ltd.,
64 Castellain Road,
London W9 1EX.
Classifieds will be published in the first available issue after receipt.

Name
Address
Post Code
Daytime Tel No:

Private Advertiser Trader (Tick where applicable)
Display (2cm box £15 inc. VAT.)
I enclose cheque/postal order for £

Made payable to Audio Publishing Ltd.

Please debit my VISA/ACCESS Card No.

Expiry Date:

Send to: Hi-Fi World Classified Ads.,
Audio Publishing Ltd., 64 Castellain Road, London W9 1EX.

SPECIAL OFFER!
BOOK 1
MONTH GET 1
MONTH FREE!
SEND YOUR ADVERT WITH THIS COUPON

BASICALLY SOUND
STOCKISTS OF LEADING HI-FI

ARCAM • ACOUSTIC ENERGY • AUDIO TECHNICA • AUDIOLAB • CREEK • CELEPHONIC COMPANY • DENON • EXPOSURE • EPOS • GOLDRING • HEYBROOK • JPW • LINN • LINX • MORDAUNT SHORT • NAKAMICHI • NAIM • ONIX • PINK TRIANGLE • PROAC • REGA • RADFORD • ROYD • SOUND ORGANISATION • SENNHEISER • SME • SOUND FACTORY • SPENDOR • WADIA • ALSO 

THRESHOLD BY PRIOR ARRANGEMENT

CLOSED SUNDAYS AND MONDAYS

BASICALLY SOUND OF NORFOLK
THE OLD SCHOOL
SCHOOL ROAD,
BRACON ASH,
NR. NORWICH, NORFOLK
TEL: 0508 70829
PRIVATE

PIONEER RT101 I open reel tape deck, £34 / £75 i.p.s. Pioneer CT 9090 cassette deck. Both little used but require attention. 7 x 10/12 NAB tapes. Any offers considered. Tel 0407 742 705


GARRARD 401 Turntable, original mahogany plinth, SME 3009 arm, renovated late 1980s by T&G, choice, £125 plus £15 insured COD post. Tel/Fax 010 353 27 61040.

GALE GS 20 SPEAKERS (Black ash) on Solid Foundation "K" stands(26h) and 2x5m QED 79 strand cable. Open, detailed sound. Can demo. SW London. Tel Mike 081 544 9329

APOGEE CALIPER signeture (£4000), grey, hardly used only £1950 ono. Valvet Audio reference mono blocks, British hand built: 75w class A, 200w class B. Tested 1992 against Krall, Musical Fidelity etc. (£4000) only £1200 ono. PX considered. Job move forces sale Tel 0225 480 990 (between 6-8pm)

CONCORDANT EXCELSSOR pre-amp with power supply, two years old, excellent sound, £575 ono. Quad II pre-amp, recently serviced, offers. Wanted, literature on Lowther speakers. Tel 021 459 2347

LEAK STEREO CABINET Garrard 301 Turntable, Variolope 2, Troubridge 3, Sandwich speakers giving 12w per channel output. Perfect working order. £500 ono. Tel 081 979 2933

DELCET (DPA DIGITAL) DSP 505 pre-amp (with separate power supply and phono stage), DPA 505 power amp, 2x5m lengths S005 speaker cable. "Noel's favourite amplifier". Immaculate, boxed. £1300 (£2692). Tel 0227 765 273

LINN LF1, ALL IMMACULATE: K/1 Dirak c/w remote and leads, £495, (£1000). LK280/Spark, £795 (£1500). LK280, £435 (£849). Kan II black c/w stands, 12m K400 cable, £445 (£740). Philips CD 850 II, £140 (£400). Tel 0785 41753 (Stafford)

DELTEC (DPA DIGITAL) DSP 505 pre-amp with power supply, two years old, excellent sound, £575 ono. Quad II pre-amp, recently serviced, offers. Wanted, literature on Lowther speakers. Tel 021 459 2347

DUAL 9090 cassette deck. Both little used etc. (£4000) only £1200 ono. PX available. Tel 0279 426 647 or 0850 484 464

DISCOUNT AUDIOPHILE CARTRIDGES: Ortofon, Audio Technica, Denon, Dynavector, Goldring, Shure. Amazing prices for all tonearms, turntables and many more. Send large 28p SAE for free 50 page catalogue. PO Box 132,(Dept W), Wokingham, Berks, RG11 4NG.

TRADE

VALVE EQUIPMENT, QUAD power- £250. RCA monoblocks. Leak TL12 & TL50, Stereo 20, Troubridge tuner, Garrard 301 & 401, single Quad power amp, Triangle Comette speakers £200. Many other valve amps, sell or swap. Tel 021 784 8765

VALVE AMPS repaired/ rebuilt/ modified. Musical Fidelity products repaired to give improved reliability. Amps, outboard PSU's, stereo decoders, etc built to order. General repairs. North East based. Tel 0642 602 823

LINN AXIS £269, Linn Intek £275, Rega Elex £220, Linn Pretek/ Powertek £495, Acoustic Energy AE 1w with Genuine Stands bi-wireable, £695, Monitor Audio Studio 5s £375, Rogers LS7T £250, Rega Elas £270, Meridian 206 CD latest sigma chip (new) £799. Deltec PD11 DAC £250. Other items available. Tel 0279 426 647 or 0850 484 464

AUDIO NOTE TYPE J SPEAKERS, boxed £395, Ks £295, First Audio's £1995, Innovation's 500s, 400s, 300s, 200s boxed. Tannoy Corner Lancaster's £650, B&W DP7 speakers £125. Also good selection of valve amps: Leafs, Raidfords etc. Tel 0903 239 980

HI FI INTERCONNECT CABLES hand made to order. Extremely high quality. 14 day home trial, money back guarantee. Send for details: Hi Fi Excellence 028/11, 145 Broad Street, Wokingham, Berks, RG11 3HX


DISCOUNT AUDIOPHILE CARTRIDGES: Ortofon, Audio Technica, Denon, Dynavector, Goldring, Shure. Amazing prices for all tonearms, turntables and many more. Send large 28p SAE for free 50 page catalogue. PO Box 132,(Dept W), Wokingham, Berks, RG11 4NG.
MANTICORE MAKE MORE MUSIC

Turntable Servicing - all makes - please ring for details.

WE ARE APPROVED THORENS SERVICE AGENTS

Arm rewiring - Manticore standard cable £80.00
Arm rewiring - Van den Hul or Isoda £160.00
Arm rewiring - Cardas £160.00
Silver plated mains cable with IEC socket £50.00
Aerolam equipment support £54.00
Fibrelam equipment support - superior performance £130
Mantra replacement belt - supplied in twos £22.00
Logic DM101 belt - supplied in twos £25.00
Logic DM101 spring sets £22.00
Rega armspacer - polished aluminium 1mm increments £11.00
Impex motor, pulley and PCB £65.00
Manticore Mantra - no tonearm £460.00
Manticore Madrigal with Musician £570.00
Manticore Magister with 12" Magician £3,800.00
Manticore Musician tonearm £330.00
Manticore Magician tonearm £550.00
Manticore 12" Magician tonearm £720.00
Part-ex available against all other tonearms

MB5 off-board power supply £250.00
MB6 off-board power supply £490.00
Motor rebuild £150.00
RIAA and preamplifier £490.00

Please telephone or write for more information and a copy of Mumbo Jumbo.

MANTICORE AUDIO VISUAL

The Courtyard, 56c Shortmead Street,
Biggleswade, Beds. SG18 0AP
Tel: 0767 318437

SA ACOUSTICS

L.F.D. AUDIO
(A HIGH END ALTERNATIVE)

LINESTAGE LSI • PHONOSTAGE MCI • POWERSTAGE PAI

High end does not have to equal high priced. Something most manufacturers don't understand. The challenge as L.F.D. see it, is to offer an integrated system of audio components that delivers high end sound.

EX DEM STOCK SALE

MICROMEGA
DUO CD 3 £900
DUO BS £489

MICRODAC £275
TRIO 4 BOX UNIT £3000

Main Dealers For

L.F.D. AUDIO

NEWTON ABBOT, DEVON
(0626) 67060

For your pleasure we present the new "SILVER NIGHT"

Audion 300B
Push Pull
"SUPER LINEAR"
Direct heated triode
Amplifiers
Positively no feedback
Pure Class "A"

"Probably the best amplifiers on the world! Under £2000, affordable high end!
Now performing at the following selected dealers

Hi-Fi World AUGUST 1993

LYNWOOD MAINS CONDITIONER

Basic £59.95
Basic + 4 Way £79.95
Advanced £149.95
Mega £295.00
Source £295.00

For further information and dealer list send SAE to:

LYNWOOD ELECTRONICS

Coley Lane Farm
Wentworth
Rotherham
South Yorkshire

JORDAN

World leaders in Foil Cone Technology

...few can match a combination of delicacy, cleanness, coherence, scale and focus which must represent the apotheosis of metal diaphragm technology, and which leaves most conventional alternatives sounding relatively dirty and uncouth ...

Review JORDAN-WATTS JH5K System
Paul Messenger Hi-Fi Choice Nov 92.

For full details of the Jordan JX Series drive units, please contact:
E.J. JORDAN DESIGNS

The Dak, Manorbier, South Pembrokeshire, SA70 8QR
Tel: 0834 871209 Fax: 0834 871770
### Speaker/Equipment Stands

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenwood KX300</td>
<td>109.95</td>
</tr>
<tr>
<td>Aiwa ACD700</td>
<td>149.95</td>
</tr>
<tr>
<td>Aiwa ACD705</td>
<td>199.95</td>
</tr>
<tr>
<td>Aiwa ACD706</td>
<td>299.95</td>
</tr>
</tbody>
</table>

### Turntables

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denon DP-303-2</td>
<td>155.95</td>
</tr>
<tr>
<td>Denon DP-303-4</td>
<td>195.95</td>
</tr>
<tr>
<td>Pioneer PL-2400</td>
<td>249.95</td>
</tr>
<tr>
<td>Pioneer PL-2400S</td>
<td>499.95</td>
</tr>
</tbody>
</table>

### Cables

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>QED 79</td>
<td>£110</td>
</tr>
<tr>
<td>QED 79 Cable Talk</td>
<td>£150</td>
</tr>
<tr>
<td>QED Concert 2</td>
<td>5.95 Mtr</td>
</tr>
</tbody>
</table>

### Specials

**Turntables**
- **Call for 16" Spiked Speaker Stands on all speakers over £110 (includes system building systems)**
  - **Advertised Prices**
    - **Aiwa AX-100**
    - **Matsui JC-600**
    - **Marantz CD52**
    - **Marantz CD42**
    - **NAD 520**
    - **NAD 302**
    - **NAD CD-1050**
    - **NAD CD-1050S**
    - **Pioneer CT-4010**
    - **Philips 219.95**
    - **Pioneer CT-4020**

**Speakers**
- **Great Reductions on all Display & New Stock**
- **Aiwa AX-200**
- **JVC XV-445**
- **Matsui JC-600**
- **Marantz CD52**
- **Marantz CD42**
- **NAD 520**
- **NAD 302**
- **NAD CD-1050**
- **Pioneer CT-4020**

**Cassettes**
- **FREE DELIVERY on ALL**

**Turntables**
- **Add £**
  - **Aiwa AX-100**
  - **Matsui JC-600**
  - **NAD 520**
  - **Pioneer CT-4020**

**Speakers**
- **Add £**
  - **Aiwa AX-100**
  - **Matsui JC-600**

**Cassettes**
- **Add £**
  - **Aiwa AX-100**
  - **Matsui JC-600**

**Turntables**
- **Add £**
  - **Aiwa AX-100**
  - **Matsui JC-600**

### All Systems Supplied With:
- All interconnects + 6 metres of OED 79 Strand professionally terminated with Radio Spares banana plugs, recognised by leading manufacturers as the best.
QUALITY HI-FI AT ITS VERY BEST
ARCAM
AUDIOLAB
BEYER
B&W
CELESTION
EXPOSURE
K.E.F.
MERIDIAN
MICHEL
MUSICAL FIDELITY
MICROMEGA
NAKAMICHI
QUAD
REGA RESEARCH
ROGERS
RUARK
ROTEL
ROKSAN
SONY
SENNHEISER
SYSTEMDEK
STAX
S.M.E.
YAMAHA

4 Queens Walk
Bread Street Mall
Reading RG1 7QF
(0734) 585463

Opening Hours:
Tues-Sat 10am-6pm
(Thursday until 7pm)
Lunch 2-3 pm except Saturdays
Closed all day Monday
DS/PAP/TIPS ADVISED

MAIL ORDER ACCESSORIES

Cables - Audioquest, Furukawa, Heybrook, Ixos, Ortofon, QED, Van den Hul

Stands - Alphason, Goldring, Sound Organisation, Stands Unique, Target

Cartridges - Arcam, A.T., Denon, Dynavector, Goldring, Lyra, Ortofon, Sumiko

Headphones - Beyer, Sennheiser, Stax

Accessories - Allsop, BIB, Discwasher, Hunt, Kontak, Last, Michell, Milly, Nagaoka, Pixall, Quad

LP's/CD's - Audioquest, Klavier, Opus, Reference Recordings, Sheffield Labs.

TO ORDER OR FOR A FULL CATALOGUE

PHONE 0850565693

EX DEMONSTRATION AND SECONDHAND OFFERS

System DEK & LUX + G1020 £ 160.00 S/H
Marantz PM305E £ 130.00 X/D
Marantz PM405E £ 180.00 X/D
Quad 66 Pre amp £ 650.00 S/H
Meridian 205 mono bloc £ 650.00 S/H
Meridian 605 mono bloc £ 1,495.00 X/D
Meridian 205 Doc £ 250.00 S/H
Meridian Argent 2 £ 625.00 X/D
Infinity ref 10 £ 149.00 X/D
Heybrook HBI £ 195.00 X/D
Alison AL 240 £ 240.00 S/H
Shahinian Arc £ 1,125.00 X/D

Bury Audio
47 Churchgate Street, Bury St. Edmunds
Suffolk IP33 1RG Telephone 0284 724337

ONE OF THE WORLD'S
GREAT CONCERT HALLS

With the help of Room Acoustics Services you can achieve near concert hall realism in your home

Full details, reviews etc., of our computerised postal consultancy available from:-

ROOM ACOUSTICS SERVICES
3, Queen Elizabeth Way,
BARTON-upon-HUMBER,
South Humberside, DN18 6AJ.
Tel: (0652) 635523

You need help from a retailer who has invested time & money in researching how best to harmonize components & extract the best sound quality. Our own design work with leading manufacturers gives us unparalleled experience in this field, and our range of products are amongst those most sought after, including:

Pink Triangle, SME, Alphason, EAR, Audio Innovations, DNM, Chord, AVI, John Shearne, Micromega, Quad, Marantz, Denon, Pioneer, Aura, Nakamichi, Mission, Tannoy, Castle, Rogers, TDL, Impulse, JPW, Ruark.

BRENTWOOD HI FIDELITY

Tel: 0277 221 210

2 INGRAVE RD. BRENTWOOD ESSEX
corner of Brentwood High St. & Ingrave Rd.
ON SITE CUSTOMER PARKING
BY APPOINTMENT
"Good equipment synergy is vital to realistic music reproduction, as are accurate, neutral components. One brand, or one distributor systems can seldom fulfil all requirements.

I'd like to introduce something new - the finest components, carefully matched: the system disappears leaving just the music...

...This is Virtually Real ".

PHONE FOR A CHAT OR A DEMONSTRATION TAUNTON (0823) 325802
DANNY VAN READ
10AM TO 10PM

Based in Taunton and Servicing the South West
Kenwood's DP-5050 CD player is the latest addition to the fiercely contested £200 - £300 price band.

Jonathan Jordan investigates its potential as a market leader.

It came as no surprise when Kenwood's latest range of CD players was launched with the slogan 'refinement before features'. Kenwood does not have the vast R&D budgets of Sony and Panasonic, for example, but instead concentrates on refining the products that the majors have developed. This policy has brought Kenwood success with both hi-fi systems and separates.

The new range is spearheaded by the DP-5050 CD player, which retails at a shade under £250 - right in the middle of the fiercely contested £200 to £300 price band. Although Kenwood may feel it is modest in features, it does well by my reckoning: twenty track programming, editing and peak level search functions that can ease home recordings, a full function remote control and variable line output. The only feature missed from the list was a coaxial digital output: in common with many oriental units only an optical digital output was fitted. This is unlikely to be of consequence to most buyers though.

The DP-5050 is equipped with Philips' SAA7350 one bit PDM (Pulse Density Modulation) bitstream digital-to-analogue convertor chip. The refinements it so proudly boasts are an advanced high precision master clock and a specialised differential circuit for the initial stages of analogue amplification, both of which are fairly minor.

I found the visual presentation of the '5050 pleasing. For a black box it has a certain attraction, its fascia blends well with the blue display. The centre mounted drawer arrangement adds visual balance to the simple, yet refined appearance of this player.

When the Kenwood was put to work with various light and heavy rock selections, I found it revealed detail in the upper regions of the frequency spectrum well, seemingly enhanced by fractionally bright treble. The '5050 also placed emphasis on the lower frequencies. David Bowie's 'Black Tie White Noise' album was reproduced with an exaggerated bass guitar, which although powerful was a little deficient in tonal colour. This gave the whole lower mid-range a slightly monochromatic tint, while at the other frequency extreme the saxophone came across as over-sharp and marginally shrill - leaving the upper midrange slightly lacking in tonal colour as well.

With Terje Rypdals QED, one piece in particular, the 4th movement, could have been written for reproduction on the Kenwood as it consists...
of only two main components: a frightening amount of low frequency detail that ventures into sub-sonics and additions from an electric guitar that reside solely in the upper mid-range and above. This in particular came across well and showed the Kenwood in its best light. It soon became clear, however, that apart from these slight inaccuracies at the 'top 'n' bottom' the Kenwood was a competent performer. With all types of music this player provided an expansive and generous presentation. Most of the tracks it tackled were delivered with a sense of openness and dimensionality; it had a competency that only the better players in its price range exhibit.

The live album by the Red Devils, 'King King' demonstrated the '5050's image stability, each instrument firmly occupied its position. It regenerated the two guitarists missing each other's cues by a minute amount excellently, but what it could not do was place you in the centre of the action. The atmosphere within this recording was truthfully conveyed in the sense that I felt I was in a dark, smoky and echoing club, but unfortunately the Kenwood was only offering me a table at the rear of the club - rather than just in front of the stage.

Along with its stable imaging this player had other strengths. It could never be described as a musical quitter - it just kept going however complicated the music content became, although it seemed a little unhappy with certain musical onslaughts - one or two choral pieces had such dynamic transients that the player appeared unable to handle them, but most instrumental crashes and bangs were well pieced together for a £250 player.

The problem of the Kenwood's heavy bass and sharp treble detracted from its reproduction of rock music, but these faults were not so obvious with classical music - an area where the Kenwood ultimately shines. Choral music was relayed with a degree of class not often found amongst players of its price and I particularly enjoyed the '5050's successful attempts at The Gabrielli Consort and Players recent recording of Vespers in Venice. The most gratifying aspect was the vocal clarity and the regeneration of the vast acoustics present in a church.

I found the DP-5050 CD player more relaxing to listen to when reproducing classical instruments focused in the midrange. Once massive excursions at the low or high frequency extremes were removed from the Kenwood's set of tasks, it seemed to enjoy itself far more. Beethoven's Violin Concerto in D major had a certain sense of real drama. During the performance I could close my eyes and be transported into a concert hall. Throughout this piece the exact repetitions of the recurring musical theme by the various parts of the orchestra were delivered with all the nuances and feeling brought to the piece by the musicians.

The Kenwood is well suited to being upgraded. When I added an external digital convertor, the QED Opto, two main areas of discomfort, the bass and the top end, were tightened up. Although the player excels with classical music, its mediocre control of bass instruments, coupled with over energetic treble causes it to lose out to slightly better all-rounders with rock. Consequently, a dedicated rock music fan might find the '5050 disappointing.

Kenwood's DP-5050 has plenty of strong points for a £250 player, but its musical preferences act against it. Although it has refinement, there's still room for a little more.}

"with all types of music this player provided an expansive and generous presentation"

**MEASURED PERFORMANCE**

The frequency response of the Kenwood DP-5050 has a gentle dish shape, with the base of the dish lying at 2kHz. As the response rises towards high frequencies it steepens to form a peak of 0.15dB between 14-15kHz. Although only slight, this deviation will be subjectively audible.

The distortion figures for the DP-5050 indicate that it should be quite clean sounding player, however at -30dB, a normal music level, there was a small amount of second and third harmonic (see distortion plot below). Whilst second harmonic distortion is aurally acceptable, third harmonic can lend a little sharpness to the sound. The other distortion measurements were all reasonable, but not exceptional, but this is to be expected from a £250 player.

Channel separation was average at 1kHz but slightly poor compared to the best at 20kHz. However, in both cases stereo separation will not be subjectively compromised. The output is just slightly above the 2V standard set by Philips at 2.15V so level matching for a shop demo is unnecessary.

**TEST RESULTS**

<table>
<thead>
<tr>
<th>Frequency Response</th>
<th>4Hz-21kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distortion %</td>
<td></td>
</tr>
<tr>
<td>-6dB</td>
<td>0.006</td>
</tr>
<tr>
<td>-30dB</td>
<td>0.015</td>
</tr>
<tr>
<td>-60dB</td>
<td>0.70</td>
</tr>
<tr>
<td>-90dB</td>
<td>37.7</td>
</tr>
<tr>
<td>-90dB dithered</td>
<td>11.5</td>
</tr>
<tr>
<td>Separation dB</td>
<td>left</td>
</tr>
<tr>
<td>1kHz</td>
<td>107</td>
</tr>
<tr>
<td>20kHz</td>
<td>84</td>
</tr>
<tr>
<td>Noise</td>
<td>-99dB</td>
</tr>
<tr>
<td>with emphasis</td>
<td>-100dB</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>104dB</td>
</tr>
<tr>
<td>Output</td>
<td>2.15/2.16V</td>
</tr>
</tbody>
</table>

Some treble lift that will give the Kenwood a bright balance.

**Distortion**

A little 2nd and 3rd harmonic distortion in evidence.
SUGDEN
HAND CRAFTED AUDIO PRODUCTS
A WORLD OF MUSIC

SDA-I Digital To Analogue Converter
U.K - Sugden's SDA-I bowled us over with a sound populated by masses of high-resolution details and complemented by very quiet, dark backgrounds and tremendous dynamics...

Canada - At a price well below many DACs of similar sound quality it offers real value for money in addition to its sonic refinement.

Germany - D/A converters from the Sugden stable have established themselves on a solid platform within the hi-fi scene.

SDT-I CD Player
Canada - The combination of excellent transport and high-quality parts make the Sugden a very relaxed and easy player to listen to, with no digital edge.

U.K - I have to say Sugden's CD player just has to be near the top of any buyer's list.

A21a Class 'A' Amplifiers
U.K - A true thoroughbred that will undoubtedly attract newcomers to Sugden's dedicated band of followers, it almost begs you to put on more music and then proceeds to play it with aplomb.

Holland - A concert hall in your living room. The reproduction quality of the amplifier is without any stress and gives total involvement in the music.

A25B Integrated Amplifier
U.K - Not only does the little A25B look more refined than many of its peers, it also has a sophistication to its sound that is sadly lacking in most of its immediate competitors.

Singapore - The Sugden A25B will not fail to please in the way it presents the music. It is therefore, highly recommended.

Canada - The quality of sound produced by this amplifier is exemplary.

Australia - We are hard pressed to think of an amplifier quite so musical. A delight to the ear.

France - The general transparency of sound and the punch delivered by the amplifier are really astonishing.

A48 Integrated Amplifier
U.S.A - In terms of sound quality the A48 is a revelation. More than any other integrated amplifier in my experience. The Sugden imbues music with a warmth and body that is quite addictive.

U.K - Coherent and musical, the Sugden A48B is on the warm side of neutral, well suited for those who like the valve sound.

AUS1c Pre-amplifier
Canada - You can tell that the AUS1c is special. Five minutes convinced everybody present that a pre-amp must sound like this if it is to be of reference quality.

Canada - Cold, out of its packing carton, the Sugden instantly sounded better than great. During the next few hours of operation, the unit literally blossomed and developed the sort of sound closely akin to a live performance.

AUS1p Power amplifier
Canada - We've never tested an amplifier which sounds this big and did its job so well.

FOR FURTHER DETAILS:

J. E. SUGDEN & Co., LTD. VALLEY WORKS, STATION LANE, HECKMONDWIKE, WEST YORKSHIRE WF16 ONF
0924 404088

OVER 25 YEARS SERVICE TO MUSIC LOVERS
Mr J.T. of Knotts has a REL STADIUM supplementing QUAD ESL’s.
"...my whole record collection is providing surprises... how I ever put up with it before is beyond me!"

Mr A.J. of East Sussex "...quite the most worthwhile system upgrade I have encountered. If that was not enough, the quality of construction is absolutely superb."

STADIUM owner - Mr K.L. of Lancs "...how did I ever live without it?"

Says Mr R.T. of Herts "...incidentally, are you really a hernia specialist who is angling for business!?"

And Mr Tom Bryant of the Weekend Telegraph, when reviewing a STADIUM "...it is a mark of its success that I no longer stoop to drool over adverts for speakers that look like they have been on steroids: I would settle for a Stadium..."

REL - Sub-bass systems for Audiophiles.

Overseas distributors please phone or fax for more information, Tel: 0656 768777, Fax: 0656 766093
Our superb service is the same, regardless of price.

**HARMONIX ROOM TUNING DEVICES — YES, PLEASE**

An immediate audition is essential!!

**NOW DEMONSTRATING**

MARANTZ CD10 — The latest MARANTZ heavyweight
SONUS FABER MINIMA AMATORI — KK told you now hear them!
KRELL DSP CD PLAYER — Give it a go!
TDL — New range of loudspeakers
HEYBROOK QUARTET LOUDSPEAKERS
ROKsan Rok-DPL TRANSPORT WITH DA1 CONVERTER & DS1 psu
MARTIN LOGAN AERIUS — Stunning looks and sound
KRELL KSA 1005 & KRC 2 (remote control) — Fabulous & just in!!
THETA COBALT 307 CONVERTER — Sensational!!
THE LATEST HARMONIX ROOM TUNING DEVICES — Incredible!!!

**AUDIO RESEARCH LS2B & LS3 PREAMPS & V70 POWER AMP**

TEAC VRDS 10 CD PLAYER
SEQUENCE LOUDSPEAKERS
AUDIO ALCHEMY DTI — with DDE and POWER STATION 2
MANDRAKE INTERCONNECT CABLE — THE ULTIMATE!!
THETA DATA 2/Pro Prime
COPLAND CTA 401
HEYBROOK SIGNATURE AMPLIFIERS & LOUDSPEAKERS
PROCEED SERIES 3 CD DIGITAL PROCESSOR & CD TRANSPORT

REVOX EVOLUTION AUDIO SYSTEM

WADIA — latest range on demonstration
LYRA LYDIAN CARTRIDGE — simply stunning!
SONUS FABER MINUETTO/ELECTA/AMATOR/EXTREMA
MICHILL GYRODEC — Still a Classic!
REL STADIUM SUBWOOFERS

**NOW DEMONSTRATING**

**Ex Dem & P/ex Bargains**

| **APPOGEE DUETTA SIGNATURES** £3495.00 |
| **TEAC X1000 REEL TO REEL TAPE RECORDER** £295.00 |
| **WADIA X32 D/A CONVERTER EX DEM** £1150.00 |
| **KRELL KST100 EX DEM** £2350.00 |
| **WHARFEDALE WAREWOODS EX DEM** £60 off £399.95 |
| **REGA ELA SPEAKERS** £225.00 |
| **KRELL KSP 7B PREAMPLIFIER** £1495.00 |
| **SONUS FABER ELECTA (BLACK) AS NEW** £1275.00 |
| **REVOX H11 cassette deck** £595.00 |

Please ask for details or our current list


**TAX-FREE EXPORT SERVICE**

MAIL-ORDER AVAILABLE ON MANY ITEMS.

Open Mon-Sat 10am-6pm.

Dems by Appointment only.

Home trial facilities. Free Installation. Servicing Facilities. We are not a shop.

Oxford Audio Consultants
Cantay House, Park End Street, Oxford OX1 1JE
Telephone: Oxford (0865) 790879
Facsimile: Oxford (0865) 791665

Soundcraft Hi-Fi
The New Musical Experience

Our single speaker listening room. There are no other loudspeakers interfering with the sound.

For your convenience we offer an appointment service, where you can hear the best equipment available today. You are welcome to bring your own records or CDs, and by arrangement, any part of your existing system for comparison.

We guarantee that you will be thrilled with your music, not just for the first few months but over many years of listening.

Soundcraft Hi-Fi, Music For Life
409 HIGH STREET, ASHFORD, KENT TN24 8TE
TEL: 0233 624441 FAX: 0233 640333

V'Audio
36 Druid Hill, Stoke Bishop
Tel: 0272 686005
Open Mon-Sat 10am-6pm.

TC, AVI, Acoustic Energy, Audio Innovations, AMC, Analogue Electronix, Cadence Valve, Chord Amps, Exposure, Jamo, LFD, Pink Triangle, Ruark, Michell, Rel, Sansui, SME (inc. 20A), Sonic Link, Stax, Townsend, Wadia, Audio Technica, Goldring, Lyra, Ortofon Sumiko

Oxford Audio Consultants
Cantay House, Park End Street, Oxford OX1 1JE
Telephone: Oxford (0865) 790879
Facsimile: Oxford (0865) 791665
**SPECIAL SUMMER CD PROMOTION**

**decca**

**Philips**

Full price CDs, £10.95 per disc

Below is an extract from our current special offers. A complete list of hundreds more is available FOC.

Some further reductions are made on orders of 20 or more items, which can be selected from any labels generally available in the UK. This very competitive rate is designed to benefit Librarians, Universities, Music Clubs, or the avid collector.

We offer a straightforward, problem free and experienced overseas service to match the individual requirements of customers in 53 countries. Payment is in £ sterling, US dollars, DM, or by credit card. EEC citizens can now take advantage of new regulations.

### BACH
- 6 Brandenburg Concertos, 4 Suites (3CD) Pinnock £24.00
- 9 Symphonies (5CD) Harnoncourt £49.00

### BEETHOVEN
- 5 Piano Concertos + Choral Fantasy (3CD) Brendel-Hattink £16.00
- 4 Symphonies (4CD) Abbado £38.32

### BRAHMS
- 4 Piano Concertos (3CD) Brendel-Hattink £21.90

### HAYDN
- 9 Symphonies (5CD) Pinnock £43.00

### MOZART
- 27 Piano Concertos (12CD) Perahina £98.00

### PROKOFIEV
- War & Peace (5CD) Gergiev £32.85

### RACHMANNINOV
- 4 Piano Concertos (2CD) Ashkenazy Hattink £21.90

### SCHUBERT
- 21 Lieder (21CD) Fischer-Dieskau Moore £91.20

### SHOSTAKOVICH
- 15 Symphonies (9CD) Gergiev £106.00

### WAGNER
- Ring (14CD) 150th Anniversary Edition £106.00
- 14 Symphonies & 3 Overtures (15CD) Karajan £21.90

### VARIOUS
- 27 Piano Concertos (12CD) Perahina £88.00
- 9 Symphonies (5CD) Abbado £38.32
- 6 Brandenburg Concertos, 4 Suites (3CD) Pinnock £24.00
- 9 Symphonies (5CD) Harnoncourt £49.00
- 5 Piano Concertos + Choral Fantasy (3CD) Brendel-Hattink £16.00
- 4 Symphonies (4CD) Abbado £38.32

We offer a straightforward, problem free and experienced overseas service to match the individual requirements of customers in 53 countries. Payment is in £ sterling, US dollars, DM, or by credit card. EEC citizens can now take advantage of new regulations.

**For your pleasure we present the new**

**"Silver Night"**

Audion 300B Push Pull
"SUPER LINEAR"
Direct heated triode Amplifier's Positively no feedback Pure Class A" Now performing at the following selected dealers

- Audio South, Farnham 0352 714555
- English Audio, Hereford 0435 553340
- K.J. Leasure 071 486 8262
- Chaundy Audio, Brighton 0777 878372

**HIGH FIDELITY**

0582 504560

**This Month's Special Offers**

- Rotel 965 BXLE £310
- Pink Triangle LPT GTi turntables £400
- Audio Alchemy BDE1 £349
- Acoustic Energy AE1 speakers £595
- Furukawa cables all available at 15% off

**6 Carolyn Court, Trinity Road, Luton, Beds. LU3 2NF**

**Valve amplification at its very best.**

Write or call for more details and dealers list to:

**REFERENCE IMPORTS**

Pineridge, Sandy Cross, Heathfield, East Sussex TN21 8BS

Tel: 0435 868004
Fax: 0435 864481

EXPORT ENQUIRIES WELCOME
<table>
<thead>
<tr>
<th>Speakers</th>
<th>CD Players</th>
<th>Tunable Turntables</th>
<th>CD Players</th>
<th>Tunable Turntables</th>
</tr>
</thead>
<tbody>
<tr>
<td>WH-550</td>
<td>AWR 89</td>
<td>275/95</td>
<td>WH-550</td>
<td>275/95</td>
</tr>
<tr>
<td>WH-650</td>
<td>AWR 90</td>
<td>285/95</td>
<td>WH-650</td>
<td>285/95</td>
</tr>
<tr>
<td>WH-750</td>
<td>AWR 91</td>
<td>295/95</td>
<td>WH-750</td>
<td>295/95</td>
</tr>
<tr>
<td>WH-850</td>
<td>AWR 92</td>
<td>305/95</td>
<td>WH-850</td>
<td>305/95</td>
</tr>
<tr>
<td>WH-900</td>
<td>AWR 93</td>
<td>310/95</td>
<td>WH-900</td>
<td>310/95</td>
</tr>
</tbody>
</table>

**Suggested Systems**

This is a list of suggested systems available at our store. Please see our staff for further alternatives.

**FREE HEADPHONES**

Spend over £500 on selected Hi-Fi products and claim a pair of Technica ATH-D10 headphones worth £40 FREE!

0% FINANCE

We offer 0% FINANCE on a wide range of Hi-Fi products. Option 1: 0% deposit followed by 6 equal monthly payments. Example: Cost £150. Deposit £0. Option 2: 25% deposit, followed by 6 monthly payments. Example: Cost £150. Deposit £37.50. Please see staff for details.

**Options**

Spend over £500 before 31st July and receive FREE Technica ATH-D10 headphones worth £40.
Whether you are a complete beginner or have many listening hours under your belt, you need the facilities a really good hi-fi shop offers to ensure you get the best value.

We carefully select equipment in every price range, from good value products at around £200 per item, to more expensive and even more enjoyable systems costing thousands.

In our demonstrations we use listening rooms separate from the main shop and our extensive experience enables us to get the best from every piece of equipment. This makes differences and improvements pleasantly obvious.

We offer free of charge the most vital part of any hi-fi system, the detailed preparation and installation necessary for us to achieve the best sound in your home.

We guarantee that you will be thrilled with your music, not just for the first few months but over many years of listening.

Equipment From:
ARCAM•AUDIOLAB•LINN•NAIM•QUAD
DENON•ROTEL•MARANTZ•KEF
RUARK•EPOS•MISSION•CYRUS
CELESTION•DUAL•MERIDIAN•MICHELL
AND OTHERS

PLEASE DO NOT HESITATE TO CONTACT US TO ARRANGE A DEMONSTRATION OR JUST FOR ADVICE ON:
081 654123 / 6542040

Interested in hi-fi? Ever heard of any of the following:
Acoustic Energy Forte Sound Lab
Air Tight Gryphon Space & Time
Audio Alchemy Kuzma Straight Wire
Audiostatic Mofi Tara Labs
Benz Micro Music & Sound Threshold
Conrad Johnson Nestorovic Labs VPI
Dynaco Phantom Acoustics Wadia
First Sound Sonoraphge Wheaton

From now on don't just hear of the above audophile equipment, contact us to arrange an appointment to listen to any of the above products in your own home.

Strathlene Electrical Company Ltd.
We provide a superior personal service whereby we come to you and discuss your music tastes and requirements then arrange to demonstrate mutually chosen equipment in the comfort and familiar surroundings of your own home.
For more details or just a friendly chat about hi-fi please contact us on (0542) 35488 at any reasonable hour

We at M.J.S. Hi-Fi are dedicated in the quest for excellence in the reproduction of recorded music.
You can be assured that we are not influenced by reviews and all the hype in Hi-Fi magazines. We devote time and patience when auditioning before we recommend and stock the product.
We feel very sad about the way in which most Hi-Fi equipment is chosen and sold. We offer a refreshing alternative to the norm:-
* EXTENDED AUDITION TIMES
• HOME AUDITIONS
• HOME VISITS
* OPEN DISCUSSIONS
• TUNING SUGGESTIONS
• EVENING AUDITIONS
AND ABOVE ALL COMMITMENT TO YOU AND YOUR MUSIC.
For more details, please phone:
M.J.S. HI-FI
80 Stapleton Lane, Barwell, Leicestershire LE9 8HE
Telephone: (0455) 846977
BY APPOINTMENT ONLY

LORICRAFT AUDIO
TURNTABLE SERVICE & REPAIR AND PROFESSIONAL RECORD CLEANING SERVICES
NEW RANGE of craftsman made plinths in solid Oak/Mahogany. 18mm MDF substructure, machined in motor, board in various finishes. Resiliently mounted with cover and hinges. Suitable for Garrard 301, 401 and Thorens TD124.
DEDICATED POWER SUPPLY for Garrard 301. Improves performance dramatically.

S.A.E. for catalogue
4 Big Lane, Goose Green, Lambourn, Berks.
RG16 7XQ.
Tel: 0488 72267
CREATIVE AUDIO

9 DOGPOLE, SHREWSBURY, SHROPSHIRE. Fax: (0743) 271010 Tel: (0743) 241924 (Closed Mondays)

History is written by the winners

Authorised retailer for:
ARCAM • AUDIOLAB • CELESTION • CYRUS • DENON • EPOS • KEF • MERIDIAN
MISSION • NAIM • QUAD • REGA • ROKSAN • ROTEL • RUARK • SOUND ORGANISATION
TRIPODS
A new approach to loudspeaker design. A design that brings harmony to both the music and the home. A loudspeaker where attention has been given to the aesthetical design as well as the technical performance.

As to performance, frequency range 35 Hz to 22KHz, power handling 45 watts, efficiency 91bd. Physical dimensions: height 41" width 13". from £290 (ex VAT)

For a colour brochure ring 0225-334595 or write to SRC DESIGN
1 Saville Row, Bath BA1 2QP.

The CL1 speakers are different.
They are a piece of furniture.
They can be finished in a colour to suit the decor.
They do not look like the normal speaker and are less obtrusive.

---

**SRG DESIGN CL1 LOUDSPEAKER**

---

**TRC Hi-Fi**

Agents for: Kenwood, Denon, Castle, Rotel

DEMONSTRATIONS AND ADVICE A PLEASURE

3 King Cross St., Halifax
Tel: (0422) 366832

---

**DEFINITIVE AUDIO**

(NOTTINGHAM)

---

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulse H2 Mahogany</td>
<td>£1,750.00</td>
</tr>
<tr>
<td>Impulse H6</td>
<td>£780.00</td>
</tr>
<tr>
<td>Audio Innovations S.200 pre</td>
<td>£220.00</td>
</tr>
<tr>
<td>Audio Innovations S.800 III</td>
<td>£580.00</td>
</tr>
<tr>
<td>Audio Innovations S.1000 pre</td>
<td>£750.00</td>
</tr>
<tr>
<td>Audio Innovations FIRST AUDIO</td>
<td>£950.00</td>
</tr>
<tr>
<td>Audio Innovations S.1000 MCT</td>
<td>£200.00</td>
</tr>
<tr>
<td>Audio Innovations S.800 MCT</td>
<td>£140.00</td>
</tr>
<tr>
<td>Snell A II Walnut</td>
<td>£2,200.00</td>
</tr>
<tr>
<td>Voyd Valdi Mahogany</td>
<td>£680.00</td>
</tr>
<tr>
<td>Apogee Stage</td>
<td>£2,000.00</td>
</tr>
<tr>
<td>Meridian 601 digital pre</td>
<td>£1,700.00</td>
</tr>
<tr>
<td>Meridian 602/606 CD</td>
<td>£1,750.00</td>
</tr>
<tr>
<td>Krell reference - 4 box pre</td>
<td>£5,000.00</td>
</tr>
<tr>
<td>Lunn LP 12</td>
<td>£200.00</td>
</tr>
<tr>
<td>SME 309 *</td>
<td>£290.00</td>
</tr>
<tr>
<td>SME 309 - Audionote Silver</td>
<td>£490.00</td>
</tr>
<tr>
<td>SME 310 - Audionote Silver</td>
<td>£590.00</td>
</tr>
<tr>
<td>Quad 66 Pre Amp Control Panel</td>
<td>£1,200.00</td>
</tr>
<tr>
<td>Tuner and CD Player</td>
<td>£1,200.00</td>
</tr>
<tr>
<td>SME MODEL 20 / SMEV / KESIKI</td>
<td>£2,500.00</td>
</tr>
<tr>
<td>BLACK HEART</td>
<td>£80.00</td>
</tr>
<tr>
<td>DENON PMA 320 int' amp</td>
<td>£1,000.00</td>
</tr>
</tbody>
</table>

---

**IMPORT / EXPORT**

TELEPHONE / FAX

0602 813562

---

**Northwood Audio**

HI-FI SPECIALISTS

10% FREE ACCESSORIES WITH ANY PURCHASE OVER £200

Can't separate the wood from the trees?
Come and audition the very best that Hi-Fi has to offer and let your ears hear music like they've never heard before!

**RUARK, ALBARRY, ROTEL, CELESTION, NAD, TANNOW, MICROMEGA, GYRODEK, HEYBROOK, MARANTZ D.C.C./A.V., PIONEER, EXPOSURE, CREEK, AUDIOLAB, MERIDIAN, AUDIO INNOVATIONS, TDL, MISSION, HECO, THORENS, DENON, KEF, TARGET, plus many more**

**BOTH BRANCHES NOW HAVE 2 DEM ROOMS INCLUDING AUDIOVISUAL DISPLAYS**

FINANCE AVAILABLE.

EXPORT AND MAIL ORDER SPECIALISTS

126 Pinner Rd, Northwood
Middx HA6 1BP.
Tel: (0923) 820877.

NEW BRANCH NOW OPEN AT:-

98 Cambridge Street
Aylesbury, Bucks HP20 1BA
Tel: (0296) 28790.
**THE AUDIO SPECIALISTS**

**PINK TRIANGLE EXPORT TURNTABLE**
For outstanding results from your vinyl classics, the "Export", coupled with a suitable arm 8 cartridge, such as the Roksan Tabriz and Audio Technica ATOC5 (both What Hi-Fi Award winners) has to be heard. Together with the less expensive LPT (little Pink Thing!), the remarkable Anniversary and controversial Pink Link for updating the Linn LP12, Pink Triangle can offer the very best for the L.P. connoisseur.

**AUDIOLAB 8000A II AMPLIFIER**
Building on an already excellent reputation, the new 8000A II achieves new standards of sound quality at a remarkably competitive price. Facilities for stereo T.V. and video are now provided and, as always, the build quality is second to none. For the larger room we also have on demonstration the 8000 C/P combination and new 8000 M monobloc power amps, shortly to be joined by a D/A converter and, we hope, the long awaited tuner.

**RUARK RHAPSODY LOUDSPEAKER**
Just one of an outstanding product range from the "Swordsman" to the magnificent "Accolade", the new "Rhapsody" is designed to provide optimum sound quality from a stylish piece of furniture. Available in a variety of real wood veneers, the Rhapsody will grace any traditional living room. Please telephone to arrange to see and hear these superb loudspeakers.

**INTEREST FREE CREDIT AVAILABLE**
(for a limited period) APR 0%
Written details on request
Licensed Credit Broker

**OPENING HOURS**
Tues, Wed, Thurs, 10.30-6.00
Friday 10.30-8.00 Sat. 10.00-5.00
Demonstrations by Appointment

**MUSIC MATTERS HI-FI**
351 HAGLEY ROAD, EDGBASTON, BIRMINGHAM B17 8DL Tel: 021-429 2811
BESPOKE AUDIO

UPGRADE TIME!

We offer a comprehensive service from cost-effective modifications to full custom builds.

Specialties:
- Garrard 401 - substantial modifications available
- Philips 16-bit CD players - astonishing improvements
- 78s - yes, 78s! - real high fidelity replay at last!
- Cassette decks - true audiophile upgrades
- FM tuners (especially analogue) - alignment and tweaks
- Cables - made to order

Real wood hi-fi furniture craftsman-made to order.

All our work is carried out to the highest standards and verified by listening and testing using professional test facilities.

Agents for Bohemian Design - fine marble turntable tables.

Contact Jan on 071 932 0591 for further details

CABLES

If you're spoilt for choice and still not sure which to choose

SILVER SOUNDS OR COGAN HALL

are two of the very best cables money can buy. Call or write for more details and reviews covering both products which will satisfy any requirements.
"AT SON ET LUMIERE WE OFFER THE WORLDS FINEST AVAILABLE EQUIPMENT IN BOTH HI FI AND AUDIO VISUAL.

AND WITH OUR PURPOSE BUILT LISTENING ROOMS WE CAN MAKE CHOOSING A SYSTEM BOTH COMFORTABLE AND EFFICIENT. TO SAMBLE JUST HOW PLEASANT AN EXPERIENCE YOU CAN HAVE GIVE US A CALL ON THE NUMBER BELOW, OR JUST POP IN."

"PLEASE NOTE THAT IF YOU ALREADY OWN, OR PLAN TO BUY, NAIM AUDIO EQUIPMENT WE HAVE SET UP A SPECIAL DATABASE TO KEEP YOU ABREAST OF ALL NEW PRODUCTS, UPDATES AND SPECIAL EVENTS. GIVE US YOUR DETAILS AND WE WILL KEEP YOU IN TOUCH."

BANG AND OLUFSEN • NAIM AUDIO
REGA RESEARCH • EPOS

COLIN WELFORD
SON ET LUMIERE

071 580 9059

67 TOTTENHAM COURT ROAD
LONDON • W1P 8A
WE DESIGN, MANUFACTURE, SUPPLY AND FIT

- FM arrays from 4 to 23 Element. TV from 10 to 92 Element.
- British-built and designed to withstand our weather.
- Interested O.I.Y. advice freely given, backed by our complete range of masts, brackets, rotors, cables and aerials. Systems available for chimney, loft, wall, or through roof mounting.
- Professional installation service available within a nominal 200-mile radius of LUTON. Full details of this service available on receipt of a large S.A.E. which will bring you our complete "Aerial Guide" which is more than just a list of our products and prices, and carries details of all our services, including MAIL ORDER and site surveys.

SEE THE REST, THEN FOR THE BEST, CALL RON SMITH AERIALS

98 ASH ROAD, LUTON, BEDS.

Day — Luton 36561 9.0 to 6.0 Eve — Luton 29560 after 7.30 pm

5 Minutes from M1 Motorway, Turnoff No. 11
WHY A HI-FI TUNER NEEDS A GOOD AERIAL

For best sound quality, a hi-fi tuner must have a strong signal of around 1 mV minimum.

The question is: how do you get it?

INDOOR AERIALS
Simple pin-up wire types (dipoles) only provide enough signal within a few miles of a transmitter. Otherwise they are noisy and prone to receiving multipath signals that produce distortion.

We've tested powered indoor aerials and expensive hi-tech designs costing up to £50 and find they give no more signal than simple, horizontal dipoles, either of the wire type or of rigid aluminium. Their only benefit is smaller size. It is better to buy a rigid aluminium dipole and mount it high, upstair on a wardrobe, at the top of a stairwell, or similar.

LOFT AERIALS
Loft aerials have the advantage of height and, if there are many elements, gain as well, so they provide a stronger signal than a simple dipole indoor aerial. In areas of reasonably high signal strength - which usually means within ten miles or so from a transmitter, a loft aerial may be satisfactory.

Usually with three elements, a director rod (short), reflector rod (long) and dipole element in between, loft aerials are also directional; they must be pointed toward the transmitter. They reject interference and reflected signals better than dipoles, giving a cleaner signal to the tuner.

The best mounting position is high up in the V of the roof, away from metal objects like water tanks. A long downlead will be needed, preferably of good quality to minimise signal loss.

BALCONY & WALL MOUNTING AERIALS
Balconies in blocks of flats have the advantage of height, giving a much stronger signal. However, the balcony should face the transmitter for good results.

It is often possible, if a little difficult, to wall-mount an aerial on a stub mast outside a window, but you may need consent to do so. Hanging out of a window can be dangerous, so consider using a professional installer. And make sure the wall faces toward the transmitter of course.

OUTDOOR AERIALS
In most locations, only an outdoor aerial will give a signal strong enough and clean enough (i.e. free from interference and multipath reflections) to provide true hi-fidelity from a good tuner. Benefits are height (the higher the better), crucial for obtaining a strong signal free of reflections, and number of elements, which determine both gain and directionality.

Multi-element aerials are used in areas of medium to weak signal strength, meaning up to around forty miles from a transmitter. Any further away is judged as a 'fringe' area and will demand even more elements.

ATTENUATORS
When it's necessary to use a directional aerial to cut down reflections from tower blocks, but the aerial then gives too much signal (i.e. more than 1 mV), an in-line attenuator can be used to prevent tuner overload.

AERIAL INSTALLERS
The best and overriding reason for using an installer is personal safety; roof work is very dangerous. Installers are also very quick and well equipped, DIY may take the large part of a day. Local installers should know about area-specific problems, the location of repeat and fill-in transmitters, and such like - all matters that are likely to be a mystery to most people.

Finally, good installers should have a Field Strength Meter that not only enables them to see whether an aerial is giving the required result, but can prove this to the satisfaction of the customer. Around 1 mV is wanted, meaning powerful stations will come in higher (say 3-5 mV) but weak ones a bit lower (0.3-1 mV). If for no other reason, knowing that the aerial works properly is enough reason for using an installer.

Discuss this matter with them first though. In some areas, it may be impossible to obtain such a strong signal, no matter what aerial is used; get a variety of opinions if necessary.

CONFEDERATION OF AERIAL INDUSTRIES
The CAI has a countrywide list of aerial installers who are members that abide by the rules below.

To find a local service, contact -

CAI Ltd.,
Fulton House Business Centre,
Fulton Road,
Wembley Park,
MIDDLESEX HA9 0TF
Tel: 081-902-8998
Fax: 081-903-8719

CAI members must employ staff competent for the business conducted. They must follow standards of practice, agree to investigation, examination or test at any time. They must guarantee any aerial, equipment and/or installation work for a minimum period of twelve months.

World Radio History
**World favourites**

Hi-Fi World's revamped, comprehensive, selection of preferred products out of those we have reviewed in the last eighteen months, with the issue in which the test appeared.

### COMPACT DISC PLAYERS

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SONY CDP-497</td>
<td>£160</td>
<td>Superb starter CD. Packaged with facilities.</td>
</tr>
<tr>
<td>DENON DCD-990</td>
<td>£299.99</td>
<td>Excellent and forceful sounding player, but slightly characterful sound.</td>
</tr>
<tr>
<td>MISSON DADS</td>
<td>£300</td>
<td>Bitstream based player. Very even handed, with solid bass. Some lack of spaciousness.</td>
</tr>
<tr>
<td>ROLEX G555</td>
<td>£300</td>
<td>Bitstream based player. Calm, open and sophisticated performer.</td>
</tr>
<tr>
<td>ARCAM ALPHA +</td>
<td>£420</td>
<td>Offers a warm, full-bodied sound with a rich, big bass.</td>
</tr>
<tr>
<td>CREEK CD60</td>
<td>£500</td>
<td>16-bit player. Excellent, rhythmic performances and a superb bass performance.</td>
</tr>
<tr>
<td>CARY CR-160</td>
<td>£500</td>
<td>16-bit Remote, with Cary-designed valve output stage. Packaged with ambience and musicality.</td>
</tr>
<tr>
<td>MICROMEGA SOLO</td>
<td>£1350</td>
<td>Distinctive transport; very light and musical, but with a deep, well controlled bass.</td>
</tr>
<tr>
<td>NAIM CDI</td>
<td>£1598</td>
<td>Single box, 16-bit player. Close to the two box CDS, very disc dependent, has vital single factor.</td>
</tr>
<tr>
<td>TEAC P-500</td>
<td>£2350</td>
<td>Superb 20-bit TOPM. Refined and characterful. Has plenty of flair.</td>
</tr>
<tr>
<td>NAIM CD5</td>
<td>£2937</td>
<td>Two box, sixteen bit player. De rigueur for Naim-based systems. Musically informative, has both punch and delicacy.</td>
</tr>
</tbody>
</table>

### COMPACT DISC TRANSPORTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCAM DELTA 170.3</td>
<td>£660</td>
<td>Smooth. Draws the listener into the performance. Improves on all the strengths of the 170.</td>
</tr>
<tr>
<td>TEAC P-500</td>
<td>£660</td>
<td>Can be too restrained for some tastes, but subtle and highly detailed.</td>
</tr>
<tr>
<td>DPA-100 T1</td>
<td>£89</td>
<td>Superbly clean and detailed sounding transport when sync-locked to DPA's converters.</td>
</tr>
</tbody>
</table>

### DIGITAL TO ANALOGUE CONVERTERS

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EID QIGT</td>
<td>£125</td>
<td>Based on Philips Bitstream. Excellent value, with no rough edges. Co-axial input for CD only.</td>
</tr>
<tr>
<td>MICROMEGA MICRODAC</td>
<td>£299</td>
<td>Philips Bitstream-based. Typical Microsonic sound, very musical and refined, lacks the cutting edge of detail.</td>
</tr>
<tr>
<td>MICROMEGA DAC 5</td>
<td>£299</td>
<td>DAC-based, clean, forward mid-range, capable of portraying real subtleties. Bass lacks firmness.</td>
</tr>
<tr>
<td>ARCAM BLACK BOX 3</td>
<td>£360</td>
<td>Warm sounding DAC. Now looking a bit tired against stiff opposition.</td>
</tr>
<tr>
<td>AUDIO ALCHEMY D.D.E</td>
<td>£376</td>
<td>Digitising Engine has broad and smooth presentation.</td>
</tr>
<tr>
<td>DPA LITTLE BIT</td>
<td>£395</td>
<td>Sets a new benchmark with an outstanding presentation and performance.</td>
</tr>
<tr>
<td>SUGDEN SDA-1</td>
<td>£650</td>
<td>16-bit box. A wide open window for the transport to flow through. Very neutral.</td>
</tr>
<tr>
<td>DPA BRIGHT BIT</td>
<td>£695</td>
<td>The bigger bit has enormous insight revealing the mixing and production work behind most rock recordings.</td>
</tr>
<tr>
<td>AUDIOLAB 8000DAC</td>
<td>£1280</td>
<td>Less ruthless than, but staggeringly close to the POM.TWO.</td>
</tr>
<tr>
<td>DPA POM.ONE</td>
<td>£1350</td>
<td>One of the best DACs seen in recent times.</td>
</tr>
<tr>
<td>PINK TRIANGLE DA CAPO</td>
<td>£1350</td>
<td>Frighteningly deep and controlled bass. Very forthright, a trifle violent in its truthfulness. Literally - stunning!</td>
</tr>
</tbody>
</table>

### TURN TABLES

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEMDEK IX-900</td>
<td>£190</td>
<td>Surprisingly natural sound, if not as detailed as some. Suits Rega. Motiv and Helios arms.</td>
</tr>
<tr>
<td>PROJECT</td>
<td>£245</td>
<td>Czech built turntable with much to offer. Very coherent.</td>
</tr>
<tr>
<td>RECA PLANAR 3</td>
<td>£250</td>
<td>Built to last. Transparent and lucid, although can sound bass light. Sets the standard to beat.</td>
</tr>
<tr>
<td>THORENS TD166/VI/UK</td>
<td>£270</td>
<td>Fitted with Rega RB 250 arm. Good basic deck, with tweakability.</td>
</tr>
<tr>
<td>MIKRO YMYCO</td>
<td>£279</td>
<td>With RB300 arm, C399) Falling between the Synco and the Glyco, the Mycro has superb mid-band clarity and poise.</td>
</tr>
<tr>
<td>ROKSAN RADIUS</td>
<td>£449</td>
<td>Neutral sounding turntable with much to do with exciting and delectable basses. Use Linn, Rega or Roksan arm.</td>
</tr>
<tr>
<td>THORENS TD166/ I BC</td>
<td>£550</td>
<td>glowing brightness, good bass and a neutral performance that considerably improves upon the LST.</td>
</tr>
<tr>
<td>THORENS TD166/II</td>
<td>£676</td>
<td>Terrific sounding properties, good bass and a neutral performance that considerably improves upon the LST.</td>
</tr>
<tr>
<td>VOYD VALOR</td>
<td>£699</td>
<td>Similar to the Pink Triangle, the two-motor Valor is an expressive performer, best suited to Audio Innovations equipment.</td>
</tr>
<tr>
<td>ROKSAN XERIES</td>
<td>£785</td>
<td>Highly analytical and pin-pointing turntable. Can be almost CD-like in its pin-pointing nature.</td>
</tr>
<tr>
<td>PT ANNIVERSARY</td>
<td>£980</td>
<td>Very neutral turntable, but with a lot of magic. Excellent imagery and detail. A natural partner to the SME V.</td>
</tr>
<tr>
<td>SME MODEL 20</td>
<td>£945</td>
<td>The last great turntable, bettered only by the £1,000 Model 30. The 20 never disgraces itself.</td>
</tr>
</tbody>
</table>

### TONEARMS

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>REGA RB 300</td>
<td>£139</td>
<td>For Pink Triangles, Michells, Roksans and Systemdeks. Simple and superb; dynamic with solid bass.</td>
</tr>
<tr>
<td>SME 319</td>
<td>£685</td>
<td>Based on IV &amp; V, uses an aluminum armbase and detachable headshell. High end value for money. Excellent imaging and definition, version of the legendary SME Series V. A precision measuring instrument only bettered by the V.</td>
</tr>
<tr>
<td>SME SERIES IV</td>
<td>£1322</td>
<td>A masterpiece of precision engineering, with a cohesive sound.</td>
</tr>
<tr>
<td>SME SERIES V</td>
<td>£1495</td>
<td></td>
</tr>
</tbody>
</table>

### CARTRIDGES

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOLDRING 1010</td>
<td>£45</td>
<td>Excellent value. Well balanced performer, rich and full without warmth. Very spacious and clear.</td>
</tr>
<tr>
<td>GOLDRING 1012</td>
<td>£89.95</td>
<td>A wealth of treble detail and a fine sense of analysis proffered by the Goldring secures its place in this section.</td>
</tr>
<tr>
<td>LUXMAN L500</td>
<td>£99</td>
<td>The Blue Point casts a romantic charm over all the other cartridge music. Robust yet musical.</td>
</tr>
<tr>
<td>ORTOFON MC15</td>
<td>£100</td>
<td>Moving coil cartridge at moving magnet price. Has a tight grip on rhythm.</td>
</tr>
<tr>
<td>ROKSAN RADIUS-V</td>
<td>£110</td>
<td>Moving magnet, based on Goldring design. Excellent and detailed, with great speed.</td>
</tr>
<tr>
<td>ROKSAN CARKUS BLACK</td>
<td>£135</td>
<td>One of the finest moving magnets currently available. Excellent tracking.</td>
</tr>
<tr>
<td>SHURE V57</td>
<td>£199</td>
<td>Tonally uncoupled the Denon offers a superbly transparent mid-band. It could sound a little thin in some systems.</td>
</tr>
<tr>
<td>DENON DL-304</td>
<td>£210</td>
<td>Based on moving coil. Good value, smooth and chunky, but can be a little brittle at times.</td>
</tr>
<tr>
<td>GOLDRING EXCEL</td>
<td>£499</td>
<td>British made mid-range. Refined and lyrical presentation, slightly dull at times.</td>
</tr>
<tr>
<td>LYRA LYDIAN</td>
<td>£500</td>
<td>Scan-Tech designed moving coil cartridge. Musical and accurate, without any flaw.</td>
</tr>
<tr>
<td>MRDRCH DA CAPO</td>
<td>£1295</td>
<td>Very low output cartridge, with high silver content. Needs step-up transformer. Very musical, can show up how poor most cartridges are.</td>
</tr>
</tbody>
</table>

### CASSETTE RECORDERs

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TECHNICS RS-BX640</td>
<td>£130</td>
<td>Terrific value and sound quality for the money.</td>
</tr>
<tr>
<td>TECHNICS RS-BX606</td>
<td>£170</td>
<td>Three head deck. Superb value, capable of seeing off much more expensive machines.</td>
</tr>
<tr>
<td>SONY TC-K47E7</td>
<td>£240</td>
<td>One of the best cost-lowest cost head decks. Can be bright and slightly bright, but makes for stable recordings and playback.</td>
</tr>
<tr>
<td>JVC TOV541</td>
<td>£280</td>
<td>Three head deck. Good for both recording and playback, especially of pre-recorded tapes. Easy to use.</td>
</tr>
<tr>
<td>NAD DR-810</td>
<td>£300</td>
<td>Drawer loading cassette - just like CD. Sweet sounding, but a bit expensive.</td>
</tr>
</tbody>
</table>

### TUNERS

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENON TU-250L</td>
<td>£110</td>
<td>Excellent budget AM/FM tuner. Easy to operate, good all-rounder with a fine sound.</td>
</tr>
<tr>
<td>NAD 302</td>
<td>£159</td>
<td>Warm sounding, but detailed budget AM/FM tuner. Classic design, very good sound.</td>
</tr>
<tr>
<td>ARCAM ALPHA 3</td>
<td>£199</td>
<td>Excellent vocal clarity and decent sharpness; good for Rock.</td>
</tr>
<tr>
<td>YAMAHA H-26</td>
<td>£260</td>
<td>Fine AM/FM, with a good AM section.</td>
</tr>
<tr>
<td>KENWOOD KT-7200</td>
<td>£270</td>
<td>Silky smooth sound, but very insensitive and needs a good aerial.</td>
</tr>
<tr>
<td>API P900A</td>
<td>£340</td>
<td>AM/FM analogue tuner: Realistic sound quality, but highly insensitive.</td>
</tr>
<tr>
<td>QUAD 66FM</td>
<td>£490</td>
<td>Among the very best in terms of tonal colour and imagery, remote controllable.</td>
</tr>
<tr>
<td>NAIM NAT-02</td>
<td>£853</td>
<td>Little box, big money, dead good. Try and find better unless it’s...</td>
</tr>
<tr>
<td>NAIM NAT-01</td>
<td>£1377</td>
<td>The best tuner currently available. All else is mere artifice. If you want better radio reception, go and live in the BBC’s studio.</td>
</tr>
</tbody>
</table>

### INTEGRATED AMPLIFIERS

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARMAN-KARDON HK1650</td>
<td>£139</td>
<td>Good sounding starter amplifier. Great dynamic range. Excellent bass.</td>
</tr>
</tbody>
</table>

---

**Recommended Products**

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAD 302</td>
<td>£159</td>
<td>Lots of insight and detail but could sound a little rough in the wrong system.</td>
</tr>
</tbody>
</table>
DENON PMA-350 £170
Pioneer A200 £199
Sugden A250 £203
Technics AE-3 £149
Mission CYRUS ONE £230
Cresta 41-50 £230
Mission 2240 £240
AURA EVOLUTION VA-100 £240
Laser 7500X £380
Tubecraft 30 £430
Mission ROADSTAD SUBVVOOFER £695
CELESTION 100 £400
JML NC-200 £249
Mission 603 £330
John Shearne Phase One £1079
NAD 2100 £180
Preamplifiers
CONCORDANT EXCELSIOR £1200
ALCHEMIST GENESIS £1800
Mission CYRUS ONE £1079
Mission 6001 £99

Power Amplifiers
NAD 2100 £290
SDA 1500 £395
CONCORDANT EXCULANT £349
Mission ROADSTAD SUBVVOOFER £695
AUDIOLAB 8000A £499
Mission 6001 £330
CROFT SUPER MICRO A £548
Mission 7611 £209
DA DIGITAL DP305 £525
Mission 780 £180
ALCHEMIST GENESIS £1150
Concorde EXCELSIOR £900
Mission ROADSTAD SUBVVOOFER £695
AUDIOLAB 8000A £499
Mission 780 £180
ALCHEMIST GENESIS £1150
Concorde EXCELSIOR £900
Mission ROADSTAD SUBVVOOFER £695
Mission 6001 £330
John Shearne Phase One £1079
Mission ROADSTAD SUBVVOOFER £695

Loudspeakers
Celestion 1 £99
Goodmans MAXIM 3 £150
Mission 7611 £209
Mission 780 £180
Mission ROADSTAD SUBVVOOFER £695
John Shearne Phase One £1079

Microphone
AUDIOLAB 8000A £499
Mission 780 £180
Mission ROADSTAD SUBVVOOFER £695

Miscellaneous
Mission ROADSTAD SUBVVOOFER £695

Audio Plan
er Musicable £499
Mission ROADSTAD SUBVVOOFER £695

Recommended Products

I measure a clear picture. Jan 92

Highly competitive.

For the best sound quality, I recommend using a balanced power supply. Oct 92
Try me & save

on budget, regular and esoteric
Hi-Fi, AV or Home Cinema Units

SENSATIONAL PRICES GUARANTEED

TRY ME & SEE LTD OFFERS A QUICK, CONVENIENT AND
COST-EFFECTIVE WAY OF PURCHASING HI-FI.
Telephone or fax your order now!

Our promise to you is...

▸ to answer all calls promptly and provide the best price.
▸ to process orders efficiently and only take payment when goods are ready
to be dispatched. (Payments by credit card are protected by the Credit
Card Protection Act.)
▸ to provide insured delivery, anywhere in the U.K.
▸ that all products sold are brand new with full manufacturer’s warranties;
  - extended warranties available.
▸ to provide an additional 2-year warranty free of charge that covers
  collection and delivery.
▸ to supply budget, regular and esoteric equipment.
▸ to never supply discontinued lines, B-stock and grey imports.

Try Me & See Ltd is bound by the rules of the Mail Order Protection Scheme and abides by
the Data Protection Act. We will always put our customers first and will constantly upgrade
and update our systems in order to improve our service.

081-563 0003  Try Me & See Ltd,
Fax 081-563 0300  5 Rocks Lane, Barnes,
London SW13 0DB
At last, the summer has arrived and so has our sale! We want to clear our shelves for the new season and to encourage you to buy now! We have worked out some great prices. Everything is fully guaranteed and can be demonstrated. View now for purchase on or after 19th.

CD players
Denon DCD600 used £95; Rotel RCD955AX (£280) £199; Rotel RCD 965BX (£299) £250; Nakamichi OMS7E top of the line player used £395; Micromega Logic (£570) £469; Teac VRDS 10 (£769) £650; Micromega Duo CD3 transport latest spec (£1,200) £959; Micromega Duo CD2 transport (£2,000) £1,559; Micromega Duo BS converter (£600) £445; Micromega Duo Pro converter latest spec (£1,200) £959; Roksan DP1 transport and DA1 converter (£1,690) £1,349; Roksan DS4 power supply (£495) £399.

Record players
Rega Planar 3 with Bias cartridge (£283) £239; Planar 3 with Elys cartridge (£323) £279; Roksan Xerxes used, immaculate in 1987 spec with 1 year old Roksan Tabriz, used but immaculate £449; Roksan Xerxes XPS3 in rare natural ash finish (£1,045) £795; Roksan Touraj Moghaddam Signature player only, perfect, (£2,500) £2,100; SME Model 20A with Series V arm (£3,762) £2,999; Linn LV11 Ittok in rare black finish £329; Roksan Artemiz arm used but immaculate £359; Linn Karma m/c cartridge s/hand but virtually unused £299.

Special for Linn owners
Trade in your old Linn m/c cartridge against any Audio Technica and get the special exchange price. i.e. the excellent ART 1 (£850) for just £595!

Amplifiers and tuners
Rega Elex (£350) £289; Rotel RC/RB 960BX pre power combination (£375) £299; Naim NAC 42.5/NAP110 s/hand, nice condition £395; Naim NAC 72 pre-amp used but immaculate (£622) £459; Naim Hicap power supply (£583) £495; Hicap power supply used, old style case £425; Naim NAP 135 power amps old style case but little used £795 each; LFD LS1 line level pre-amp and powerstage PA1 (£699 each) £459 each; Rotel Michi RH2 10 remote control line level pre-amp and RHQ 10 phono stage (£795 each) £599 each; Copland CTA501 valve integrated power amp (£1,599) £1,299; Exposure 17/18 stereo pre/power (£1,525) £1,295; Roksan L1 pre-amp, black finish immaculate (£2,250) £1,875; Roksan M1 monoblocks silver finish pair (£4,500) £3,695; Audio Research Phono stage 1 immaculate (£1,599) £1,299; Audio Research LS2b balanced line level pre-amp (£2,799) £1,799.

Loudspeakers
Heybrook Solo (£179) £139; Rogers LS4A black, used but immaculate £159; Heybrook Trio new model (£359) £299; Epos ES11 slightly marked cabinets (£350) £279; Rega ELA black finish (£405) £345; Epos ES14 slightly marked cabinets (£415) £359; Neat Petite (£255) £299; Naim IBL black ash in near perfect condition £595; Linn PMS active Isobarik with stands £695; Shahanian Super Elf compact, oak finish (£790) £649; Sonus Faber Minuetto (£898) £749; Shahanian Arc, light oak finish (£1,195) £949; Martin Logan Aerius hybrid electrostatic (£2,198) £1,799.

Opening Hours
Tuesday - Saturday. 10am to 6pm.

MORE SALE STOCK
We have much more on sale than we can show here. Please call if you have a specific requirement.

A minimum 15% off our entire demonstration stock.
All sale items are ex-demonstration and in excellent condition.
MARANTZ PM40 SE AMPLIFIER
MORDAUNT SHORT MS5-40
INFINITY REFERENCE 50 (shop soiled)
ROTEL RA960 AMPLIFIER (ex demo)
AUDIO TECHNICA ATH-610 Headphones
YAMAHA AVX700 AMPLIFIER

**SUPER SPECIALS**

<table>
<thead>
<tr>
<th>Product</th>
<th>Special Price</th>
<th>Sale Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARANTZ PM40 SE AMPLIFIER</td>
<td>£149.95</td>
<td></td>
</tr>
<tr>
<td>MORDAUNT SHORT MS5-40</td>
<td></td>
<td>£269.90</td>
</tr>
<tr>
<td>INFINITY REFERENCE 50 (shop soiled)</td>
<td></td>
<td>£380.00</td>
</tr>
<tr>
<td>ROTEL RA960 AMPLIFIER (ex demo)</td>
<td></td>
<td>£239.90</td>
</tr>
<tr>
<td>AUDIO TECHNICA ATH-610 Headphones</td>
<td></td>
<td>£24.95</td>
</tr>
<tr>
<td>YAMAHA AVX700 AMPLIFIER</td>
<td></td>
<td>£399.90</td>
</tr>
</tbody>
</table>

**REDUCTION ON MOST STOCK ITEMS**

**MANY OTHER SPECIAL OFFERS**

**CALL OR PHONE**

**FOR GOOD SERVICE AND ADVICE**

849 HIGH ROAD
LONDON N12
(NORTH FINCHLEY)

analog audio

TEL 081-445 3267
FAX 081-445 1443

---

**Advertisers Index**

<table>
<thead>
<tr>
<th>Advertiser</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Sounds</td>
<td>44</td>
</tr>
<tr>
<td>Alchemist Products</td>
<td>101</td>
</tr>
<tr>
<td>Alema</td>
<td>71</td>
</tr>
<tr>
<td>Alema UK</td>
<td>106/115</td>
</tr>
<tr>
<td>Analog Audio</td>
<td>130</td>
</tr>
<tr>
<td>Audio Craft</td>
<td>103</td>
</tr>
<tr>
<td>Aura</td>
<td>22</td>
</tr>
<tr>
<td>B&amp;W</td>
<td>8</td>
</tr>
<tr>
<td>Bandor</td>
<td>28</td>
</tr>
<tr>
<td>Bespoke Audio</td>
<td>122</td>
</tr>
<tr>
<td>Bill Hutchinson Hi Fi</td>
<td>76</td>
</tr>
<tr>
<td>Brentwood Music</td>
<td>108</td>
</tr>
<tr>
<td>Bryants Hifi</td>
<td>107</td>
</tr>
<tr>
<td>Bury Audio</td>
<td>108</td>
</tr>
<tr>
<td>Campaign Audio Design</td>
<td>124</td>
</tr>
<tr>
<td>Clear Crystal Systems</td>
<td>101</td>
</tr>
<tr>
<td>Connections</td>
<td>62</td>
</tr>
<tr>
<td>Connections</td>
<td>103</td>
</tr>
<tr>
<td>CR Developments</td>
<td>28</td>
</tr>
<tr>
<td>Creative Audio</td>
<td>119</td>
</tr>
<tr>
<td>Divay</td>
<td>70</td>
</tr>
<tr>
<td>DPA</td>
<td>IFC,68</td>
</tr>
<tr>
<td>E J Jordan</td>
<td>106</td>
</tr>
<tr>
<td>Europa Disk</td>
<td>115</td>
</tr>
<tr>
<td>Fullers Audio</td>
<td>14,57</td>
</tr>
<tr>
<td>G T Audio</td>
<td>102</td>
</tr>
<tr>
<td>Groove Tubes</td>
<td>70</td>
</tr>
<tr>
<td>Hailey Audio</td>
<td>70</td>
</tr>
<tr>
<td>High Fidelity</td>
<td>115</td>
</tr>
<tr>
<td>JE Sugden</td>
<td>112</td>
</tr>
<tr>
<td>JPW</td>
<td>6,7</td>
</tr>
<tr>
<td>JVC</td>
<td>OBC</td>
</tr>
<tr>
<td>KAL</td>
<td>28</td>
</tr>
<tr>
<td>KJ Leisure</td>
<td>62</td>
</tr>
<tr>
<td>KJ Leisure</td>
<td>122</td>
</tr>
<tr>
<td>KJ West One</td>
<td>96</td>
</tr>
<tr>
<td>Kipsch</td>
<td>103</td>
</tr>
<tr>
<td>Listen Inn</td>
<td>96</td>
</tr>
<tr>
<td>Loricraft</td>
<td>118</td>
</tr>
<tr>
<td>Lynwood Audio</td>
<td>106</td>
</tr>
<tr>
<td>Manticore</td>
<td>106</td>
</tr>
<tr>
<td>Marantz</td>
<td>24</td>
</tr>
<tr>
<td>Max Townsend</td>
<td>101</td>
</tr>
<tr>
<td>Micro Mega</td>
<td>102</td>
</tr>
<tr>
<td>MJS HiFi</td>
<td>118</td>
</tr>
<tr>
<td>Music Matters</td>
<td>121</td>
</tr>
<tr>
<td>Musical Images</td>
<td>65</td>
</tr>
<tr>
<td>Northwood Audio</td>
<td>120</td>
</tr>
<tr>
<td>Ortofon</td>
<td>18,19</td>
</tr>
<tr>
<td>Oxford Audi</td>
<td>114</td>
</tr>
<tr>
<td>Partington</td>
<td>14,18</td>
</tr>
<tr>
<td>PM Components</td>
<td>48</td>
</tr>
<tr>
<td>Precision Cables</td>
<td>124</td>
</tr>
<tr>
<td>Quad</td>
<td>12,13</td>
</tr>
<tr>
<td>R S Audio</td>
<td>103</td>
</tr>
<tr>
<td>Radford</td>
<td>14</td>
</tr>
<tr>
<td>Reading HiFi</td>
<td>108</td>
</tr>
<tr>
<td>Reference Imports</td>
<td>115</td>
</tr>
<tr>
<td>Reference Imports</td>
<td>122/124</td>
</tr>
<tr>
<td>REL Acoustics</td>
<td>113</td>
</tr>
<tr>
<td>Ringmat</td>
<td>62</td>
</tr>
<tr>
<td>Room Acoustics</td>
<td>108</td>
</tr>
<tr>
<td>Sanskui</td>
<td>IBC</td>
</tr>
<tr>
<td>Sevenoaks</td>
<td>116/117</td>
</tr>
<tr>
<td>Slate Audio</td>
<td>102</td>
</tr>
<tr>
<td>SME</td>
<td>4</td>
</tr>
<tr>
<td>Sonet Lumiere</td>
<td>123</td>
</tr>
<tr>
<td>Sound Simplicity</td>
<td>71</td>
</tr>
<tr>
<td>SoundCraft</td>
<td>114</td>
</tr>
<tr>
<td>Spaldings</td>
<td>118</td>
</tr>
<tr>
<td>SRG Design</td>
<td>120</td>
</tr>
<tr>
<td>Strathlene</td>
<td>118</td>
</tr>
<tr>
<td>Studio Acoustics</td>
<td>106</td>
</tr>
<tr>
<td>The Aerial Shop</td>
<td>124</td>
</tr>
<tr>
<td>The Speaker Company</td>
<td>102</td>
</tr>
<tr>
<td>TRC Hi-Fi</td>
<td>120</td>
</tr>
<tr>
<td>Try Me &amp; See</td>
<td>128</td>
</tr>
<tr>
<td>V’Audio</td>
<td>114</td>
</tr>
<tr>
<td>Virtually Real</td>
<td>96</td>
</tr>
<tr>
<td>Virtually Real</td>
<td>109</td>
</tr>
<tr>
<td>Wilmslow Audio</td>
<td>18</td>
</tr>
<tr>
<td>Vollaton</td>
<td>19</td>
</tr>
</tbody>
</table>
Bring a little colour into your life!

The Sansui AV-7000 Dolby Pro-Logic* A/V Amplifier.

The AV-7000 is designed to let you easily upgrade your home entertainment system, combining audio and video to produce astonishing results.

* Dolby and Dolby Pro-Logic are registered trademarks of Dolby Laboratories Licensing Corporation.

Sansui offers a two-year guarantee on all its Hi-Fi products.
For further information and FREE brochure, contact us today.

Sansui (UK), 91 Coleman Road, Leicester LE5 4LE. Telephone: 0533 769471
The Sound of Silence.

Crosstalk, noise interference, signal degradation. All dirty words as far as we're concerned. That's why the JVC AX-A662BK amplifier has no such vices.

Featuring separate heat sinks and 'Advanced Super A' circuitry for left and right channels coupled with the dramatic reduction of internal wiring, this amplifier is virtually free of such problems.

**Designed for the Digital Age.**

The benefits? A very special amplifier that delivers a powerful punch, but manages to preserve a certain delicacy and subtlety at low signal levels.

As one Hi-Fi magazine put it - 'The JVC AX-A662BK produces a tidy, neutral, articulate sound with a refined and clean presentation, but is powerful without being unpleasantly assertive'.

Silence is Golden