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EDITOR'S NOTEBOOK

Jason Kennedy reflects on the character of amps and reminds us why we buy hi-fis in the first place.



Amplifiers are strange things – you think you know an amp's character and potential pretty well after a year or so but then one of its creators gives it a tweak and sends it into another realm of possibility.

This has happened with the Pioneer A-300R Precision that we are always harping on about and that I use as the source for sound on my TV. I have neither the space nor the inclination to install a full-on AV system with five speakers and a subwoofer, and with this amp and the matching Eikos FR1 speakers there's no shortage of realism or power to the viewing experience. The amp's other main bonus under the circumstances is its remote control volume facility – for some reason this seems more essential with the AV than it does with pure A.

After a year or so of using this set-up, I reached the point where its clarity and box negating imagery (only with off picture action do you notice the existence of the speakers) were the norm and thus taken for granted. However, when I sent the amp back to Precision-meister Tom Evans for a bit of tweaking, the intervening week was spent wondering how anyone could use the sound coming out of their TV's speakers – its combination of murkiness and plain distortion ensuring a constant battle between giving enough level for intelligibility but not so much that it becomes uncomfortable. Luckily, I had a 'proper' stereo next door so viewing took up even less of my time than usual.

Before it was sent off we used the amp in the office listening room while entertaining some Technics engineers and their prototypes – the units they brought along had distinctly greater bass power with the harder (to drive) than average PMC TB1 speakers. So when the Precision came back in SE or MkII form, I stuck it back in the same system and was shocked at the extra grunt that appeared in the bass and, unlike that which was emanating from the Technics, this had the leading edge definition to match a Quad 77 we had on hand. All from a power supply tweak and some new silicon (a chip), this was still a 35 Watt amp and a £400 one at that.

When I got the amp home and into the telly system, the change from the TV was big enough but it took a couple of evenings before the tweaks began to show their worth in this application, or maybe that was how long it took to warm up, because



the resolution seemed to be twice what it was before. Somehow this amp has turned from being plain old great-value-for-money, Best Buy material into a David-style giant slayer. The fineness of intonation, tonal colour and dynamics matched by shocking power and definition on transients. This is a serious amplifier – next time I get a pair of efficient loudspeakers it's coming back into the listening room for some hard-core action.

THE POINT

Recently I had the tough job of telling someone to stop buying hi-fi mags and start reading music journals instead. He was an extreme case, but don't forget about music – it's the point of the exercise and without it this stuff would be worthless. So don't just read – listen and enjoy.

Memedy

THIS MONTH'S EDITOR'S CHOICE

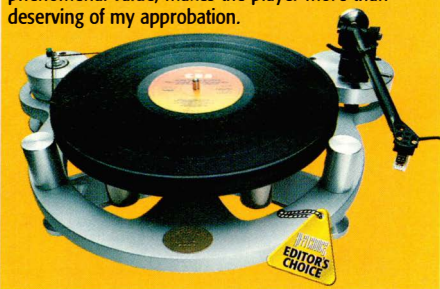
CHARIO ACADEMY MILLENNIUM 2

Tim had such a fantastic time with these gorgeous Italian speakers that it would be churlish not to give them a flag. The combination of solid walnut cabinets and two and a half way operation seems to have instilled an unusually broad palette of qualities in these £2,000 beauties. If you have the money and are confident enough in your manhood to use a standmount, check 'em out.



MICHELL GYRO SE

This latest incarnation of a genuine classic looks and sounds the business, and tweaks to the spring system and the free-standing motor unit mean that it probably outperforms the standard GyroDec. This, combined with the extra aesthetic appeal and phenomenal value, makes the player more than deserving of my approbation.





HIGH END TEST GYRO SE P39

HIGH END TEST ARIA P41



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NEWS & VIEWS

Get hip to the top hi-fi stories with scoop-thirsty newshounds Tim Bown and Phil Strongman.

NEWS IN BRIEF

NORDOST has launched a new reference interconnect, the Quattro Fil, priced at £1,250 for a one metre pair. It features four conductors, each made from seven strands of oxygen-free copper coated in 50 mils of solid silver, and a proprietary Teflon-based dielectric. Also new from Nordost is the El Dorado power cable, which employs the same Teflon-based Monofilament technology used in the interconnect to optimise power transmission. It costs £400 for two metres. ☎ (01352) 730251

HI-SPACE is a little known brand of recordable optical media, yet its French owner MPO is apparently the world's fifth largest producer of optical discs. The brand is hoping its new audio CD-R disc and coloured MiniDisc, available in green, blue, yellow and crystal, will raise awareness among UK consumers. ☎ (33) 1 41 10 51 51

LONDON'S MAIN HI-FI SHOW is moving from its traditional Heathrow Airport location to the more central Novotel Hotel in West London. The 1999 show takes place from September 23rd to 26th. ☎ (0181) 686 2599

MCINTOSH, the American high-end hi-fi brand, is not the first name that springs to mind when you think of in-car entertainment. However, the company has been producing in-car gear since 1994, following a take-over by Clarion, and its range is now available in the UK. Call the number below for stockists. ☎ (01628) 890505

WOLLATON AUDIO is to distribute speakers from Italian make Aliante in the UK. The line-up includes a range styled by Pininfarina, the design company best known for its work with Ferrari, and featured in Choice 187. Prices range from £580 to £2,700. ☎ (0115) 928 4147



MIELE, the vacuum cleaner manufacturer, has an invention which may make grubby hi-fi a thing of the past. The MicroSet consists of a miniature hose, dusting brush and crevice nozzle, attachable to the company's full-size cleaners. It costs around £25. ☎ (01235) 554455

NXT has announced a new development of its flat speaker technology called SoundVu. It allows construction of ultra-thin, transparent speakers, so video products like TVs and computer screens could function

Zero hour



High-end stalwart Audio Note has unveiled a new range of 'entry-level' separates, with each component the size of a shoe box. The Zero Series comprises four models, with valve technology extensively featured and each housed in an aluminium extrusion just 21.8cm wide.



First up is the DAC Zero, a digital-to-analogue convertor sporting a 24-bit/96kHz chip and copper coils in its filter network. It's priced at £369, and meets its match in the £399 CDT Zero CD transport, supplied with full remote control. The M Zero is a £299 line-level preamp with four inputs and a tape out, and final touches are supplied by the P Zero mono power amp — a valve-based design priced at £599 per pair and delivering eight Watts a piece.

In addition to the valves in the power amp's output stage, the DAC and preamp feature a 6111WA sub-miniature valve in their output and line stages respectively. Each is designed to last for around 100,000 hours of continual use, and Audio Note claims the result is a smoother, more organic sound. All four components are in the shops now.

Audio Note ☎ (01273) 220511



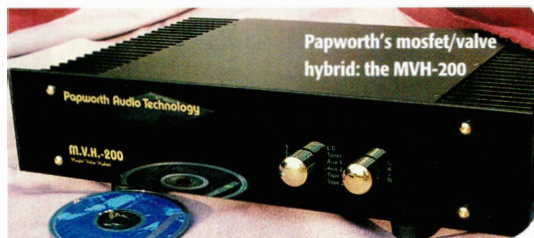
Audio Note's Zero Series: valves at budget prices.

From valves to transistors



A range of mosfet transistor-based amplifiers is on the way from Papworth Audio Technology, a firm previously ensconced in the world of valves.

There are three new models involved: the MVH-200, a mosfet/valve hybrid integrated at £1,200, the pure mosfet integrated MIA-200, also at £1,200, and the MPA-200 stereo power amp at £1,100.



Both integrated amps are available with remote control for an extra £100. However, this doesn't mean Papworth is abandoning valves. The company has also produced a new tube-based monoblock, the M300. Elm Audio ☎ (01744) 604578

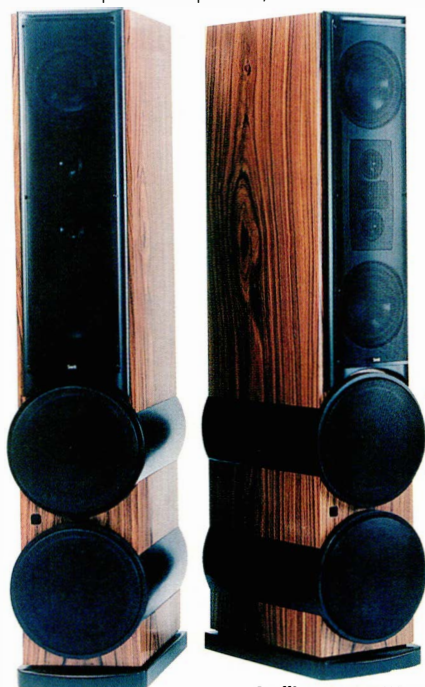
Snell's bells



Snell Acoustics has announced details of a new upmarket powered loudspeaker, the XA90. This top-of-the-range floorstander features a built-in 300 Watt amp driving twin 25cm woofers delivering bass down to 32Hz. The remainder of its frequency range is supplied by two 15cm midrange units and a 25mm aluminium dome tweeter, with an additional rear-firing soft dome tweeter "for added ambience".

Remote control is included for the amp section, allowing user optimisation of high and low frequency output to suit the room and recording. The XA90 costs £7,000, and two less expensive models are set to complete the range later this year.

See-Hear ☎ (01233) 813111



Snell's 300 Watt XA90.

Cop a load of the CDA 289



Copland's "ultimate CD statement" is poised to pounce. The CDA 289 is the Danish company's new flagship CD player, priced at £1,898, and successor to the well-regarded CDA 288 – the firm's first player launched in 1995.

Under the lid, Copland has replaced the TEAC mechanism used by its predecessor with a well-specified Sony unit, incorporating a sprung isolation system and signal buffer to help maintain audio purity. Two 20-bit Burr Brown PCM 63P DACs are used in each channel and the mechanism is slaved to a custom-built master clock to optimise jitter performance.

In the digital filtering department, Copland has hand-picked samples of Pacific Microsonic's top-notch PMD 100, and augmented it with the company's own filter to double the data rate to 16 times the sampling frequency. HDCD decoding is included to take advantage of suitably encoded discs.

The analogue stage is based on a traditional Copland topology, a discrete class 'A' circuit refined for this latest guise. Two isolated transformers supply power to digital and analogue circuits.

Some may be surprised at Copland's decision to launch a high-end CD player with new upmarket audio formats around the corner like DVD-A and SACD, but



Copland's flagship CD player: the CDA 289.

the firm's spokesperson is adamant the time is right to launch its ultimate CD player.

"These new formats are still being finalised, and it's too early for us to say which we should develop. From results so far, resolution is greater but sound is somewhat flat. CD has had two decades to develop and there is no guarantee the new formats will sound instantly better when they arrive."

Absolute Sounds ☎ (0181) 971 3909

Rotel rolls on



Rotel has launched a CD player for £300, the RCD-951. It's based on the £350 RCD-971, awarded a Best Buy tag in issue 184, and features the same specification but without the latter's substantial toroidal transformer.

Under the lid, there's a Burr Brown PCM-69 DAC and an HDCD PMD-100 digital filter, acknowledging the gradual growth of HDCD-encoded software in the stores. Analogue and digital signal stages feature independent power supplies, and a coaxial digital



The RCD-951 CD player features a Burr Brown PCM-69 DAC.

output is supplied to the rear. Check out our Mega Test next issue for a full review.

Gamepath ☎ (01908) 317707

Nakamichi goes lifestyle

Japanese firm Nakamichi is launching a new all-in-one 'lifestyle' system to cement its return to the UK market.

The SoundSpace 8 features a vertical loading, five-disc CD multiplayer and AM/FM tuner, with a



The SoundSpace 8 marks Nakamichi's debut on the wall-hanging scene.

separate 'tower' unit containing amplification and a subwoofer. A pair of neat satellite speakers suitable for wall or stand mounting via optional supports is supplied, and the main source unit can also be wall-hung. You even get two remotes as part of the £1,100 package – one compact and simple handset, and another larger, full-function controller.

According to a spokesperson: "Small size and good looks are becoming more important. Nakamichi has a profile capable of competing with B&O and Bose, and has the musical ability to create good sounding hi-fi in a lifestyle package." Distributor BBG expects this sector to account for 25 to 40 per cent of Nakamichi's business in the UK for the next year.

The SoundSpace 8 is available now, with other models, including a five-disc, DVD-based model, to follow in November.

BBG Distribution ☎ (0181) 863 9117

NEWS IN BRIEF

simultaneously as speakers. As we go to press, another 24 companies have joined the growing ranks of NXT licensees.

☎ (0171) 343 5050

ORELLE has added a loudspeaker and a subwoofer to its range. The Swing is a 95cm high floorstander priced at £1,200, employing a 12.5cm mid/bass driver and an active silk dome tweeter. The Spice is an 25cm subwoofer at £1,050, with a 25.5cm driver and integral 300 Watt amp. Orelle has also moved its main operations to Germany, though design will continue in the UK.

☎ (0181) 931 1206

JAMO has added an extra finish option to its Concert range of speakers. All three models are now available in maple veneer, in addition to mahogany and cherry. Prices remain the same.

☎ (01327) 301300

THE AUDIO T HI-FI DEALERSHIP has acquired Hampshire Audio. The Southampton-based store has been trading since 1969, and plans are underway to refit the shop in the summer.

☎ (01865) 760844



CELESTION'S smart-looking C Series continues to grow with the addition of an active subwoofer. The C6 incorporates a 30cm drive unit and an amp delivering 100 Watts, it's magnetically shielded and comes finished in 'video grey'. The C6 costs £600.

☎ (01932) 841349

ECLIPSE has launched two new horn-loaded speakers. The Titan is the flagship model, and the Aurora is a smaller, more affordable design. Prices have yet to be determined.

☎ (0181) 686 9331

THE FRANKFURT 'HIGH END '99' HI-FI SHOW, reputedly the oldest high-end exhibition in Europe, is to be held from May 13th to 16th in the Kempinski Gravenbruch hotel near Frankfurt airport. Call the number below for details.

☎ (00 49) 202 70 20 22

CABLE MAGIC from Frenger International aims to do away with that tangle of wires dangling behind your system. Simply feed your cables through this black plastic tube, complete with holding rings and end clips, and Spaghetti Junction is no more. Yours for £13.

☎ (0181) 202 4111

ROTHWELL'S Indus preamp and Rubicon valve power amp have been given a makeover. The Indus now has a neater internal layout with shorter signal paths, and the Rubicon has become bridgeable, transforming into a monoblock at the flick of a switch.

NEWS IN BRIEF

Both units sport new hand-finished hardwood front panels, and prices are £499 and £949 respectively. ☎ (01204) 654614



PANASONIC'S latest line-up of personal and portables allegedly includes the world's smallest MiniDisc player. The £199 SJ-MJ70 includes bass boost and 40 second anti-shock memory, and delivers six hours' playback from a single rechargeable battery. Also new are six CD personals, starting at £60, and six portable CD/radio/cassette players, priced from £80. ☎ (01344) 853550




HECO has announced details of three new active subwoofers. The German brand is launching the 100 Watt Reflex at £159, 140 Watt Odeon at £235 and 200 Watt, remote controllable Mythos at £360. Contact UK distributor Recoton for details. ☎ (0161) 702 5000

MSB TECHNOLOGY continues the mini-renaissance of the off board DAC with a 24-bit/96kHz unit. The MSB Link DAC 2 costs £299, and hooks into any digital source with an optical and/or coaxial digital output. A 'Virtual 3D Surround Sound' mode is available as a user-installable option. ☎ (01945) 588533

TOSHIBA AND BLOCKBUSTER are to extend their DVD rental deal to include 140 Blockbuster stores around the country. Consumers can rent a Toshiba DVD player at a cost of £10 for two nights, with two movie rentals thrown in free. In addition, 110 stores will feature demonstrations of the technology. The deal has been on trial in 30 stores since last October. ☎ (0171) 229 4400

CÚRA is a new British speaker brand with three models vying for your cash. Entry point is the stand-mounting CA-10, followed by CA-21 and CA-30 floorstanders, the latter featuring sloping front baffles. All come in a choice of seven real wood veneers and prices start at £699. ☎ (01252) 401401

A ProActive pair

 Loudspeaker specialist ProAc has two new speakers ready for launch this month, including the company's first floorstander for less than £1,000.

The Studio 125 is priced at £999 a pair and sports a 91.5cm high cabinet with a choice of seven real wood finishes. It's designed to be used in both music and home cinema applications, and incorporates a newly designed 16.5cm mid/bass unit combined with a 20mm soft dome tweeter. Both drivers are magnetically shielded and coupled via a "superior crossover network", with twin loading for the lower unit by rear- and downward-firing reflex ports.

The second new model is the Tablette 2000, the latest evolution of the classic Tablette standmounting speaker which first appeared in 1979. Its cabinet is 50 per cent bigger than the Tablette 50 it replaces, and the mid/bass driver is larger too; the speaker features the same 16.5cm cone and 20mm dome used by its floor-standing brother above. The mid/bass unit is reflex loaded by a flared port to the rear for "tight, natural




The latest ProAc speakers fresh from t' pit.

bass". The Tablette 2000 costs £649 and comes in five real wood cabinet variations.

ProAc ☎ (01280) 700147

Mission duet

 Mission has announced two floorstanding additions to its existing loudspeaker line-up, costing less than £400.

First up is a replacement for the 773 in the 77 Series. The 85cm high 773e costs £50 more than its predecessor, selling at 10p shy of £400. In return you get two 13cm Aerogel mid/bass drivers in place of one, with revised internal geometry and a modified crossover.

The result, claims Mission, is better bass extension, improved power handling and greater sensitivity.

Also new is the 702e, a £200 addition to Mission's more youth-oriented 700 Series. The company claims its development was "driven by a desire to improve cost/performance ratios", and has packed a 16.5cm mid/bass driver and bi-wirable cable terminals into its 85cm high cabinet. Both speakers are available now. Mission ☎ (01480) 451777



Manchester suffers Stealth bombing.



Mana from heaven for Manchester Show


 March's on-off-on Manchester Hi-Fi Show was very much on after Mana Acoustics took over the event to launch its new Stealth monoblock amplifier. Isolation expert Mana stepped in after original organiser Leading Edge dropped out, and roped in ten other companies, including Vinyl Demand, Direct Disc, Gamma Acoustics and Sonic Link. The free entry show was spread over three floors of the Britannia Hotel.

According to Mana supremo John Watson: "It was a bit frantic because we took over the show at the last minute, but it all came good — the fact that rooms, booked direct, cost just a third of what the promoters would have charged, made me realise how much we were all being exploited before. This industry has got to reach out to the music lover at the festivals, in the concert halls and out in the provinces — or it's finished. So we'll definitely be doing our own shows again — and that will definitely include Manchester."

The Stealth amp, which utilises gold-plated connectors and Vishay components, is conservatively rated at 300 Watts of Class A. It should be on sale within weeks, a pair of the monoblocks costing around £4,500. A stereo version, retailing at approximately £3,000, will be available later this year.

Mana Acoustics ☎ (01753) 655744

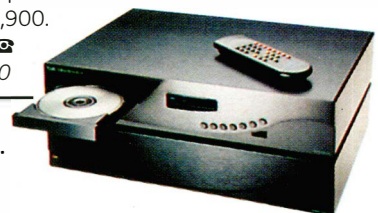
Weather forecast

 Talk Electronic's range-topping CD player is now with us. The Thunder 4/Whirlwind 3 is a two-box affair, but not one that's split in the traditional transport/DAC manner. Instead, the Thunder 4 player is accompanied by its own dedicated Whirlwind 3 power supply.

The Thunder 4 incorporates a Sony transport mechanism and a "highly enhanced" 24-bit Crystal Semiconductors DAC. Its maker claims it undertook a rigorous selection process to source specific audiophile components for its analogue circuitry, and the resultant player can only be used in conjunction with the Whirlwind 3. The price for both boxes is £1,900.

Talk Electronics ☎ (01276) 686030

Talk's Thunder 4/Whirlwind 3 combo.



Sennheiser's head start



Sennheiser's latest pair of hi-fi headphones have hit the stores, marking the start of a new 5 Series. The HD 500 Fusion slots in at the popular £70 price point, and boasts 'BioNetic' design, a term apparently referring to its curvaceous ergonomics.

Inside, it uses Sennheiser's proprietary 'Duofol' diaphragm, incorporating dual films to make a single rigid, resonance-resistant structure. The magnet assembly is designed to allow controlled long excursions for deep bass with low distortion, while its circumaural ear pads and oxygen-free copper lead are both replaceable features. Total weight is a comfortable 210gm and Sennheiser lays claim to a spacious, "out of the head" performance.

Sennheiser Helpline ☎ (01494) 551571



The HD 500 Fusion uses a 'Duofol' diaphragm.

Sony launches two box surround



Sony's TA-E9000ES/TA-N9000ES

pre/power amp may be just the ticket for those who fancy going down the multi-channel route. It's a surround sound combo which joins the company's 'ES' range — products which are intended to offer a particularly high level of audio performance.

The TA-E9000ES preamp features Dolby Digital, MPEG2 and dts decoding, with a special 'Advanced Digital Cinema Sound' mode and tasty 'touch-panel' remote. Meanwhile, the TA-N9000ES power amp delivers five channels at 140 Watts (eight Ohms) each.

Sony is expected to unveil a whole raft of new products soon, so watch this space...

Sony ☎ (01932) 816000



PAUL MESSENGER

New standards bring THX down to earth

It must be ten years since I first encountered the THX logo at the big Chicago CE Show. Home THX was the latest buzzword on the emerging home cinema scene, earning a lot of kudos by being a division of movie maker Lucasfilm.

Lucasfilm THX originally set out to improve standards of sound reproduction in cinemas. As the home theatre market built up steam, originally in America during the late '80s (following the arrival of affordable Dolby Pro-Logic chip sets), so THX turned its attentions to the high quality reproduction of film soundtracks in the home environment.

The result was a set of performance standards for various kinds of AV equipment, called Home THX, which was technically challenging, especially for loudspeaker designers, and also quite expensive to implement. Whether or not one went along with the quite persuasive arguments which THX advanced, it still set down some performance markers where none had existed before, and was widely welcomed for its ability to distinguish a high(ish) end home cinema from the price-driven hoi polloi.

I got to try my first Home THX system back in 1994, during the early days of *Home Entertainment*, and once I'd got over the shock of discovering I needed seven (yes, seven!) channels of power amplification to drive that particular system (the original B&W THX package used twin passive subwoofers), I had to agree it sounded remarkably good with movie soundtracks.

The trouble was, it favoured multi-channel movies over stereo music. This is fine for those lucky enough to have a separate room for each, but I don't even buy a lottery ticket, so have to make my stereo hi-fi and AV system share the same room, and at least some of the same loudspeakers and power amps. This involves a measure of compromise, and, as far as I'm concerned, it's the movie reproduction that has to make it.

Stereo music is the main priority, and AV has to take second place, so I wasn't going to convert to THX loudspeakers. From a hi-fi music point of view, the most original part of the THX spec — the carefully defined directivity characteristics of the various loudspeakers — also contained its weakness.

While the idea of deliberately engineering the surround channel loudspeakers to deliver a diffuse soundfield still makes a lot of sense, I was much less happy about the requirement for the



THX's new standard is easier on the wallet.

front loudspeakers to focus their output into a relatively tight vertical 'window'.

The idea is to improve imaging by maximising the direct sound from the speakers, and minimising reflections from floor and ceiling. This may well be worthwhile if the room is big, the ceiling low, and the listeners sit a good distance back from the speakers. But few of us live in Hollywood mansions, and the precaution has always seemed unnecessary in the much smaller British lounge.

The problem comes because most THX front speakers employ vertical pairs of drivers, creating cylindrical (rather than spherical) wave-fronts to control vertical directivity. It's those pairs of tweeters which are the problem from a hi-fi point of view. They create interference patterns which seem to introduce a phasiness to high frequencies which inhibits the sort of transparency many hi-fi listeners are looking for.

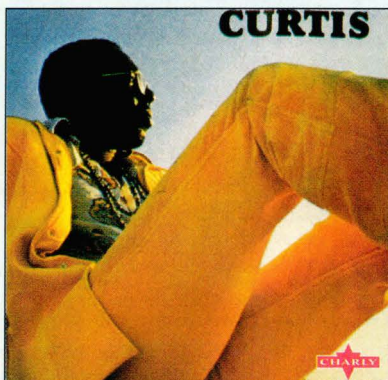
However, THX has changed, partly perhaps because Laurie Fincham (long-time technical head at KEF) is now heading up the engineering side of THX, and there are now two standards rather than one. The original has been re-christened THX Ultra, and is acknowledged to be better suited to larger rooms, and a new THX Select standard is being introduced primarily to cater for smaller rooms and smaller bank balances.

THX has gone very coy on the exact details of its latest specifications, but the crux of the matter is that the speaker directivity is considerably simpler than the Ultra requirements, and now follows what is essentially good hi-fi practice, ensuring that good drive unit integration is maintained across a sensible segment of the forward response.

I'm sure I'm not alone in wanting a system which can do a good job with both stereo hi-fi music and surround sound movies. It sounds like an easy enough target, but is not always easy to achieve in practice. THX Select loudspeakers could represent a turning point in bringing the two worlds of hi-fi and AV closer together.

PREVIOUSLY UNHEARD

Phil Strongman digs out rare and classic tracks appearing on CD or virgin vinyl for the first time. Go strut your funky stuff...



CURTIS MAYFIELD *Curtis*

Back in 1970, *Curtis* was Mayfield's first solo shot — and what a shot. The brassy yet light *Move On Up* has been an uptempo dancefloor hit for three decades — it was most recently borrowed by Trickster — and the extended version remains full of percussion subtleties while *Makings of You* sounds like a love song from another world. An original pressing will have the edge on this, a borderline audiophile, re-release but try finding a mint one. *Curtis* was voted one of the Top Ten albums of all time by *The Guardian* and, after a few spins of this, it's easy to understand why. Sequel ★★★★★

FRANK SINATRA, DEAN MARTIN, SAMMY DAVIS JR. *The Summit – In Concert*

This gold disc squeezes the last ounce of quality from a 1962 'rat-pack' recording that's easy-going to the point of carelessness although it retains a certain warped charm. Fans of Ol' Blue Eyes will enjoy it. Artanis DCC ★★★★★ — from Vivante (0181) 977 6600

MILES DAVIS *Sketches of Spain*

In 1959 Miles Davis had his mind blown by a tape of Joaquin Rodrigo's *Concerto de*

Aranjuez and, after consulting his arranger, one Gil Evans, *Sketches* was his considered, and considerable, response — a kaleidoscopic pan, starting with *Concerto*, that sweeps over the musical nuances of an entire nation. By turns sultry, stark and soulful, the trumpet has rarely sounded so poignant as it does on *Sketches*. Columbia ★★★★★ (from Vivante)

BILLY COBHAM *Magic/Simplicity of Expression...*

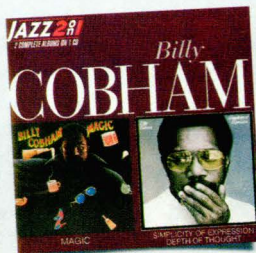
A freewheeling jazzy-soul fusion thang, recorded by the master composer-drummer during the genre's late Seventies golden age and now reissued with the aid of SBM 20-bit remastering. Sinuous with liquid keyboards and horns flowing all over. Wonderful — magic, in fact. Columbia ★★★★★

VARIOUS *Funk Spectrum*

Twenty fun-kee rarities by talented unknowns, includes a spaced-out Latino *Do It Again* and a buzzy *It's A Man's World*. Once again selected by the legendary Keb Darge, aided here by Josh Davis (DJ Shadow), and also available on standard vinyl. Dance-floor dynamite. BBE ★★★★★

MEDESKI, MARTIN & WOOD *Combustication*

It's 1975, right, and George Clinton's Funkadelic decide to cut an instrumental version of *Dark Side of The Moon*, in Canada. But, as a tax dodge, they really record it in NYC in a week, under the name of their lawyers — M, M & W. After ten jazz woodbines, Clinton's band forget what the idea was but plough on anyway. And that's it, except that it isn't Funkadelic or *Dark Side*, it's a slab of Hammond weirdness from 1998. Groovey. Bluenote ★★★★★



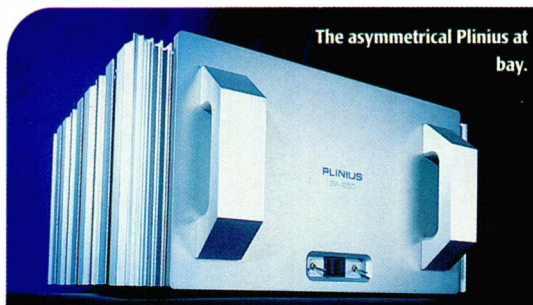
Kiwi firm rolls out nine amps



New Zealand firm Plinius is bringing its extensive range of high-end amplifiers to the UK.

The line-up starts with two integrated amps, the 2100i (£995) and 8150 (£1,895). Two line-level preamps are available, the M16L (£2,995) and M16P (£3,295), together with a phono-equipped preamp, the M14 (£2,595). There are three power amps to choose from: the SA50/3 (£2,750), SA100/3 (£3,450) and SA250/3 pictured below (£5,850), and the Jarrah phono stage (£450) completes the range.

Plinius claims its class 'A' power amps are capable of driving any speaker on the market, as they feature asymmetrical circuit topology which is claimed to follow the behaviour of real musical wave forms more closely than typical symmetrical designs. Sound quality rivaling any amp, regardless of price, is the alleged result. *Absolute Analogue* ☎ (01425) 654488



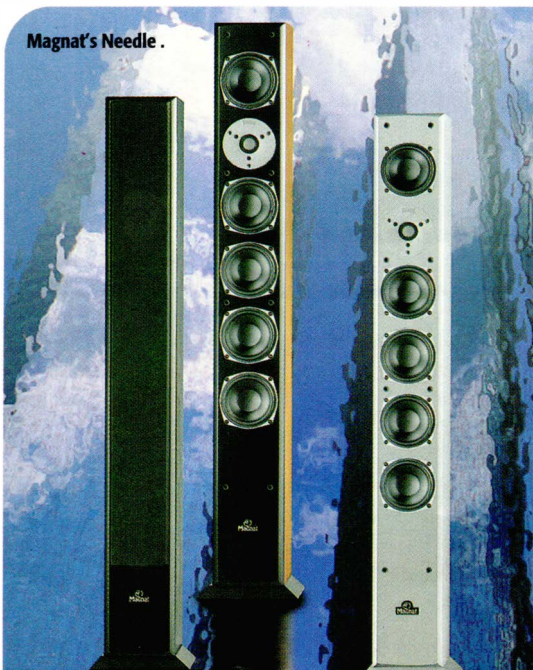
The asymmetrical Plinius at bay.

Getting the Needle



German outfit Magnat has delivered the Vector Needle to the UK. It's a tall, narrow floorstander incorporating a ceramic dome tweeter and five mid/bass drive units with 10cm cellulose cones. Each main driver is housed in a tough ABS basket to reduce the effect of resonance. It's available in black, beech or silver and costs £449.

☎ Recoton (01491) 834700



Magnat's Needle.



JIMMY HUGHES

A love affair with those old mechanical things in a technological world of uncertainty

For a rabid collector who's spent the greater part of his adult life working in the hi-fi business, I've accumulated very little of what you might call 'collectable' hi-fi. True, I do have one or two juicy bits tucked away: a Yamaha CT-7000 FM tuner; a mint condition Revox G-36 valve tape recorder; a rather nice Lux 507X integrated amplifier. Oh, and a Swiss made Breuer type 8 tonearm I bought in the early '80s.

From the first time I saw and heard a Breuer arm (a type 7 back in the late '70s when Linn Products were briefly the UK import agents), it was my ambition to own one. If you've ever played with a Breuer you'll know why. Experienced hi-fi enthusiasts, even cynical ones who've seen everything, gasp when they encounter this arm for the first time. It's something different; something special. And in a way it's never been bettered.

Now having just said that, it's a terrible thing to admit, but I



haven't actually used my Breuer arm since 1987 or thereabouts. Originally I had it on a Linn LP-12, but switched it to a Roksan Xerxes after a few years. When Roksan brought out its Artemis arm, I went over to it and put the Breuer away. But it's still upstairs in its box, and sometimes I get it out just to look at it. It's an amazing piece of engineering; incredibly light and delicate, yet remarkably rigid.

The bearings are silky smooth and almost friction free, yet there's no perceptible free play. The headshell is milled from a solid billet of aluminium, and precision drilled to reduce mass. The various individual parts fit firmly yet glide together as if perfectly matched for size. And then there's the sound: lively and very open, with outstanding dynamics and remarkable precision. Apparently, Herr Breuer only ever made one arm per week. So it's a real hand-made item.

There's a fascination with all things mechanical that's buried deep within the male psyche. We're besotted with cars, bikes,



cameras, watches, hi-fi — the list goes on. Precision engineering gets our pulse racing. So it didn't come as a complete shock when a close friend made an absurdly generous offer for my Breuer. There's just one snag: he got rid of his entire LP collection about two years ago!

Of course, he's telling me how he's going to get a turntable and buy some LPs, but I know it won't happen. He wants my Breuer arm; to just look and periodically handle it will be sufficient. Actually using it might almost be an anti-climax. Like me all those years ago, it's long been his ambition to own a Breuer.

It's like another friend of

mine who loves cameras but hates taking pictures. The pleasure he gets from photography comes from handling quality equipment and learning how to operate it. Having to go out and actually take photographs almost spoils the party. Similarly, with hi-fi there have always been keen enthusiasts with little or no interest in music; their massive investment in equipment is inversely proportional to the minuscule size of their record collections.

As life becomes more and more electronic,

“Mechanical things come from a world of certainty. A world that's ordered and predictable. You can see how something mechanical works.”

automated, and computerised, there seems to be an increasing fascination for mechanical products. Why else would second-hand manual-focus cameras sell when you can buy the latest all-singing/dancing auto-focus wonder for the same or less money? I think it's the sense of achievement you get when you're personally responsible for making all the decisions.

With such products you're back in a kinder, gentler time. Mechanical things come from a world of certainty. A world that's ordered and predictable. The rules are clear and simple. You can see how something mechanical works. Even with something very sophisticated there's usually an underlying simplicity about the principle on



Above: the sought-after Breuer type 8 tonearm is light and delicate, yet surprisingly rigid. Below: the original Roksan Xerxes.

which it operates. Anyone can see how a record player works. But a CD player?

Of course CDs can sound great, and their consistency, dependability, and operational simplicity is wonderful. But how they actually work is a mystery to most of us. Even those who understand how a CD player functions would probably be unable to trace a fault in one. A turntable that remains silent because the platter doesn't spin is much easier to trouble-shoot.

There's something heroic about a mechanical watch that keeps perfect time despite the onslaught of dirt, dust, wear and gravity. It's almost as though a quartz timepiece achieves its accuracy by cheating. In the same way, there's still a special thrill when you play an LP and it rewards you with outstanding sound. A thrill that comes from knowing the odds that have been overcome, and that part of the success is due to you, the user, maintaining stylus and records in tip-top order.

So, I may well sell the Breuer to my friend — on the pay-me-a-bit-each-month-if-you-can-afford-it easy terms (written details on request) — and use the money to buy a manual focus camera (a Contax RTS-111 would be nice) I don't need but would love to have. Or failing that, maybe some other mechanical trinket that holds out the promise of enriching my otherwise tawdry existence.

And even if I never put a roll of film through my new camera the pleasure gained from owning such a fine piece of engineering will be worthwhile in itself. As much, I hope, as the thrill my friend will get from owning a tonearm he'll probably never use.

BODHISATTVA Soul

Hull-based specialist dealer Zen Audio has hand picked a system for us to examine. **Tim Bown** listens for some sonic enlightenment.

THE SYSTEM

Naim CD3.5 CD player	£1,080
CR Developments Kalypto valve amp	£599
JM Lab Electra 905 loudspeakers	£1,095
Target R5 stands	£295
Chord Cobra 2 interconnects	£55/m pair
Chord Odyssey	£85/5m pair
TOTAL COST	£3,209

Good name, that. It's always pleasing when a dealer comes up with a creative title for its business, something that fires the imagination and sets the mind racing down the road to hi-fi nirvana. So it is with Zen Audio, that three letter word suggesting all sorts of connotations relevant to the cosmic reproduction of music. Meditation and contemplation, intuition and enlightenment – all these states of mind can be evoked by a hi-fi system of sufficient quality. A religious experience? By some people's definitions, quite possibly.

With these thoughts in mind, anyone shopping in Hull is likely to hold high expectations as they pass through Zen Audio's doors. And well they should, as the store carries a quite vast selection of high quality hi-fi components, which in turn breeds a wealth of system building possibilities. It's not surprising, then, that when we asked the guys at Zen to collate a CD-based system for our perusal, with a guide price of around £3,000, they took a while to think it through. What follows is the culmination of their cogitation, born from a desire to build a system that's just a little bit different.

AN UNUSUAL AFFAIR

The system's CD starting point is a common enough recommendation – Naim's CD3.5 player. Clad in the firm's traditional greyish-green garb, its utilitarian approach to aesthetics smacks more of military functionalism than

high-end hi-fi flamboyance. But wired and fired this player is some kind of firecracker, endowed with Naim's traditional sense of pace and rhythm. It's arguably a touch coarse up top, and not as open as some, but it remains one of the most persuasive CD players in the £1,000 ball park.

When we get to the amp, things are a little more out of

“Wired and fired this player is some kind of a firecracker, endowed with Naim's traditional sense of pace and rhythm... it remains one of the most persuasive CD players in the £1,000 ball park.”

the ordinary. Zen has chosen from its stock list the Kalypto by CR Developments, a little known valve amp with an output of 15 Watts per channel. It's a smart enough example of the breed, with a shiny metal plate at the front, a gloss black finish elsewhere and a nine-strong array of vacuum tubes protruding proudly from the top. Facilities are typically Spartan, with just three controls adorning its front panel: power, volume and source selection between five line-level inputs. More surprising is this amp's £599 price tag, which is unusually affordable for a valve-based design.

Lined up on the speaker front is the Electra 905, a new-ish standmounter from French outfit JM Lab. It's made entirely in-house, employing two mid-bass drivers and an inverted dome tweeter from partnering brand Focal. Crucially, its sensitivity is rated at a high 91dB, with an amp-friendly 8 Ohm nominal impedance, so even the low-powered Kalypto



“There’s an effortless energy in the upper part of its frequency range, a deliciously airy midband allied to finely-edged, often liquid treble. It’s not entirely sweet but it transmits ambience superbly.”

should be able to drive them without obvious difficulty. And as far as a collective test like this can ascertain, their sound shows enough pace and air to fully warrant further investigation.

Cables to hook it all together are supplied by The Chord Company, with top-of-the-range Odyssey wires ensuring transmission of signal between amp and speakers. Interconnect is the Cobra 2, a cable known to work well with entry-level Naim gear like the CD3.5. The selected speaker stands are the heavy-duty Target R5s from a range acknowledged to be among the best in the business.

Viewed as a whole, there’s no doubting this system’s unusual constitution. It would be wrong to assert that Naim CD players should be used exclusively with Naim amplification, but that’s very often when they’re at their best. As for putting one with an entry-level valve amp, the character of which is undoubtedly rather different, well – adventurous is the word. The idea is that the best bits of each component will meld to form a well-balanced whole that hits close to our £3,000 budget: the pace and rhythm of the CD3.5, the effortless mid/treble of the Kalypso the fleet-footed imaging of the Electra 905. Of course, it’s rarely that simple. Components have to be pulling in the same sonic direction to make a cohesive sound. But sometimes the most unlikely systems just seem to work...

SOUND QUALITY

So, does this motley collection have the synergy to make seamless music in my listening room? Well, yes and no. Sometimes it works spectacularly well, other times it just falls flat, depending entirely on the music with which it is fed.

Its strengths lie predominantly with simple and spacious musical types, acoustic stuff, small-scale classical and the like. There’s an effortless energy in the upper part of its frequency range, a deliciously airy midband allied to finely-etched, often liquid treble. It’s not entirely sweet but it transmits ambience superbly: a play of Talk Talk’s minimalist *Laughing Stock* disc finds delicate percussive taps and tingles surrounded by an entrancing sense of space, and the equally sparse sound of Stina Nordenstam’s *And She Closed Her Eyes* shows the freedom with which it’s able to transmit voices. Just as enticing is a spot of Fauré’s *Complete Works for Cello* (Steven Isserlis/BMG), the system supplying excellent texture and rosin with each draw of the bow.

Less impressive is its performance with more driving material, be it rock, dance or whatever. Bass is rather soft, lacking authority and drive when rhythms begin to flow, and the entire picture flattens out to an overwhelming degree with everything from Wilco’s guitar-driven *ELT* to the epic trance of Binary Finary. Mid-range still fizzles with energy, but there’s no rhythm or vigour to underpin the sound, the end result being rather mushy.

To be fair, the guys at Zen are well aware of this set-up’s strengths and weaknesses – if someone walked into the shop with a bag of rock or dance CDs, this is not a set-up they would recommend. They were also limited by our budgetary guidelines, their determination to include the Naim CD player forcing some creative thinking in the amp department and a conscious trade-off of strengths and weaknesses.

Ultimately, though, the final criteria I can use when judging

a system is this: if I had around £3,000 to spend on a CD-based set-up, would this one tempt me into parting with my money? The answer is no – simply because it doesn’t supply the consistency and broad-ranging talents I require for my music collection. But

there are those for whom this system undoubtedly offers very good value for money – for a vivid and effortless portrayal of classical and acoustic styles, it really has much to commend it.

Overall, it’s a brave and fascinating mix with more virtues than vices.

THE SYSTEM COMPONENTS

CD PLAYER

NAIM CD3.5 £1,050

Naim’s entry-level CD player is a typically engaging little number, endowed with excellent pace and rhythm. It can sound a bit rough up top though.

Alternatives: Arcam Alpha 9 £800; Cyrus dAD3Q £898; Meridian 506 £1,100; TAG McLaren CD20R £1,250



SPEAKERS

JM LAB Electra 905 £1,095

A recently introduced standmounter, part of a range featuring technology filtered down from the upmarket Utopia speaker. Cone material is a glass fibre composite and sensitivity is fairly high.

Alternatives: Dynaudio Contour 1.3 MkII £1,198; Jamo Concert 8 £1,365; JBL L90 £1,500



CABLES & SUPPORTS

We used The Chord Company’s Odyssey speaker cable (£85/5m) and Cobra 2 interconnects (£55/1m), the latter terminated with 5-pin DIN plugs at one end (for the Naim) and standard phono plugs at the other. Speaker stands were the Target R5s (£295), a substantial four-pillar design. All were recommended by Zen Audio.



VALVE AMPLIFIER

CR DEVELOPMENTS Kalypso £599

This unusually affordable valve amp looks pretty good value for money. It’s smartly turned out and has definite strengths in the mid/treble region, as you’d expect from valves.

Alternatives: Valve – Audion Sterling £600; Transistor – Audio Analogue Puccini £475

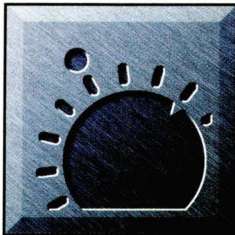


VERDICT

SOUND	★★★★☆
SYNERGY	★★★★☆
VALUE	★★★★☆
PRICE	£3,209

An interesting mix of gear with some definite strengths, but it lacks consistency across a wide range of music – particularly in the bass.

☎ Zen Audio (01482) 587397



PAUL MILLER'S OASIS OF SANITY

The Tech Ed asks: is there truth in the popular rumour that high levels of negative feedback can only result in poor sound quality?

One sure-fire way for manufacturers to grab the attention of the average, die-hard audiophile is to drop the phrase 'low feedback' into a discussion of their latest range of amplifiers. Mission Cyrus understands this better than most: it's just launched a 'no-negative feedback' power amplifier called the aPA7 (see review, p30). But why has feedback become the whipping boy of audio and the scourge of high quality sound? More importantly, is there truth in the popular rumour that high levels of negative feedback can only result in poor sound quality? In this month's *Oasis* we'll explore the historical need for some form of 'compensation' in our amplifiers, how negative feedback works and the pros and cons of its execution.

WHY USE FEEDBACK?

The job of an amplifier is to boost the incoming audio signal into a bigger replica of itself, with nothing added and nothing taken away. For example, a 2V signal level provided by a CD player would be boosted by 10x to 20V by an amplifier with a gain of 20dB. As long as the amplifier could maintain sufficient current across the loudspeaker load, this 20V would equate to a power output of 50W into 8 Ohms.

Of course, 'real world' amplifiers use transistors or valves that are neither entirely

transparent nor wholly linear, so they modify the audio signal as it passes through. So, while boosting the level of an audio signal (applying gain), the addition of noise and distortion is almost unavoidable. Quite simply, negative or regenerative feedback (NF) is a method of compensating for this non-linear gain, squeezing-out the distortion and noise that would otherwise colour the amplified music. The concept harks back to the 1920s when Harold Black, who worked for Western Electric, used NF to improve the quality of transmissions down long telephone lines. NF clearly pre-dates the advent of transistors and high fidelity reproduction by quite a few decades.

DIAGRAM ONE FEEDBACK IN THEORY

Rather than view an amplifier at the transistor level we'll take a step back and see how feedback might be implemented around an op-amp, shown by the triangle in diagram 1 (right). An op-amp, or operational amplifier, encompasses two or more stages in the form of a pre-assembled package typically, though not exclusively, as an IC. Op-amp IC's are used extensively in modern amplifiers, particularly in preamp-level, MM/MC disc stages and tone control circuits.

Op-amps are versatile because they include both non-inverting and inverting

inputs (the red '+' and blue '-' on diagram 1) which, as we'll discover, allows the easy application of external feedback. The following principles apply equally to discrete power amplifier stages and op-amps.

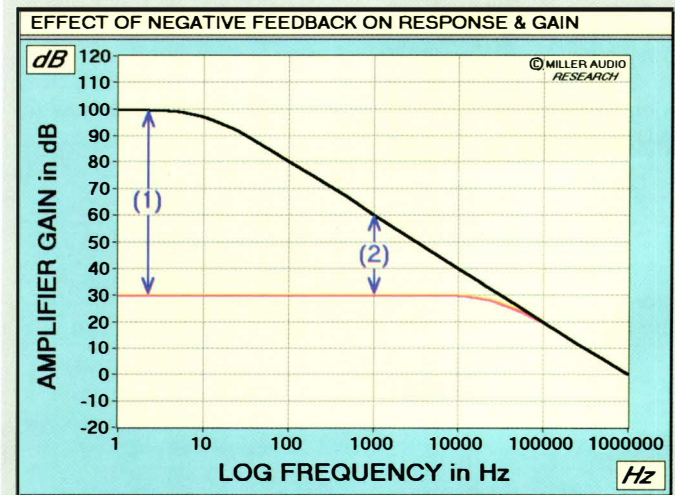
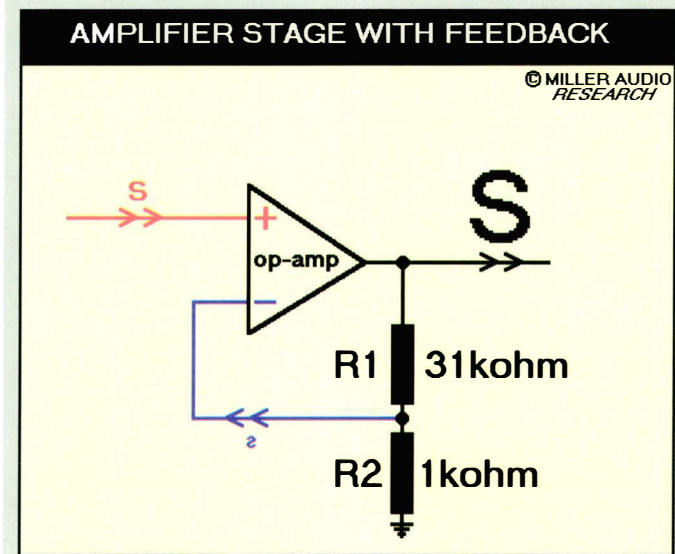
Without feedback, the gain of our op-amp might be as high

as 100dB, boosting the input signal (red 's') by an unnecessarily huge x100,000 (large black 'S') and adding distortion as high as 5 per cent. This is known as the op-amp's open-loop gain. The blue segment of our diagram shows a portion of the op-amp's output (small blue 's') being fed back into its inverting input. Any difference between the input signal (red 's') and feedback signal (blue 's') will cancel or at least suppress the noise and distortion emerging at the output.

In our example, the amount of signal fed back is determined by the ratio of resistors R1 and R2, this being 3.1 per cent. This, in turn, fixes

"Op-amps are versatile because they include both non-inverting and inverting inputs which allows the easy application of external feedback."

DIAGRAM ONE AND FIGURE TWO



Cyrus' aPA7 amps use a minimum of feedback.

the gain of the op-amp circuit by the same proportion, i.e. $1+R1/R2 = \times 32$ or 30dB. This 30dB figure is known as the op-amp's closed-loop gain. The reduction in gain from 100dB (open-loop) to 30dB (closed-loop) means we are applying 70dB of feedback, which reduces our 5 per cent distortion by 70dB or $\times 3200$ th to just 0.0016 per cent. Here, feedback is used to successfully manage the gain, distortion (and noise) of the op-amp circuit.

This might seem like closing the stable door after the horse has bolted, after all the distortion has already occurred before the signal is re-routed back to the input. In practice, however, the flow of electrons through the op-amp and its return path (the feedback) is as close to the speed of light as makes no difference. Clearly, any such propagation delay is inherently faster than the 'speed' of the amplifier itself, which is defined by its frequency response. In practice, the act of correction always occurs sufficient swiftly to

counter the popular argument that NF is ineffective because it's "acting after the event".

**FIGURE TWO
FEEDBACK IN PRACTICE**

In reality, the open-loop response of our op-amp (black trace) falls with frequency from about 5Hz, which is a fat lot of use for an audio amplifier requiring a minimum response of 20Hz-20kHz. The red trace shows the effect of applying 70dB worth of feedback (1), as detailed above, reducing the op-amp's open-loop gain of 100dB to a closed-loop figure of 30dB. This gives us a 'flat' response to beyond 10kHz, but the feedback factor is clearly

"Indeed many believe that high levels of feedback can be incorporated quite successfully so long as the amp is designed accordingly."

reducing with increasing frequency. For example, at 1kHz the difference between the op-amp's open-loop gain (black trace) and closed-loop gain (red trace) is just 30dB (2), which implies a distortion reduction of just $\times 32$ instead of the $\times 3200$ enjoyed at very low frequencies.

This is one of the compromises that must be accommodated by the designer when deciding how to modify the open-loop performance of the amplifier with feedback. You may also notice that the rolled-off response of the op-amp looks like a simple low-pass filter and, as such, experiences a phase shift that increases with frequency. If this phase shift were to reach 180 degrees, added to the 180 degree phase inversion of the feedback path, the feedback would become positive instead of negative. This would increase, rather than decrease, the op-amp's gain resulting in instability and a puff of blue smoke.

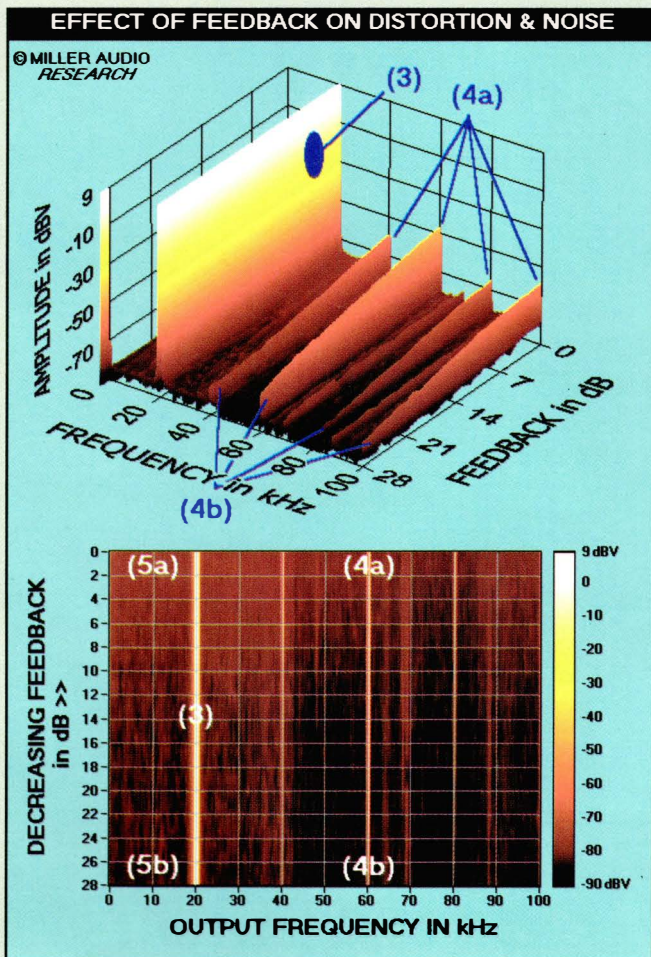
The designer guards against this by rolling-off the op-amp's closed-loop gain to less than $\times 1$ or 0dB before the frequency at which this phase shift hits 180 degrees. On figure 2, this occurs at 1MHz (1000,000Hz). In 'real life' the reactive nature of the loudspeaker load and various oddball cables (see Oasis, issue 179) adds to this phase shift, further complicating the amplifier's stability margins. Some designers will use output inductors to increase the amplifier's output impedance at high frequencies and isolate it from the ravages of this 'reactive' load. There are compromises here too, as the amplifier/speaker response may become more susceptible to changes in the speaker load just as ringing may result with musical transients.

0-28dB, the gain of the amplifier is also reduced, proportionally, by 28dB. As predicted from our discussion, this also achieves a linear reduction in 2nd, 3rd, 4th and 5th harmonic distortions (4a) which reach a minimum as the NF reaches a maximum 28dB (4b). You may also see the reduction in noise as the NF sweeps from minimum to maximum 28dB (5a-5b).

Evidently, NF is a powerful tool for the amplifier designer, but it's no cure-all for sloppy work. Indeed, all our experience suggests that most low NF (10-30dB) amplifiers sound better than their high NF (60-100dB) cousins. But there is a strong case for thinking that this is merely a reflection of the poor interfacing between the closed loop, its peripheral circuitry and the nature of the load and not necessarily an indictment of the feedback itself. Indeed, many believe that high levels of feedback can be incorporated quite successfully so long as the amplifier is designed accordingly. Otherwise, amplifiers should be designed to be as linear and noise-free as possible before feedback is applied, leaving NF for that final management of gain, distortion, output impedance and frequency response.

Do you have a subject matter for the Oasis? Please contact P.Miller via E-mail on MILLER_AUDIO_RESEARCH

FIGURE THREE



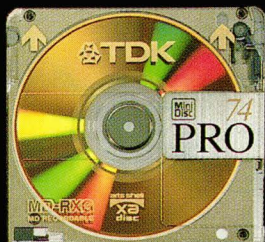
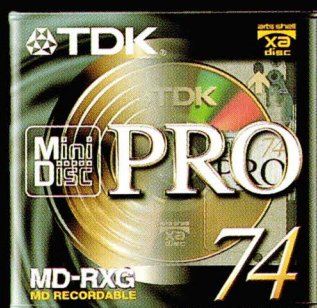
**FIGURE THREE
FEEDBACK IN ACTION**

What follows is, I believe, a unique snapshot demonstrating the impact of NF on distortion and noise on the output of a traditional solid-state amplifier. The amplifier is fed a pure, high frequency (20kHz) tone (3) and its output maintained at a steady 1W into 8 Ohms (or 9dBV) while the amount of feedback is increased from 0-28dB. Remember that as the amount of NF is increased from

GLOSSARY

- CLOSED-LOOP:** An amplifier's performance after feedback is applied.
- COMPENSATION:** Any method by which circuit non-linearities (noise, distortion) are dealt with (typically: Negative Feedback).
- GAIN:** The boost, magnification or amplification factor of the amplifier circuit. 20dB gain = $\times 10$ and 40dB gain = $\times 100$.
- IC:** Integrated Circuit
- NEGATIVE FEEDBACK (NF):** (or degenerative feedback) requires that a fraction of the amplifier's output is returned in anti-phase to its input. This controls the amplifier gain and reduces noise and distortion.
- OP-AMP (OPERATIONAL AMPLIFIER):** An amplifier circuit encompassing two or more stages as, typically, an IC package.
- OPEN-LOOP:** amplifier's performance before feedback is applied.
- PHASE SHIFT:** (In this instance) An increasing lag in phase with frequency between the output of an op-amp and its input.

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All digital recording media sound the same, right? Not with TDK's new MD-RXG PRO MiniDisc they don't. Better definition, more precise control, an even more 'real' sound. All thanks to TDK's leading edge digital technology. But don't take our word for it. Believe the audio experts from across Europe who raved that the MD-RXG PRO was the most realistic MiniDisc they'd ever heard. So, if you really care what you listen to, there is only one MiniDisc. TDK's amazing MD-RXG PRO.

TDK

at the heart of it

DAVID VIVIAN

AVI's NuNeutron has a bigger, cunningly disguised brother in the Bigga-Tron – what are those guys on?

Beware, appearances can be deceptive with the AVI Bigga-Trons.



When it comes to loudspeakers, they enjoy a joke down at AVI. Baby-like word-play is a speciality. “Nu” for “new” (as in Neutron) is an obvious example. “Bigga-Tron” takes the Tellytubby-esque vocab an amusing stage further. It’s a bigger NuNeutron, of course. There again, it is and it isn’t.

Glance at AVI’s publicity photograph of the Bigga-Trons and you’re left with the impression that they’re NuNeutrons that have grown a bit in every direction. Bigger but still, essentially, baby boxes. It’s a clever optical illusion. The bottle of Les Jamelles Cabernet Sauvignon they’re snapped with is, in fact, a monster 600ml job. And the two half-filled glasses are of similarly jumbo dimensions.

No, the Bigga-Trons are very much medium-sized stand-mounters some 10cm taller, 5.5cm wider and 8cm deeper than the natty NuNeutrons – a genre of speaker more popular a few decades ago when the likes of Rogers and Spendor ruled the roost. And unlike their genuinely cute baby brothers, the Bigga-Trons don’t use reflex ports to massage the bass, being a sealed box design. Kind of nostalgic, this: plain sealed box, no frills, too big to look dainty, too small to plonk on the floor. Awkward, boxy, blot-on-the-decor, “ugh hi-fi”-type speakers.

“When you fire them up, they disappear. We’re talking about stereo imagery you can take a stroll around.”

And, right now, I wouldn’t swap them for anything. NuNeutrons? Arguably the best £500 mini monitors on the market. I use them, dance to them, love them to bits. But the Bigga-Trons blow them away, effortlessly. Size does matter. Not just because a bigger box equals more bass but because it expands the options and shrinks the compromises.

Besides, AVI is keen to point out that the Bigga-Trons are a very serious piece of kit. Serious in the sense that they want to sell as many to recording studios and sound engineers as reference nearfield monitors as they do to hi-fi buffs. By all accounts enlightened slider-jockeys are snapping them up. The only concession to cosmetic appeal is the terrific quality of the real wood veneer finish. Otherwise they’re plain and conspicuous: you live with their lumpish looks for the way they sound.

I mentioned expanding the options and shrinking the compromises. It works like this: the bigger box (18mm MDF veneered both sides damped with bitumastic sound

deadening and loaded with selected acoustic wadding) accommodates a larger bass driver (6.5 instead of 5 inches). Together these increase the Bigga-Tron’s bass potential without the need for reflex port augmentation. The claimed advantage is that a sealed box gives a tighter, faster and better defined bass with a more gradual decrease in output at low frequencies.

The worth of such parameters was easy to establish. More demanding was the selection and implementation of the drive units. AVI’s contention – vindicated to stunning effect in the NuNeutron – is that provided the amplitude response of a drive unit is smooth and extended at least an octave past the desired crossover point, then the softest diaphragms sound best. The Bigga-Tron uses the same 28mm soft dome Scanspeak tweeter as the NuNeutron and a 6.5 inch soft, damped curvilinear, doped paper diaphragmed bass driver from Vifa.

These are expensive units; to deliver their best in the context of the design, the crossover must be a piece of work. It comprises 13 elements, substantial ferrite cored inductors (apparently air cored ones have too high an electrical resistance), multiple, low-value polystyrene capacitors and operates as a second order Linkwitz Riley network. A single pair of brass-cored terminals connects the crossover to the speaker cable; there’s no provision for bi-wiring. AVI’s goal was absolute phase accuracy and, for that to be a possibility, the crossover has to be completely “non-intrusive”. Sensitivity is a good 88dB, impedance an easy nominal 8 Ohms, though AVI recommends amps of between 75 and 150 Watts.

So to recap: the Bigga-Trons are rather ungainly-looking nearfield monitors, designed and built with considerable care and attention to detail in what some might consider to be an old-fashioned way. They don’t look sexy, no hi-tech tackle to tickle your fancy. Just a couple of boxes.

But that doesn’t matter because, when you fire them up, they disappear. We’re talking about stereo imagery you can take a stroll around – the claims for phase accuracy seem to be well founded. Tonality is a revelation, too. With well-recorded material, the Bigga-Trons sound fabulously natural. Bright recordings are bright, dull ones dull. These are monitors after all and never less than revealing. But the music always survives the analysis. Distortion and phase anomalies are low; so is listener fatigue.

Initially the bass is disappointing; there doesn’t seem to be enough of it and it doesn’t go very low. But that’s misleading. The most notable absentees are boom and opacity. True, the Bigga-Trons don’t have the most muscular bottom end you’ll ever hear but it is one of the clearest and fastest.

Which, when teamed with their efficiency, control and quicksilver dynamics, makes them one of the most honest and enjoyable speakers I’ve heard at any price. At £599, they’re the steal of the year and certainly no joke.

LETTERS

Hi-Fi Choice's very own 'points of view' page, where you, the reader, can express your opinions!

LETTER OF THE MONTH



Cables: is it all types?

A NON-BELIEVER!

Any real differences in the sound quality of interconnects in your Super Test (issue 188) are due to the effects of the cable capacitance on the output stage of the signal source. (I have to say, I believe most of the sonic differences you report are figments of the reviewer's auto-suggestivity.) Different signal sources will produce widely different results with the same interconnects.

The cable capacitance causes three effects: 'ringing' of the source output stage (small parasitic oscillations on sharp changes in the signal wave-form), attenuation of higher frequencies and phase shifts. The ideal interconnect cable is therefore none at all – the signal source should connect directly to the amplifier.

Given that this is impractical, interconnects

should be just long enough to connect the source and amplifier together (a matter of a few centimetres, much shorter than commercial interconnects), made from a good quality cable (exotic materials are a waste of money) with a low capacitance per metre and have good quality (but again not exotic) connectors.

The best solution I have found is to make my own; for anyone with soldering skills, it is also a lot cheaper, and it allows you to spend money where it really matters – on your music collection.

David Bradshaw, London

Richard Black replies... I can't scientifically refute Mr Bradshaw's points because, frustratingly, the few really carefully managed cable tests (full double-blind testing with proper statistical and psychological controls and analysis) support his view. Maybe we are all mad but, as we are always urging, get along to a decent hi-fi dealer and try for yourself! No magazine worth a damn will presume to tell you what you, personally, can and can't hear, but those of us who reckon we can hear cables are not exactly alone.

Space does not allow a full discussion of cable effects, but while it's true that interactions between cable and amplifier are almost certainly important, they aren't the whole story and Mr Bradshaw's comment about 'parasitic oscillations', for instance, is not strictly accurate in most instances – it's more to do with transmission-line effects which occur at much higher frequencies than the audio band. In fact, one of the most bewildering things about cables is the very consistency of results between different source components with a given cable.

sounding, distortion-free, system for X-amount of money without all the gobbledygook and 'ifs', 'buts' and 'maybes'?

Incidentally, a glossary explaining the meaning of such words as 'grunge', 'grunty', 'welly' and 'in-yer-face' would be helpful.

Edward Pyke, Abergele, North Wales

The Editor replies... We are unable to reply to all the Help enquiries we get because the rate at which they arrive exceeds the space and time we have to reply. The ifs, but, and maybes arise because of the many variables that hi-fi has to cover: room acoustics, music taste, sonic taste etc. We will endeavour to create a glossary of audio adjectives in a forthcoming issue.

MIDDLE OF THE ROAD

In issue 187 Jason Kennedy's Notebook asked what we, the readers, want to see in Hi-Fi Choice.

Well, I assume that most readers, whether subscribers or casual purchasers have some kind of music system. Given that, it would be interesting to read more about mid-range products, rather than entry-level, for those building on their systems.

I suspect the volume of letters you receive for Help would endorse this. I realise you cannot omit budget products completely, but perhaps you could give them less prominence.

ML Jones, Co Limerick, Ireland

The Editor replies... Our recent issues have concentrated on more expensive product and I anticipate future reviews will cover a broader price band, so hopefully there will be something for everyone.

TOP TIPS

I've got a few suggestions that I believe will improve Hi-Fi Choice. First do more unsighted, panel group tests of budget equipment, especially speakers – such as your excellent test is issue 187. I believe there's a large untapped market of dissatisfied What Hi-Fi? readers looking for accurate, unbiased and consistent reviews they can trust.

Second, write more about the products' sound quality and less about describing it. Also drastically reduce the number of 'opinion' articles. After removing the often irrelevant and irritating waffle, the useful comments

ITS NOT FAIR!

I became interested in hi-fi around 14 years ago. Up till then I only had a portable radio cassette and midi system, but when my granddad died and left me some money, I spent most of it on a Nakamichi DR3 tape deck. My pre-recorded tapes sounded magical.

The most expensive item I own is a Musical Fidelity XA-1 amp, which I'm delighted with.

My question is: why are CDs, tapes, amp and speakers reduced in hi-fi shop sales, but interconnects and speaker cables remain the full price, even if they aren't new products?

Thanks for a great magazine.

Julian Bedford, Leeds

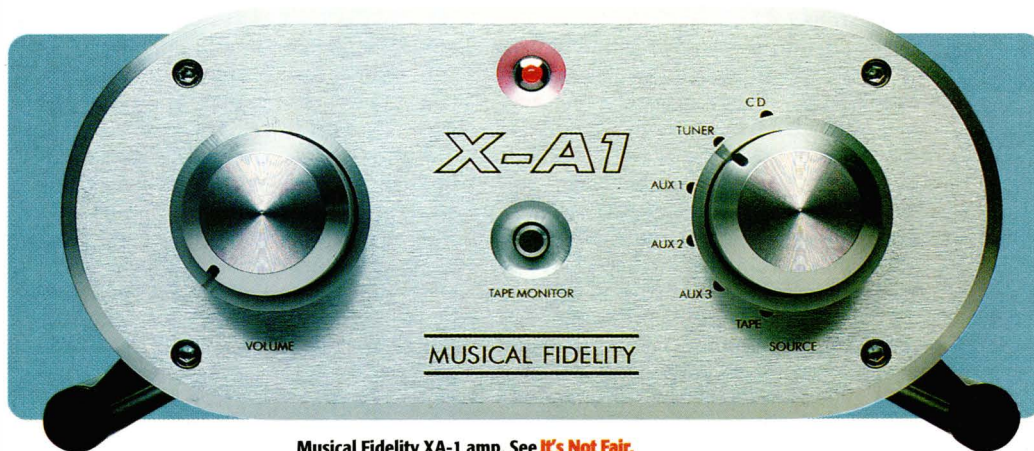
The Editor replies... Good question, we'd imagine it's because cables are less expensive to hold in stock

and, unlike components, aren't superseded very often.

DOUBLE-DUTCH

I have recently been invited to renew my subscription to your magazine, but would like to complain that when I wrote to your Help pages, six months ago, I got no reply.

Why is it just so difficult to obtain advice on buying a good



Musical Fidelity XA-1 amp. See *It's Not Fair*.

can normally be reduced to just a few words.

Finally blow your own trumpet more about your review methods (unsighted, panel, lab reports etc) which I believe are the best in the business. Why not use a "sound bite" style on the cover and a couple of paragraphs on the same page as Editor's Notebook?

Vince Cox, Bromley, London

BACK TO BASS-ICS

I have a query regarding the bass extensions reported in the compact speaker review in February's issue. The figures quoted seem to me to be rather high in the light of previous tests on similar speakers. The Tannoy R1s are at 60Hz and the Heybrook Heylette Bs at 56Hz, while your directory shows the Tannoy M1 and Heybrook Heylette at 45Hz.

I know these speakers are not identical but would expect a closer correlation than this.

By the way, I applaud the blind listening tests you conduct, as it is easy to become prejudiced when you know what you are listening to.

T Short, Croydon, Surrey

The Editor replies... The difference you note is due to the fact that the figures quoted in the directory are based on in-room measurements, whereas those in the review are derived by mathematical estimation. The latter are more representative of an anechoic response.

HAPPY CHAPPY

I faxed a letter to your office a couple of days ago asking if you had the current details of a loud-speaker manufacturer, Jordan Watts Acoustics, as the phone number listed in your magazine seemed out of date.

You replied very quickly and I am pleased to say that the new number you gave me was correct. It might be an idea to update your Manufacturers and Distributors Contact Numbers page, with this new number. To save you looking it up again the correct number is (01945) 474729.

Anyway, the real reason I am writing is to thank you very much for taking the time and effort to get me the above number which was much appreciated and I have already been in contact with the company. Thanks once again for all your efforts.

Andrew Leonard, Bucks

MARANTZ LASHBACK 1

How disappointing to read your disparaging review of the Marantz PM-17 KI Signature. I was puzzled by the original review, then it occurred to me

Heybrook Heylette.
See [Back To Bass-ics](#).



that the 'bug' was the ancillary equipment. Substitute one of the musically revealing B&W loudspeakers and a Marantz, Sony or Pioneer CD player and 'hey presto' all is revealed.

D Shakeshaft, London W1

MARANTZ LASHBACK 2

I regret that I cannot understand Paul Miller's bargraphs. Furthermore, it would be preferable if distortion was measured at 20Hz, 1kHz and 20kHz.

Another magazine says that the Marantz PM-17 KI Signature is capable of magical, musical involvement and, having heard the Marantz SACD demo I have to agree, yet you awarded it only three stars. I noted no problems with the frequency extremes.

Your Best Buy Primare A30.1 has more distortion, higher noise and poor overall

compatibility. Most revealing is the fact that two of your listeners guessed the brand correctly in a blind listening test. This, if true, means the Primare is unlikely to be sonically neutral, the prime requirement for an amplifier.

P Stanley, Potters Bar, Herts

The Editor replies... We're sorry to hear that the bargraphs are not clear enough. They were conceived as a replacement for plotted graphs for the sole purpose of making the measured results more transparent. In a nutshell they reflect how a component compares with the others in its group across five broad based parameters. In future we intend to reinforce their usefulness by taking account of all previously tested products in the bargraph averages.

As for the Marantz and Primare reviews, ultimately our reviews should be used as a guide to aid the selection of components that suit the user. Because of variations in taste, ancillary equipment and rooms, it's impossible to definitively say something is the best product in its price band for everyone. We use blind listening panels and as many alternative ancillary components as is feasible to cater for a broad range of tastes and systems, but inevitably there will be situations where our recommendations can be bettered.

COLOUR CODED

Thanks for an excellent magazine. However, I have to disagree with Dr Neil Straker, who wrote in March (*Mellow Yellow*), suggesting that B&W speakers only use Kevlar cones because of their nice yellow colour. I've owned three sets of speakers from JPW, Mission, and now, B&W. The latter's 60ls are clear and dynamic in sound quality. Why have B&W's 601, 602, 603 and CDM7SE speakers won so many accolades? Surely not because of the nice yellow coloured cones?

Your hi-fi tests are very good but how about comparing CD players verses MiniDisc players verses DVD players; expensive speaker cable verses cheap speaker cable, is the price difference worth it?

J. Bedford, West Yorkshire



A B&W Kevlar cone yesterday.



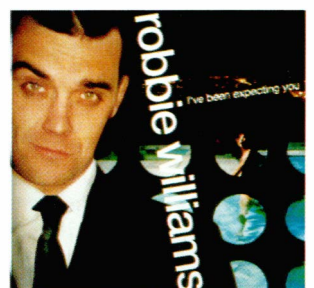
Marantz PM-17 KI Signature. See [Marantz Lashback](#).



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'I've been expecting you' the album: Mastered and listened to in Robbie's front room on PMC



HELP!

Jason Kennedy
is here to rid you
of your hi-fi woes!

LETTER OF THE MONTH



I'm looking to replace my system, and the amp department is giving me most cause for concern. Before I can make an informed decision, there are certain questions I need answered. What are the relative merits of integrated amps versus pre/powers, and what are the benefits of bi-amping?

Sandy Dalziel, Aberdeenshire

Pre/power amps: Putting the preamp and power amp sections of an amplifier into separate boxes ensures that delicate line level signals are isolated from interference from the power stage. It also allows the power supplies for each to be optimised for their particular function.

Bi-amping: To bi-amp you need an integrated amp with pre-outs and a stereo power amp, or a preamp and two stereo or four mono power amps. You also need speakers with two sets of input terminals (i.e. suitable for bi-wiring) so each drive unit can be driven by a separate channel. Bi-amping increases total power delivery, and allows each amp to work over a narrower frequency range. It can also provide a useful upgrade path, utilised by the likes of Arcam.

It's not true to say that a pre/power combination will automatically beat a comparable integrated amp, or that a bi-amp set-up is inevitably better than a pre/power; there are good and bad examples of all three. But, when you hear a great bi-amp combo like the Roksan Caspian integrated (£695) with Caspian Power (£595), you'll be convinced of the benefits.

♥ Roksan Caspian Integrated and Power.



GET A JAMO LEATHER CD WALLET!

Every issue, the reader whose letter is our Query of the Month will receive one of these stylish, leather CD wallets, courtesy of those lovely people at Jamo Loudspeakers.

THREE STEPS TO HEAVEN



My current system consists of a Rotel RCD-965 BX CD player, Mordaunt-Short MS3.40 Series 3 speakers and an old 70 Watt per channel Akai amplifier.

I want to upgrade the entire set-up, but I'm not entirely sure how to go about it. I have about £1,000-£1,500 to spend now, and could buy all three components – CD player, amp and speakers – in one hit. Alternatively, I could use my budget on just one item, the amp perhaps, and then add a CD player and speaker later on. *Christian Mertz via e-mail*

You could indeed spend all your money now and end up with a great sounding system. But the ability to improve a system over time is just one of the many beauties of separates hi-fi, and if you buy wisely it'll pay great sonic dividends in the long run.

The amplifier is probably the



♥ AVI S2000MI.

right place to start, and models like Musical Fidelity's X-A100R (£999), AVI's S2000MI (£999), Naim's Nait 3R (£780) and Exposure's RCXXV (£1,000) should all be vying for your attention. All four are suitably well judged in character for them to slip into your system without grizzling – for now.

For speakers check out the Jamo Concert 8 (£1,300), Celestion A1 (£899) and Dynaudio Contour 1.3 MkII (£1,198) standmounters, together with Castle Harlech (£880) and Dynaudio Audience 70 (£1,100) floorstanders. Look at the CD player last, with the likes of Arcam's Alpha 9 (£800), Naim CD3.5 (£1,050) and Roksan Caspian (£895) in contention.

When it comes together the end result will be really special.

MINIDISC R.I.P.?



I've been searching your web site for articles on MiniDisc without success. I'm wondering if this is because it's a format you feel will never take off properly, and has already died a death?

Stewart Pearl via e-mail

Far from it. MiniDisc took a while to get off the ground in the UK, much to Sony's frustration, but the format is now going great guns.

Convenience has obviously played a major part in its acceptance, its track access and editing features

giving it the edge over old-fashioned tape. As for sound quality, recent generations of hardware have proved its worth as a hi-fi medium. It can't match CD in absolute terms, due in part to the way it uses compression, but it easily betters your average cassette deck.

The bottom line is: CD-R has the edge on sound quality, but MiniDisc's flexibility and cheap software count heavily in its favour. With models like Sony's MDS-JB920 (£300) available now, you can buy with confidence.

♥ Sony MDS-JB920.



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BIG AMPS RULE



◉ **Sirius D200 and partnering passive Control Unit.**

 I'm considering buying a Musical Fidelity A1001 to go with my Martin Logan Sequel SL3 speakers. I've read in a review that it's a little lacking in clarity and would appreciate your comments.
John Napier, Bolton

“Big, gutsy and musical, with a smooth, fluid midband that satisfies from the very first note.”

The A1001 is undoubtedly an impressive amp – at £2,500 it damn well ought to be! It's a huge and heavy beast, with a

performance that's big, gutsy and musical, with a smooth, fluid midband that satisfies from the very first note. Build quality is a little flimsy for an amp at this price point, but the look and feel of the front panel is simply gorgeous.

All that said, it's by no means the last word in amplification for people with that kind of money to spend. Some sound more precise and detailed, others more spacious and open, and with speakers like your fabulous Martin Logan electrostatics at your disposal we'd suggest some alternatives that might make better use of their sheer transparency. The Sirius D200 (£2,995) would be a good option, as would the Krell KAV300i (£2,590) and even the new two-box SU-C3000/SE-A3000 from Technics (£2,997).

500 NOTES

 I've had an Arcam Alpha amp for seven years, but it recently decided that enough was enough. I'm looking for a replacement in the £500 price area that would do a set of five-year-old AR speakers justice. Most of my components were bought between four and seven years ago and cost £250-£350, and all have provided good service. I'll be looking to upgrade these over the next two years, so I'm hoping the amp will be able to bring the best out of my originals while doing justice to any better components I might acquire in the future. I hope you can help.

Julian Ward via e-mail

It's a little tricky to help you without more information about your Acoustic Research speakers, Julian,

not to mention the other partnering components. Still, if we provide you with a few suggestions you can see if you can arrange a home trial or two, or perhaps take your speakers to a specialist dealer and use them for auditions on-site.

The AR speakers of a few years back were reasonably sensitive beasts on the whole, so it's unlikely that high current delivery is a necessity. That means we can pretty much take our pick from our current favourites in the £500 ball park: Musical Fidelity's X-A1 (£480), Sony's TA-F3000ES (£500), Audio Analogue's Puccini (£475) and Pioneer's A-300R Precision (£400). If you want priorities, we'd pitch the Musical Fidelity against the Audio Analogue. Both are extremely good for the money – well built, sonically informative and extremely musical.




◉ **Musical Fidelity X-A1.**

HINTS & TIPS

 With separate pre/power combinations you've the option of using short speaker cables with a long interconnect between pre-amp and power amp. This has several benefits, not least reduced costs; with expensive speaker cables (especially when bi or tri-wiring) it's invariably cheaper to opt for a long interconnect that lets the power amp be placed fairly close to the speakers, thus allowing short speaker cables to be used. Whether it's actually better, sonically, is a moot point. Some power amps definitely like to 'see' a bit of resistance in the speaker cables, and may work best with (say) a minimum 3m run. At the same time, a long interconnect between pre and power amp may result in radio (rf) breakthrough, especially with unscreened cables. So check with your amplifier manufacturer before you set off on this route, and if possible try both options before deciding.

SWEDISH POP

 My current system consists of a Sony CDP-XA30ES CD player, Pioneer VSA-701S home cinema amplifier and B&W P5 speakers. I'd like to improve the system by buying a new amp or pre/power combo. I've looked at the Denon PMA-2000R and the Primare A-20 MkII – in Sweden these both cost around £600. I have the opportunity of buying an Exposure XVIII and Exposure XIX pre/power combo for £900 (this is at the limit of my budget).

My room is about 6x4 metres and I don't listen at very high volumes. I prefer pop to classical and I would appreciate your advice on what to buy.
Richard Clarke, Stockholm, Sweden

We're not familiar with the Denon amp you mention, so if it's any good we'll have to take your word for it. The Primare A-20 MkII is a very good amp, on the other hand, brimming with Scandinavian pedigree. It's also available for £600 in the UK, having dropped recently from £800, and at that price it's undoubtedly one to watch. It's superbly built, with a sound that's rich, substantial and engaging to a tee. What's more, it should suit your B&Ws well – they don't like

a thin or bright sounding amp, a description that could never be used for the Primare.

As for the Exposure combo, that too would seem a tempting prospect. A price of £900 means a serious discount, and its bold and authoritative sound is thoroughly enjoyable. With that kind of saving we'd be tempted to go for it, but if you prefer a richer style the Primare may still be the better bet. For alternatives, check out amps from the likes of Musical Fidelity and Naim.

◉ **Primare A-20 MkII.**



RADIO STAR

Pioneer F-504RDS Precision.



I'd like to ask your advice on which tuner I should buy. My system (with which I am extremely pleased) comprises of an Arcam Alpha 8R amp, 8SE CD, Sony MDS-JE520 MiniDisc and Tannoy Precision P10 speakers (bi-wired with Cable Talk Talk 3.1 bi-wire). Interconnects are Monster Interlink MkII 400s (bought in the States recently).

I auditioned the Creek T43 at the recent CES show in Las Vegas and was impressed by its clarity and imaging, but on my return to the UK I wondered if I could do better justice to my system? Short listed are the T43, Arcam's Alpha 8 tuner and the Rega Radio. Possible 'budget' choices are the Arcam Alpha 7, Sony ST-SB920, Marantz ST48, and NAD 412. My priority is performance and sound quality – I can manage without LW, RDS and a remote. What do you recommend up to £400?

On a separate note, is it worth buying an Alpha 8P power amp to bi-wire and bi-amp my speakers?

Dave Chadderton via e-mail

You've short listed some very good tuners, but on sound alone none can out do Creek's T43. It's performance is superbly clean and musical at £399, and while some may be put off by its 'agricultural' aesthetics and lack of RDS, on sound alone it's a definite winner.

One other option that you don't seem to have considered is the Pioneer F-504RDS Precision (£300). For starters it would save you £100 and is also an excellent performer, though perhaps not quite as engaging as the Creek. If you want to save more, the 'budget' Marantz (£120) and Sony (£180) models you mention offer very fine value. But if you've got up to £400 to spend, you may be better off spending £100 on a decent aerial installation and opting for the Pioneer.

As regards your bi-amping question, – yes, adding an 8P power amp to your 8R integrated will certainly give your system more punch and focus, and improve dynamics. For more details on bi-amping, see *Letter Of The Month* (p21).

SOURCING THE CLASSICS



I have a Rotel RCD-970BX CD player, Audiolab 8000S amp, Dynaudio Audience 50 speakers, van Den Hul The Second interconnects and van Den Hul CS122 speaker cable. I'm hoping to upgrade my CD player with either a Marantz CD63 MkII KI-Signature or a Pioneer PDS-505 Precision, and I'm looking for a sound that's detailed, focused, open and full, and also refined and natural. Which one will better match my system? I mainly listen to classical and jazz music.

Maria Guadalupe Barbosa, Brazil

"Detailed, focused, open..." You really want it all, don't you? And why not. A well chosen CD player will help give your system all these things, and the two you mention certainly stand out under £500.

First, the Marantz CD63 MkII

KI-Signature. Smooth and focused, its sound has seduced many a buyer since its introduction, and at £400 it's undoubtedly great value-for-money. Then there's the Pioneer PDS-505 Precision, another top-notch sub-£500 player with a sound that's open, subtle and superbly three-dimensional.

A tough choice indeed, and one that should really be sorted out with some serious auditioning. But if you want our gut instinct, we'd go for the Pioneer at £460. It's a player that takes time to fully appreciate, and on initial listening the Marantz may well impress more, but the Pioneer's fluidity and soundstage depth is hugely satisfying in the long term. It should suit the rest of your system too, it's subtle yet assured nature balancing well with the direct approach supplied by Audiolab and Dynaudio.

Pioneer PDS-505 Precision.



CD HEADACHE



Which CD player would you consider to be most compatible with B&W DM603 speakers and Cyrus pre and power amps? I'm considering the Copland CDA-266, Arcam Alpha 8SE or Cyrus dAD3Q, but as I'm unable to listen to these models locally I would appreciate your assistance.

Ken Mellor, Guernsey

We appreciate how difficult it can be for people living in remote areas to undertake decent auditions, but it's really impossible to make a single, absolute recommendation based on a simple kit list – there are too many variables at play. We can recommend a short-list, and point out the pros and cons of each, but it's your ears that

should make the final decision.

Of the players you list, the safest option to buy 'blind' would be the Cyrus dAD3Q (£898). It's a good match for your amps both visually and sonically, with a clear and transparent delivery that's easy to like.

The two other players are also excellent performers. The Arcam Alpha 8SE (£600) sounds a touch warmer and more meaty than the

Cyrus, though perhaps not quite so crisp and detailed, while the Copland CDA-266 (£1,199) shows impressive balance and a deft sonic touch. Ideally you should add the Arcam Alpha 9 (£800) and Naim CD3.5 (£1,000) to a list of auditions, but if you need to buy blind the Cyrus has an undoubted edge.

○ Cyrus dAD3Q.



HINTS & TIPS

Although most enthusiasts take great pride in their equipment, a surprising number fail to take good care of their CDs – perhaps feeling that a few fingerprints and scratches won't make much difference. Of course it's true that a good CD machine will not skip or jump when faced with a soiled disc. But even if your player has excellent error correction, the sonic difference between a new clean disc and one that's picked up a few marks is often audible.

Hi-fi magazines are always giving advice on how to clean CDs, but easily the best course of action is not to get them dirty and scratched in the first place! So treat your CDs with respect. Avoid fingering the playing surfaces, and always return the disc to its protective caddy after use. That way you really will get Pure Perfect Sound Forever – well, almost.

THE YOUTH OF TODAY



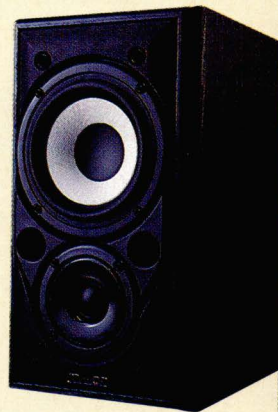
I am 15 years old and have a Technics SL-PS50B CD player, a NAD 3020i amp and a pair of JPW Mini Monitors. It sounded nice until my five-year-old cousin poked in the cones on the JPW's! I wanted to kill him, but that wouldn't help, so instead I want to replace the JPW's – they now sound awful! Because I'm only 15, the budget is very tight. Any suggestions?

Anthony Cresswell, South Yorkshire

You're right, Anthony – buying a new pair of speakers would be much more productive than slapping your cousin. If you want to keep things below £100, check out JPW's ML310 (£90) for clean, detailed sound, or

for more bass there's the Tangent Acoustics Monitor Six (£80). If you can stretch your budget a little further, it's well worth trying Tannoy's Mercury M1 (£120) and Acoustic Energy's Aegis Ones (£150), or for a gutsier approach there's the Mission 700 (£130). Armed with one of these, the threat of physical violence should no longer seem necessary.

Just one more thing before we go – don't forget the vital part that stands and cables play, even at budget level. Pick a pair of speaker stands like Atacama's SE24s (£70) and some good quality, affordable speaker cable – Cable Talk's Talk 3.1.



● Mission 700.



FLOORED BY SPEAKERS



My set-up includes a Denon DCD-635 CD player, Technics SU-A800D Mk2 amp and Tannoy M2 speakers on Atacama stands. I'm keen to change my speakers, and the Dali 606 seems like it might be right for me. Or would the Mission 752 Freedom be a better choice? My room is 5x5m.

Vitor Serpa, Portugal

If you're interested in floorstanders in the £400-£600 region, both the models you mention are fine buys. I'd particularly recommend the Dali 606 (£400) if you're into indie or rock music – its bass is excellent, full of weight and authority, and its smooth treble character won't sound too harsh or abrasive with dodgy recordings. Its sound is cohesive, and it manages to pack a real dynamic punch.

If your music tastes are more 'refined' (acoustic, classical and the like) it's worth spending the extra on the Mission 752 Freedom (£578). It's a superbly musical-sounding speaker, with a lovely, fluid midband and a delicate touch matched by few floorstanders at the price. With similar cost in mind, other suggestions include the Musical Technology Harrier (£400), Neat Mystique 2 (£575) and B&W DM603 (£500).

● Dali 606.



HINTS & TIPS



Speaker drive units can produce quite a lot of vibrational energy that is transmitted back into the cabinet, creating resonances that lead to the music sounding 'loud' and noisy during peaks. One way of combating this is to mount the drivers on a lossy absorptive material that introduces some decoupling, while still maintaining a reasonable degree of rigidity. Deflex make a range of gaskets that fit between drive unit and speaker cabinet, absorbing vibration so that cabinet resonance is reduced. The result is a smoother, freer sound that feels more comfortable during loud complex passages, yet with no loss of low-level detail or dynamics. The cautious should try decoupling the bass/mid drive unit first, before moving on to the tweeter – though doing both undoubtedly produces an effect that's greater than the sum of the individual parts.

READER SEEKS MATCH FOR SONY



I'm about to buy a new system and have about £1,500 to spend. Both looks and sound are important to me, so I've decided to buy the amp and speakers from Sony's 3000 ES range. The thing is, I can't decide on a short-list of speakers to audition with them. I listen mainly to rock, indie and techno, with some folk thrown in for good measure, and my room is 16x16 feet. I love voices that send a shiver down my spine, but hate shrill treble – some speakers seem to separate treble from the rest of the music. I have managed to hear the KEF Q35s, and liked them.

Andrew Newton, Crewe

The two Sony components you've chosen are stunning lookers, and their sound is impressive to boot. The 3000 ES amp is not the most powerful around, however, so

make sure you pick speakers that are reasonably easy to drive. That shouldn't be a problem – most models currently available offer decent sensitivity, making it easier to find a match.

Let's look at standmounters first. Dynaudio's Audience 40 (£400) is a definite candidate – a compact speaker with a persuasive and room-filling sound. There's little to beat it at the price, but you may find its vinyl-wrapped cabinets don't quite

meet with your aesthetic requirements. It's not ugly, just ordinary.

More stunning in a visual sense are the B&W CDM1SE (£600) and Sonus Fabre Concertino (£599), both of which offer particular strengths in the midband, but with your music tastes in mind you're probably better off with the Dynaudio (or its £577 big brother, the Audience 50).

From a floostanding perspective, you've already heard KEF's Q35s (£350) and liked them. For a ballsier approach you could also listen to Acoustic Energy's AE109 (£350), while Mission's 774 (£500) not only looks good but sounds great too, though you might find its treble a touch hard. Also listen to Dali's 606 (£400), and if you fancy spending more check out Celestion's A Series – £600 upwards.

● B&W CDM1SE.



MY FIRST HI-FI 1



I'm building my first hi-fi and would like some advice. I've come up with a short-list: either an Arcam Alpha 7 or Marantz CD-67MkII CD player, hooked up to a Audio Analogue Puccini or Musical Fidelity X-A1 amp. For speakers, I'm choosing between the Tannoy M1, Heybrook Prima 2 and JPW ML510. These would be connected with QED Qnect 2 interconnects and van Den Hul CS122 Hybrid or Cable Talk Talk 3.1 speaker cable.

I listen to all genres of music but more usually jazz, dance and pop/rock. I hope to upgrade the system in the future, so being able to bi-amp would be a plus. *Elijah via e-mail*

There are so many permutations when it comes to putting a system together; there is only way to really sort it out, pick a good dealer, get listening and when you find a combo you like, buy it!

You've emerged from your research so far with seven different prospective components, all of which are among the better of their breed. But just because two products are well rated in their own right, it doesn't mean they'll work well together, and that's where

the listening comes in.

From your list, we'd be most intrigued to hear what the Arcam Alpha 7 CD player (£330), Audio Analogue Puccini (£475) and Heybrook Prima 2 (£129) sound like in unison – it could be a pretty potent combination! However, it might be worth spending more on the speaker front – something like the Mission 771 (£170), Heybrook

“To really sort it out, pick a good dealer, get listening and when you find a combo you like, buy it!”

Heylette B (£199) or KEF Q15 (£200), or if funds permit go for something more ambitious.

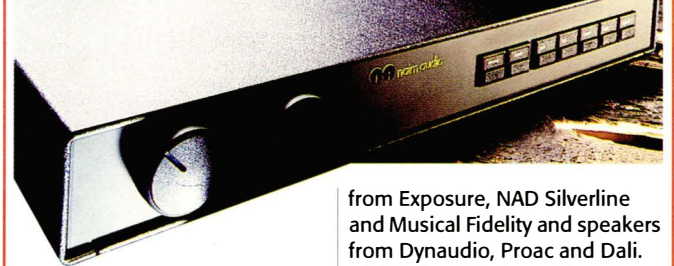
Of the two cables you're considering, the van Den Hul is the better option if it falls within your budget, and don't forget a sturdy pair of speaker stands – Atacama SE24 (£73) or Partington A-20 (£120) would do nicely. Remember: your journey on the path to audio Nirvana is just beginning.

◉ Arcam Alpha 7.



WHERE TO NEXT?

Naim Nait 3.



My system consists of an Arcam Alpha 7 CD player, Arcam Alpha One Amp and B&W DM601 speakers, connected by Audioquest Quartz interconnects and Cable Talk 3.1 Biwire speaker cable. Equipment sits on a Target VR4 rack and Atacama SE24 speaker stands (filled with soundbytes) resting on 30mm thick marble tiles.

This set-up was purchased six months ago and was an upgrade from a JVC midi system. When first set up it was a 100 per cent improvement, but after living with it and listening to friends set-ups, I feel that the treble is too sharp and the bass/midrange lacks punch and drive. So I'm looking to upgrade, and I have a feeling that the CD player will improve through a better amp and speakers. But which first?

I've auditioned Arcam Alpha 9, Naim Nait 3 and Linn Majik amps, with KEF Q35, Naim Intro, and Linn Keilidh speakers. I liked the Nait 3/Intro set-up the best. I also like the look of electronics

from Exposure, NAD Silverline and Musical Fidelity and speakers from Dynaudio, Proac and Dali. Which should I choose?

Vince Coyne via e-mail.

Options, options, so many options. Calm down Vince! We agree that amp and speakers should be your first port of call, probably with the amp as priority, and it sounds like you might have already found your ideal combo – if the Naim gear appeals to your ears, why not go for it?

The other names you mention are all makers of quality gear, and it's well worth investigating further if time permits. The more research you undertake, the more secure you can be in the knowledge that years of musical pleasure lie ahead. You should certainly check out the NAD Silverline gear, for example – anyone who read last month's issue will have witnessed our esteemed Editor swooning at its charms – and speakers like Dynaudio's Audience 70s £1,100 would partner it well. In the end, though, you have to let your ears be your guide. If the Naim fits, buy and be happy.

MY FIRST HI-FI 2



I'm buying my first separates system soon and I want to know what you think of the following: Marantz CD-67MkII CD player with a PM-57 amp and Tannoy Mercury M3 speakers, total cost £530. Do you think this is a decent system for me to start with?

Lee Cafferkey, London

Sure, Lee, that should make a pretty good starting point on the road to hi-fi Damascus. We're not overly keen on the PM-57 amp

“The CD-67MKII CD player and Tannoy Mercury M3 floorstanding speakers are good buys.”

(£200), but the CD-67MkII CD player (£250) and Tannoy Mercury M3 floorstanding speakers (£230) are good buys, and the business link between Marantz and Tannoy should help ensure the whole lot finds synergy. What's more, it looks like you're getting a good price – £150 less than their individual prices combined.

However, if you're prepared to put in more effort, try listening to combinations of the following: Sony CDP-XE310 (£140), Yamaha CDX-493 (£180) CD players; NAD C320 (£200), Rotel RA-971 (£200) amps; Acoustic Energy Aegis One (£150), Mission 771 (£170) speakers. The Sony/NAD/Acoustic Energy combo works particularly well. And don't forget to budget for decent stands and cable.



HINTS & TIPS

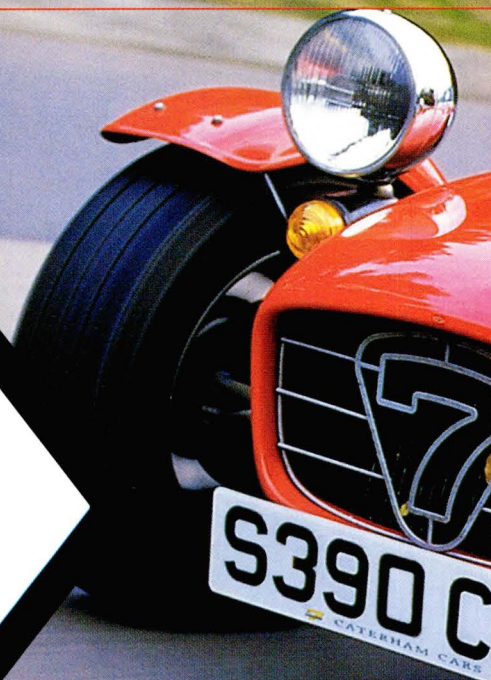


Improving the quality of the mains supply can bring audible benefits to any system. Start by making sure all your connections are clean and tight, and look into the possibility of replacing some stranded mains cables with solid core types where this is easy to do. Neon indicator lights in distribution boards add noise to the mains, and should be avoided – as should illuminated plugs or sockets. Going further, equipment with removable mains cables terminating in IEC or figure 8 plugs can be upgraded with a specialist cable from the likes of Kimber. Also investigate mains conditioners, and see whether one of these brings audible benefits. Cleaning up the mains will allow your system to reveal its full potential, letting you hear the sound you paid for. Don't forget to switch off and unplug before working on mains cables!

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COMPETITION

WIN THE NEW KINGS OF CASTLE ACOUSTICS

Answer our simple questions and you could win one of three pairs of speakers from the new Castle Acoustics Inversion series. Get to it...

There is both science and art in building quality loudspeaker systems. From the 1970s Castle Acoustics has sought to be a complete manufacturer and is one of the few building both its own cabinets and drive units in-house. Following the launch of the Inversion series we have a pair of each model in this three-strong line-up to give away.

The Inversion series features unusual tapered cabinets and new drive units utilising cones manufactured from the stuff that Michael Schumacher sits in, Formula One uses and 747 engine fan blades are made of. No prizes for guessing – it's carbon fibre. This revolutionary woven carbon fibre cone first appeared with Castle's Avon. The material is exceptionally light yet has a stiffness equal to metal with negligible energy storage potential resulting in a dynamic and involving sound.

The models up for grabs are: first prize – a pair of Inversion 100s. A substantial two-way, three-drive unit model, standing at 108.5cm high and sporting a pair of 17cm mid/bass drivers, one of which fires up from the cabinet top. Priced at £1,975, it incorporates twin-pipe quarter-wave loading and is touted as the effective replacement for Castle's highly regarded Howard.

Second prize – a pair of £875 Inversion 50s. A two-way 95cm high floorstander, set to replace the Avon in Castle's range and also featuring a 17cm main drive unit.

Third prize – the base model £425 Inversion 15s. A two-way 42cm stand-mounter with a 15cm mid/bass driver.

Winners will be given a choice of sumptuous real-wood veneer finishes: cherry, mahogany, birch, maple, natural, walnut and antique oak. And, for the price of a stamp, you could end up enjoying the company of these fine speakers in the comfort of your home.



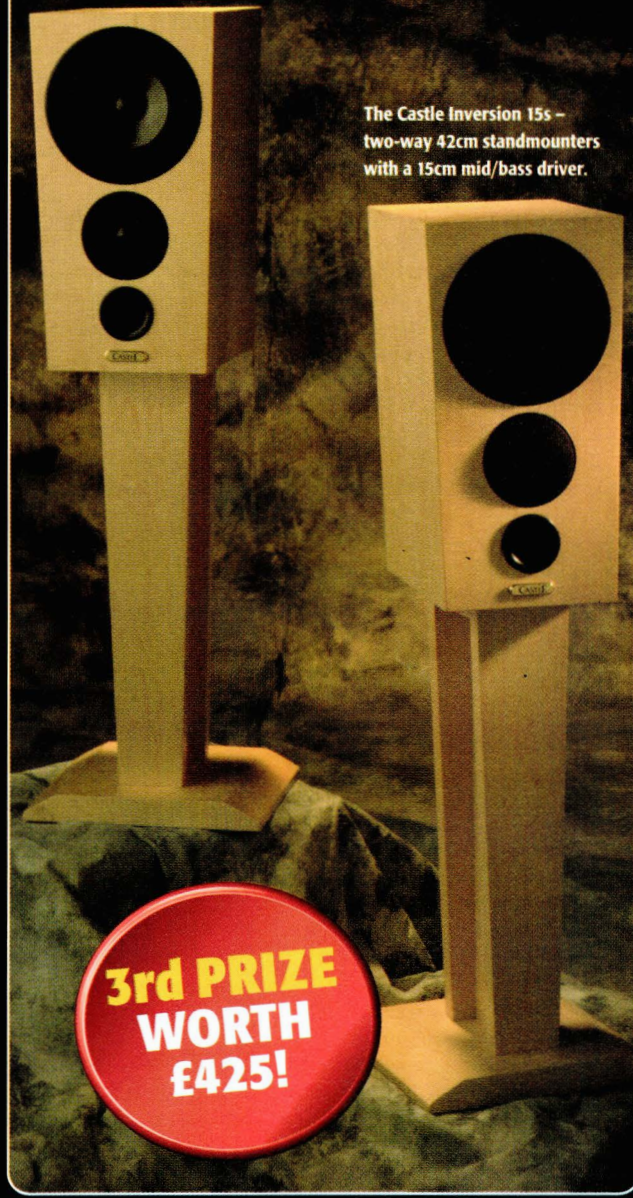
The Castle Inversion 100s have been hailed as the successors to Castle's highly esteemed Howard model.

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The Castle Inversion 50s – two-way 95cm high floorstanders which are set to replace Castle's Avon model.



The Castle Inversion 15s – two-way 42cm standmounters with a 15cm mid/bass driver.



HOW TO ENTER

Answer the questions below by circling the correct answers, then fill in your name, address and daytime telephone number in the spaces given.

The Questions

Which model are the Inversion 50s set to replace in Castle's range?

- a) Kendal
- b) Avon
- c) Howard
- d) Keep

What material is utilised in the Inversion series drive unit cones?

- a) Carbon paper
- b) Carbon-monoxide
- c) Carbon fibre
- d) Carbon dioxide

Post this entry form to:

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All entries must arrive by First Post, Thursday 27 May 1999.

Please remember to tell us whether you are over 18 years of age.

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- 1) The Closing Date for the Castle Acoustics competition is First Post, Thursday 27 May 1999.
- 2) Winners of the Castle Acoustics Competition will be judged from all correct entries submitted, and drawn at random after the Closing Date given in 1) above.
- 3) All winners will be notified by post.
- 4) The Editor's decision is final and no correspondence will be entered into.
- 5) The Castle Acoustics Competition is not open to employees of Dennis Publishing Ltd, Castle Acoustics nor their suppliers, agents or associates.
- 6) We regret this competition is open to UK residents only.
- 7) No cash alternatives will be offered.
- 8) We reserve the right to substitute alternative prizes with equal value to these shown, in the unlikely event of stock being temporarily unavailable.
- 9) By entering the competition, you agree to be bound by the rules.
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CHFC 905A

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POSITIVE feedback

Paul Miller gets to grips with the Cyrus aCA7/aPA7 pre/power combo and finds a genuinely feedback-free tranny amp.

For more than a few years, Mission's Cyrus integrated amplifier was a rallying call to audiophiles, earning a succession of swing-tags from *Hi-Fi Choice* as the mid-priced amplifier of note. Since that time, this mid-sized product has evolved into MkIII guise and has been joined by a host of matching components, including CD players, a tuner, AV and multi-room preamps, power amps, outboard power supplies and a phono EQ stage. All the products are housed in Cyrus' die-cast chassis, providing a motif for a comprehensive range that has the ability to communicate from component to component via an 'intelligent' BUS.

So the Cyrus range is stylish and exceedingly flexible, but is it particularly radical? One component, at least, is highly innovative, if not unique. This is the new aPA7 power amplifier, a £948 apiece monoblock design based around what Cyrus describes as a 'Zero-Feedback' topology. To discover more about the pros and cons of negative feedback, please see my companion *Oasis* feature on page 14. Here, at least, eliminating negative feedback from the circuit is intended to enhance its sound quality without compromising either the amplifier's frequency response, its output impedance or pattern of distortion.

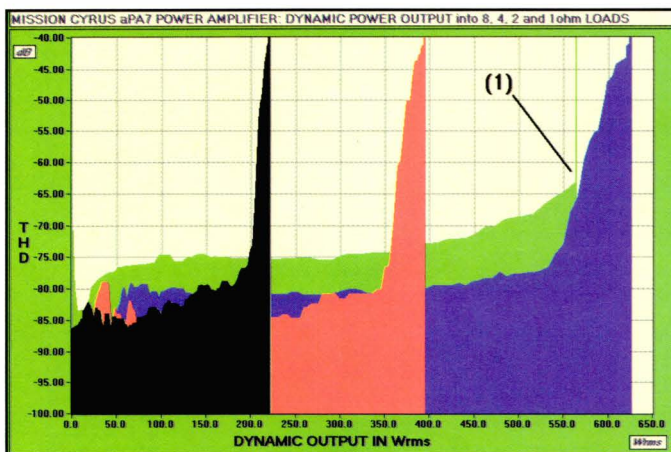
Little of this is evident from the aPA7's compact, matt black

enclosure and integral heat-sinks, although the rear vent for its cooling fan does hint at the potential for prodigious power outputs. But, before audiophiles begin popping blood vessels at the thought of whirring fans, even this sector of the aPA7 is logic controlled. By mapping the safe delivery of high current with time, the speed of the fan is continuously varied, ensuring that when the music falls silent, so does the fan.

POWER CURVES

And what power! The aPA7 meets its rated 150W/8ohm output but goes on to deliver 221W, 393W, 622W (17.6A) and 563W (23.7A) into 8, 4, 2 and 1 Ohm loads, respectively, under dynamic conditions before Cyrus' in-built protection pulls the plug (1, below). We can see this clearly enough on the accompanying graphic, which profiles its power output

"One component is highly innovative, if not unique. This is the new aPA7 power amplifier, a £948 monoblock design based around what Cyrus describes as a Zero-Feedback topology."



into these loads (black, red, blue and green traces, respectively). With musical transients of even shorter duration (<5msec), the maximum current delivery increases to 27.4A (or 750W into 1 Ohm). So don't be put off by the aPA7's diminutive stature, because this amp will drive 99 per cent of loudspeakers with an iron fist.

THE TECHNOLOGY

As ever, the secret behind the aPA7 lies tucked away under its bonnet along with 'traditional' features like star-earthing and the latest Slit-Foil capacitors. There are two key stages to the aPA7. The first is a highly linear voltage amplification stage with limited emitter-feedback based around the individual transistors themselves (this prevents the gain running out of control or behaving unpredictably with temperature — see *Oasis*). Importantly, this stage has been conceived to provide very low distortion, noise and a wide bandwidth, without relying on feedback to 'paper over the cracks'.

It provides about 34dB of gain (magnifying the input by x50) before addressing a second amplifier stage that provides sufficient current to maintain this voltage across the speaker load. Here's where the clever stuff happens. Any distortion inherent in the final current amplifier caused by it driving the speaker load is detected as a change in the voltage flowing through it. Ideally, the current amplifier has unity gain (a magnification of x1), so 5V going in should emerge as 5V, not 4.9V or 5.1V.

If a difference is observed, this is used to either raise or lower the input voltage so as to maintain the correct output voltage. This technique also maintains the low 0.02 Ohm output impedance enjoyed by the aPA7, which betters the

0.1 Ohm or so typically achieved by conventional moderate-feedback amplifiers. Distortion too, remains below 0.02 per cent right across the amplifier's dynamic range. Cyrus' method amounts to a form of compensation but it's not negative feedback. Rather, it's a form of very limited positive feedback which, taken too far, would turn the aPA7 into an oscillator! Naturally, the aPA7 is specified as unconditionally stable into any load.

SOUND QUALITY

As is my practice, this combination was evaluated under blind conditions using a Theta Data Basic/DSP Progeny CD transport and DAC and Audio Note AN-E/II loudspeakers. Cyrus' own £598 aCA7 remote-controlled preamplifier and £328 outboard PSX-R power supply are natural partners, and were drafted in at the beginning of our session. Right at the outset, our listeners agreed that this was a very distinctive-sounding combination, if not always natural or believable. Indeed, though the full, warm and natural quality of its bass was flavoursome, its "genetically-engineered treble" was, to our ears at least, less appealing.

Annie Lennox' *Walking on Glass* sounded a little too 'glassy'; her voice recessed in relation to the sharp, driving rhythm of the bass line and the untidy, gravel-like quality of percussion. The cellos that open Mahler's *2nd Symphony* sounded tremendously





◉ This radical design could prove a signpost to a new breed of amplifiers that manage gain, response and stability while offering low distortion and excellent tolerance of difficult speakers, without recourse to negative feedback as a performance 'band-aid'.

gruff and menacing, a deliciously rich roll of sound that played to the aPA7's strengths unlike the higher strings and percussion that build tension into the body of the piece. Here the Symphony teetered on the edge of shrillness, the horns introducing a hint of discomfort while the intermittent crescendos of percussion were likened to the orchestra "dropping

great sheets of plate glass". This theme was repeated from track to track and disc to disc and, with hindsight, is not atypical of our panel's response to standard 'high feedback' designs, like the Restek or T+A from HFC 189. In the event, this coarseness was largely attributed to the micro-controlled aCA7 preamplifier

whose performance, though good for the price, is not in the same league as the aPA7.

Feeding the aPA7s from the same Deltec DPA100S preamp used in countless *Choice* tests over the years, allowed them to flourish: the soundstage expanding in scale, the music in drive, clarity and determination. Annie Lennox's *Diva* CD now sounded appropriately positive - her voice sharper and more powerful, the backing track easy to differentiate and the bass drier, but quicker in attack. All styles of music enjoyed an altogether crisper and more polished delivery, although the treble is arguably still a little too dry, lacking the 'airy' space necessary for a truly strain-free performance.

Lyle Lovett was revealed in articulate fashion, complemented by a tuneful and powerful bass, a richly detailed midband and a tightly focused treble that tracked the swings of guitar and percussion with tremendous authority. Of course, this description might seem at odds with that of the archetypal 'low feedback' amplifier that, through other aspects of design, might sound softer and warmer. Just remember, 'low-feedback' designs, and especially low-feedback valve amplifiers, typically suffer far higher levels of harmonic distortion and are far more susceptible to variations in the speaker load than the Cyrus aPA7. By dint of its clever engineering, the

'zero-feedback' aPA7 actually has far more in common with the performance of a high quality, solid-state amplifier employing moderate levels of feedback.

CONCLUSION

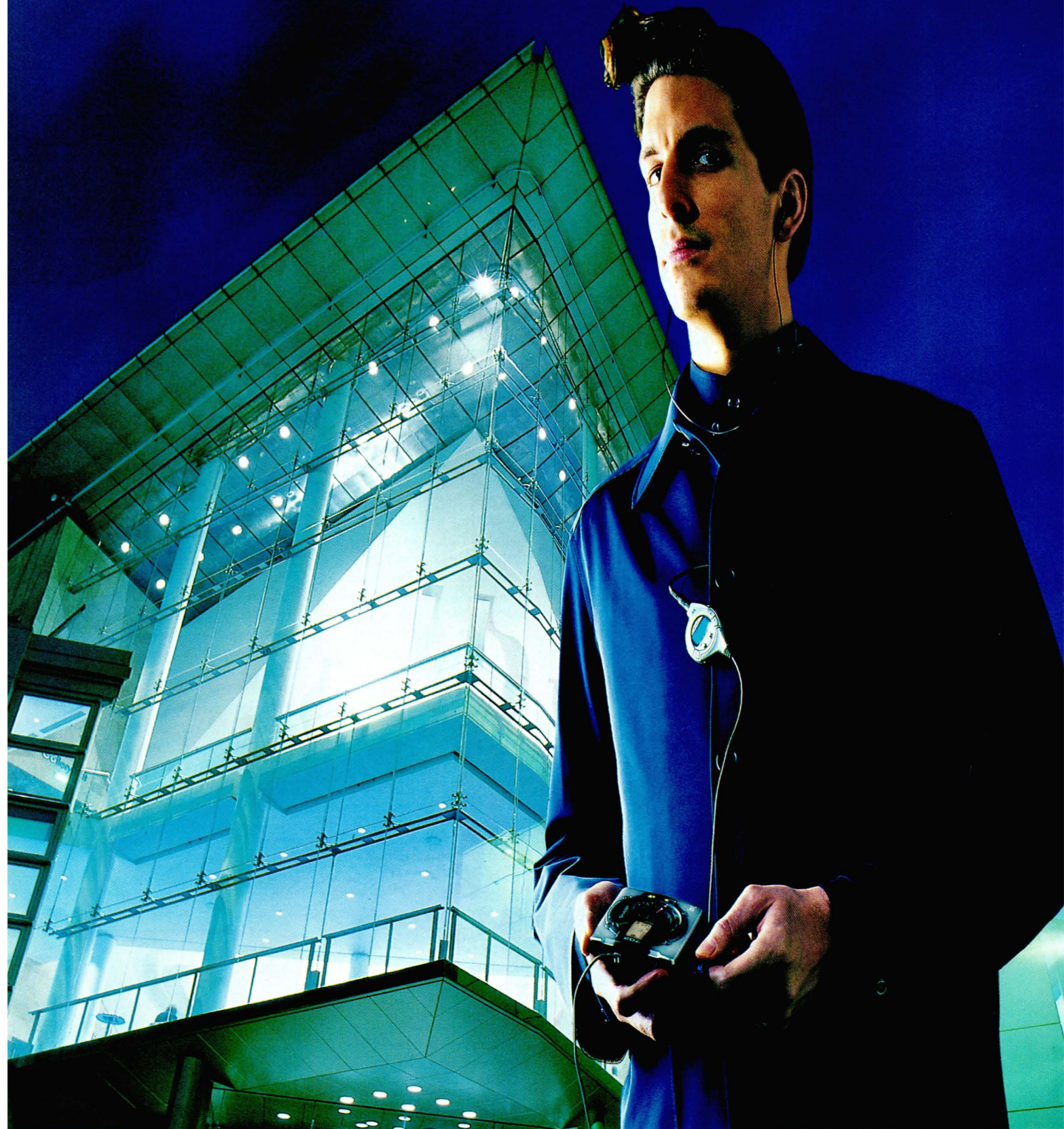
The aPA7 sounds very quick and powerful with unburstable reserves of power, an impression reinforced by my lab tests. Its tactile bass is its best feature, encouraging the kind of drive and 'grip' of musical events that few amplifiers ever achieve. The irony, of course, is that the (now defunct) DPA100S preamp relies on a veritable truckload of feedback to maintain its high level of performance, while the aPA7 uses none. As the engineer said to the actress: "It's not how much feedback you have, but how you use it that counts."

"The aPA7 sounds very quick and powerful with unburstable reserves of power. Its tactile bass is its best feature, encouraging the kind of drive and 'grip' of musical events that few amplifiers ever achieve."



VERDICT	
SOUND	★★★★☆
BUILD	★★★★★
VALUE	★★★★☆
PRICE	aCA7/£798
PRICE	aPA7/£1,896
<p>■ A genuine departure from the transistorised norm, the powerful aPA7 amp combines tuneful bass, rich midband and sharply focused treble.</p> <p>■ ONE YEAR GUARANTEE</p> <p>☎ Cyrus Electronics (01480) 451777</p>	

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WHAT HI-FI?



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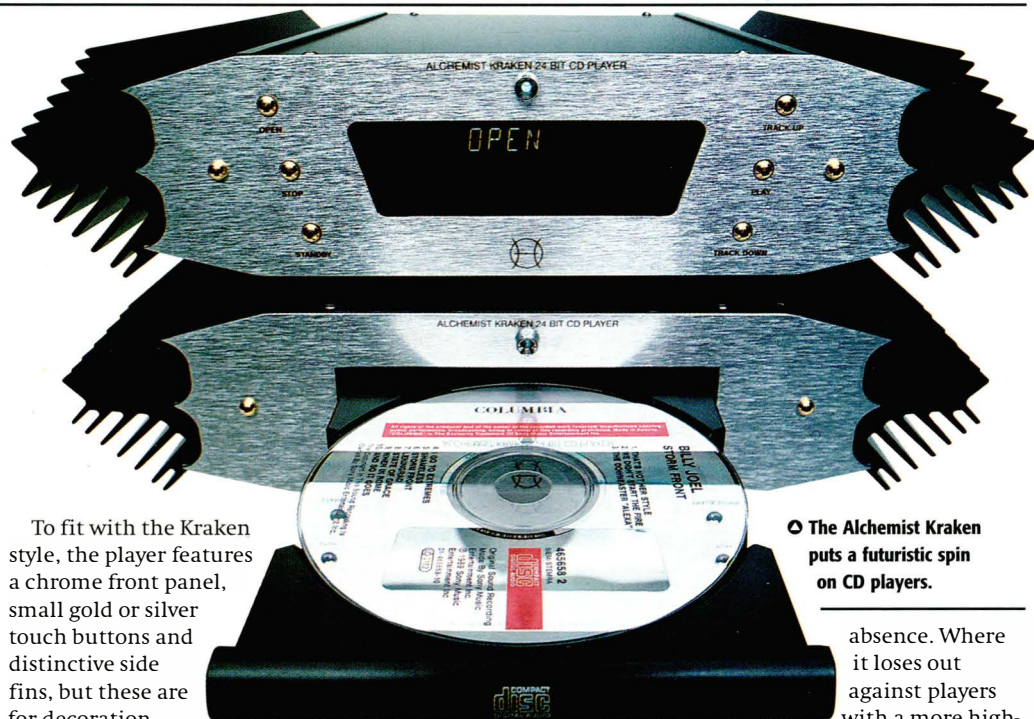
THE KRAKEN awaketh

Alan Sircom jousts with the multi-finned Alchemist Kraken, a new two-box CD player with a twist.

I have fond memories of the original green-Hammerite Kraken amplifier that the Alchemist brand got started with in the early '90s. So does Alchemist, as it was one of its most successful products. The 'new look' brushed chrome Kraken integrated and pre/power amplifiers soften the lines of its predecessors. But the problem remains; Kraken matches little else.

Those untroubled by such things are fast becoming the minority today, so Alchemist has built itself a CD player to match. The £1,249 Kraken CD is divided up into two boxes, but this is as much for appearance as for any sonic bonus. The player's boxes are split in the fashion of a Naim player, with the digital and analogue CD gubbins in one box and all the power supplies in the other. Connection is by a slim and simple D-Sub multi-pin cable.

Alchemist has moved the main controls on to the power supply, which makes both boxes look busy, but separating the control system from the CD drive and the digital converter can only help improve the sound. However, it may have a downside, as there is the occasional, irregular click and clunk through the speakers as the player locks on. On a more personal note, I find this set-up infuriating, especially if the two boxes are on separate shelves. One automatically searches around the CD tray for the play/pause and open/close buttons, only to find them on the other box. Still, this frustration is sure to fade with familiarity.



◉ The Alchemist Kraken puts a futuristic spin on CD players.

To fit with the Kraken style, the player features a chrome front panel, small gold or silver touch buttons and distinctive side fins, but these are for decoration

only. In essence, the Kraken CD is a beefed-up Alchemist Nexus CD player in two boxes. It uses a new-generation Philips Eco CD transport, allied to a complete set of Crystal chips, including the 3443 digital converter.

Although I doubt if many Kraken CD players will be supplied to owners of anything other than Kraken amps, we tested it in a known (non-Kraken) system anyway. This comprised a Quad 77 integrated amplifier and PMC TB1 loudspeakers on Atacama stands.

Cables were Kimber throughout and all the electronics sat on Mana Acoustics tables. CD players from Meridian and Pioneer were roped into use to compare and contrast.

After an appropriate warm up for the electronics, the most noticeable feature of the Alchemist is that it appears to be considerably louder than its peers. This will make the Kraken stand out dramatically in a demonstration, as it will sound more exciting than most similarly priced CD players it will be compared against. It may not sound intrinsically better or worse than its peers, it will just sound 'more'.

“Pitched towards the rock end of the spectrum, the Kraken pushes the upper mids and high frequencies that highlight rim shots and break beats. It has an almost edge-of-the-seat sense of dynamics.”

I believe this is due in part to the output voltage of the CD player, and also because it is a more up-front player than many of its contemporaries. Pitched towards the rock end of the spectrum, the Kraken pushes the upper mids and high frequencies that highlight rim shots and break beats. The almost edge-of-the-seat sense of dynamics only serve to highlight the sonic fireworks.

Soundstaging is good, especially if you like a wide image. Front to back depth is less impressive, but there is a semblance of three-dimensionality. And, with so much mid-range on show, the Kraken boxes seem packed with detail. Some of this detail is misleading, however, as most of the bass instruments on orchestral works seemed to be notable by their

absence. Where it loses out against players with a more high-

end bent is in grace and smoothness. This is not a comparative thing; the Kraken sounds exuberant, not relaxed or refined.

Play a less amplified instrument like a solo piano and the same upper mid emphasis causes it to sound too real and life-like compared to the real thing. This is a mild failing and one found on the otherwise superb BBC LS3/5a loudspeakers, where a similar balance causes comparable problems. However, partnered with the Kraken amp and a pair of warm-sounding speakers this could prove to be a very acceptable balance.

That is one of key issues to the Alchemist Kraken; it is intrinsically linked to the Alchemist ethos. Breaking the Alchemical spell upsets the balance both sonically and aesthetically. Away from an all-Alchemist system, it just lacks a little magic.

VERDICT

SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★☆
PRICE	£1,249

Distinctive-looking CD player that appears to be little more than a cosmetically-enhanced mid-price model. Likely to suit a Alchemist system, but will give variable results elsewhere.

■ TWO YEAR GUARANTEE

☎ Henley Designs (01491) 834700

TUSCAN Titan

Chario's Academy Millennium 2 is a new upmarket standmounter fresh from Italy. Tim Bowne finds it fit for the next century.

The Italian male just loves to show off. His smooth talking, forthright ways are world renowned. The swaggering reputation of a seducer and exhibitionist par excellence. Here, then, is a product that epitomises such caricatures in high fidelity form, a speaker that's just dying to be noticed. It hails from Milan and its name is suitably effusive – it's the Chario Academy Millennium 2.

It may be a standmounter, but this isn't one to blend innocuously into the background. Its 53cm high cabinet is a striking vision, tall but relatively slender, and clad in sumptuous, sinuous walnut. Thick mediate baffles adjoin front and back, with immaculate attention to detail throughout: dips, curves and grooves abound, coaxing the observer to reach out and run a hand across each sculpted surface. The enclosure is reflex-loaded via a smoothly-flared port to the rear and features comparatively minimal internal bracing. Because of the fundamental rigidity of its structure, says Chario, the cabinet is already virtually inaudible without the need for such reinforcing techniques.

Drive unit configuration is '2.5 way', employing a pair of compact mid/bass units with composite carbon fibre/paper diaphragms made by Chario itself. Equally fine is the 29mm soft dome tweeter, a-top-of-the-range design outsourced from Scanspeak and given the portentous name 'Revelator' (yikes).

The cumulative effect of such constructive prowess is as pleasing to the eye as it is to the ear, but anyone spending £1,800 on a pair should surely take things one step further. Splash out an additional £300 for a package including their

matching stands, similarly draped in solid walnut, to complete an utterly distinctive look: Italian style and swagger evoked in a walnut shell.

SETTING UP

This Chario needs some space in which to work, so I positioned the pair a couple of feet from walls to the side and rear, secured them to their stands with a few blobs of Blu-tack. A distance of about two metres between them worked well in the test room, and toeing-in quite dramatically gave the best image focus.

Sensitivity is high at 90dB for one Watt, and while the low impedance of 4 Ohms suggests a demanding load, Chario claims the effect is offset by uniformity across the

"Whether the music is classical or contemporary, you get an unedited impression of instrumental character wrapped up in a thoroughly engaging package."

frequency range. I took no chances and used some amps with serious grunt, including Musical Fidelity's 200 Watt A1001 integrated and Advantage's 175 Watt power amp (HFC 189), yet the speaker also behaved surprisingly well on the end of a lowly 60 Watt Pioneer A-400.

SOUND QUALITY

It's true to say that many examples of the world's best hi-fi don't really grab you from the off; it's their even-handed subtlety that proves so seductive over time. Not so this speaker: its performance absorbs your ears immediately, its quality instantly recognisable. But while the Italian stereotype with which I led this piece may not care much for fidelity, the sonic fidelity of this speaker reaches high indeed. It has a strength of character that's able to satisfy in the short-term and the long.

From both musical and analytical stand points, its qualities are considerable. Performance is impressively devoid of box coloration, promoting a sound that's rock solid and free from obvious constraint, while an eminent flair for dynamics takes your breath away with the right material coursing through its drive units. Bass doesn't drop especially deep – these are standmounters, remember – but speed and authority down low is superb, allied to a slick, expressive midband and a grain-free treble that shows the quality of its tweeter.

Sadly, I only had possession of a pair for a few days, but over that time it devoured a large portion of my CD collection with eager aplomb. The scale of the overall musical picture and the energy of each instrumental thread within proved addictive, sending me scouring for CDs to take another hit. The highlights were many: the subtle

percussive texture of John Beltran's *Gutaris Breeze*, the belting power of rhythm 'n' voice throughout *The Miseducation of Lauryn Hill*. It even emerged victorious after a Friday night session round my gaff, with all the raging dance styles that such events encompass, several visitors proclaiming them to offer the best sound they'd heard. 'Nuff said, methinks.

Anything it can't play? It sounds hard and unforgiving with edgy indie rock/pop recordings, but that's a criticism of the recording, not the speaker. Some may prefer a warmer, more laid-back style of music making, a legitimate subjective view, and there are a number of speakers at similar prices that sound a touch more open and 'airy'. But the majority of these trade such qualities for a measure of this speaker's sheer sense of involvement, and for me the Chario gets it just about spot on. Whether the music is classical or contemporary, you get a unedited impression of instrumental character wrapped up in a thoroughly engaging package, and that's what hi-fi is really all about.

When he dropped them off, Chario's UK distributor said he thought I'd like this speaker. He was right. Passion, flair and style, adjectives that commonly represent the Italian aesthetic, find embodiment here. It's a sonic and visual thoroughbred, and a real front runner in the £2,000 speaker stakes.



◉ A walnut whipping post that has drug-like addictive qualities.

CHARIO VERDICT

SOUND	★★★★★
BUILD	★★★★★
VALUE	★★★★☆
PRICE	£2,099.99

Price Includes Stands

It's pricey for a standmounter, but performance justifies the cost. A showy speaker that lives up to its own hype.

FIVE YEAR GUARANTEE

Musical Design Company (01992) 573030

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WHAT HI-FI?

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Hi-Fi Choice

(December '96)

Cable Talk Studio 2
Sound *****

THE VERDICT

▲ Tonally, dynamically and rhythmically a truly first-class cable

▼ Very little to criticise.

Price: £65 (1m pair)

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(August '98)

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Verdict *****

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WEB Spinner

Michell's ever-green GyroDec turntable has spawned a sibling called the Gyro 'Spider Edition'.

As **Tim Bower** discovers, it weaves a magical musical web.

A true story from the Bristol hi-fi show: a man wanders into Michell Engineering's demonstration room and sidles up to proprietor John Michell, an adoring glint is his eye. "What vitamins do you take?" asks the man mysteriously. "Because you must be on something to make such outrageously beautiful turntables."

He has a point. John Michell's vinyl-spinning creations have long been among the most desirable hi-fi components, craved as much for their stunning appearance as for their excellent quality of sound. He recognised the turntable's potential as a functional kinetic sculpture years ago, even attracting the attention of late, great film director Stanley Kubrick. John worked on the film sets for *2001 A Space Odyssey*, and the director was so enamoured with one of his early decks that he requested a unit to feature in the cult classic *A Clockwork Orange* – an enviable claim to fame.

The most famous Michell design is the GyroDec, an amalgam of aluminium, gold and clear acrylic once described as the most desirable turntable below £1,500. It's still current and as gorgeous as ever, but now it's been joined by a new version adapted from the original blueprint. The Gyro 'SE', or 'Spider Edition', was born from a desire to refresh Michell's range and reinforce its competitive edge.

Essentially-speaking, it's a GyroDec without the large acrylic base and dust cover. The chassis is instead supported by a three-pronged piece of acrylic called a 'spider', and the entire construction is left open to the dust-ridden elements. The pay back hits first with retail price – removing all that costly

acrylic has allowed Michell to sell the deck at a more aggressive £775, while the original GyroDec has seen a price hike to £975. There are also aesthetic 'advantages', the new deck striking a minimalist pose in line with current turntable fashions.

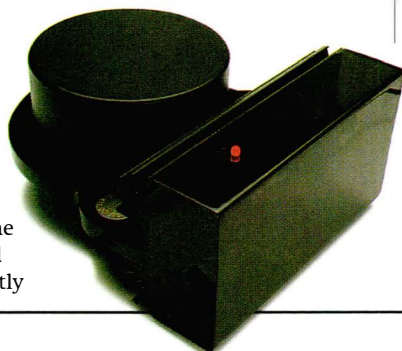
On the sonic side of things, there are three changes that are claimed to make a difference. The first is the detachment of the deck's aluminium-clad motor unit from the acrylic bass of old,

"Add the QC power supply and things start to fly like the deck's taken a dose of 'pep' pills, the whole musical picture hanging together with a vice-like grip."

making it free-standing in the manner of Michell's more costly Orbe turntable. An upgraded toroidal power adapter is also included, and a new spring assembly featured in the deck's suspension system, aiming to improve isolation and allow easier adjustment.

Those things apart, the deck remains true to the original GyroDec design. Aluminium chassis and arm board,

○ The dinky QC power supply is an optional extra for the 'Spider Edition'.



give a touch more in the way of dynamic and rhythmic bite.

But its overall balance is hard to fault, an open and lucid midrange blending seamlessly with tight, clean bass and well-extended treble.

As I rifle through my record collection, the Gyro 'SE' proves itself to be a highly capable all-rounder. The Comsat Angel's early '80s angst rock on *Sleep No More* sounds suitably tense and atmospheric, Mike Scott's vocal in The Waterboys' *A Pagan Place* comes across as rich and vibrant, and a Sasha dance 12-inch shows just how punchy and pacy this turntable can really be. From New Country to old classical, it's an admirable performer; arguably a touch clinical on occasions, yet always superbly even-handed.

But it gets better. Add the optional QC power supply and things start to fly like the deck's taken a dose of 'pep' pills, the whole musical picture hanging together with a vice-like grip. Going the whole hog by slipping on the Rohmann cartridge introduces a significant jump in resolution. With the necessary ancillaries, the Gyro 'SE' competes in the same ball park as decks way above its price. For the vinyl vanguard, it's a designer dream.

○ The Gyro SE features a freestanding motor and revised suspension springs.

gold-plated brass weights to add mass and a long, rounded rubber belt betwixt motor and black acrylic platter – it's all pleasingly familiar.

SETTING UP

Considerable assembly is required from the box before the Gyro 'SE' is ready to play, and it's essential to spend more time than usual levelling the spider and suspension to obtain optimum results. Patience brings just rewards, however, and once the deck is on an even keel and bouncing freely it really begins to sing.

A wide variety of arms can be fitted, the arm adapter plate tailored to maintain constant mass. Our review sample included a Rega RB300 arm (£146), a standard option, and was supplied with a choice of cartridges from Ortofon – the MC 30 Supreme (£550) and top-of-the-line Rohmann (£1,000). Michell's QC power supply (£399) was also included to illustrate a possible upgrade path.

SOUND QUALITY

With the Rega arm and less costly Ortofon cartridge firmly ensconced, the Gyro 'SE' sets about playing music in a thoroughly believable fashion. I'm a fan of the original GyroDec, and the Gyro 'SE' offers more of the same: a strong mix of pace, resolution and control, with perhaps a slightly cleaner presentation overall.

It's not the most immediate-sounding turntable for the money – for example, Pink Triangle's Tarantella seems to

VERDICT

SOUND	★★★★☆
BUILD	★★★★★
VALUE	★★★★★
PRICE	£775

Arm/Cartridge Not Included

■ A stunningly desirable combination of looks, solidity and sound make the Gyro 'SE' the most tempting turntable below £1,000, but it needs the QC power supply to reach its full potential.

■ FIVE YEAR GUARANTEE

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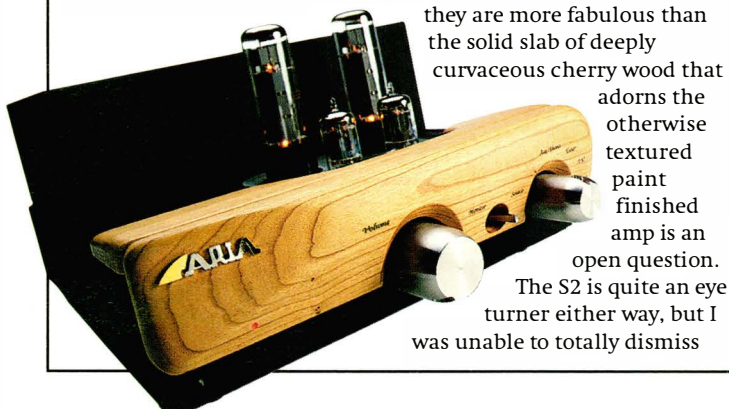
AN OPERATIC veneer

Unreconstructed solid state acolyte **Alvin Gold** tries on an attractive new valve amp for size.

If ARIA means little to you, the brand used to be known as Unison Research. There are probably several card-carrying readers of *HFC* who have never owned, heard or even seen a Unison Research amplifier, the writer included. In the Far East, however, this Italian company was up there with Audio Research, selling enormous quantities of drop-dead gorgeous valve amps, while dreaming up ever more fanciful designs, culminating in the Palladio monoblocks and the Dream preamp. To give you some idea, the last was a £12k wannabe flying turtle, with an expensively tooled curved ceramic top, introduced just before the Far Eastern markets went belly up a couple of years back. The inevitable fallout has seen Unison Research taken over by Professor Giovanni Sacchetti, the original designer, a name change to ARIA, and a rationalised, more down to earth range of products. You may reasonably ask – whither ARIA? What do the Italians know about opera anyway? In fact it's an acronym which stands for Advanced Research In Audio.

The name is misleading; there are few techy secrets here. The ARIA S2, developed from the Unison Research Simply 2, is a classic entry level valve amp whose active complement

◉ The ARIA S2 is a thoroughbred in the valve amp stakes.



consists of one EL34 pentode per channel run in pukka Class A, driven by an ECC82 and connected to the load through output transformers of ARIA's own design and build. Being Class A of course means plenty of waste heat from a circuit that delivers roughly 12 watts per channel. It's worth playing around with the 4 and 8 Ohm output taps, which as well as maximising power transfer helped resolve a certain waywardness after changing to the 4 Ohm tap with the Eggleston Works speakers used for the test. The amplifier has four line inputs, one for tape with a monitor facility and, if you're seriously into vinyl, the ARIA Simply Phono step-up (not tested) is available for a nice, round £500. The volume control and input selector are equipped with fabulous, machined stainless steel knobs, though whether they are more fabulous than the solid slab of deeply curvaceous cherry wood that adorns the otherwise textured paint finished amp is an open question. The S2 is quite an eye turner either way, but I was unable to totally dismiss

the niggling feeling that the woodwork at least was an afterthought.

Compared to its predecessor, the ARIA has been improved with silver PCB tracking, a simplified circuit with a reduced passive component count, and neater packaging, achieved by turning the transformers on their sides. The claim for the circuit changes is that the amp is more detailed and dynamic than its predecessor. Be that as

“Within its limits it has an almost spine-tingling effusiveness, an alluring, almost clubby elegance and warmth (despite an absence of truly subterranean bass).”

it may, the ARIA S2 is really not a detailed amplifier in the sense in which the term is normally used with solid state amplifiers. In a particularly fine recording of Bartok's *Concerto for Orchestra* (Ivan Fischer/ Budapest Festival Orchestra, 2nd mvt) the woodwind instruments failed to separate out from each other, and the string section, which should and can sound perfectly articulate and rock solid, was a

cotton wool blur. Ambience also didn't happen as it should, remaining locked into and around the direct sound instead of taking on an independent a life of its own. End of story? Not quite. No, it doesn't bring the typical strengths of a good solid state amplifier to the job, but that's because this is an unreconstructed valve amp that sounds exactly like the popular stereotypes of what valve amps are supposed to sound like. It is not especially powerful, in fact it's not powerful at all, but it compresses quite sweetly when pushed

hard, only finally losing control after it has signalled its intentions as clearly as a red traffic light. Within its limits it has an almost spine-tingling effusiveness, an alluring, almost clubby elegance and warmth (despite an absence of truly subterranean bass) reminiscent of a pair of old slippers. Which had even this unreconstructed solid state acolyte grinning like a Cheshire cat when in the mood to sit back while music wafted around. It's this role that the ARIA performs to perfection.

So it's a bit of a wood panelled lush (in both senses), and the S2 won't convince those who have never understood the plot with valve amps, but for those who have, it is a thoroughbred. While I wouldn't buy one for my main system, I might do so for a second room system where ear appeal can afford to take precedence over analysis.

VERDICT	
SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★☆
PRICE	£1,000
<p>📦 Glamourously packaged valve-powered 12 watter produces a real eyes closed, feet up kind of sound.</p> <p>■ TWO YEAR GUARANTEE</p> <p>📞 UKD (01753) 652669</p>	

Five Stars

Paul Messenger explains why you should visit an independent

Why use a specialist hi-fi dealer? The short answer is because he knows one hell of a lot more about hi-fi than you do. And if you've gone to the trouble of picking up a specialist magazine on the subject, you're obviously interested in something rather more than a mini system from the nearest electrical superstore.

You've probably bought this magazine for one of two reasons. You're looking for advice (presumably unbiased and good) on choosing and using your hi-fi system, and/or you're checking out the ads to decide where to go and buy it.

The independent specialist dealer doesn't know everything, and he doesn't know much about you, but if music's an important part of your life, he's the only guy around who's able (and hopefully willing) to help you choose the equipment which will give you the best long term satisfaction.

Power of the Press

Dealers sometimes moan to me about the power of the press, and the disproportionate influence of its 'Best Buy' and multi-star ratings. Well, I've been in the press for twentysomething years, and still feel more ignorant than powerful.

The more I mess around with hi-fi gear, the more I become aware of our lack of real understanding of the subtleties involved, and the more I appreciate the importance of the dealer's skills and experience, in bringing together components so that the whole is greater than the sum of its parts.

We hacks get paid to write words, often about components in isolation, because individual product reviews are still the staple diet of the press. They can sometimes provide a useful guide to the way a product performs, but only under the particular circumstances in which the review was conducted.

The hi-fi reviewer attempts, with varying

degrees of success, to evaluate a particular component, and find something interesting (and hopefully positive) to say about it. That's about the end of it, and it's on to the next product.

The magazine prints the review, and that very process magically confers a measure of authority. Experienced hi-fi enthusiasts, who read reviews over a period of years and try out various products themselves, soon start to realise the limitations of that approach. Some reviews are better than others, but none can get to grips with the real heart of the problem - whether a given product will improve your musical satisfaction, in your system and your room.

The Role of the Dealer

The dealer's role is very different, and potentially much more valuable. He has the chance to talk one-on-one. If he's good at his job, he'll use that opportunity to find out what you as an individual are looking (or listening) for.

His motivation is very different too. Sure he wants to make a sale. That's the lifeblood of any shop. But he also knows that if something he sells really does deliver long term satisfaction, there's a very good chance you'll come back again to see if he can repeat the trick some time in the future.

If you go into a shop and demand a particular CD player, on the basis that it got seven stars (out of five) in last month's magazines, the shop will probably simply take the line of least resistance and sell it to you. (Or switch-sell you to a similar price alternative, if he's fresh out of stock

For Value

specialist dealer if you are searching for real hi-fi satisfaction

of that particular flavour-of-the-month.)

If you go in and say you're looking for a CD player, and want his advice on what to choose, things are liable to become more interesting. The onus is now on the dealer to show what he can do. His first task is to ask the right questions to try and get some idea of what you might be after.

Asking the questions is the easy bit. The real skill comes in using the information to come up with a shortlist of likely contenders, and then conducting a demonstration so that you have a real chance to play a central role in the decision making process.

Putting together a successful hi-fi system might not be as difficult as it was twenty or thirty

"If music is an essential ingredient in your daily diet, you owe it to yourself to become a member of the discriminating minority."

years ago, but it's just as easy to make a mess of things. Put the 'wrong' combination of components together and it'll still sound a lot better than any cute little mini system package. It might even rate a five star review. But it won't match the potential of a carefully balanced and properly installed system, and it certainly won't cater for your own particular preferences and personality.

We British are notoriously indiscriminating consumers, at a mass market level at least. The majority of the population don't even bother to drive a car they're thinking of buying, never mind take the trouble to listen to hi-fi equipment.

The majority will therefore end up with hyperstore mediocrity, and hi-fi that's about as tasty as supermarket bread. But if music is an essential ingredient in your daily diet, you owe it to yourself to become a member of the discriminating minority.

You know full well that your music collection is as individual as your wardrobe, and just as

precious too, so it's worth taking the time and trouble to search out the dealer and equipment that will make that collection come alive, and give you a new buzz every time you play your favourite discs.

The independent specialist may not beat the chain store on price, but he continues to thrive in a hostile environment because real hi-fi is so much more than a matter of price. The people who work in these shops are themselves enthusiasts, often with many years of experience in meeting customer's needs, and the very necessary expertise to ensure that the whole thing is properly set up to deliver the best results.

The better the hi-fi, the more important it is to get the fine details right at the installation end of things, but even the least expensive equipment can be made to sound a whole lot better if good care is taken over the fine details - the support furniture, the cabling, the positioning of speakers and so on.

Without expert assistance even high class hi-fi can give mediocre results. With it you'll stand a very good chance of ending up with something rather more than a consumer durable - something which will be a source of considerable pleasure and genuine emotional satisfaction for decades to come.

I agreed to write this signed piece, irrespective of the specific sponsors, because I believe the independent specialist dealer plays a vital role in giving customers long term hi-fi satisfaction.

Paul Messenger

The specialist Dealers listed here are professional and enthusiastic. Give your nearest a ring for a demonstration.

STAR QUALITIES

value for money	★★★★★
service	★★★★★
facilities	★★★★★
verdict	★★★★★

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190a New North Road
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SW11 ORANGES & LEMONS
61/63 Webbs Road, Battersea
0171 924 2040

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0181 400 5555

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40 High Street
01233 624441

Chelmsford RAYLEIGH HI-FI
216 Moulsham Street
01245 265245

East Grinstead
AUDIO DESIGNS
26 High Street
01342 314569

Kingston-upon-Thames
INFIDELITY
9 High Street Hampton Wick
0181 943 3530
Lakeside Retail Park
RAYLEIGH HI-FI
Dansk International Furniture World
01708 680551

Rayleigh, Essex
RAYLEIGH HI-FI
44a High Street
01268 779762

Southend-on-Sea
RAYLEIGH HI-FI
132/4 London Road
01702 435255

Uxbridge UXBRIDGE AUDIO
278 High Street,
01895 465444

MIDLANDS

Banbury OVERTURE
3 Church Lane
01295 272158

Birmingham SOUND ACADEMY
152a High Street, Bloxwich
01922 493499

Leicester CYMBIOSIS
6 Hotel Street
0116 262 3754

Northampton LISTEN INN
32 Gold Street, 01604 637871

Shrewsbury CREATIVE AUDIO
9 Dogpole 01743 241924

NORTH

Cheadle (Stockport)
AUDIO COUNSEL
14 Stockport Road
0161 428 7887

Oldham AUDIO COUNSEL
12/14 Shaw Road
0161 633 2602

Sheffield MOORGATE ACOUSTICS
184 Fitzwilliam St
0114 275 6048

SCOTLAND

Edinburgh
RUSS ANDREWS HI-FI
34 Northumberland Street
0131 557 1672

Glasgow STEREO STEREO
260 St. Vincent Street
0141 248 4079



SUPER TEST

DVD PLAYERS

Alvin Gold gets to grips with the latest generation of DVD players and wonders if it's time to take the sound and pictures plunge.

There has not been such a palpable sense of anticipation in the hi-fi world since the launch of compact disc about 15 years ago. At that time the issues seemed simple enough, though this doesn't mean there was universal agreement about the change from 12-inch vinyl to 12cm polycarbonate,



multi-channel high resolution sound – and there is no doubt that from the audiophile viewpoint, one or other, and perhaps both of these systems are what we have been waiting for since the launch of compact disc.

Right now, however, neither DVD-A nor SACD exist. SACD will not be

and from the beginning there have been substantial misgivings in some quarters about the ability of 16-bit/44.1kHz PCM audio (the standard underpinning compact disc) to deliver the goods musically – and rightly so.

DVD provides what looks like an answer, but it is a tantalisingly incomplete one. The primary purpose of DVD is to play films, but from the beginning the people planning the standard realised that DVD – Digital Versatile Disc, remember – might have applications in many areas, including sound with pictures, where the classic video paradigm was pictures with sound. A dedicated audio disc with a limited picture element based on DVD was envisaged from day one, and this is now on the way as DVD-Audio, whose specification was finally settled in February, will be launched in Japan later this year. Sony and Philips have responded aggressively with SACD, which has broadly similar capabilities –

compatible with DVD at all, though the discs will look similar. DVD-A will need dedicated DVD players to work at anything other than a basic mid-fi compatibility level, though at least one manufacturer has said it will launch with a universal player which will cope with both flavours of DVD, as well as compact disc and relics from a bygone age such as the ill-starred Video CD/CD-V.

This presents today's buyers with a problem, namely whether to wait or opt for DVD-V, which after all includes the capability to play stereo 24-bit/96kHz audio – already nothing less than a revolution by ordinary standards. The answer, to an extent, depends on what view one takes about the use of multiple channels for music. There is a fairly widespread view that multiple channels are for films and have little to contribute to high quality music reproduction, and it is certainly the case that poor multi-channel is worse than good stereo, and that stereo well

THE CAST LIST

Hitachi DV-P2E	£400	p45
JVC XV-D2000	£475	p46
Kenwood DVF-9010	£1,000	p47
Panasonic DVD-A150	£400	p48
Pioneer DV-717	*£550	p49
Pioneer DV-515	*£400	p50
Samsung DVD-907	£500	p51
Thomson DTH 2000	£380	p52
Yamaha DVD-S700	£600	p53
Typical selling prices (* suggested retail price)		

done can be remarkably three dimensional. Up to a point.

However, I take the view that to make the next quantum peak from the stereo hi-fi paradigm requires the combination of 5.1 channels (or something very like it) and high-resolution sound. This is the proposition that is tested here using a range of two-channel and multi-channel music in various genres, recorded in Dolby Digital AC-3, dts and 16-bit and 24-bit PCM. Although the focus is on the sound, picture quality has not been neglected.

GLOSSARY

DVD (AKA DVD-VIDEO):

Digital Versatile Disc is capable of storing a feature film and various alternative soundtracks, subtitles etc. A high resolution 24-bit/96kHz PCM option was written into the standards, potentially offering better than CD sound in two-channel form.

MPEG: A number of related video and audio compression standards, of which the most important is MPEG-2 Video used to encode DVD video.

MPEG-2 Audio, which was proposed for Europe, has now been dropped in favour of Dolby Digital.

DOLBY DIGITAL (DD): A codec that compresses 5.1 channels of sound data into a very limited bandwidth. The front running standard for DVD multi-channel sound. Formally AC-3.

PCM SOUND: This sound is used for CD (16-bit/44.1kHz) and is an option for two-channel use for DVD (up to 24-bits and 96kHz), potentially offering better sound quality than compact disc.

DVD-A: Dedicated audio variant of DVD-Video, which offers very high resolution PCM multi-channel audio with pictures. Due for late '99 launch.

VIDEO-CD: Earlier CD-like video carrier that's very big in Asia. Version 1 gave up to 74 minutes of sound and pictures and Version 2 added a graphical contents/navigation system and other facilities. All of the test players can cope with Version 2 discs and most with Version 1.

DTS: Competing alternative to Dolby Digital AC-3, recently integrated into the DVD standard.

HOW THE TESTS WERE DONE

The players were tested using a system which included a NAD T770 Dolby Digital receiver, a Denon AVD-1000 bolt-on dts decoder and a THX Select speaker system from Definitive Technology. For CD comparisons, a Primare 30.1 CD player was drafted in. A variety of discs were used, including ordinary compact discs, 24-bit 96kHz discs from Chesky, Classic Recordings and Pioneer, Dolby Digital AC-3 discs from Denon (Ambience series) and elsewhere, and various commercial films on DVD. dts feature films and demo discs were supplied by dts Europe. The video assessment was made with a Philips TV and the cables used were mainly from Straight Wire, Kimber and Reference Cable. Most of the listening was done on an A-B basis, comparing for example the performance of the integral DD processor of each player with the DD processor built into the NAD receiver.

HINTS & TIPS



DVD players tend to respond to the same kind of measures that might be adopted to extract the best from compact disc. They like good quality cables, but so many are needed to connect the average player this could end up nearly as expensive as the machine. Also, ensure the player is well supported. Nordost Pulsar Points, used for this test, gave excellent results at a price, but there are plenty of alternative equipment feet and full blown tables which often give surprisingly large improvements. Like CD players, DVDs also like to be run and warmed up prior to serious listening.

With most TVs, the RGB interface (found on some SCART connections) gives fresher, sharper pictures and better colour than other standards, but separate S-Video cables sometimes work even better because of fundamental limitations in the SCART interface itself. In any case, composite video should be avoided if possible and remember that electrical digital interfaces usually outperform the optical alternatives.

HITACHI DV-P2E



The DV-P2E gives its identity away with a not-so-discreet label on the front panel in a familiar typeface that signals there is a Legato Link digital filter inside. Legato Link, of course, is a proprietary Pioneer technology and it turns out this model is based on the Pioneer DV-505.

DVD (Dolby Digital and PCM), CD and Video-CD compatible, the DV-P2E's design predates the ratification of a dts DVD specification, and dts coded DVDs (but not dts CDs) are greeted by silence from the digital output. CD-Rs are not recognised either. However, the secondary features, including aesthetics, menus and some operating features, have been customised by Hitachi's engineers.

The D/A converter stage offers 20-bit and 96kHz sampling, though Hitachi adheres to the recognised DVD standard by downsampling the digital output feed to 48kHz as an output menu option. In principal this a potential limitation on sound quality if an external D/A converter is to be used, but only for the handful of 24/96 discs available, and the future of DVD-Video 24/96 looks bleak given the imminent launch of dedicated audio carriers like DVD-Audio. Other features include a Condition Memory which remembers set-up parameters such as the language, subtitles, and various other play modes for up to 30 discs, which are automatically recognised on insertion by the ID

“The Hitachi’s raison d’être becomes clear, thanks to a combination of excellent video and the big, lush sound typical of modern film soundtracks.”

markings on the disc. Last Memory allows the player to resume play where it was last stopped. Three picture settings (cinema/animation/standard) act as a kind of video tone control, and a simple two-channel pseudo surround algorithm called Trusound may woo those with stereo speakers, though results were ambiguous and their position critical.

Society is adequate, with just one composite video SCART socket, both flavours of digital output, and two sets of analogue audio outputs, along with a switch to force a PAL or NTSC feed, though by default it is set to auto. The remote control, which is not identified as Hitachi, offers standard setup and play features, but is not coded to operate other equipment.

SOUND QUALITY

The Hitachi doesn't sound too dissimilar to the Thomson DTH2000 (tested on page 52) which shares the same antecedents, although the internal D/A converter has a slightly different flavour. The Hitachi sounded smoother, rather creamy and a tad dull, though this wasn't always a disadvantage.

Overall the DV-P2E was a little tidier all round than the Thomson when performing its own D/A conversion, from compact disc or from the high-resolution PCM discs from Chesky and others, but it still lagged painfully behind the D/A converter stage of the NAD receiver, which sounded more vivid and three-dimensional and delivered a much stronger sense of presence and occasion. CDs sounded better through the test CD player, which added layers of subtlety and range that neither the Hitachi or most other current generation DVD players can match.

It is only when using the player in its primary intended role – for playing movies – that the Hitachi's *raison d'être* becomes clear, thanks to a combination of excellent video (the equal of all but a couple of the models on test) and the big, lush sound typical of modern film soundtracks. With films, the video element tends to reduce attention on subtle limitations in the soundtrack and the overall effect can be thrilling. Certainly listening to Dolby Digital

○ A DVD player that offers a great home cinema experience at a nice price.

sound-only recordings (such as the Denon Ambience series) underlines how primitive this standard is compared to high-resolution PCM. The basic sound quality is rough and lacks detail (more so here than with the best DVD players), though the well-formed ambience and an almost excessive warmth remains, which means that the music often sounded more enjoyable than was strictly warranted by considerations of sound quality alone.

CONCLUSION

This is one of a number of players that seems best suited to the role of LaserDisc replacement for those who want a good combination of picture and sound quality at a modest price for playing films in the home. It offers little of direct interest to the audiophile, but in practice is rarely less than competent and, with the Chesky and similar recordings and a good outboard D/A converter, it is capable of giving some good CD players the occasional fright.

VERDICT

SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★☆
PRICE	£400

Fine, but no longer class-leading performance, is available from this polished middle ranker.

ONE YEAR GUARANTEE

Hitachi Home Electronics (Europe) Ltd, Hitachi House, Station Road, Hayes, Middlesex UB3 4DR

SPECIFICATIONS

D/A processor: 20-bit/96kHz
 Digital output: up to 16-bit 48kHz
 Output sockets: SCART (composite), 1 electrical, 1 optical audio, 2 pairs analogue stereo, 1 composite video, 1 S-Video Y/C



JVC XV-D2000



An imposing machine with a fuller control set than most, the JVC XV-D2000 is one of several players in this month's group to include a Dolby Digital decoder, with a six-channel output on the back which makes it possible to construct inexpensive 5.1 channel systems based on any amplifier (even a Pro-Logic amp) with a six-channel analogue input. In this context, the asking price, which is typically between £450-£500 (JVC is one of a number of manufacturers who no longer quote retail prices) seems very reasonable.

The basic compatibility list includes DVD-V, Video-CD and CD, but not dts, DVD or CD-Recordable, though dts CDs play happily as usual. The JVC also fails to provide a digital output from 24-bit/96kHz discs, either at the full sampling rate or converted down to the 48kHz that AV amps and processors can cope with. These limitations apart, the XV-D2000 is not without audiophile credibility thanks to separate analogue and digital power supplies and measures designed to reduce digital interference with the analogue circuit, reduce jitter and improve sound quality. However, the PEM (Pulse Edge Modulation – JVC's proprietary low-bit D/A conversion technology) is 20-bit and not 24. The usual health warning applies here: the

“Picture-wise, this is one of the best. It delivers high standards in all areas, notably picture focus, lack of smear and colour bleed.”

difference in D/A converter resolution is arguably immaterial for anything but a handful of 24/96 discs which will effectively become orphans anyway if and when DVD-A and/or SACD look in danger of achieving any substantial level of success.

The player has the usual output complement, including two SCARTs with switchable composite/S-Video (but not RGB) compatibility, dedicated composite and S-Video sockets, six outputs to feed an amplifier with a 5.1 or 6 channel input, and optical and electrical S/PDIF outputs. Headphones can be connected via a standard 6.3mm socket and front panel volume control. One neat feature is the control panel that can be pulled up on screen when any but the most basic DVD or CD features are accessed. The TV continues to show on-screen action in a window.

SOUND QUALITY

Picture-wise, this is one of the best. It delivers high standards in all areas, notably picture focus, lack of smear and colour bleed (even via the composite output, surprisingly), and in the range and

subtlety of fine picture elements in dimly lit and brightly lit areas of the screen alike.

Compact disc replay, however, is not the JVC's strong point. A fine Carlton Classics piano recording of Korngold music played by Ingrid Jacoby, chosen because it has an unusually well-balanced sound, with the instrument and the acoustic leading independent lives of their own when well reproduced (and also because it's damn fine music), sounded messy and congealed through the JVC, the aural equivalent of trying to see through steamed up-spectacles. The bass was especially ill-focused, while their mid and treble just sounded a little distant and wispy.

This unfortunately set the pattern. Bypassing the internal Dolby Digital processor led to a more open and organic sound with well made recordings. Richard Thompson's *I Feel So Good* from *Sessions At West 54th* is an excellent example that was used in this test: the subtle dynamic shadings were strongly reduced by

the JVC's internal processor, giving a rather monochromatic dynamic quality without actually reducing the music's drive and energy.

One minor imperfection noted with the test sample was that transport was intermittently a little noisy mechanically when spinning discs, and the chirruping it produced could often be heard through quiet passages.

CONCLUSION

Although not an auspicious performer by today's fast-moving standards, this player is easily converted to any Region Code operation using the front panel and remote controls. It is not necessary to remove the lid (which would void the warranty) and the details of how to do this are in the public domain, though not in the manual. This alone makes the XV-D2000 a much more attractive proposition, but for the serious music lover looking for a next generation machine to see him through to DVD-A or SACD, it is not the obvious choice.

VERDICT

SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★☆
PRICE	£475

Another player for the general video market, but not a competitor in the audiophile PCM stakes.

ONE YEAR GUARANTEE

JVC UK Ltd, JVC Business Park, Priestley Way, London NW2 7BA
 ☎ (0181) 450 3282

SPECIFICATIONS

D/A processor: 20-bit/96kHz
 Digital output: up to 20-bit/48kHz
 Output sockets: 2 x SCART (composite), 1 electrical, 1 optical digital audio, 1 analogue stereo, 1 composite video, 1 S-Video Y/C, 6 analogue out (from DD processor) with subwoofer boost switch



KENWOOD DVF-9010



Kenwood's top-of-the-line DVD player is physically massive. It has an articulated drawer with a front action that would have been quite impressive if it didn't make such a grinding noise while it was on the move. If nothing else, this model is clearly an individual. It has a lot of Kenwood proprietary technology inside, though this doesn't extend to the excellent on-screen set-up or the attractive but sometimes indecipherable play menu bars that can be switched across the top of the picture. The remote control is also different and a real peach. It is tiny, chunky and has a limited number of multi-function controls whose allocations change according to a three-position switch on one side. The handset includes a small but particularly well-designed joystick which can be pressed to confirm selections instead of referring to a separate 'enter' key. A small point, but indicative of the attention to detail that is a hallmark of the design.

In the event, the player's basic specifications don't stray too far from the straight and narrow. dts, DVD and CD-R compatibility are not on the menu, but the Kenwood is home to a full 24-bit 96kHz D.R.I.V.E. low jitter D/A converter stage, though the digital output is limited to 16-bit/48kHz maximum. The player includes an

"It has an unusually open and expressive quality, and dynamically the sound is wide open in a way that eludes virtually all comers in this month's group."

integral Dolby Digital and MPEG-2 Audio converters (the latter is academic for now). The converters feed six analogue outputs that can be connected to six/5.1 channel Pro-Logic amplifier inputs in the usual way. An absentee from the feature count is SCART socketry. Generally SCART gives inferior results to comparable dedicated connectors, but the superior RGB interface is only available via the SCART output, and SCART-style auto-TV channel switching will be missing in systems that use this player.

Secondary features are extensive: (non-Dolby) Virtual Surround for 'surround' reproduction using two speakers – gold plating for most of the connectors, an adjustable headphone feed, soft/sharp picture-switching, and, best of all, a CD Text display which goes some way to bringing navigation with compact discs up to the standard offered by DVD.

SOUND QUALITY

Compact disc replay is very impressive – well almost. The Kenwood has an unusually open,

expressive quality, and dynamically the sound is wide open in a way that eludes virtually all comers in this month's group. There is real sparkle here, but at the same time the sound lacks an edge of stability and discipline that finally led to a marginal preference for off-player D/A conversion. Nevertheless, this is about as good as DVD gets this side of very serious money indeed.

Dolby Digital results were quite exceptional and easily a match for the reference NAD receiver. Compared to the run-of-the-mill player, the Kenwood is noticeably sharper and clearer, and sounded less processed and therefore more transparent, with less of the granularity that seems to be endemic with most processors. The *Sessions At West 54th* compilation sounded keen and propulsive, and attention was rarely drawn to the limitations of the medium.

High-resolution PCM performance was also rather good, both when

✓ **Excellent sound and picture quality but rather on the pricey side.**

reproduced directly and via the digital output, though there is at least a theoretical advantage to the Pioneer player's 96kHz digital output capability with the small number of appropriately recorded discs.

CONCLUSION

If it wasn't for the Pioneer DV-717, which matches the Kenwood almost point for point and exceeds it in some areas – the unrestricted digital output, dts, DVD and CD-R compatibility – the price of the Kenwood would be easily justified. Indeed the Kenwood has a clear edge in CD and Dolby Digital replay, and these abilities are more than enough to earn it Recommended status. With an appropriate price cut, this model could really hammer most of the competition, but this is unlikely to become reality as long as it is possible to buy the Pioneer and a good CD player and still get change from the cost of the Kenwood.

VERDICT

SOUND	★★★★★
BUILD	★★★★☆
VALUE	★★★☆☆
PRICE	£1,000

■ Recommended on performance grounds. Although rather pricey, this player offers excellent picture and sound quality through its on-board processor.

ONE YEAR GUARANTEE

✉ Kenwood Electronics UK Ltd, Kenwood House, Dwight Road, Watford, Herts WD1 8EP
☎ (01923) 816444

SPECIFICATIONS

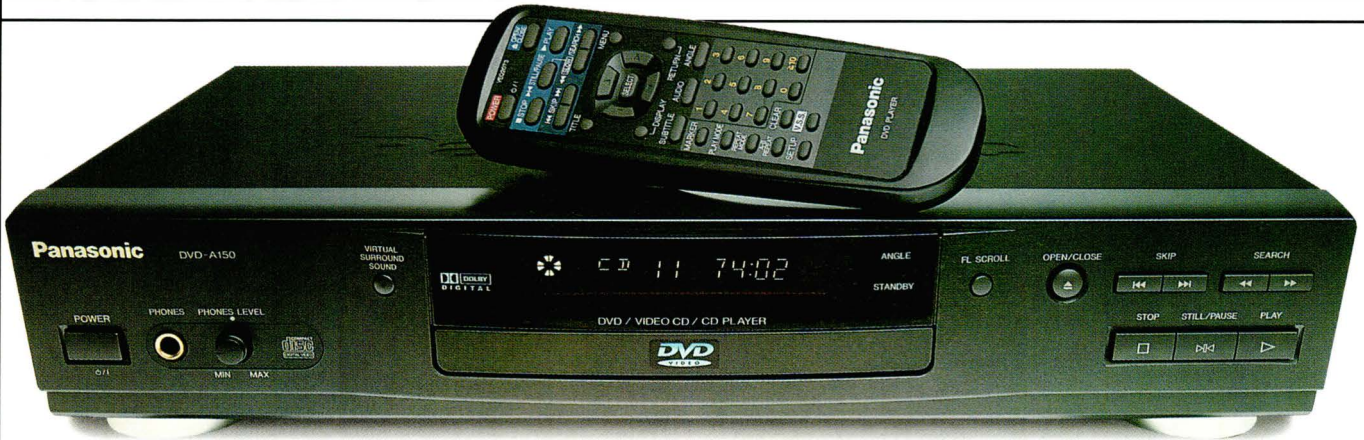
D/A processor: 24-bit/96kHz
Digital output: up to 16-bit/48kHz
Output sockets: 1 electrical, 1 optical audio, 1 analogue stereo, 6 channel analogue from on-board Dolby Digital and MPEG-2
Audio converters, 2 composite video, 2 S-Video Y/C



PANASONIC DVD-A150

PANASONIC DVD-A150

Visit Our Website: www.hifichoice.co.uk



Introduced in October '98, this is Panasonic's entry level model, but not for too much longer: it is to be replaced by the DVD-A160, which buyers might be able to use as a bargaining chip when negotiating with their dealer.

Like all DVD players, the DVD-A150 will reproduce dts music CDs without difficulty, with the Panasonic screen saver showing on screen, and it can output linear PCM, Dolby Digital and even MPEG2 audio (the latter has no practical application at present) but the player is struck dumb at the sight of a dts DVD disc. It's true that the DVD limitation may not matter much now with the few titles available, but it will begin to look like a gaping hole within a year or so. Similarly, this player doesn't 'see' CD-R discs at all. Of course, the player will cope with Video-CD and standard CD (technically called CD-DA) discs. It can also cope with 24-bit/96kHz recordings and is fitted with an appropriate D/A converter, though the maximum resolution available from the digital output is 48kHz (96kHz recordings are automatically downsampled to 48kHz) and 16-bit 'for copyright reasons'.

The back panel is a model of simplicity. Two SCART sockets allow for pass-through connections, with a VCR (say) connected to one socket and the other to the TV. The connectors are supplemented

"It has a simple control system, clean screen images, clever on-screen furniture (even the screen saver is slicker than usual) as well as Virtual Dolby Surround."

by S-Video (Y/C) and composite (phono) connectors. The only other rear panel socketry is a single optical S/PDIF output – there's no electrical option – and the standard pair of analogue outputs, but there is one unusual provision on the front panel: a headphone socket and associated volume control.

As is usual with DVD players, there are many minor but often significant features available if you care to search for them. The list includes sophisticated handling of screen and software aspect ratios, Virtual Dolby Surround, which delivers a supposedly Dolby-like wraparound effect from two speakers (it can do it effectively if you happen to be on exactly the right axis), and an excellent icon-based menu system (separate from the disc's own menus) that doesn't obscure the picture.

SOUND QUALITY

Everything about this player screams 'mass market': the simple control system, the clean screen images, the clever on-screen furniture (even the screen saver is slicker than usual) as well as features like Virtual Dolby

Surround, aimed at the Pro-Logic TV market. None of which should undermine its performance potential. The Panasonic is more than good enough to show the limitations of the data-reduced codecs. dts compact discs sound smooth but heavy handed and lacking clarity, while Dolby Digital DVDs often sounded crude and granular (both using outboard processors), though both were capable of pin sharp soundstage positioning. It should be borne in mind that it was not possible to perform a like-for-like comparison of DD and dts for lack of identical recordings in the two formats.

As usual the best measure of the audio potential of the DVD-A150 was when playing high-resolution PCM (eg the Chesky 24/96 discs), and here the limitations of the design begin to become apparent. The Panasonic's on-board D/A conversion stage is responsible for lacklustre sound quality, with a subjectively limited dynamic range, and a rather shallow, shouty feel through the midband, as well

Competent player offering a good performance at an affordable price.

as a reigned-in treble which proved quite lacking in the sparkle and airiness apparent with at least some of the alternatives. There is a temptation to use an outboard D/A converter to address these limitations, but the limited maximum resolution of the digital chain effectively acts as a barrier to this approach here.

CONCLUSION

One point that has become obvious with this new medium is that there are models designed for the general user and ones aimed at the audiophile and videophile. The difference in price between the two may not be as large as you might expect. This player is one of the first type. There is really nothing wrong with this player, which handles like an ordinary CD player and has a great picture. The only gripes are that it is a little limited in audio resolution and that it lacks a few cutting-edge features that can be found elsewhere.

VERDICT

SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★☆
PRICE	£400

In the fast-moving world of DVD, the DVD-A150 may already have an outdated feature set, but it is competently engineered, reasonably priced and an attractive, if not an especially revealing, performer.

ONE YEAR GUARANTEE

Panasonic UK Ltd, Panasonic House, Willoughby Road, Bracknell, Berks RG12 8FP (0990) 357357

SPECIFICATIONS

D/A processor: 24-bit 96kHz
 Digital output: up to 16-bit/48kHz
 Output sockets: 2x SCART (composite), 1 optical digital audio, analogue stereo, 1 composite video, S-Video Y/C



PIONEER DV-717



The Pioneer DV-717 has a feature-rich design with some fancy under-the-skin engineering to distinguish it from less costly stable mates like the DV-515. Its close relationship to the US DV-05 Elite THX model means that the DV-717 is effectively THX compliant in NTSC mode (that is with a non-transcoded video output: there's a switch on the back panel to enable or disable PAL transcoding, which is normally left on auto). In the UK, however, it doesn't wear THX badging since the PAL THX specification hasn't been written yet.

Although it has a single pickup, twin diodes with different wavelengths enable it to read low-reflectivity CD-Rs, a useful capability given the rapidly increasing popularity of this medium. The DV-717 can also recognise dts data, which is available from the digital outputs.

Although not strictly a heavy-weight, the DV-717 has a dual layer aluminium chassis and a satin gold aluminium front panel; the loading tray is mechanically decoupled from the chassis. The electrical stuff includes twin Burr Brown PCM1716 DACs, one per channel in dual differential mode, and the digital outputs are capable of streaming 24-bit/96kHz digital

● The DVD-717 has the right mix of qualities at the right price.

"It is thoroughly modern in conception, plays anything you throw at it and is even capable of streaming 24-bits/96Khz audio from its digital outputs."

audio (the 717's predecessor was limited to 20-bit, despite a suggestion to the contrary in our original review). The output can be downconverted, which is important for users with current AV amps whose digital inputs would be dumbfounded by the arrival of a 24/96 signal.

There are separate regulated analogue and digital power supplies and a symmetrical audio channel circuit layout. Video is handled by the now obligatory 10-bit video DAC, aided by a number of exotic-sounding, picture-enhancing circuits like Digital Video Noise Reduction, Horizontal Sharpness and a Block Filter. As well as composite and S-Video outputs, this player can also output video in RGB, which resists cross-colour and other problems associated with lesser video interfaces. Outputs include two SCART sockets which can be used as pass-through connectors.

And the list continues... Virtual Dolby Surround creates a surround-like effect from two speakers. There are some great toys too, including screen read-outs such as a real-time indication

of data transfer rate. More usefully, unlike its predecessor, the player's digital output can switch automatically between the various perceptual coding and PCM, standards without manual selection through the menu system. The result: a player which is just a little easier to use.

SOUND QUALITY

In short, the sound is good to excellent, depending on the type of disc. With conventional compact discs, the DV-717 struggles to match dedicated CD players at half the price, but even this achievement is better than most. Although slightly flat and dry sounding, the good mechanical properties, high-speed D/A converters and Legato Link digital filtering seem to have had the desired effect of increasing the level of detail and ambience extraction above group level.

Of much greater interest was the Pioneer's performance with high-resolution discs, notably Chesky's 24-bit/96kHz titles like *Sex Without Bodies* from Dave's True Story which sounded frighteningly real, with a strong presence even through two channels. This was repeated with other Cheskys, though other 24/96 discs

such as the *Folk Singer* from Muddy Waters on Classic Records, mastered from an analogue tape, was really not in the same class.

In a pattern that repeated itself with

other players, multi-channel audio sounded grainy and vaguely inarticulate when compared to stereo PCM, but somehow it was the multi-channel recordings that most often sustained interest better in the long term, proving that sound quality per se is not the only thing that matters. Add in picture quality that was difficult to unpick on the test screen, and the package is hard to fault.

CONCLUSION

Given the furious pace of development in DVD technology, there are solid grounds for suggesting that even buyers with ambitious requirements would be better served by a player like this one. Certainly the DV-717 seems to have the right capabilities at the right price. It is thoroughly modern in conception, plays anything you throw at it and is even capable of streaming 24-bits/96kHz audio from its digital outputs. A clear, unambiguous Best Buy.

VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £550

Overall this is a near-ideal, thinking man's, dts-compatible DVD player, which plays just about anything with real panache.

ONE YEAR GUARANTEE

✉ Pioneer High Fidelity (GB) Ltd, Pioneer House, Hollybush Hill, Stoke Poges, Slough, Berks SL2 4QP

SPECIFICATIONS

D/A processors: 2 x Burr Brown PCM1716
Digital output: up to 24-bit/96kHz
Output sockets: 2 SCART (composite/S-Video/RGB), 1 electrical, 1 optical audio, 2 analogue stereo, 2 composite video, 1 S-Video Y/C, 2 system link control sockets



PIONEER DV-515



PIONEER DV-515 Visit Our Website: www.hifichoice.co.uk

This entry level model replaced the popular DV-505 early this year and typically sells for around £50 less than its predecessor. Finished in a sober black, most of the key differences between this model and the DV-717 (tested on page 49) are obvious at first glance, yet under the skin they are closely related with some key common features. Where the DV-515 boasts a dual layer chassis and extruded front panel, the 515 contents itself with a simpler single layer chassis with a plastic fascia, without the DV-717's isolated loading tray. The player weighs so little that at first we thought it was empty. The range of outputs has been thinned out somewhat, but still includes electrical and optical digital outputs capable of streaming a 24-bit/96kHz signal – a Pioneer exclusive – composite and S-Video sockets, a single SCART socket (without S-Video or RGB output capabilities in this case) with a rear panel switchable ability to force an NTSC or PAL output. The latter may be useful with some TVs when playing Video-CDs, though the auto setting reproduces the video signal as recorded and usually works well. There are also two sets of analogue outputs.

Many of the DV-717's key features are present in this simpler

❖ **The DV-515 packs in an impressive collection of features for the money.**

“Many of the Pioneer DV-717's key features are present in this simpler model, including the twin laser pickup which allows it to play CD-Rs.”

model, including the twin laser pickup which allows it to play CD-Rs (a facility limited to Pioneer and Sony at present) and dts recordings are recognised and handled properly. This and a number of related software features means the DV-515 can cope with virtually all kinds of 12cm silver disc, automatically switching between the various sound standards it encounters – PCM (standard CD), MPEG-1 (Video-CD), Dolby Digital and dts – without any reconfiguring through the on-screen menus being needed between discs, as was necessary with the DV-505. The 24-bit/96kHz output capability is handled by the player's software in the same way as the senior Pioneer player from the user's point of view, but there is just one Burr Brown PCM1716 instead of two and simplified power supply arrangements to mark it apart from the senior model. The remote control is a little more basic than the DV-717's and is not illuminated.

SOUND QUALITY

Performance-wise, this is a perfectly adequate player. It has good on-screen picture quality,

though not quite in the same class as the DV-717, with less of that model's purity, vibrancy of colour and rock-solid stability. As far as sound quality is concerned, it worked particularly well with data-reduced codecs like Dolby Digital and dts, the latter assessed using some early Region Code 1 (US standard) dts discs which fortuitously happen to work on Code 2 (UK standard players). With these discs there was little to choose from between the two players, presumably because the results were dominated by off player processing in the NAD amp.

Where the Pioneer scored less well was when it was used with PCM material. As a compact disc player, for example, the DV-515 was clean and detailed sounding, but the lower octaves on some favourite recordings seemed to lack the density and drive delivered by a good CD player (in this case a rather impressive and costly model from Primare, the 30.2). Treble quality was lacklustre, though far from objectionable, and still surprisingly detailed – with a clear edge on the prevailing standard among less costly DVD players, thanks in part, no doubt,

to the Legato Link digital filter. As usual the best sound quality came with 24-bit/96kHz material and specifically with some of the Chesky recordings. These sounded impressively vivid and dynamic, but clearly without the air and space and the strong dynamic structure apparent when reproduced through the more costly Pioneer player.

CONCLUSION

This model could be thought of as a kind of general purpose, everyman's version of the DV-717: it has all the key features but lacks the touches that give the senior model extra appeal to the audiophile. It is a good player and in certain respects it is startlingly well equipped: its ability to read CD-Rs, to output a 24-bit/6kHz datastream, its dts compatibility and the generally high standard of usability. These factors mark DV-515 out from the crowd and earn it a Best Buy flag.

VERDICT	
SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★☆
PRICE	£400
<p>📖 This is an unusually well-endowed player, which can read CD-Rs and understands dts, but has a rather lightweight build and, in some respects, sound quality.</p> <p>■ ONE YEAR GUARANTEE</p> <p>✉ Pioneer High Fidelity (GB) Ltd, Pioneer House, Hollybush Hill, Stoke Poges, Slough Berks SL2 4QP</p> <p>☎ (01753) 789789</p>	

SPECIFICATIONS	
D/A processor:	Burr Brown PCM1716
Digital output:	up to 24-bit/96kHz
Output sockets:	SCART (composite), 1 electrical, 1 optical audio, 2 pairs analogue stereo, 1 composite video, 1 S-Video Y/C, 1 system link control socket



SAMSUNG DVD-907



Made in Korea, the DVD-907 is a PAL/NTSC and SECAM (which is not relevant to the UK) standard player. It comes with a point of sale banner that brags that the Samsung can play "any disc, any TV". Nice idea, but not quite accurate. CD-Rs are rejected willy-nilly and so is the dts track of any DVD disc, though as usual CDs with dts soundtracks work happily. In fairness, these restrictions apply to most players in this group, and a small note on the POS highlights the Samsung's ability to play NTSC discs through PAL receivers, though transcoding to suit PAL hardware is a standard DVD feature. One significant limitation concerned 24/96 discs, which were not reproduced from the Samsung's digital output, either in their original form or downsampled to 48kHz, a task which most players can perform. Such discs still deliver a stereo signal via the internal D/A converter through the line outputs, but this option locks out some of the sound quality potential available from the use of an outboard D/A converter (more of this later). Again, this affects very few discs but it does suggest that the primary market for this player is the general video buff rather than the audiophile.

Perhaps reinforcing this conclusion, the Samsung includes its own integral Dolby Digital processor, which means it can

"The Samsung's fascia is clean and simple, and the menu structure is very easy to understand. Another bonus is the ultra-rapid loading drawer."

play through any amplifier's 5.1 or six channel input, which may be on a simple Pro-Logic amplifier or receiver, reducing system costs. The Samsung's fascia is clean and simple, and the menu structure is very easy to understand. Another bonus is the ultra-rapid loading drawer, making this one of the more gratifying models to operate.

Of course there are standard stereo outputs and, for those who prefer to unwrap their digital surround with an outboard processor, Samsung provides optical and electrical S/PDIF outputs, alongside two composite phono sockets and an S-Video Y/C connector. A single SCART socket is fitted.

The aforementioned point of sale banner contains a warning that "it is illegal to modify the player to code-free status". Well it isn't, although opening the cover may void the maker's warranty and there are also legal impediments regarding the sale of DVD software which is not classified for sale in the UK.

SOUND QUALITY

Picture quality is a little shy of the group average. We saw some noticeable cross-colour problems,

which showed as colour patterning on areas of fine detail. Similarly, detail and tonal resolution seemed distinctly soft and closer to LaserDisc standard than DVD.

Sound quality is bound to be hampered by the inability to play high-resolution discs in the digital domain. The on-board processor is spatially and dynamically flat – the word 'lacklustre' is underlined in the listening notes – and although the best Chesky recordings were still impressive enough by compact disc standards, the Samsung didn't get close to demonstrating the true magic available from such discs. Instead they end up sounding rather like typical audiophile recordings, and lacking the transparency, spaciousness and sense of scale that they were able to demonstrate in other equipment combinations.

Given this starting point, CDs sounded unexpectedly good. Although a little reigned in spatially and softened dynamically, the overall balance was well judged, and even quite difficult material sounded musical, if you can

❖ **The Samsung's sound and picture quality does not justify the price tag.**

forgive the '80s terminology. Similarly, Dolby Digital DVDs like *Sessions At West 54th* (surely the best non-classical recording in the DVD format so far) worked well, in this case sounding a little better than average, perhaps because the smooth quality of the player complemented the character of the DD process. In this case, although the internal DD decoder had a lighter balance than the NAD one used as reference, sound quality was on a par or at least within the margins of personal preference.

CONCLUSION

Some of the shine is taken off this model by the lacklustre picture quality. Sonically, it approaches average standard but from the wrong side, and the inability to reproduce 24/96 discs digitally militates against serious sound-first applications. Overall, the player's pricing makes it unappealing as a general purpose home cinema player.

VERDICT

SOUND ★★☆☆☆

BUILD ★★☆☆☆

VALUE ★★☆☆☆

PRICE £500

❖ **Musically it fails to excite, and video performance is at the lower limit of acceptability for DVD.**

■ ONE YEAR GUARANTEE

✉ Samsung Electronics (UK) Ltd, 225 Hook Rise South, Surbiton, Surrey KT6 7LD
☎ (0181) 391 0168

SPECIFICATIONS

■ D/A processor: 24-bit/96kHz

■ Digital output:- up to 16-bit/48kHz

■ Output sockets: Scart (RGB & composite), 1 electrical, 1 optical audio, 2 pairs analogue stereo, 1 composite video, 1 S-Video Y/C, 6 channel analogue out (from internal DD processor), 1 system link control socket



THOMSON DTH2000



Thomson, the major French multi-national that swallowed the Ferguson brand some years ago, is deeply involved in DVD and is currently building DVD players for sale in the USA. The DTH2000, however, is an OEM model based closely on the Panasonic DVD-A150, which is due to be replaced with the DVD-A160 imminently. But there are differences that favour the Thomson and the £380 typical street price looks competitive.

The DTH2000 is capable of dealing with CDs and Video-CDs in the time-honoured way, but it won't recognise CD-Rs and dts discs, except of course dts compact discs, which output a datastream from the digital outputs that outboard decoders will recognise. MPEG-2 Audio compatibility is part of the package, though this is of academic importance in practice. Connection possibilities include optical and electrical S/PDIF sockets (throttled back to 16-bit/48kHz, unlike the 24-bit/96kHz capable Pioneers), plus composite, S-Video and RGB video. The latter is in addition to the Panasonic's provision and helps ensure slightly better picture quality with an appropriately equipped TV.

Aesthetically, the four square and distinctly old-fashioned looking main unit and the jelly mould handset are gloriously at odds. In fact, they're both very practical propositions: the handset with its attractive colour coding, subtly

“The Thomson offers a combination of good to excellent picture quality when switched to its sharp setting, with strong clarity and stability.”

organised control grouping and the tactile surfaces of the actual controls help make the learning process quick and sure. The handset is coded with the commands for a wide range of VCRs and TVs, though there is no direct learning facility for the few exceptions. Operation is aided by good, simple menus, some of which appear in a strip above the screen.

The player will drive headphones, with a volume control available, though the socket is a 3.5mm minijack which won't suit some of the better hi-fi designs. Virtual Surround (a precursor to Virtual Dolby Surround) is included in the specification, but this should be seen as a belt and braces facility and not a substitute for full multi-channel operation.

SOUND QUALITY

The Thomson offers a combination of good to excellent picture quality when switched to its sharp setting, with strong clarity and stability, low cross-colour and the excellent low-light detail that is characteristic of the medium. It boasts good, though not outstanding, sound quality to match. As always with players of this type, the on-board D/A converter set the practical

limits on what can be achieved – bypassing it with the digital input of a good AV amp (the NAD T770 was chosen for this test for this reason) made a world of difference.

The opening track *Spasm* from Dave's True Story (a digitally sourced 24/96 disc) sounded slightly smeared through the on-board converter, while with the NAD receiver's converter (which sets a high, but by no means unbeatable standard) the music sprang to life and instrumental colours were more vivid and better formed. The difference wasn't huge, but it was enough to add a certain 'wow' factor that this recording is capable of eliciting. With compact disc source material (compared in this case to the Primare reference CD player), the sound was unatmospheric and, although quantisation noise wasn't directly audible, there was a perceptible, if almost subliminal 'busyness' about the background acoustic, where the reference CD player sound was more open and contrasty.

The inability to play dts DVDs means that for all practical

○ **A modestly well-equipped DVD player at a knock-down price.**

purposes Dolby Digital is the best quality multi-channel option to hand and, although the Thomson sounded as good as most in this mode, the tight, slightly granular quality of the system was all too obviously inferior to PCM, even 16-bit CD-style PCM. dts CDs worked well using the Denon AVD-1000 dts decoder, sounding for all practical purposes on a par with any of the other players.

CONCLUSION

To its credit, the Thomson is cheap and modestly well equipped: it will play high-resolution PCM discs, albeit down-sampled to 48kHz/16-bit, and can drive headphones – if you can live without CD-R and dts DVD compatibility. It has a great remote control, but it still struggles against the best in class. We discovered that this model is available very economically in an all-regions version, which is not to say that you may not find similar deals on some other players.

VERDICT

SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★☆
PRICE	£380

It may have been rocket science last year, but now it has already dated, though within its limitations it performs unexceptionally well.

ONE YEAR GUARANTEE

Thomson Multimedia, Crown Road, Enfield, Middlesex EN1 1DZ
(0181) 344 4444

SPECIFICATIONS

D/A processor: 20-bit/96kHz
Digital output: up to 16-bit/48kHz max
Output sockets: 2 SCART (composite/S-Video/RGB), 1 electrical, 1 optical audio, 1 analogue stereo, 1 composite video phono, 1 S-Video Y/C, headphones 3.5mm
Includes coded remote control



YAMAHA DVD-S700



This deceptively ordinary-looking player is based on the Panasonic DVD-A350, which has become an industry benchmark in its own right. Yamaha hasn't rushed this, its first model, to market, but has taken its time with some subtle modifications to the basic model to give it an authentic Yamaha stamp.

Although the DVD-S700 does not read CD-Rs or dts soundtracks on DVD, in other respects it is a thoroughly modern design. The player has a full 24-bit 96kHz D/A converter, although the audio is downsampled to 16-bit/48kHz at the digital outputs. Dolby Digital and MPEG-2 Audio decoders are built in, which means that a Dolby Digital system can be built economically around any Dolby Pro-Logic amplifier equipped with 5.1 channel inputs. It seems there are a few MPEG-2 audio discs in circulation, mostly in France, but the system has been undermined by the global acceptance of Dolby Digital and is effectively dead on its feet.

The Yamaha DVD-S700 is not awash with outputs, although the basics are present and correct, including electrical and optical S/PDIF digital outputs, twin composite video and one S-Video output, and a complete set of eight analogue outputs, two stereo, and six to feed the six (5.1) channel inputs of a Dolby Pro-Logic or other home cinema

“The player is simply a strong all-round performer, with a lack of processing that holds true even with fast-moving scenes that stretch MPEG-2 coding to its limits.”

amplifier. There's no headphone socket, but the most noteworthy omission is the European standard SCART output. SCARTS are something of a dog's dinner for a variety of reasons, mostly concerning poor standardisation and inadequate or inconsistent earthing, but they can deliver two features which are missing from this player. One is auto-source switching on the partnering TV and the other is access to RGB video, which potentially offers better video quality than S-Video. Yamaha's response is that by eliminating the SCART it has reduced internal electrical noise, which means a cleaner video output signal from the remaining sockets. Other changes from the Panasonic original, which Yamaha calls 'fine tuning', include improvements to the power supply with the aim of enhancing sound quality.

SOUND QUALITY

The Yamaha is one of the top players in the group. Picture quality is especially good and broadly comparable with the best in the group, namely the Pioneer 717 and the JVC. There are no particular outstanding points, but

there are no real weaknesses either: the player is simply a strong all-round performer, with a lack of processing (pixellation, aliasing and the like) that holds true even with fast-moving scenes that stretch MPEG-2 video coding to its limits.

The excellent picture quality is almost matched by the sound. As this is one of the players capable of reproducing high-resolution audio through the digital outputs, much time with this player was spent ploughing through Chesky and Classic Recordings titles and some Japanese (mostly Pioneer) discs recorded to this standard. As is usual at this price level, a series of better results were available when performing digital conversion outside the player (even though this meant working on a 48kHz source signal and not the full blown 96kHz), though this says more about the current state of the art at this price point than anything else. In this respect the Yamaha was no match for the Pioneer DV-717, but remains well above average and often sounded exceptionally clean.

✓ The Yamaha is a superb all-rounder, delivering great sound and pictures.

Compact disc was rather less exciting, however, and although acceptably clean and detailed, the Yamaha really doesn't qualify as CD replacement material.

The Yamaha's internal converter sounded a little weak and lacking in dynamism and solidity through the lowest octaves, though detail levels are quite high. Indeed the Dolby Digital processor suffered from the same type of handicap, which suggests that the analogue output stage and buffers may be dominant factors. Be this as it may, the overall prognosis remains favourable and the DD processor was on the way to matching the NAD receiver, which is well above average.

CONCLUSION

At first glance the DVD-S700 could be mistaken for being just another CD player. In reality this is a fine package, based on one of the best mid-price players around, which has been slightly simplified and is sold at a lower price. Good all round and Recommended.

VERDICT

SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★★
PRICE	£600

■ A fine player that concentrates on good sound and pictures at the expense of superfluous features.

ONE YEAR GUARANTEE

✉ Yamaha Electronics UK Ltd, 200 Rickmansworth Rd, Watford, Herts WD1 7JS
☎ (01923) 233166

SPECIFICATIONS

D/A processor: 24-bit/96kHz
Digital output: up to 16-bit/48kHz
Output sockets: 1 electrical, 1 optical digital audio, 1 pairs analogue stereo, 6 channel analogue output from integral Dolby Digital and MPEG-2 Audio processor, 2 composite video, 1 S-Video Y/C



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T3 Magazine, May 1998

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Chief Musical Officers' Warning

BEWARE. OBJECTS IN MIRROR
MAY APPEAR SMALLER

So What!



DVD PLAYERS CONCLUSIONS

It's a clear one-two to Pioneer, which has delivered the right products at the right time and at the right prices. The star of the show without doubt is the DVD-717, which offers wider compatibility (including CD-R and dts, facilities otherwise limited for now to some Sony models) and greater sound quality potential, especially if used with an appropriate outboard D/A converter – and all for £550. The £400 DV-515 offers much the same level of functionality, but with a simpler D/A converter (still 24/96 though) and more basic build quality. From the audio point of view, however, the DVD-717 is the one to go for.

The Kenwood DVD-9010 also offers a tremendous standard of performance, the video processing side being

particular good, but the £1,000 price tag is an obvious stumbling-block to wider acceptance. More down to earth, the Yamaha DVD-S700 is a stripped down Panasonic DVD-A350 clone, with enhanced quality and, at £600, reduced pricing. Both are recommended.

VERDICT

There is an essential dichotomy with the players in this test, in that you can have high resolution sound or you can have multi-channel sound, but not at the same time. It is precisely this combination of attributes that DVD-A and SACD will eventually bring to the party.

Should you wait? Is DVD-Video buying a pig in a poke with hi-res audio just around the corner? Perhaps not. The new audio systems will take considerable

time to become established and reach technical and price maturity. Meanwhile, DVD-Video has proven capabilities and will cope with a wide variety of disc types (in some cases more than others). As a video standard its capabilities are simply stunning, if not entirely beyond criticism, and the designers took a long term view when they built in 24-bit/96kHz PCM – a standard that is technically aeons better than CD on paper – as part of the basic specification. If DVD-A and SACD were to fail, this could be a safety net for high-resolution audio.

From the start there has been a lot of interest in buying Region Code 1 films from the USA, which means importing US (or other Code 1) players or converting UK ones. As the market matures in this country and the range of

software titles increases, interest in Code 1 may dip, but the fact remains that the range of US-sourced films will remain vastly greater than what we are allowed to buy in the high street. The mastering quality of Region Code 2 discs tends to be lower and added bonus material is often thin on the ground. With many UK suppliers and Internet sources able to supply discs at reasonable prices, this looks like one thorn in the flesh for DVD software producers that is unlikely to disappear quickly.

Finally, readers should be aware that DVD-V is an immature market. There is considerable 'churn' in this market, with short product cycles, and it can't be long before the entry level will be nearer £300 rather than the £400 you'll need to pay now.

THE BEST IN THE TEST



BEST BUY PIONEER DV-515

An unusually well-endowed player, which can read CD-Rs and understands dts, but has a rather lightweight build and, in some respects, sound quality.



BEST BUY PIONEER DV-717

Overall this is a near-ideal, thinking man's, dts-compatible DVD player, which plays just about anything with real panache.



RECOMMENDED KENWOOD DVF-9010

Recommended on performance grounds. Although rather pricey, this player offers excellent picture and sound quality through its on-board processor.



RECOMMENDED YAMAHA DVD-S700

Based on one of the best mid-price players around this fine player concentrates on good sound and pictures at the expense of superfluous features.

DVD PLAYER COMPARISON TABLE

MAKE	HITACHI	JVC	KENWOOD	PANASONIC	PIONEER
MODEL	DV-P2E	XV-D2000	DVF-9010	DVD-A150	DV-515
PRICE	£400	£475	£1,000	£400	£400
SOUND	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
BUILD	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
VALUE	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
GUARANTEE	1 yr	1 yr	1 yr	1 yr	1 yr
SIZE WxHxD	42x10.4x28.4cm	43.5x11.2x32.8cm	44x12.8x38.4cm	43x8.7x29.8cm	42x10.4x28.3cm
D/A PROCESSOR	20-bit/96kHz	20-bit/96kHz	24-bit/96kHz	24-bit/96kHz	24-bit/96kHz
DIGITAL OUTPUT	16-bit/48kHz	20-bit/48kHz	16-bit/48kHz	16-bit/48kHz	24-bit/96kHz

DVD PLAYER COMPARISON TABLE

MAKE	PIONEER	SAMSUNG	THOMSON	YAMAHA
MODEL	DV-717	DVD-907	DTH2000	DVD-S700
PRICE	£550	£500	£380	£600
SOUND	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
BUILD	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
VALUE	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
GUARANTEE	1 yr	1 yr	1 yr	1 yr
SIZE WxHxD	42x12.8x37.1cm	42x8x33.3cm	40x72x29cm	43.5x8.8x28.4cm
D/A PROCESSOR	24-bit/96kHz	24-bit/96kHz	20-bit/96kHz	24-bit/96kHz
DIGITAL OUTPUT	24-bit/96kHz	16-bit/48kHz	16-bit/48kHz	16-bit/48kHz

BUSMAN'S holiday

Phil Strongman visits the cosy listening room of ex-Mother Earth member and acclaimed singer-songwriter **Matt Deighton** to hear just how good a bit of folk-rock nostalgia can sound.

Maybe it's the busman's holiday angle but the plain fact is that most musicians just don't like hi-fi that much. Artists who think nothing of demanding studio access to a £5,000 Lexicon reverb unit will balk when asked to pay more than a few hundred pounds for a domestic set-up.

All of which puzzles ex-Mother Earth boy Matt Deighton, the much-acclaimed singer-songwriter who's been a guitarist in Paul Weller's touring band for the last couple of years.

"As soon as I get money in my pocket, one of the things I start thinking about is what I can get to make things sound better," Deighton confessed as he flopped down in his cosy 11 foot square listening room. "I can't believe the way a lot of people who are into music just don't bother. Some of them have never heard the full range of what they've bought – or what they've recorded. I know that in studios you hear stuff in the control room, but it's never quite the same because of the pressure of recording or because you're tired or tense or whatever." He shifted some of the guitars that he's painted himself, rather beautifully I might add, and tried to explain further.

"Having hi-fi of some quality at home has definitely helped me when I'm recording stuff professionally, mainly because I've come into the studio with a good idea of the full picture, of just what can be done with a mix, all the subtle stuff that you hear after playing a track at home a few times – there's some amazing things, even on old '60s and '70s records, things that you just won't hear on a cheap mini-system."

Coming from a pro' musician these are fairly exceptional words but Matt Deighton is a pretty exceptional talent, a man who's debut solo album *Villager* (Focus records 1995) is already much sought after,



"I finally heard how much I'd been missing – and I realised that a mint vinyl album is as close to the master tape as you can get."

especially on vinyl, after it had some of the greatest reviews of the '90s. Everyone from the *Guardian* to *The Face* and *New Musical Express* united to pour praise on it as they made comparisons with the likes of Curtis Mayfield, John Martyn and Nick Drake. Comments like "gorgeous", "sublime" and "exquisitely beautiful" abounded and rock author Paula Shutkever even declared that it had: "vocal harmonisation to die for – the afterglow after the orgasm." Hmm...

Unfortunately, Focus records closed just a few weeks before the parent company, Acid Jazz, itself began to wind down.

"I was in the wrong place at the wrong time," shrugs Deighton, "but I'm not that worried...". Nor does he need to be when he's sitting on the new, more electric tracks from his *Common Good* set as well as a vast archive of well-crafted, and unreleased songs. The majority of the latter are in the acoustic folk or psychedelic soul modes – and a few of which he was kind enough to spin for me. *Folklore Son* was one outstanding example, it already sounds like a classic with an appealing vocal and some dynamic guitar that grabs your sonic attention as firmly as any FX-laden fireworks. The latter, like most demos, was just a two track effort transferred from quarter inch tape to DAT, but with Deighton's ear for detail his demos often sound better than many 'finished' recordings by other name artists.

The DAT players he uses are a Sony TCD-D100 Walkman – "just to capture a rehearsal somewhere or something" – and a heavyweight Sony

Above: Matt Deighton mellowing out in the room where everything's to hand.

TCD-D10 Pro 2 with balanced mike inputs. The latter won't leave you much change from three grand but the sound, like most high-end DAT players, is superbly crisp even though the rest of the Deighton system isn't quite as expensive or of pro audio inclination. Nestling at the top of a Goldring five-tier stand is an Ariston XL turntable with an Ortofon OM10 cartridge followed by three NADs – a 5320 CD player, a 614 cassette deck and a 3225PE amp. Cambridge Audio Studio Reference cables connect the electronics while some Gale XL315-2 speaker wire leads the way to Matt's KEF Q35 speakers.

"I got the Ariston turntable because I heard it and loved the sound. After a succession of so-so Duals it was a bit of a leap forward, while the NAD 3225 amp replaced a Kenwood surround-sound TV thing... the latter didn't sound that great but it had a nice weird effect



Through the keyhole: Ariston turntable and NAD electronics give little away, the Sony DAT recorders and tasty guitars provide the real clues here.

Hustle Is On (Groove Note 180g, 1998) which rapidly became another musical high-point on the Deighton rig, as lively as you like without losing anything of the CD's clarity. You could close your eyes and T-Bone Walker's protégé was in the room with you. Another Davy Graham cut *Both Sides Now* from *Large As Life, Twice As Natural* (Decca, 1968)

seemed to emulate the effect, swimming out of the speakers and sweetly commandeering the room as it swelled up and around us.

As I write, Deighton's management is haggling with record companies, so we will hopefully be hearing some of his new *Common Good* material before too long. He's also been approached about issuing some audiophile vinyl of his back catalogue (which would also give us audiophile collectors a chance to purchase some music that wasn't either American or over 20 years old!). Either way, music-lovers are in for a treat and, although they travel well, I've still got a sneaking feeling that the best place to hear Deighton's latest productions is going to be that little 121 square foot room, surrounded by hand-painted guitars and with an everyman system that effortlessly blends pro audio with budget bargains.

when you used the 'stadium' setting on things like the *Antiques Roadshow*," he said, struggling to suppress a laugh. "I'd heard a few NADs in some project studios so I had a good idea of what they sounded like — at least that's my excuse for not auditioning them properly, but I would have preferred proper piano keys on the cassette. Piano keys were the 'pause' buttons that really worked, though the NADs all do their job pretty well." He grinned before confessing: "It was that factor and the fact that I liked the quiet grey look of them that swung it... then I got the KEFs and it was complete. I finally heard how much I'd been missing and I realised that a mint vinyl album is as close to the master tape as you can get."

Which encouraged him to extend his 5,000-strong album collection even further. "The thing that amazed me was how good some of the mono LPs sounded, the Beach Boys' *Pet Sounds* and all the early Beatles tracks. An engineer told me John Lennon would only bother to attend the mix mastering when it was mono, stereo was considered a gimmick at first."

Although he'll be the first to admit that a dash of luck came

into it, Deighton's hi-fi instincts have really paid off. In his small listening room, four or five people can be completely surrounded, womb-like, with a musical sound which still maintains detail and bandwidth. The system isn't particularly bass-heavy but the size of his room somehow compensates and to my jaded ears the acoustic music came across with a startling new intimacy. Of course, some tracks might come over better in larger environs — although one has to ask how many of us actually have 42ft by 21ft listening rooms built to 'magic' proportions? But other selections would undoubtedly lose something, since some LPs by various cult folkies seemed to sparkle as never before.

Money Honey from *Midnight Man* (Decca, 1966) swung like no Davy Graham track had the right to — is folk allowed to be funky? — with pulsing reverb warming up Graham's cutting-edge guitar as his voice tugged at the back of your soul.

I'd bought along, a 12inch pressing of Roy Gaines' *The*



ON TEST!



SPEAKERS

Paul Messenger and Paul Miller lend their listening rooms and laboratories to a diverse group of new loudspeakers from every corner of the high fidelity universe.

GLOSSARY

BALANCE: Most loudspeakers have a characteristic frequency balance which results from emphasising some parts of the audio range and/or de-emphasising others.

BASS: The lowest three octaves of the audio band – hence ‘low bass’ refers to the bottom octave (20-40Hz); ‘mid-bass’ the middle octave (40-80Hz); and ‘upper bass’ the 80-160Hz octave.

BI-AMP (SOMETIMES TRI-AMP): Loudspeakers equipped with separate access terminals to each drive unit can be driven by separate (matching) power amplifiers for each driver.

BI-WIRE (SOMETIMES TRI-WIRE): Loudspeakers with separate access terminals to each driver can be driven by separate cable runs between the power amp and each driver.

CROSSOVER: A simple electrical network which divides the full bandwidth signal received from the power amplifier, apportioning appropriate parts of the spectrum to the various drive units.

DRIVE UNIT/DRIVER: A transducer which converts electrical energy into acoustic energy, eg main driver, tweeter.

FREQUENCY RESPONSE: The range of frequencies, from low to high, which a loudspeaker will reproduce.

IMPEDANCE: The complex electrical load that a loudspeaker presents to the amplifier which is driving it.

MAIN DRIVER: A drive unit which reproduces both bass and midrange frequencies.

MIDRANGE: The middle three or so octaves of the audio band, where the ear is most sensitive, covering the approximate frequency span from 160Hz up to 1.5kHz.

NETWORK: see *Crossover*.

PRESENCE: Critical section of the band between midrange and treble.

SENSITIVITY: The relative loudness generated for a specific voltage input.

TREBLE: The top end of the audio band, eg above 3kHz.

TWEETER: Treble driver.

WOOFER: Bass driver.

THE CAST LIST

Acoustic Energy AE520	£999.99 p77
Audiovector C2	£795 p79
AVI NuNeutron	£500 p61
Chario Constellation Lynx	£549 p69
Dali Royal Menuet MkII	£400 p63
Dynaudio Audience 40	£400 p65
JBL 4312 MkII	£1,000 p80
KEF Q65	£799.95 p81
Musical Technology Falcon	£625 p71
Opera Prima	£495 p67
Snell K5 Monitor	£750 p72
System Audio 1150	£750 p73
Triangle Zephyr II	£599 p75

The price range for speakers in this test – from £400 to £1,000 – might fairly be said to represent the broad middle ground for a stereo pair of hi-fi loudspeakers. In the context of, say, a 29-inch telly it sounds quite a lot of money to spend on a pair of speakers. Looked at historically, however, and taking inflation into account, it's not really such a big deal.

For the serious enthusiast, £1,000 only represents the starting point for high-performance loudspeakers. That said, there are plenty of interesting sub-£1,000 models, some offering serious performance capabilities.

Unlike the other components in the hi-fi chain, loudspeakers vary

dramatically in size, shape and finish, so choosing a pair can be a bewildering prospect. Take our 13-strong test group as a (not entirely) representative sample, and you'll find it split pretty evenly between stand-mount and floor-standing designs, with large and small examples of both styles. (Bear in mind, if you're thinking stand-mount, that the cost of decent stands can jack up the price by 20-50 per cent.)

The bottom line is that you do get more or less what you pay for. The smaller speakers have the more luxurious wood veneers – or even solid hardwood in two cases in this test. They're more likely to have cast main driver frames too, though in practice this feature is found on the majority of models in our collection. The small speakers offer reduced box coloration and better mid-to-treble integration than their larger rivals, but inevitably lose out in bass extension, loudness capability and headroom.

Cosmetics play an important part in most people's speaker selection process, since a pair of properly placed loudspeakers will always have a major impact on the aesthetics of a room. Hence the reason why a lot of speakers end up improperly placed and

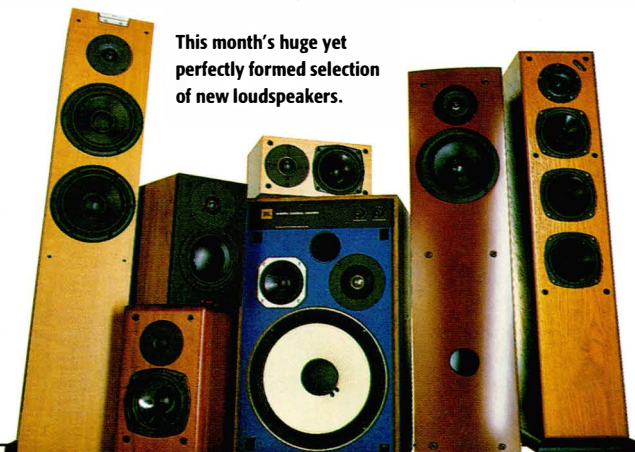


1) Acoustic Energy AE519 p77, 2) Audiovector C2 p79

therefore unable to perform to their best abilities. Do take your room into consideration and determine where it's practical to place loudspeakers to help you make the best decision. Note that some speakers have a bass alignment suited to close-to-wall siting; others are balanced for free space. The distinction is an important one (even though many designs attempt to fudge the issue).

The size of the room, the type of music you like and the sort of loudness levels you like to play this music at are all factors which could affect the decision-making process. In a small room, small speakers are a very practical proposition and can usually cater for most tastes most of the time. Naturally enough, in a large room, the smallest speakers can sound a bit lost, especially if called upon to handle full-scale orchestral or heavy rock or dance material.

This month's huge yet perfectly formed selection of new loudspeakers.



From left to right: 3) AVI NuNeutron p61, 4) Chario Constellation Lynx p69, 5) JBL 4312 MkII p80, 6) Dali Royal Menuet MkII p63, 7) Dynaudio Audience 40 p65, 8) Opera Prima p67,

9) Snell K5 Monitor p72, 10) KEF Q65 p81, 11) Musical Technology Falcon p71, 12) System Audio 1150 p73, 13) Triangle Zephyr II p75,



GROUP A BELOW £500

GROUP B £500-£750

GROUP C £751-£1,000



HINTS & TIPS

The rules for getting the best out of speakers are the same whatever the speakers involved. Standmounts require proper stands to ensure stable, predictable support and place the drive units the same distance off the floor as your ears. Floorstanders should have spikes fitted carefully – this is a potential weak spot in cheaper models.

Finding the right place to position the loudspeakers acoustically, with respect to the room walls, is just as important. Our reviews include suggestions but every room is different, so do take time and trouble experimenting with your own set-up. And don't forget to use decent speaker cable, if you want your system to perform at its best.

SPEAKERS GROUP A

BELOW £500

Perhaps coincidentally, these are all standmounts, so any price advantage they may have over the Group B models is likely to be eroded by the need to purchase some matching stands. They're all small two-way speakers with small main drivers, so are best suited to smaller rooms and modest replay levels.

The Opera has the largest, most beautifully built box of the four, followed by the Dali and AVI, whereas the Dynaudio settles for a vinyl finish. However, the Dynaudio has the largest main driver cone. Three have cast frame drivers, but the AVI makes do with a pressed steel basket.

AVI NuNeutron	£500
Dali Royal Menuet MkII	£400
Dynaudio Audience 40	£400
Opera Prima	£495

SPEAKERS GROUP B

£500-£750

Logic (and price) might well have put the tiny £549 Chario among the Group A selection, due to its main driver and enclosure size. All these Group B models use cast frame main drivers in two-way configurations, but the other four are larger, more expensive and have greater air-moving capabilities.

The Snell and Triangle are straight two-ways, while the other two use twin main drivers in the so-called d'Appolito arrangement, one above and one below the tweeter. You get more bass and loudness potential with the three floorstanders, but all are predominately vinyl covered.

Chario Constellation Lynx	£549
Musical Tech Falcons	£625 inc. bases
Snell K5 Monitor	£750
System Audio 1150	£750
Triangle Zephyr II	£599

SPEAKERS GROUP C

£751-£1,000

The most varied group of all, price band apart these speakers have little in common. They're an object lesson in how loudspeaker design becomes more and more diverse the higher you move up the price ladder.

One is a standmount and three are floorstanders. Two have vinyl finish, while two have real wood. Three are full three-ways, the other a two-and-a-half-way. Naturally enough, the three-ways have the advantage when it comes to loudness capability and power handling, but that doesn't mean they'll sound better at 'normal' listening levels – sometimes the reverse is true.

Acoustic Energy AE520	£999.99
Audiovector C2	£799.95
JBL 4312 MkII	£1,000
KEF Q65	£799.95

HOW THE TESTS WERE DONE

The unsighted listening tests took place in a room which is a little larger than average – 5.5x4.2x2.6m (WxLxH). The speakers were installed one pair at a time behind an acoustically transparent curtain and positioned according to the results obtained from a series of sinewave sweeps taken in the room itself across the listening arc. Each presentation takes roughly half an hour, covering a broad range of music, split evenly between vinyl and CD sources.

Care is taken to try to match the relative volume of each loudspeaker, though differences in frequency balance, bass

extension and room drive unavoidably get in the way; grilles are removed to take account of black net curtaining.

The tests were spread over two days, allowing for repeat presentations. Extensive hands-on listening also took place over a period of two weeks.

The main reference system used for the blind and hands-on work consisted of Mana-supported Naim and Linn components, viz: Linn LP12 turntable, Naim ARO tonearm, Linn Arkiv 2 cartridge, Naim CDS CD player, NAT01 tuner, NAC52 pre-amp and NAP135 power amps. Speaker cables were NACA5 and

Nordost SPM, and speaker stands were primarily Kudos S100s.

THE LISTENING PANEL

Many thanks to the panellists:

DAVID INMAN (Castle)

ROBIN MARSHALL (NXT)

RUSSELL KAUFFMAN (Morel, Densen)

JASON KENNEDY (Hi-Fi Choice)

TIM BOWERN (Hi-Fi Choice)

CHRIS JACKAMAN (Monitor Audio)

WHAT MUSIC DID WE USE?

Music used included excerpts from the following albums, as well as BBC Radios 3 & 4 during the hands-on work:

MAS SIVE ATTACK: Mezzanine on Virgin

JONI MITCHELL: Mingus on Asylum

CHEMICAL BROTHERS: Brothers Gonna Work It Out on XDUSTCD 101

LYLE LOVETT: I Love Everybody on MCA MCD10808

CAMBRIDGE SINGERS:

There Is Sweet Music Rutter/Collegium on COLCD 104

STADIUM SYM ORCH NEW YORK:

Uirapura/Villa-Lobos/Stokowski on Everest/DCC Compact Classics

FUN LOVIN' CRIMINALS:

Come Find Yourself on Chrysalis

MASSIVE ATTACK: Blue Lines

on Virgin

- Integrated CD player
- Integrated amplifier
- Tuner
- Power amplifier
- DSP Surround sound processor
- 5 Channel AV amplifier

Finish: silver or matt black

MODE

CD

TUNER

VIDEO

LINE 1

LINE 2

TAPE

ROKSAN

Caspian
whichever way you look at it...

...its award-winning

Roksan Caspian system – January '99
Best Buy
CD player/amplifier/speakers



Caspian – '98 winner
Best Buy
Integrated/Power amp
from £1000



Caspian – '97 winner
Best amplification
component up to £1000



Roksan was formed in 1985 to offer sound reproduction systems of the highest quality for the most discerning of music lovers.

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AVI NuNeutron

AVI is a West Country manufacturer, known primarily for its range of amplifiers and other electronics, whose reputation for build and quality has developed a strong niche following. However, AVI has speakers too, and this NuNeutron is not the first to come under our scrutiny. In *HFC 174* we featured the compact floorstanding Positron, which looked and sounded pretty enough, but seemed a little small considering its £900 asking price.

The latter criticisms could probably be equally applied to the NuNeutron, which is very nearly the smallest speaker in this group test and not the least expensive either at £500. With these, of course, you'll probably have to

“A well-engineered small speaker such as this can have a smoothness and delicacy rarely encountered in beefier designs.”

find some more money to buy a decent pair of stands.

While I admit that I'm not a particular fan of the sub-miniature breed, there's no denying they have a strong appeal to many customers. Classics like the BBC LS3/5A and Acoustic Energy AE1 have done much to give tiny speakers hi-fi credibility, and small speakers do have certain inherent advantages: a small enclosure surface area to radiate unwanted coloration, for starters. There's

also the argument that using a midrange driver to handle the bass makes more sense than using a bass driver to cover the midband, because the midband is the real heart of the musical action.

AVI obviously thinks along those lines, as the NuNeutron has an enclosure volume of just 5 litres and a main driver with a 90mm doped paper cone (the same size as that used in the Positron), port loaded at the rear. Given the price and the competition, I was disappointed to find only a pressed steel frame for the main driver. The tweeter has a relatively large 33mm soft fabric dome, and the signal comes in through a single terminal pair. The tiny box is rather understated, but nicely finished in real wood veneer.

Room measurement confirmed the manufacturer's recommendation for close-to-wall siting and, while the bass is inevitably limited, the mid to treble is very well ordered and smoother than most.

SOUND QUALITY

One could hardly describe the NuNeutron as a giant-killer. That's just not its style. It may lack something in weight and dynamic drama, but it also plays to the



precision and welcome timbral accuracy – our choral extract was particularly convincing.

CONCLUSION

After a fair amount of soul-searching, I have decided to award the NuNeutron a Recommended flag, not because it's a great speaker or good value, but because it's an impressive example of the sub-miniature subculture. These tinies are not for those with large rooms or a penchant for annoying the neighbours with block rockin' beats. But a well-

engineered small speaker such as this can have a smoothness and delicacy rarely encountered in larger, beefier designs. **PMe**

VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £500

■ A smooth and subtle if pricey sub-miniature, albeit with the inevitable limitations of the breed.

■ FIVE-YEAR GUARANTEE

✉ AVI Ltd, 16 Bridge Road, Cirencester, Gloucester GL7 1NJ
☎ 01285 654432

THE LAB REPORT

The NuNeutron shares some family traits with the much larger AVI Positron (*HFC 174*): its axial response shows a similarly downturned balance from bass through mid and presence before picking up again above 5kHz. The averaged 3rd-octave trace indicates this U-shaped response will flesh out slightly at 2-3m distance, but the lack of midrange/presence 'vitality' – where distortion exceeds 1 per cent – is likely to remain. At least the NuNeutron's modest 85.8dB sensitivity is in line with AVI's 86dB specification. The average 6.6 Ohms

○ Modest sensitivity and impressively low distortion.



impedance is not as tough as that imposed by Dalí's competing miniature but the sub-5 Ohms region from 160Hz-720Hz will not be greeted with delight by all amplifiers.

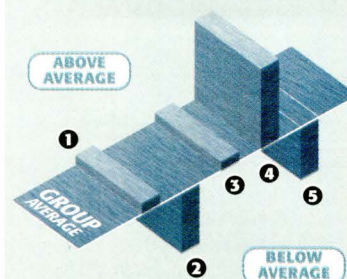
AVI has not been tempted to tinkle up the bass with a 'peaky' driver alignment, though with the driver null at 48Hz, impedance minimum at 54Hz and port

tuned to 83Hz it does remain 'mis-tuned'. In practice, the broad port output reinforces the 5inch 'curvilinear' bass driver as its drops to -6dB at 82Hz and is sufficient to extend bass to around 70Hz in-room. A slightly deeper bass will be obtained by mounting the box in a bookshelf but the NuNeutron will never rock ornaments from the sill. **PMi**

HOW IT COMPARES

A modestly-proportioned box with equally modest sensitivity and loudness capability. Distortion is impressively low through the bass and, though it increases through the midband, is still lower than with most competing miniatures.

1	EASE OF DRIVE	5%
2	RELATIVE LOUDNESS	-40%
3	MAXIMUM LOUDNESS	5%
4	AUDIBLE DISTORTION	55%
5	BASS EXTENSION	-35%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	86dB	85.8dB
■ Impedance (Nominal/Mean)	8 Ohms	6.6 Ohms
■ Estimated Bass Extension	65Hz	70Hz

REALITY CHECK—the all-valve **LS25** brings down the cost of true **Audio Research** high-end performance. This line stage preamplifier can be perceived as a slightly small Reference 1. It is a pure Class A design with smooth detailed sound, clean focus and plenty of bass impact. It has the flexibility to integrate with high quality audio and video components.

A NEW REALITY—**Audio Research** delivered true reference sound quality with its **Reference 1 preamp** and **Reference 600 monoblocs**. A number of customers looking for Reference 600 sound quality have asked for slightly lower output power and a smaller chassis. The new **Reference 300** is the smaller, quieter and cooler answer to these customer's needs.

Good news too for existing Reference 600 customers who can opt for the **MkII factory update** while new-build **Reference 600MkII**s are now available. Each mono chassis packs 16 power output valves through a tightly coupled output transformer to deliver an effortless 600 watt with the naturalness and ease of dynamics only associated with live performance. With its wide bias adjustment the Reference 600 can use of any popular output valves in the 6550, KT88/90/99/100 families. The all-valve Reference 1 stereo line preamp has full micro-processor remote control of volume, balance, record and input selection with both balance and single ended inputs (eight plus full tape loop) and outputs (two main, one tape). There are no mechanical switches to degrade the signal path. Awards and world-wide acclaim says it all. Find out for yourself why Ken Kessler rated these "the finest audio

amplification devices ever produced" (Hi-Fi News May 1996)

REAL PARTNERS—**Audio Research** has introduced the **LS9**, a remote control solid-state preamp to replacing the popular LS3/3B. This all new, direct-coupled Class A design uses the constant-current technology of the flagship Reference 1 and features two balanced and three single-ended inputs plus a full tape monitor loop in a low profile case.

Perfect partner for the LS9 is the **100.2** solid-state power amp which we believe sets a new standard. Liquid and grain-free, it possesses a fine midrange transparency.

REAL TRADITION—the **PH3 phono preamplifier** is eagerly sought out by those enjoying the renaissance of interest in vinyl. A total of 109 part changes now see the PH3 in Special Edition guise as the **PH3SE**. We can confidently say this is the most stunning phono stage ever to bear the Audio Research logo. An upgrade will be available for existing owners.

Get a new grip on REALITY

LS25 preamplifier — gripping



VT200 amplifier — nominee The Academy Advancing High Performance Audio & Video Golden Note award 1998 'Tube (valve) electronics design'

Reference 600 monoblocs — winner AAHEA Golden Note award 1996 'Best tube electronics design'

Reference 1 preamplifier — winner AAHEA Golden Note award 1997 'Best tube electronics design'

REAL PERFORMANCE—the **LS15** pre-amplifier is for those making an important transition into the real high-end yet who wish to retain the convenience of full remote control of all front panel functions. It offers both singled ended and balanced inputs with micro-processor controlled relays for gain control and switching. Enthusiasts looking for the traditional qualities of an all-valve line preamplifier will find them carried over into the **LS8** which replaces the much-loved LS7.

REAL POWER—The 100 watt per channel **VT100 power amplifier** is a hard-driving amplifier with true bass slam matched by a liquid mid and top. Its speed and control have to be heard. The LS15/VT100 pre-/power combination will rock you back on your heels with its resolution and dynamics. This partnership puts excitement back into your music making. Martin Colloms (Hi-Fi News April 1997) reviewed the VT100 as "having a generously balanced sound... sufficiently positive and dynamic to give a believably accurate tonal balance".

The **VT100** is now in **MkII** build with doubled power supply energy storage, cooling fan and valve damping rings. MkII enhancements are available as a factory upgrade for existing owners. The mid-power VT100 MkII is positioned between the classic VT50, at around £3300, and the mighty VT200.

REAL INTEGRATION—enthusiasts waited a long time for the **CA50** all-valve, remote control integrated amplifier. Conservatively rated at 50 watt per channel the CA50 is designed to be stunningly musical, handsome in appearance—its styling cues come from

the awesome Reference 1—and completely convenient. Audition this important **Audio Research** first and find out why Ken Kessler (Hi-Fi News February 1997) said, "So much for the superiority of separates...".

REAL QUALITY—An entirely new full 20-bit **CD player**, the **CD2**, is styled to match the CA50. As a complete player **Audio Research** is convinced the CD2 can compete with any single or two-box player in the market with its astounding resolution of detail and dynamics.

For those seeking classic Audio Research sound quality in an outboard digital converter the all valve-output **DAC3** converter is the perfect choice. It is now in **Mk II** production with improved components and important mechanical improvements to reduce vibration.

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DALI Royal Menuet MkII

There's nothing surreal about this speaker, though I dare say the manufacturer won't be displeased by the artistic connotations of its chosen name – even though it's an acronym for something to do with Danish loudspeakers. Dali is distributed in the UK by The Audio Club (which also handles NAD product) and is part of a major Danish hi-fi retail operation which also has extensive manufacturing interests.

Several Dalis have appeared in *HFC* over the years, the two most recent examples having been big on perceived value as well as impressive performers for low-cost floorstanders. The Royal Menuet MkII could not present a greater contrast. With a bijou

“Timing is pretty good, as the whole thing sounds quick and coherent, with a well-judged treble and spacious imaging.”

presentation that's almost as pretentious as its name, you don't get a lot of loudspeaker for your £400 here. I certainly couldn't fit a pair of my size elevens inside these pretty little miniatures, and I was quite startled to note that there's an even smaller and less blue-blooded Menuet in this Red Series range. (There are also three floorstanders which are less dimensionally challenged.)

There's no denying that the sub-shoebox-sized miniature

loudspeaker has its niche. For many people, when it comes to speakers the smaller the better is the rule – and small doesn't have to mean cheap, in price or performance.

But at what point does reduction become absurd? It's a debatable point, which in my opinion has something to do with the size of the listening room, the type of music that's likely to be played and the predispositions (or prejudices) of the listener. Whatever the reason, the Royal Menuet MkII's main driver, with its classy cast alloy chassis, has a tiny 80mm cone which is one of the smallest found at any price, and certainly the smallest in this test group.

The enclosure is particularly nicely finished, with a pretty veneer and a lustrous furniture finish. Both drivers are flush mounted into the front baffle, whose periphery is nicely radiused to soften the lines. A single pair of terminals is fitted to the rear, just below a small diameter port.

Not surprisingly, room measurement confirmed that bass output is limited and that some wall reinforcement is likely to be beneficial in filling out the midbass. This helps compensate



There was also criticism of its 'smallness' and lack of dynamic expression. Timing is pretty good, as the whole thing sounds quick and coherent, with a well-judged treble and spacious imaging. But the lack of bass weight was evident both in the limited authority and dynamic range, and a slight shift in harmonic timbres.

CONCLUSION

Undoubtedly one of the prettiest sub-miniatures around, the Royal Menuet MkII has an engaging sound quality. However, £400 is a lot to pay for a speaker this size and, while the

top quality ingredients go some way to justify the price

tag, the whole set-up ultimately lacks sufficient subtle transparency or sheer excitement to justify formal recommendation. **PMe**

for a slight forwardness centred on 1kHz. Impressive smoothness elsewhere is interrupted by a dip 3-5kHz.

SOUND QUALITY

The Royal Menuet MkII isn't a bad-sounding loudspeaker, but, as the smallest as well as one of the least expensive on test, it didn't manage to transcend the limitations imposed by those constraints. The good 'up-front' detail projection gave an initially strong impression with fine vocal intelligibility, but there was a slightly 'forced' quality, with a touch of nasality and boxiness.

VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £400

Classy sub-miniature with a beautiful box and fine ingredients, but a little lacking in both subtlety and excitement.

FIVE YEAR GUARANTEE

The Audio Club, Unit 15 Faraday Road, Aylesbury, Bucks HP19 3RY
01296 482017

THE LAB REPORT

This miniature speaker undercuts its rival in this test – the AVI NuNeutron – by £100 and yet offers a little extra sensitivity (86.6dB re. 2.83V/1m) and a livelier response. Livelier also means slightly more ragged as our narrowband analysis shows some prominence around 750Hz followed by what are probably a series of cone modes at 1.4kHz and 2kHz. Neither is it a doddle to drive with +51/-32 degree swings in phase angle through the bass region coupled with a 3.2 Ohms minimum at 280Hz. Dali claims a “linear 4 Ohms impedance”, which is only realised above 140Hz in practice

Extra sensitivity and a livelier response from the Dali.



where it holds to within 3.2 to 7.9 Ohms. Either way, the 5.2 Ohms average impedance means the Menuet is no pushover.

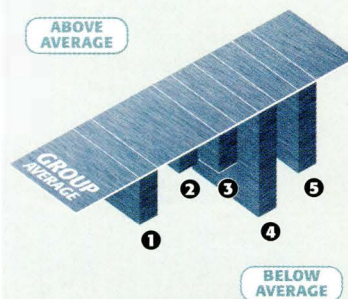
Distortion holds below 1 per cent through the bass but as the tiny bass/mid driver works through the midband, both 2nd and 3rd harmonic distortions accumulate to 2-3 per cent. The treble driver is a little disappointing with its strong 2 per cent 2nd harmonic. Here the

AVI proves more effective. There are differences in bass loading too, with Dali opting for an under-damped port resonance at a low 63Hz with a smooth bass roll-off reaching -6dB at 85Hz. When it comes to bass extension, the AVI has the edge. **PMI**

HOW IT COMPARES

Maximum sensitivity is squeezed from a minute enclosure by challenging the amplifier with a relatively tough 5 Ohms load. Distortion remains high through midrange and treble, and bass extension, naturally, remains limited.

- 1 EASE OF DRIVE -30%
- 2 RELATIVE LOUDNESS -10%
- 3 MAXIMUM LOUDNESS -25%
- 4 AUDIBLE DISTORTION -70%
- 5 BASS EXTENSION -55%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	86dB	86.6dB
■ Impedance (Nominal/Mean)	4 Ohms	5.2 Ohms
■ Estimated Bass Extension	N/S	73Hz

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REVIEW OF CASPIAN AMPLIFIER, CD PLAYER & ROKONE SPEAKER SYSTEM, WHAT HI-FI, JANUARY 1999

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'To be brutally honest the integrated amp is superior to most bi-amp combos...two Caspians are dynamite. They could end your amp wanderlust for good'

REVIEW OF CASPIAN AMPLIFIER, HI-FI CHOICE, NOVEMBER 1998

'It is gloriously vivid and involving sound; looks the bizzo too'

REVIEW OF CASPIAN CD PLAYER, WHAT HI-FI, AUGUST 1998, ★★★★★

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REVIEW OF ROKSAN POWER AMPLIFIER, WHAT HI-FI, DECEMBER 1998, ★★★★★

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DYNAUDIO AUDIENCE 40

A long-established Danish company, Dynaudio has been better known for unusual main drivers than complete speaker systems, but this is beginning to change. The 577 Audience 50 scored a 'Best Buy' rating in *HFC 174* and, while the £400 Audience 5 was rather less successful (*HFC 177*), the company has now come up with its Audience 40 replacement.

However, £400 is still a lot of cash to pay for a 7-litre miniature two-way, especially as the box finish is vinyl where most of the price competition offer a tasty choice of real wood veneers. But Dynaudio has built its reputation on serious engineering, applying its proprietary driver technology

"The Audience 40 delivered a stonking performance in the listening tests... and was widely praised for fine musical communication."

across the whole range, budget to high end. It also uses some pretty solid cabinet work, even in the vinyl-finished enclosures, simply because this is very effective engineering to maximise all-round performance – the front panel is 19mm MDF. Besides, the vinyl looks neat enough, even close up, only really betraying its humble origins to the touch.

On the surface this is a simple, demure and understated two-way, in a classic 'miniature' enclosure

for stand-mounting. The *pièce de résistance*, however, is the unique main driver with its combination cone/dome 100mm plastic diaphragm driven from an oversize (75mm) voice coil and cast chassis. The tweeter is also Dynaudio's own design, using a 28mm fabric dome with ferrofluid cooling/damping. Both drivers use aluminium voice coil wire.

The rear carries a port (with optional foam bungs) and just a single terminal pair (Dynaudio doesn't believe in bi-wiring), while the crossover uses very gentle 6dB/octave roll-off rates. Although the far-field in-room measurements confirm the expected lack of deep bass, the Audience 40 still has sufficient midbass output to avoid the need for wall assistance – use the bungs if you want to place them close to a wall. The trace, as a whole, is exceptionally well balanced right across the band, with just a faint dip around the crossover point and a slightly brighter-than-average treble.

SOUND QUALITY

The Audience 40 delivered a stonking performance in the listening tests – two listeners rated this humble Group A



The sound as a whole is clean, clear and beautifully balanced, with just the minor caveat that it might be a shade on the bright and shiny side for some partnering electronics.

CONCLUSION

A big improvement over the now discontinued Audience 5, it's hard to avoid the conclusion that the Audience 40 is even better value than the 40 per cent larger (and 44 per cent more expensive) Audience 50, especially since its bass tuning gave a rather better match with our listening room.

Since the Audience 50 rated a 'Best Buy', the same accolade is mandatory for this excellent newcomer. Few, if any, of a similar price and size can offer the same winning combination of neutrality, dynamic range and sheer musical involvement. **PMe**

miniature their joint "best of the day". It might not quite have the artillery to compete head on with some of the larger models in the more upmarket Groups, but it proved quite able to see off its immediate competition and several Group B and C models too. It was also widely praised for its fine musical communication.

The bottom line is that it does nearly everything well and can compete with floorstanders in everything bar dynamics and bass grunt: "Treble sings sweetly and midrange is coherent. Not a sound to thrill the senses but generally foible-free and easy to live with. Very pleasant indeed."

VERDICT

SOUND	★★★★★
BUILD	★★★★★
VALUE	★★★★★
PRICE	£400

■ A very welcome new addition to the Dynaudio stable – a great all-rounder that's good value for money too.

■ FIVE-YEAR GUARANTEE

✉ Dynaudio UK, 29 Robyns Way, Sevenoaks, Kent TN13 3EB

☎ 01732 451938

THE LAB REPORT

There are obvious visual parallels between this Audience 40 and Dynaudio's slightly larger Audience 50, reviewed in *HFC 174*, but the smaller box also looks to be the more mature. The Audience 50, for example, enjoyed an 88dB sensitivity by imposing an average 6.6 Ohms load on the amplifier. By contrast, the 40's sensitivity is down to 86.7dB (re. 2.83V, 500Hz-8kHz) but the average load looks much kinder at 8.9 Ohms. The brief 3.5 Ohms minimum at 245Hz is not associated with any significant phase angle, so shouldn't prove troublesome for competent amplifiers.

☐ Good bass extension and a very sweet treble.

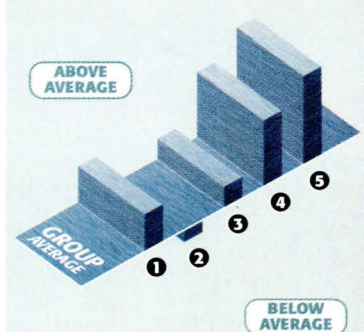
The response, furthermore, might still err on the bright side of neutral but is not so fierce as the Audience 50. An axial listening position gives the more uniform response (aside from a series of cone nodes at 1.8kHz as the two drivers collide at crossover), whereas off-axis a sweeter treble is traded for a lumpier bass and mid. Take your pick. Bass tuning is perfectly aligned with symmetrical port, impedance minimum and driver null frequencies, but is still a little 'peaky'. Here a high-Q, but very clean, port resonance reinforces the driver at 63Hz, just following its -6dB rolloff at 75Hz. Expect an in-room bass extension close to 50Hz. **PMi**



HOW IT COMPARES

Perhaps Dynaudio has been reading our Lab Reports, for the Audience 40 is an altogether more civilised beast than previous Danish mini-monitors. Good bass extension and a moderate load are won at the cost of sensitivity but not maximum loudness.

1 EASE OF DRIVE	25%
2 RELATIVE LOUDNESS	-5%
3 MAXIMUM LOUDNESS	15%
4 AUDIBLE DISTORTION	35%
5 BASS EXTENSION	60%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	86dB	86.7dB
■ Impedance (Nominal/Mean)	4 Ohms	8.9 Ohms
■ Estimated Bass Extension	53Hz	50Hz

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OPERA Prima

A new name to this reviewer and the HFC Directory, it came as no great surprise to discover that Opera is an Italian loudspeaker builder, based in Treviso in the north-east part of the country, quite close to Venice. It's also therefore no surprise to find an exquisitely crafted real wood cabinet when one opens the carton, because that seems to have become a key feature of Italian hi-fi speakers.

Distributed in Britain by Italian audio specialist UKD, Opera has an extensive range of at least nine models. This £495 Prima is a new model which sits on the second rung up the ladder. A two-way, luxury finish standmount with real hardwood enclosure,

“The midband is its main strength, not only for its tonal accuracy but also for its lively exuberance and wide dynamic range.”

its closest relative is the compact floorstanding Platea (£795), which uses the same two-way driver line-up but a considerably greater area of woodwork.

Apart from the claimed sonic benefits of using solid hardwood in place of chipboard or MDF, which I for one wouldn't attempt to dispute, there's a major cosmetic advantage in being able to sculpt the wood however you wish without wondering how to glue veneer onto a curved surface

afterwards. The Prima exploits this by heavily post-forming all the edges of this medium-sized (12-litre) standmount, softening the edges and giving a very smooth and classy feel, while the individual box sections are highlighted in the construction, adding variety and interest to the whole.

It's a simple two-way design, port loaded at the rear and with chunky terminals fitted directly to the woodwork. The main driver has a cast frame and clear plastic cone, just 95mm in diameter, while the tweeter uses a 19mm soft fabric dome.

The averaged measurements in a far-field room show a relatively smooth and even, if slightly prominent, midband; a slightly recessed presence; and a well-judged and smooth treble. However, the bass looks detached and lumpy, with lots of activity around the main 55Hz room mode but a decided lack of it through the upper bass.

SOUND QUALITY

That rather uneven in-room balance was reflected in a similarly uneven reaction from the listening panel. The majority verdict was not too enthusiastic, though at least one member was well persuaded by its lively charm.



with few aggressive tendencies, so broad compatibility should be a foregone conclusion – indeed, some might find the top end a little shut in and too restrained.

CONCLUSION

A difficult speaker to sum up, the highish price must be largely vindicated by the excellence of the solid hardwood cabinet work, artful carpentry and good quality ingredients. The sound quality, however, is uneven, and it's difficult to weigh up the impressively

expressive midband

against the unconvincing lack of bass drive and weight. Formal recommendation is perhaps not quite appropriate – but if you like what you hear as well as see, don't let our quibbles put you off. **PMe**

VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £495

Although the midband is impressive, this speaker sadly suffers from a lack of bass drive and weight.

TWO YEAR GUARANTEE

UK Distribution, 23 Richings Way, Iver, Bucks SL0 9DA
01753 652669

THE LAB REPORT

Opera's choice of 90mm copolymer bass/mid unit crosses over around 2.8kHz to a 19mm silk-dome and, indeed, there is a sharp (inaudible) peak followed by a slight, but more audible, shelf right through this region as the bass unit falls away and the dome picks up steam. The treble peak, when it arrives, is sufficiently high in frequency not to provide an aggravating 'sizzle'. The speaker's low frequency alignment is a joy to behold (spot-on, anyway) with a high-Q port resonance precisely matching the driver null at 50Hz. The driver itself looks to have been optimised for

Excellent bass alignment and acceptable sensitivity.



flatness rather than an exaggerated peak, which might otherwise give the (false) impression of a punchy bass.

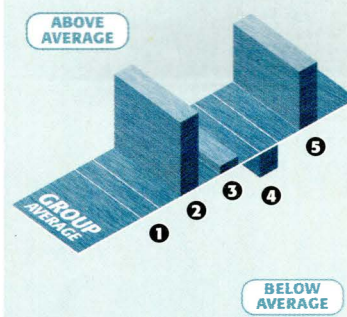
Otherwise, not all amplifiers will appreciate the bold +54/-42 degree swings in phase angle through the bass, nor the 3.4 Ohms load at 240Hz, but the average 7.1 Ohms impedance is not too harsh. The 88.4dB (re. 2.83V/1m) sensitivity is near enough to Opera's figure of "around 88dB"

and sufficient to raise some 103dB per pair in the average room. Sadly, something was not nailed down tightly enough in our sample, which suffered a low-level 'buzz' through the upper bass and forced distortion from 1 per cent to over 2 per cent. **PMI**

HOW IT COMPARES

A perfectly 'usable' 88dB sensitivity, excellent bass alignment and a broadly flat response all look good on paper. Sadly, our sample was compromised by a low-level 'buzz' and increased distortion through the upper bass region.

- 1 EASE OF DRIVE 0%
- 2 RELATIVE LOUDNESS 50%
- 3 MAXIMUM LOUDNESS 5%
- 4 AUDIBLE DISTORTION -15%
- 5 BASS EXTENSION 40%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	88dB	88.4dB
■ Impedance (Nominal/Mean)	8 Ohms	7.1 Ohms
■ Estimated Bass Extension	N/S	55Hz

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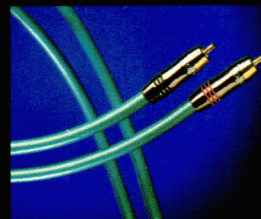


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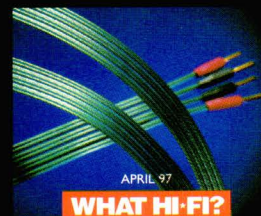
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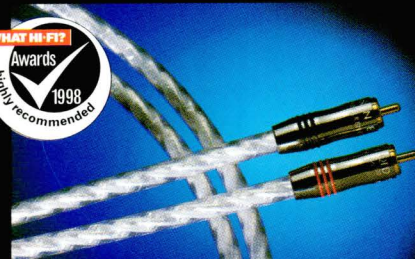
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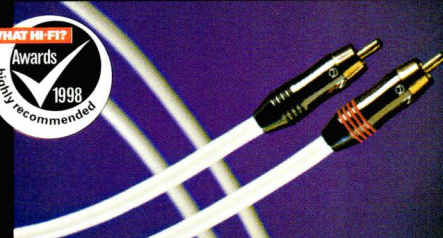
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AUGUST 98

Home-Entertainment EDITOR'S CHOICE



MARCH 98

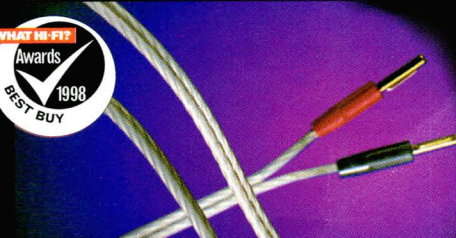
"Qnect 2 was one of the best-liked cables in the test. Qnect 2 fully deserves a Best Buy."

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WHAT HI-FI 5 star review MARCH 98

Qudos Silver

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MAY 98

WHAT HI-FI?



"...what a fabulous little cable this is! Insightful, involving and able to dredge out even the smallest of details, ...In a sensibly-priced system (say, £1000 or so) it's a bargain."

CHARIO Constellation Lynx

An Italian brand which follows its country's tradition for exceptional cabinet work, the Constellation Lynx is the fourth of the curiously named Chario range to come in for formal HFC scrutiny: a Syntar 100 and Hiper 1000 at £250 and £300 respectively, as well as a much more upmarket Academie (£1,500).

The aforementioned speakers are all standmounts and the Constellation Lynx borrows from all three, taking the gorgeous cabinet work of the Academie, complete with its elegantly sculpted solid walnut sides, and scaling the box down to something closer to the others in size. Less successfully in my view, it also borrows from the

"It created a strong first impression, fooling several panellists into believing that this is quite a large loudspeaker."

smaller models an arrangement which places the port in the base and sits the box on rubber feet. However, I have my doubts that the springy, little rubber feet will provide optimum mechanical support, and it's useful to bear in mind that some stands will not have a suitable top plate.

The 11-litre box feels exceptionally solid, combining a vertical wrap in textured black MDF with the solid walnut sides. Cunning shaping has been used

to soften and round off all the edges. Chario claims this is its first ever model to have full proprietary drive units. The main driver has a cast frame and a small 90mm doped paper cone, while the tweeter has a large 33mm soft fabric dome. The drivers are nicely flush-mounted into the front baffle, and the single terminal pair is mounted on an elegant brass panel inset into the rear.

The far-field in-room responses not only confirm that this Chario should be kept well clear of walls, but highlight a problem previously encountered with the Syntar 100: a much stronger output below 300Hz than above that point.

SOUND QUALITY

One of the difficulties of 'blind testing' loudspeakers comes in coping with the sometimes quite dramatic balance variations between models, and the consequent impossibility of achieving accurate level matching between successive presentations. Try to set an 'equivalent level' with the Constellation Lynx and you're left clutching at straws. Set the bass level right and voices sound distant and weak. Set the voice level right and the bottom end thumps away



wide range of sources, the sound began to pall and I found the heavy bottom end irritating and not particularly informative, while the midband lacked vigour and expressiveness.

CONCLUSION

This beautiful-looking speaker is let down by a balance which emphasises the mid and upper bass, at the expense of the midband. The result is pleasant, in a laid-back way, but makes digging out the musical messages relatively hard work. It's a tricky amplifier load too. **PM**

STOP PRESS

Way past the last possible moment we got word from Chario's importer that the company has been having major QC problems with this model. Chario is withdrawing affected samples from dealers.

VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £549

Beautiful near-miniature speaker is let down by a midband too laid back for its own good.

■ FIVE YEAR GUARANTEE

✉ Musical Design Company, PO Box 13, London E18 1EG

☎ 01992 573030

THE LAB REPORT

In common with other Chario speakers (HFC 187), the Lynx is supported on rubber feet and reflex-loaded via a long downward firing port, a technique described as 'vented NRS'. This is a high-Q affair with a sharp 58Hz port resonance and very 'peaky' driver alignment that reaches its apex at 145Hz. It's here that the biggest swings in impedance and phase angle are experienced by the amplifier, including a brief 2.9 Ohms minimum at 180Hz. Even mounted away from walls, the lift to its bass is unmistakable and encourages a 'bloom' of some +5dB from 100-250Hz. This

○ Sophisticated appearance hides an enthusiasm for bass.

relative to the very smooth decade of upper bass, mid and lower treble from 400Hz-4kHz (where THD increases 1 per cent).

Beyond 8kHz, the treble output rises by some +6dB, the impedance drops towards 6 Ohms and phase angles approach +36 degrees. This, incidentally, is the listening axis recommended in Chario's literature. Toe the speakers off this axis and the

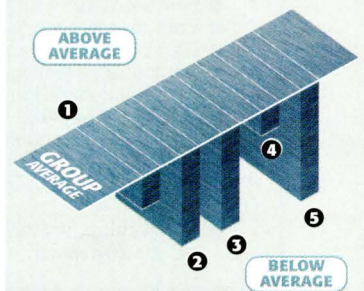
treble drops away, though the underdamped bass remains. This 'midrange plateau' also explains why the Lynx fails to meet its rated 87dB sensitivity at a low 85.5dB, even though 87.3dB can be achieved if the measurement bandwidth is just extended from 200Hz-20kHz. **PM**



HOW IT COMPARES

Adhere to Chario's preferred listening axis (in line with the large treble dome) and you'll get both 'boom' and 'tizz'. The latter is improved by off-setting the boxes by 20 degrees or so. The speaker load is hardly generous bearing in mind its modest sensitivity.

1 EASE OF DRIVE	-20%
2 RELATIVE LOUDNESS	-60%
3 MAXIMUM LOUDNESS	-65%
4 AUDIBLE DISTORTION	-15%
5 BASS EXTENSION	-75%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	87dB	85.5dB
■ Impedance (Nominal/Mean)	4 Ohms	7.8 Ohms
■ Estimated Bass Extension	67Hz	58Hz

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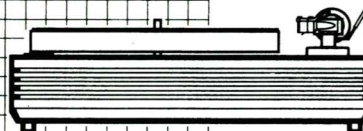
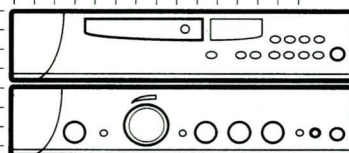
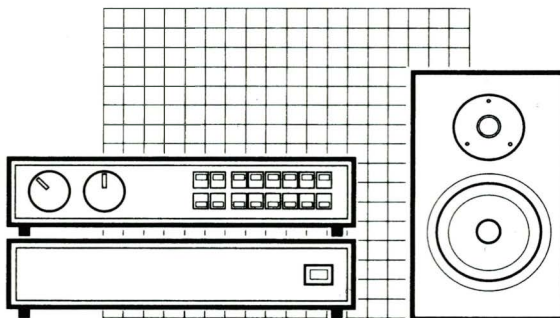
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MUSICAL Technology Falcon

The £625 Falcon is the eighth Musical Technology to come HFC's way. All share a number of common elements, both in MT's own unique variation on the metal cone main driver theme and also in the unusual pentagonal shape floorstanding enclosures.

The variations are mainly to do with size and finish, and this Falcon is one of the largest. It's also the first to stray from a classic two-driver configuration. The speaker is still a two-way design, but has an extra main driver above the tweeter in the so-called 'd'Appolito' layout. Said tweeter is at seated ear height, so this is a tall and quite imposing-looking speaker, the more so

"A speaker this big and inexpensive has no right to sound so smooth and well-behaved... it's a beautifully balanced all-rounder."

because of its unusual shape and significant width.

Given the price and size, the finish is inevitably vinyl, but the 'rosewood' variation on our review samples looks rather good and appearance is further enhanced by the heavily chamfered edges, which help to soften the lines even if the top cap is a shade over size. The drivers are neatly flush-mounted, should you wish to avoid the curiously shaped grille. Two separate



ports attest to the twin enclosure system, each main driver working into its own reflex-loaded and carefully asymmetric share of the 47-litre total.

Twin gold-plated terminals stick out from the pointy rear and look a little exposed and vulnerable if the speaker is used without its optional steel-plate plinth. The latter costs an extra £55 and was supplied for the review. It's a hefty chunk of ironmongery which adds considerable extra stability through its mass and by extending the 'footprint'. Normally bolted into the spike holes, these didn't line up properly on the first samples, and were a tight fit even with the replacements. There's no disputing the excellent functionality of this plinth, but it's far from pretty and I don't reckon much on those sharp edges in any household with toddlers at large.

Big speakers may go louder and deeper than their smaller rivals, but rarely manage to do so with the smoothness and broad-band neutrality of the Falcon under far-field, in-room conditions. The manufacturer recommends siting this speaker 10-30cm from the nearest wall, but I'd suggest leaving more space if possible.

SOUND QUALITY

Even though it had to be auditioned prior to the arrival of the correct plinth, the panel was rather impressed by the Falcon's generous yet cultured performance. Delivering a fine impression of scale and

headroom, there may also be a touch of wooden boxy colour, but there's also a fair attempt at genuine dynamic expression and a freedom from the over-damped congestion that too often afflicts this scale of speaker.

The sound is smooth, even-handed and impressively 'big', in scale as well as height. There are the occasional rough edges, and the bass can sound a tad resonant and thumpy and certainly won't set any speed records, but speaker design is all a matter of compromises – and the Falcon draws them very well indeed.

CONCLUSION

A speaker this big and this inexpensive has no right to sound so smooth and well behaved. A beautifully balanced all-rounder, the Falcon does nothing obviously wrong and nearly everything rather well, setting a standard which is difficult to beat at such an affordable price. All it really needs is a nicer cast alloy plinth. **PMe**

VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £625+£55 (PLINTH)

Big speaker has a big but also surprisingly smooth and civilised sound. Fine material value too.

■ TWO YEAR GUARANTEE

✉ Musical Technology, Unit One, Penilwngwent Ind Est, Saville Road, Ogmore Vale, Bridgend, Mid-Glamorgan CF32 7AX
☎ 01656 842000

THE LAB REPORT

Although the MT Falcon looks huge, its pentagonal enclosure narrows at the back to yield an overall internal volume similar to KEF's 'smaller' Q65. The projected 34Hz in-room bass extension is not far off either, though MT's bass alignment is less tidy. MT has split its cabinet internally, giving two tuned systems associated with each alloy bass driver. The lower driver, for example, is tuned close to its 35Hz null with a broad port reinforcement at 40Hz, but there's also a quarter wave pipe resonance at 160Hz that coincides with a notch in the driver's nearfield response and a glitch on the

impedance trend. The speaker load itself is a current-hungry average of 6.2 Ohms, remaining as low as 3.7 Ohms at HF. Fortunately, phase angles are a modest +17/-33 degrees.

Otherwise, it's plain sailing. The Falcon meets its 90dB sensitivity with 'real' figures of 89.7dB (500Hz-8kHz) and 90.3dB (200Hz-20kHz). Clean musical peaks up to 108dB SPL look to be possible. The Falcon's response, both on and off axis, is impressively smooth. There's a tiny loss in output at the 2.1kHz crossover point and you may need to park yourself on a cushion to rise above the treble axis but, overall, distortion stays below 1 per cent and there are no nasty irregularities to report. **PMI**

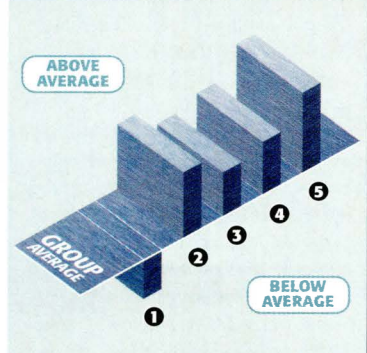


○ A good performance with low distortion from the Falcon.

HOW IT COMPARES

A healthy sensitivity is achieved at the expense of a relatively tough load for the amplifier to drive. The LF tuning still needs attention, but overall performance looks good with generous loudness, a smooth response and low distortion.

1	EASE OF DRIVE	-25%
2	RELATIVE LOUDNESS	45%
3	MAXIMUM LOUDNESS	30%
4	AUDIBLE DISTORTION	27%
5	BASS EXTENSION	55%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	90dB	89.7dB
■ Impedance (Nominal/Mean)	6 Ohms	6.15 Ohms
■ Estimated Bass Extension	N/S	34Hz

SNELL K5 Monitor

Snell speakers come from America and have only been intermittently available in the UK. In fact, they're probably rather better known for the late Peter Snell's original designs, replicas of which have been made by Audio Note UK for a number of years. Meanwhile, the US company has not stood still but has evolved new and more fashionably attired ranges. Most importantly, it has also taken on board the US market's considerable enthusiasm for 'Home Theater' products.

Although this £795 K5 Monitor is well suited to two-channel stereo audio reproduction, the brochure emphasises its video-shielding and suitability for 5.1 format music or movies.

'An unusual feature is a switch on the rear panel which selects different equalisation for free space and near-boundary location.'

A large and very substantially built standmount, the K5 follows the classic 'large bookshelf' shape (roughly 18 litres in capacity) that's not often found these days but which nevertheless makes a great deal of sense for a number of good acoustic reasons. Although the shaped front baffle and flat back are textured black MDF, the cabinet wrap is a high quality real wood veneer. The grille is an unusually stylish affair in perforated metal – very

fashionable in Japan, I understand, but take care you don't knock it because you'll never get the dimple out.

This standmount weighs as much as a couple of the floorstanders in this group test, which attests to the hefty cabinet work: 3/4-inch all round plus a double thickness for the front panel, complete with a damping layer sandwiched between. An unusual feature (perhaps for fear of offending purist sensibilities) is a little switch on the rear panel which selects different equalisation for free space and near-boundary location. The free space condition was used for the tests. Twin terminals allow bi-wire/-amp operation and are mounted through a finned alloy casting which acts as a heatsink for the crossover network. The main driver has a cast 165mm frame with plastic 125mm cone, assisted in the bass by a front port, while the tweeter uses a black anodised 25mm aluminium dome.

The in-room far-field response (free field setting) confirmed its suitability with a relatively even

and well-extended alignment. The design peaks up a little in the midband (700-900Hz) but overall is smooth and well ordered.

SOUND QUALITY

Puzzled as to why such a polished, pricey contender barely achieved an average rating on the first day, I scheduled the K5 for a second day repeat – and ended up with the same result. One listener who dismissed it as "perfectly adequate and unremarkable"

summed it up as: "A control freak, at the expense of expression." The following day another recorded: "Pleasant but not inspiring. This is an easygoing speaker that will not offend but does not excite."

No-one took a strong dislike, but there was the underlying feeling that Snell had put too much emphasis on the damping side of things and had ended up damping too much of the life out of the speakers.

CONCLUSION

Solid it certainly is, but words like 'stolid' and 'stodgy' also come to mind. The K5 is a worthy enough speaker, but not a particularly exciting one. It does little wrong, but nevertheless left the listening panel bereft of emotional involvement. The high quality engineering is most commendable, but the

end result is somehow a little clinical and uninvolved. **PMe**

VERDICT

SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★★
PRICE	£750

The combination of impressive engineering and stylish design somehow does not deliver the goods.

■ FIVE YEAR GUARANTEE

☒ Seehear, Unit 1 Briar Close, Wye, Ashford, Kent TN25 5HB
☎ 01233 813111

THE LAB REPORT

For a medium-sized, reflex-loaded enclosure, Snell's K5 is only modestly sensitive at 86.3dB (re. 2.83V/1m). This is some 4dB short of Triangle's Zephyr. Snell has provided a 'normal/boundary' switch to account for its location. I would have expected a 'boundary' switch to bring up the treble level in line with the bass reinforcement expected by near-wall mounting. Instead, the 'boundary position' provides a uniform 2.5dB cut below 150Hz or so to prevent or reduce any booming. The optimum balance is achieved about 1m from the rear wall, about 20

degrees off axis with the boundary switch engaged.

The low sensitivity is partially offset by the very easy average 10.5 Ohms load and classic 'shape' of the impedance curve, which hits an easy minimum of 5.1 Ohms at 8kHz. With this in mind, the -24 to +51 degree phase swing from 650Hz to 2.1kHz

should not prove bothersome for most amplifiers. Low sensitivity is also explained by the optimal and flat bass alignment of the main driver that betrays no hint of 'peakiness'. Even the null at 30Hz is damped almost out of existence. The port is tuned to 50Hz and successfully drags a good 38Hz bass extension from the box as a whole. **PMi**

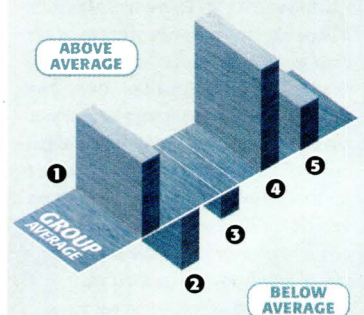


☐ The K5 delivers a good, but perhaps a little tame, sound.

HOW IT COMPARES

A good example of speaker engineering with no attempt to 'jazz up' the bass, sacrifice its ease-of-drive or smooth response in the name of high SPLs. Either a low-distortion classic waiting to be discovered or simply too 'tame' for modern tastes.

1 EASE OF DRIVE	50%
2 RELATIVE LOUDNESS	-35%
3 MAXIMUM LOUDNESS	-15%
4 AUDIBLE DISTORTION	70%
5 BASS EXTENSION	30%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	86dB	86.3dB
■ Impedance (Nominal/Mean)	8 Ohms	10.5 Ohms
■ Estimated Bass Extension	48Hz	38Hz

SYSTEM AUDIO 1150

System Audio is a Danish speaker specialist, whose intermittent availability in Britain has been improved by the relatively recent appointment of Atacama Audio as its UK distributor. For a speaker stand specialist, what could be more logical than to take on the marketing of a particularly cute range of ultra-compact floorstanders?

HFC tested and Recommended the £500 1130 as recently as issue 183, and this £750 1150 represents the next model up in a five-strong range of similar looking ultra-slimline floorstanders. The 1150 is 3cm wider than the 1130, 5cm taller and 5cm deeper. It has an extra chamber inside the enclosure to house the crossover

“Give this speaker more than half a chance and you could well find yourself seduced by its understated charms.”

network, and uses main drivers with 90mm rather than 70mm cones. In all other respects, including the vinyl woodprint finish, the two models appear to be effectively identical. Quite why this 1150 should therefore carry a 50% price premium over the 1130 remains a mystery, if not a rip-off.

It is at least a decent quality woodprint, and the detailing is nicely handled, with a proper plinth to improve stability. System



Audio suggests adding mass to the lower chamber to improve the stability. Our earlier 1130 samples arrived pre-loaded, and I was quite surprised at how unstable the unloaded 1150s seemed, so I would suggest that mass loading is desirable on those grounds alone.

A slim front view is the current fashion and also System Audio's rationale. The 1150 has twin 90mm cones, both separately port-loaded, operating in d'Appolito mode, above and below the 19mm tweeter, giving a total cone area equivalent to a 125mm cone, which should give it some dynamic edge over the typical miniature and its smaller brother. Twin terminals permit bi-wiring or bi-amping.

The in-room, far-field trace shows a bass rolling off quite gently below 100Hz, which might well benefit from a little room boundary reinforcement, though this isn't obligatory. Elsewhere the balance is fairly smooth and well ordered, if a trifle dull in the treble.

SOUND QUALITY

The 1150 bombed in the listening tests, attracting unanimous opprobrium from the assembled panel – and I'm still not quite sure why. It's not a bad speaker at all, as I discovered after spending a day with it. However, I suspect it suffers from creating negative first impressions because I was also rather underwhelmed when I first put it on for the hands-on work.

After around half an hour's acclimatisation, however, I started really enjoying the performance it

was giving, and found myself forgetting about the loudspeaker and just letting myself get sucked into the music it was making.

As speakers go, it lacks 'front' and doesn't reach out to grab the listener's attention. But give it more than half a chance and you could well find yourself seduced by its understated charms. Relatively smooth and even, the sound is commendably free from nasties and has a good dynamic range. Boxiness is notable for its absence, and imaging is precise and convincing.

CONCLUSION

A difficult speaker to sum up, there's no escaping the poor reactions of the listening panel, but listening panels do sometimes make mistakes. I can also see no good reason why the 1150 should cost £250 more than the only slightly smaller and simpler 1130. However, it is undoubtedly the better speaker and actually has considerable charm, of a delightfully subtle and understated nature. **PMe**

VERDICT

SOUND	★★★★☆
BUILD	★★★★☆
VALUE	★★★★☆
PRICE	£750

Delivers a smooth sound with a good dynamic range, although the price tag is a little hefty for this speaker.

■ **TWO YEAR GUARANTEE**

✉ Atacama Audio, Winston Avenue, Croft, Leicester LE9 3GQ

☎ 01455 283251

THE LAB REPORT

In order to optimally load its two 14cm bass/mid drivers, System Audio divides the 1150's cabinet into several small enclosures (not unlike the 1130 in HFC 183). In this way, the two bass drivers, the mass-loaded base and even the 3rd-order crossover are isolated from one another. As a result, the air volume available to each reflex-loaded driver is less than you might expect, and the projected 40Hz bass extension somewhat less than the box size might imply. The speaker provides a +34/-39 degree phase swing through the 3kHz crossover region where there's an

○ The System Audio 1150 is almost free of bass 'peakiness'.

additional dip to 6 Ohms (4.7kHz). In practice, the 3.7-9 Ohms trend through the bass is tougher on the amplifier.

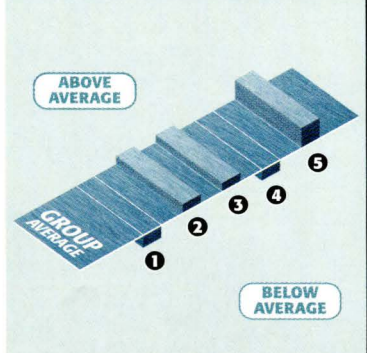
Its rated 91dB sensitivity cannot be accounted for in practice, especially with a broad trough through the presence region bringing in a more realistic 88.1dB (re. 2.83V, 500Hz-8kHz,1m). But good power handling will allow clean musical peaks up to 105-106dBA in the 'average' room. Off-axis, the 1150 takes on a more downtilted balance with some lumpiness in the upper bass. Distortion remains 0.5-0.6 per cent across the audioband (re. 96dBA), which is high for a treble driver (thanks to a dominant 2nd harmonic) but gratifying for its consistency. **PMi**



HOW IT COMPARES

System Audio rates its 1150 some 2dB more sensitive than the 1130 at 91dB/1W/1m, but our results suggest it is actually slightly less sensitive at 88.1dB. Bass output is limited but free of the 'peakiness' experienced elsewhere.

1 EASE OF DRIVE	-5%
2 RELATIVE LOUDNESS	5%
3 MAXIMUM LOUDNESS	5%
4 AUDIBLE DISTORTION	-5%
5 BASS EXTENSION	15%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	91dB	88.1dB
■ Impedance (Nominal/Mean)	4 Ohms	7.78 Ohms
■ Estimated Bass Extension	35Hz	40Hz

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TRIANGLE Zephyr II

Triangle is not a new name to Britain, though the company has recently changed its UK distributor, which might explain why this is the first time the marque has appeared in one of HFC's multi-way group tests. France is the country of origin here, so presumably the correct pronunciation is 'Tree-ongle'. And like most of the (few) French hi-fi speakers I've encountered, it's quirkily different from the British stereotype – and not just in terms of styling.

The £599 Zephyr II falls about halfway up (or down) a range of some eight models. It's a two-way compact floorstander with predictably oddball styling and some unusual drive units too. The

“It goes to the top of my wish list... because this level of dynamic drama and time coherence is rare at any price.”

enclosure proper consists of a non-descript textured vinyl box, featureless apart from two pairs of terminals and some pretty, but not too secure, spike mounting lugs.

Styling (if that's the right word) is reserved for the front panel, where the *pièce de résistance* (if that's the right phrase) is an attractively curved front panel that looks and feels very classy and is itself adorned by little brass grille-mounting sockets. The grille covers the full height and

is narrower than the baffle, so strips of the fascia remain visible. Ultimately, however, the whole thing looks a little old-fashioned.

So too does the main driver, which is intended as a compliment. In this world of increasingly predictable uniformity, Triangle offers something very different from the norm, with a lovely cast frame, a 115mm flared paper cone, a 'bullet' phase plug and a pleated fabric surround. The tweeter too is unusual, a rubber moulding providing some horn assistance.

With no need for any wall reinforcement, the far-field room measurement gave an essentially flat response across a surprisingly broad bandwidth, especially in light of the high sensitivity. The relative treble level is a dB or

two stronger than average, while the midband (200Hz-2kHz) looks distinctly uneven.

SOUND QUALITY

A real hit with the listening panel, who delivered a surprising unanimity of comments and ratings across two separate presentations, the Zephyr II's invigorating dynamics "put some real life into the hi-fi", going much further than most in breaking down the barriers between musician and listener.

By the same token, it's not the smoothest or most subtle sound around. While our panel – and yours truly in the hands-on work too – were very impressed by this speaker's

exceptional communication skills, the sound is unquestionably bright and boasts somewhat 'in yer face' characteristics, which won't necessarily have universal appeal.

I have some concern that the Zephyr II's wide dynamic window and ruthless timing might highlight the inadequacies of components further up the chain, but don't believe the speaker should take the blame. It is, after all, only a window onto the rest of the system and, if the window is wider and cleaner than usual, that's got to be a bonus, as well as an incentive to improve the whole system.

CONCLUSION

Notwithstanding its quirky styling, the Zephyr II is an obvious Best Buy. It goes to the top of my wish list for speakers costing up to twice its asking price, simply because this level of dynamic drama and time coherence is rare at any price, and suits my particular prejudices better than less invigorating but lower coloration alternatives. Check out your own preferences and see whether you agree. **PMe**



VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £599

A truly impressive dynamic range and great timing makes it an excellent value small speaker.

FIVE YEAR GUARANTEE

The Audiophile Club, PO Box 6477, London N13 4AY
0181 882 2822

THE LAB REPORT

Although both System Audio and Triangle rate their respective loudspeakers at a 91dB sensitivity, only the latter really comes close. At 90.4dB (500Hz-8kHz) and 91.8dB (200Hz-20kHz), the Zephyr Two is by far the 'louder' of the pair even though, as a design concept, it remains flawed. Typically, most listeners will find themselves either 'looking' at the T222 metal dome tweeter or on a par with the top of the cabinet. This axis reveals a deep bass/mid trough around 800Hz and a substantial 'hole' some 8-9dB below the mean midband level at 5-6kHz, just after the 4.5kHz crossover point.

○ Sensitivity and 'liveliness' are distinct features of the Zephyr II.

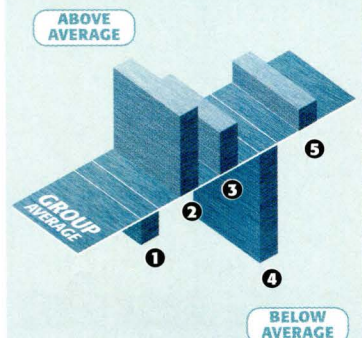


A severe cone breakup (rim resonance) is evident through this region where distortion climbs to 2-3 per cent (re. 96dBA). The dome grows in confidence to produce an aggressive-looking treble beyond 8kHz or so. Toeing the speakers in by 20-30 degrees is absolutely vital if the worst excesses of this irregular response are to be avoided. The composite paper bass/mid cone and reflex port are accurately tuned to 40Hz but there's a strong quarter-wave pipe resonance at 180Hz (also showing on phase and impedance plots) that muddies an otherwise clean LF. The amplifier will also experience the biggest swings in phase and impedance through this bass region. **Pmi**

HOW IT COMPARES

Asensitive and lively speaker but one that demonstrates poor driver integration. An erratic response and high distortion are caused through the upper midrange while, at lower frequencies, dips to 3.7 Ohms are 'seen' by the amplifier.

1	EASE OF DRIVE	-15%
2	RELATIVE LOUDNESS	55%
3	MAXIMUM LOUDNESS	30%
4	AUDIBLE DISTORTION	-72%
5	BASS EXTENSION	15%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	91dB	90.4dB
■ Impedance (Nominal/Mean)	6 Ohms	6.9 Ohms
■ Estimated Bass Extension	45Hz	40Hz

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BACKGROUND:
Zingali Overture 3 loudspeaker £2995

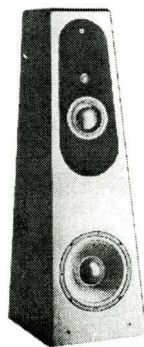
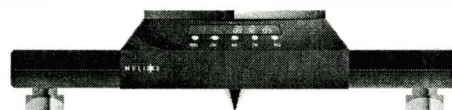
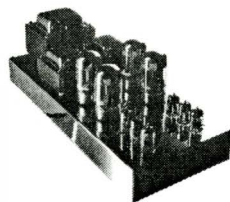
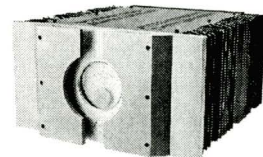
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OL' BLUE EYES IS BACK!

In what must be one of the musical coups of the decade, LA-based audiophile specialist DCC have just announced an historic agreement with Artanis (the company started by the Sinatra family to handle the late crooner's musical catalogue) to issue previously unreleased archive material. The world-wide deal has given DCC access to over 60 hours of tapes which will result in a series of 180g vinyl and 24 carat gold CD releases, all to be remastered by engineering maestro Steve Hoffman using DCC's renowned vintage vacuum playback system, resulting in what we all hope will be the best-sounding Sinatra releases ever. The first title is *The Summit*, a 1962 "Rat Pack" recording featuring Ol' Blue Eyes and accomplices Sammy Davis Jnr and Dean Martin, this will be followed by a solo Sinatra live recording, '57 Concert, and many more releases will follow.

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ACOUSTIC ENERGY AE520

This newish, £1,000 AE520 is at the top of Acoustic Energy's upmarket 500-series models, though it has some roots in the £349 AE109, one of the better looking and more successful among recent budget floorstanders.

The 520 and 109 do indeed have outline similarities and the enclosures look much the same size. The differences lie in the details, which are very different. The 520 hits the price ceiling for this group test, but sets all the speakers out in a row, and I'd also pick it out as the best looking. It might not have the solid hardwoods of the little Italian jobs, but it's seductively neat and compact, beautifully veneered all round and

"The excellent build ensures a wide dynamic range, as well as two exceptionally elegant items of furniture."

with a neatly radiused baffle edge. The *pièce de résistance*, however, is the cast alloy plinth. It not only feels exceptionally solid and ensures good spike connection, but its 3D curves and crackle finish set off the wooden enclosure beautifully, bringing a welcome completeness to the whole affair.

Under a neat moulded-frame grille there's a purposeful looking trio of little cast chassis, metal cone drivers, below a 25mm soft dome tweeter. This is actually a



full three-way design, as the observant will notice from the three pairs of terminals on the rear. It's by far the best solution for a three-way, as it expands the multi-wire/-amp options and flexibility.

The lower two drivers, backed up by the port on the enclosure rear, provide the bass oomph, the two 100mm diameter cones deliver the equivalent to a single 140mm cone. The midrange driver operates from its own sealed section of an exceptionally solid and rigid enclosure, which has internal braces running in various directions. Extra solidity (and stability) is supplied by factory-fitted mass loading in its own small chamber at the base.

Surprisingly (in view of the studied neutrality of the little Aegis One), the 520's far-field room averaged response was a rather up and down affair. On balance, free space siting looks the best bet, but you might get away with being closer to a wall.

SOUND QUALITY

Emerging as the favourite of the day is an achievement that goes some way towards justifying the 520's substantial price. Everyone liked this speaker, despite its somewhat wayward balance, for the way its wide dynamic range brought out the subtleties of the music and underpinned them with a fine sense of weight and power. "A serious upgrade in transparency over the others today," as one panellist put it.

Three-ways rarely have the coherence of two-way designs, but this AE model gets very close indeed, showing fine timing and a good sense of rhythm. The bass is quick, dry and impressively deep, with a convincing combination of thump and drive and, while the presence is just a little 'shut in', which works against low level intelligibility, you get used to it. Dynamics may lack the exuberance of high sensitivity designs, but classy drivers and build quality create a measure of resonance control unusual in this test group.

CONCLUSION

Although the 520 falls a little short on classic tonal neutrality, that doesn't stop it from being a very rewarding musical experience. The excellent build ensures a wide dynamic range, as well as two exceptionally elegant items of furniture. Three-way operation will give plenty of power handling (250 Watts is quoted), though the decent sensitivity might be compromised in practice by the low impedance minimum. **PMe**

VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £999.99

Could be more neutral, but high-class build is reflected in a high-class sound. Very elegant too.

FIVE YEAR GUARANTEE

Acoustic Energy Ltd, 16 Bridge Road, Cirencester, Gloucester GL7 1NJ

01285 654432

THE LAB REPORT

This tall and weighty floorstander, with its classically three-humped axial response, is a dead giveaway for an in-line multi-driver system. In fact, the AE520 employs three Sinch alloy bass/mid drivers, two working in parallel to 450Hz and the third bridging the gap but fading away before crossing over to the 25mm silk-dome tweeter at 3.2kHz. Taken as a band average from 500Hz-8kHz, the AE520's sensitivity settles at 89dB. Off-axis, the response drops away quite dramatically, resulting in a loss of mid and high treble, so try to remain 'looking' directly at the baffles for the strongest treble.

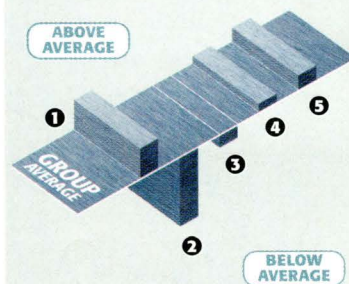
○ The AE520 speaker has an extremely low distortion output.

The bass drivers provide an exceptionally low distortion output – just 0.1 per cent up to 96dB SPL. Interestingly, the midrange cone (which we already know is struggling to keep up) suffers THD up to 10x this level. There's a -45 degree phase angle at 235Hz where the impedance has just risen from a minimum of 2.9 Ohms (130Hz) to 8 Ohms but, though the drive is complex, it's otherwise none too harsh. The bass loading, meanwhile, mirrors Audiovector and KEF with a very sharp driver peak at 120Hz allied to a low-Q port output from 20Hz-120Hz. In my view, the two paralleled drivers should be pushed from 120Hz closer to 80Hz if the proper bass extension is to be realised. **PMi**

HOW IT COMPARES

The response means that its sensitivity varies from point to point, though 89dB/1W/1m is an accurate, wideband figure. The load is complex but not the toughest in the test while distortion tends to increase through the midrange.

1 EASE OF DRIVE	20%
2 RELATIVE LOUDNESS	-45%
3 MAXIMUM LOUDNESS	-5%
4 AUDIBLE DISTORTION	5%
5 BASS EXTENSION	10%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	90dB	89.0dB
■ Impedance (Nominal/Mean)	8 Ohms	10.8 Ohms
■ Estimated Bass Extension	33Hz	39Hz

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AUDIOVECTOR C2

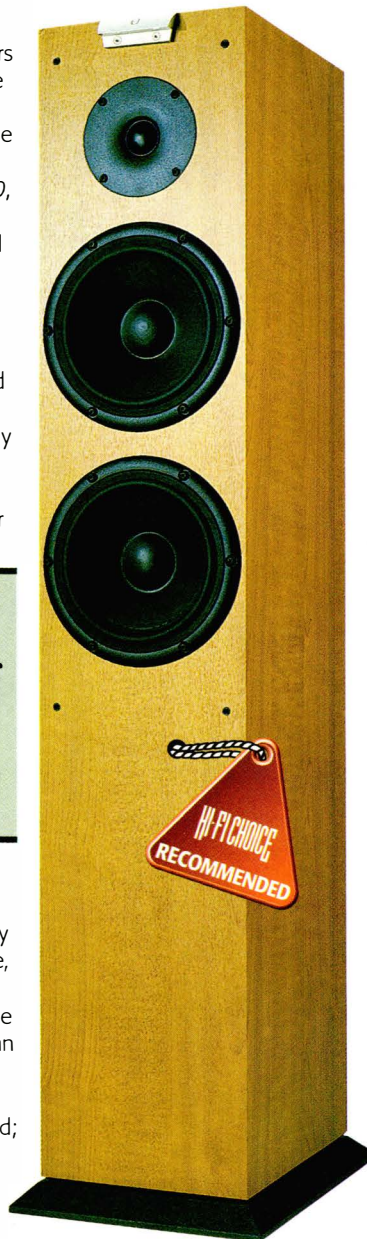
There's a certain austerity regarding this Danish manufacturer's loudspeakers and a distinct family resemblance between the models too. We have previously reviewed a couple of more upmarket examples, most recently the M2 in *HFC 180*, and this £799 C2 looks very similar, despite its less substantial build and vinyl finish. This is exactly what parent company F3 intended: to try to preserve as much of the M-series quality as possible in a more affordable and cost-effective package.

'Classic contemporary' probably best sums up the appearance of this smart, understated floor-stander. Tall, quite slim and rather monolithic in appearance, the

"The Audiovector C2 earns itself a Recommended flag as an attractive and very well-balanced all-rounder."

sharp edges might not be the latest fashion and the price is high for a vinyl box, which actually looks pretty good from a distance, even though it doesn't feel very nice. There's good detailing: in the neat, chamfered plinth which is an integral part of the enclosure; in the solid name-plate onto which the bi-wire terminals are mounted; and in the neat alloy badge at the top front, which does look rather odd if the grille is left off.

The three drivers operate in a



'two-and-a-half-way' configuration, in that just one of the twin main drivers operates right up to the tweeter crossover point, the lower one only being used to help out at the bass end of things. Functionally this is much closer to a two-way than a three-way, but has the added bonus of keeping the enclosure fashionably slim while using a relatively small driver to handle the midband.

There should be plenty of bass available here, the combined efforts of two 125mm carbon-fibre impregnated, doped paper cones being augmented by a generous rear port loading the 32-litre enclosure. The tweeter has a 26mm soft fabric dome and the main drivers have cast frames. The box is apparently built from an allegedly superior NRFB variation on the fibreboard theme, with heavy internal bracing, and the whole thing certainly feels suitably solid.

Far-field room measurement indicates a pronounced tendency towards midbass excess even with the speakers well out from room boundaries, so free space siting is mandatory here.

SOUND QUALITY

The listening test results were positive overall, though the enthusiasm for the C2 varied from one listener to another. "Very listenable" and "a good all-rounder" are typically representative comments on this speaker's big, generous sound and fine overall balance, though some were careful to qualify their praise with criticisms that the speaker a bit too "easy listening".

"A bit tonally grey and not all that hot with dynamic swings" seems a particularly apt synopsis of a rather under-developed mid-band, which somehow manages to sound open and clear but also a little too inclined to squash the dynamic expression out of voices, ending up sounding a little 'small' as a result. The fullsome bass adds a touch of chestiness to male speech, and bass instruments lack something in poise and tension, but fortunately the sound stays free from excessive boom or thump. Over the longer haul the C2 did prove "very listenable", going on "easy listening", though its limited dynamic analysis and tension remained in evidence.

CONCLUSION

Weighing up the pros and cons, the Audiovector C2 earns itself a Recommended flag as an attractive and very well-balanced all-rounder, though the price is high for a humble vinyl finish. And don't expect to find M2 performance on the cheap.

PMe

VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £799.95

📖 **Elegant two-and-a-half-way has a big, full bandwidth sound, but midband seemed a little under-developed.**

🛡️ **FIVE YEAR GUARANTEE**

✉️ ClaiVe Ltd, Unit 7 Wren Ind Est, Coldred Road, Maidstone, Kent ME16 9XN

☎️ 01622 664070

THE LAB REPORT

The 'average' music-lover, reclining in an 'average' armchair will have a listening axis midway between Audiovector's fabric-domed tweeter and the mid/bass driver and will experience a pronounced treble 'sting' (8-16kHz), some +7dB above the mean midband level. I would expect the midband area to fill in slightly at a 2-3m distance, but it's worth keeping sight of the main axis because – as the speakers are toed inward – there is a progressive loss of presence energy.

It's difficult to envisage how the excess treble energy may be completely avoided, just as it's tricky to imagine how Audiovector comes

📍 The C2s need precise placement for best results.

up with a 92dB sensitivity when 88.4dB (re. 2.83V @ 1m) seems far closer to the mark. The C2 offers a generous 150W power handling, but it's just not going to sound as 'loud' as you'd expect from its figures! The reflex port has a broad,

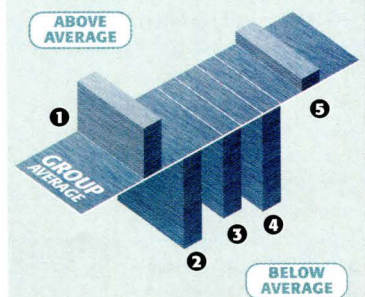
low-Q output with -3dB limits at 30Hz-95Hz, but the bass alignment is very peaky indeed, yielding an 88Hz apex that might cause it to 'boom' in some rooms. Distortion, meanwhile, is low at around 0.3 per cent through bass and treble (re. 96dBA) but does increase closer to 1 per cent as the middle driver ploughs on from 150Hz-3kHz. This crossover region is also the site of big swings in impedance (33 Ohms) and phase angle (+/-45 degrees). **PMi**



HOW IT COMPARES

Careful siting of these speakers will prove crucial in optimising its bass response, just as the listening axis will determine how much of a 'sting' remains through the treble. Sensitivity, too, is far lower than claimed in the literature.

1	EASE OF DRIVE	35%
2	RELATIVE LOUDNESS	-60%
3	MAXIMUM LOUDNESS	-55%
4	AUDIBLE DISTORTION	-65%
5	BASS EXTENSION	10%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	92dB	88.4dB
■ Impedance (Nominal/Mean)	8 Ohms	10.4 Ohms
■ Estimated Bass Extension	38Hz	35Hz

JBL 4312 MkII

I'm slightly ashamed to admit I can recall the original L100 Century on which JBL's 4312 MkII retro speaker is firmly based. Of course, I didn't know it well – we Brits seemed to be into the more polite sounds from Quad, Spendor, KEF and B&W – but the C100 was the business for the many US servicemen stationed in Europe, and examples 'trickled down' from PX stores into the second-hand trade.

However much we might respect the neutrality and delicacy of our Electrostatics and BC1s, when it came to throwing a party

"If rock is your main thing and the electric bass the prime instrument, go check this out – you'll find it a whole lot of fun."

there was only one winner and it rhymes with gerbil. The three-way driver line-up, chunky cast frames and that dazzling Omo-white Aquaplas 12-inch bass driver cone are all about headroom and loudness, in an era when voice coil adhesives made 'loud' unusual in hi-fi speakers.

Thirty years on the Quads need a rebuild, but I still use the BC1s regularly, marvelling at their unrivalled midband lucidity while taking great care to respect those ancient voice-coils. Does the Century L100 also have a place in our modern world? Power handling isn't the issue it once

was, but variety is always welcome in our increasingly me-too world.

You might even like the '70s styling, even the 'distinctive' blue-painted baffle. The wide, shallow, squat shape was (and is) intended for bookshelf mounting, so finding an appropriate stand will not be easy. Then there are two knobs for adjusting relative mid and treble volume – anathema to any self-respecting purist. The driver layout looks problematic too because the graphics indicate setting the speaker vertically, but that means having the mid and tweeter side by side, which is likely to introduce phasiness.

The bass and mid drivers look like the originals, though the titanium tweeter is of much more recent vintage. The room measurement confirms its 'bookshelf' suitability, as close-to-wall siting gives the best bass alignment. Elsewhere the balance (controls 'flat') looks rather 'forward' and very uneven through the presence region.

SOUND QUALITY

The listening panels responded rather erratically to the 4312 MkII, which actually makes sense as this is an erratic speaker. Where

it's good (ie in the bass and dynamics), it's very, very good – in fact, quite the class act in this group test. Where it's bad (in the midband coloration, imaging and phasiness), it can be pretty horrid.

That's too simplistic a synopsis, but the 4312 MkII is certainly an uneven performer and so very different from today's speaker norms that it's impossible to produce a meaningful 'blob chart' rating. How does one weigh up the relative crudeness of the midband coloration against the splendid dynamic tautness and punch, and the awesome headroom and lack of strain when winding up the

volume? If your tastes run to choral, opera and other essentially acoustic music, approach this one with caution. If rock is your main thing and the electric bass the prime instrument, go check this out – you'll find it a whole lot of fun.

CONCLUSION

Back in 1995 (*HFC 143*), I reviewed and Best Buy-rated a JBL L90 which was also based on the L100, but only in outline. This 4312 MkII is much closer to the original and significantly less expensive, but it only gets a Recommended flag.

That's because the L90 is the better all-rounder,

much less likely to offend our pre-millennial palates. But this 4312 MkII is as close as you'll find to the original party animal. **PMc**



JBL 4312 MkII Visit Our Website: www.hifichoice.co.uk

VERDICT

SOUND ★★★★★

BUILD ★★★★★

VALUE ★★★★★

PRICE £1,000

Cosmetically crude but dynamically dramatic. The original party animal knows just how to rock 'n' roll.

TWO YEAR GUARANTEE

Gamepath Ltd, 25 Heathfields, Stacey Bushes, Milton Keynes, Bucks MK12 6HR

01908 317707

THE LAB REPORT

As a pro-orientated studio monitor harking back to the '70s, the high sound levels but erratic response and disjointed phase of JBL's 4312 MkII package will make it the dominant force of most if not all systems. Its narrowband axial response is simply too messy to contemplate discussion in this short report but, with the mid/treble controls set midway, its averaged forward response shows a strong upper-mid emphasis and a smoothly declining treble beyond 4kHz. Off-axis, however, the response becomes less manageable with a 'hole' appearing in the 5kHz region.

○ The 4312 MkII ain't perfect, but it lives to rock.

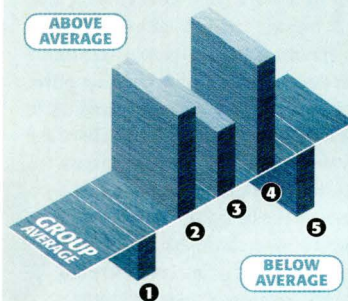


Aside from lending a deal of percussive attack, the upper-mid boost lifts the system sensitivity to a huge 94.1dB (re. 2.83V/1m). With a 150W power amplifier, crushing in-room peaks of 111dBA will be achievable. The load remains below 7 Ohms, aside from at resonance (65Hz), and averages out at a reasonably tough 5.9 Ohms. Bass alignment is out of kilter (port at 58Hz, driver null at 25Hz) but, hey, this is a 'fun' speaker. The errors in response will affect tone but not distortion which remains very low at better than 0.25 per cent (re. 96dBA) across the audioband. In truth, few £1,000 domestic monitors are able to match this performance. **PMi**

HOW IT COMPARES

The oddball of the bunch with a wayward response, poor off-axis uniformity and imaging – but enjoying low distortion, a high sensitivity and the capacity to stun listeners with explosive sound pressure levels.

- | | |
|----------------------|------|
| 1 EASE OF DRIVE | -25% |
| 2 RELATIVE LOUDNESS | 70% |
| 3 MAXIMUM LOUDNESS | 45% |
| 4 AUDIBLE DISTORTION | 75% |
| 5 BASS EXTENSION | -45% |



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
■ Sensitivity @ 1m/2.83V	95dB	94.1dB
■ Impedance (Nominal/Mean)	6 Ohms	5.9 Ohms
■ Estimated Bass Extension	45Hz	45Hz

KEF Q65

This is one of the bigger brothers to the (rather good) Q15 standmount which we covered in our recent budget speaker round-up (*HFC 187*). The Q65 is the fourth model up KEF's five-strong Q-series range and carries a £799 price tag. That seems decidedly pricey for what is basically a vinyl-covered compact floorstanding three-way – essentially a pair of Q15s (£200) combined with a pair of built-in passive subwoofers.

Speaker ranges often share common components, so it was no surprise to find the Q65 using essentially the same mid/treble driver as the Q15 uses full range. The mounting trim for said driver links up to a moulded reflex

“Pleasantly smooth and easy on the ears, one panellist appreciated the KEF's good sense of scale and headroom.”

loading port, which makes sense when it's being used as a two-way (like the Q15). Such a port, however, seems entirely inappropriate for a three-way, where said driver only takes over above 120Hz. I'm surprised none saw fit to block it off. The crossover already protects the midrange cone from significant excursion, so any output generated by the port resonance will be well out of the designed driver operating range, and therefore spurious.

It's a rather dumpy-looking shape, with a black textured front and back panels and a vinyl woodprint around the wrap. Perched on its



spindly 6mm spikes, it seems to be crying out for some sort of plinth arrangement. The full height grille is neatly executed with a skeletal moulded frame and the terminals are intelligently sited close to the floor, though a three-way design should surely have either three pairs or one, rather than the two provided.

The front baffle has a gentle curve, and plastic trim rings cover the pressed steel driver frames – unfortunately these tend to warp as the woodscrews are tightened. The Uni-Q mid/treble driver has a 120mm translucent plastic cone, while the 'racetrack' elliptical bass driver (reminiscent of KEF's classic B139 in appearance, though more prosaic in actuality) has a 190x120mm plastic diaphragm, equivalent to a 160mm cone, yet with only the width of a 120mm unit.

The far-field room responses show some midbass excess even with the speaker well clear of walls, so room boundary siting should be avoided. The overall balance looks well enough ordered, but not very smooth.

SOUND QUALITY

The listening panel gave the Q65 short shrift, placing it well below average with impressive unanimity. It isn't that the speaker is all that bad, just that it's rather bland and laid back, and our listeners found the 'easy listening' balance tended to get in the way of the musical communication.

One complained of post-lunch torpor; another that he couldn't distinguish the words properly.

Pleasantly smooth and easy on the ears, one panellist aptly described the Q65 as "a bit soft-centred", appreciating its good sense of scale and headroom but finding it lacking in insight and focus, and a bit stodgy through the bass region. The panel tests don't explore a speaker's loudness capabilities, but the hands-on work does, and the Q65 does indeed go loud with some enthusiasm. However, the excessive quantity of the bass only tends to highlight a heavy-handed nature and lack of dynamic tension.

CONCLUSION

In complete contrast to its rather effective baby brother, the Q65 doesn't seem to have a great deal going for it, apart from loads of bass output. Even discounting the poor listening test results, it seems quite pricey for the engineering content on offer, and the wicked amplifier load rather negates the value of the high sensitivity. **PMe**

VERDICT

SOUND ★★☆☆☆

BUILD ★★☆☆☆

VALUE ★★☆☆☆

PRICE £799.95

Dumpy-looking three-way has loads of bass and a laid-back midband; goes loud but lacks poise and impact.

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THE LAB REPORT

This large, 46-litre floorstander uses the same concentric Uni-Q driver as the baby Q15 model (see *HFC 187*) and, like that model, enjoys a very generous 91.2dB sensitivity. In a further parallel with the Q15, the Q65 also faces the amplifier with a 7 Ohms average load and with a substantial +60 degree phase swing at the 3kHz (Uni-Q) crossover point, after which the impedance falls to 2.7 Ohms (9kHz). At low frequencies, the load remains <6 Ohms from 20Hz-580Hz.

The averaged, in-room response looks fairly even-handed though the HF element of the Uni-Q driver remains somewhat directional and still

Good levels of sensitivity and bass extension from the KEF Q65.

shows a sharp cancellation notch around 11kHz. You'll need to experiment with speaker placement (angle and room boundaries) as well as the listening axis before achieving the smoothest treble possible.

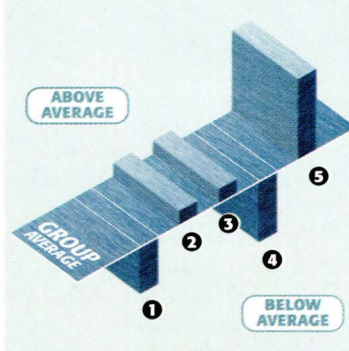
At 96dBA – just 5dB beyond its nominal sensitivity – the Q65 is still 'ticking over' and distortion hovers around the 0.8 per cent mark. Not unlike the Audiovector, the Q65 uses a complex bass alignment, yielding a broad, low-Q port output from 26Hz-78Hz together with an LF driver response that peaks quite distinctly at 78Hz. The end result is a projected in-room low of 30Hz – slightly better than KEF's 35Hz estimate – and maximum SPLs close to 110dBA in the average room. **PMi**



HOW IT COMPARES

Sensitivity is right on the nail at 91dB but, as with the smaller Q15, is achieved by facing the amplifier with sub-3 Ohms loads. Bass extension is good and distortion only moderate but, equally, remains demanding of the amplifier.

1 EASE OF DRIVE	-30%
2 RELATIVE LOUDNESS	10%
3 MAXIMUM LOUDNESS	10%
4 AUDIBLE DISTORTION	-40%
5 BASS EXTENSION	55%



SPECIFICATIONS

SPECIFICATION	CLAIMED	MEASURED
Sensitivity @ 1m/2.83V	91dB	91.2dB
Impedance (Nominal/Mean)	6 Ohms	7.2 Ohms
Estimated Bass Extension	35Hz	30Hz

SPEAKERS

CONCLUSIONS

THE BEST IN THE TEST

BB

BEST BUY**DYNAUDIO Audience 40**

The £400 Dynaudio Audience 40 might not have a real wood finish, but it turns in a remarkably dynamic performance for such a small loudspeaker, and is clearly a substantial improvement over its Audience 5 predecessor. Although better suited to smaller rooms, of say around 40 cubic metres in volume, it didn't do a bad job at all in our 60m³ listening room.

BB

BEST BUY**MUSICAL TECHNOLOGY Falcon**

The Musical Technology Falcon (£625 + £55 bases) has the driver area and port loading to fill almost any size room, and you'll need a big one because these are genuinely big speakers. They're fine value for money too, with a rare combination of scale, smoothness and dynamic literacy.

BB

BEST BUY**TRIANGLE Zephyr II**

I tend to find French loudspeakers stimulating, and that was never more true than with the £599 Triangle Zephyr II. The oddball appearance probably won't do it any favours, but its unusually high sensitivity main driver supplies fine dynamic tension and vivid excitement, with reasonable neutrality too.

REC

RECOMMENDED**ACOUSTIC ENERGY AE520**

A beautiful compact floorstander, the three-way £1,000 Acoustic Energy AE520 has an idiosyncratic tonal balance, but excellent ingredients give fine musical communication.

REC

RECOMMENDED**AUDIOVECTOR C2**

A large, nicely styled (despite its vinyl finish) floorstander, the £799 Audiovector C2 delivers a full scale sound with a fine, open-mouthed neutrality.

REC

RECOMMENDED**AVI NuNeutron**

The tiny AVI NuNeutron doesn't come cheap at £500, but it's a fine example of the delicate precise sound of the well-engineered miniature.

REC

RECOMMENDED**JBL 4312 MkII**

The JBL 4312 MkII gives a, for the most part, welcome taste of hi-fi speakers from 30 years ago. Bizarre styling and an unruly midband, but sensitivity and dynamic tension to die for.



In short, this is a slightly strange group of speakers. JBL and KEF are the only famous 'global names' that go back decades. The others are relatively recent arrivals, at least to the UK.

It's also surprising to have so many overseas brands. Run your finger down our Directory and about one model in five carries an overseas brand. But run your finger down this test group and you'll find four British brands, four from Denmark, two each from Italy and the USA, plus one from France.

I presume the strong pound provides some extra incentive for importers to have a go in what has traditionally been one of the toughest markets for outsiders. This test group might not be the most representative we've ever assembled, but its variety certainly broadens perspectives and adds some extra interest.

It's tempting to try to draw national stereotypes – the two Italian models certainly have much in common and I could probably dig out some other notional national links. But the British contingent couldn't have been more different from one another. Besides, the best thing about loudspeakers is that variety is the key note, not the stereotypes. Variety, in size, shape, finish and performance, is the very essence of mid-price loudspeakers, and the reason why it's important to take an active role in choosing the right package to suit your particular taste and lifestyle.

SPEAKER COMPARISON TABLE

MAKE	ACOUSTIC ENERGY	AUDIOVECTOR	AVI	CHARIO	DALI	DYNAUDIO
MODEL	AE520	C2	NUNEUTRON	CONSTEL LYNX	R. MENUET II	AUDIENCE 40
PRICE	£999.99 <small>REC</small>	£799.95 <small>REC</small>	£500 <small>REC</small>	£549	£400	£400 <small>BB</small>
SOUND	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
BUILD	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
VALUE	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
GUARANTEE	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs
SIZE (WxDxD)	21x98x30cm	19x106x27cm	14x27x23cm	20x36x26cm	16x26x18cm	17x28x25cm
WEIGHT	24kg	17kg	4kg	7kg	4kg	5kg
RECOMMENDED PLACEMENT	clear of walls	well clear of walls	close to wall	well clear of walls	quite close to wall	clear of walls
ACTUAL SENSITIVITY @ 1M/2.83V	89dB	88.4dB	85.8dB	85.5dB	86.6dB	86.7dB
ACTUAL IMPEDANCE (MEAN)	10.8 Ohms	10.4 Ohms	6.6 Ohms	7.8 Ohms	5.2 Ohms	8.9 Ohms

Another surprise was finding that just over half the models were standmounts, in an era when it sometimes seems that floorstanders are threatening to take over. Is this a sign that the floorstanding tide is being turned back? More likely it's just the random nature of the group selection process.

As far as trendspotting goes, I'm tempted to suggest there is no trend. The three Best Buys are all different from each other as are the four British models, and each served the accolade for its own particular solution to the complex matrix of compromises that is speaker design.

I've mentioned before that sensitivities seem to be gradually increasing, a trend which I heartily endorse, and which would seem to be amply borne out in this group test. Admittedly JBL's 'showback' 4312 is in no way representative of the current marketplace, but it provided a very interesting contrast with the more modern designs. For all its coloration and imaging foibles, it clearly showed the dynamic and headroom virtues of a large bass driver in an unusually high sensitivity package.

The longterm average sensitivity rating for hi-fi speakers is generally reckoned to be around 87-88dB (ref 2.83V) yet, from our group of 13, no fewer than six achieved 90dB or better, and even the little miniatures weren't too far off the pace.

But is there a hidden agenda? Check out the loads which the amplifiers are expected to drive, and you'll find that nearly everyone here is playing the low impedance game. Only the Snell, with its six Ohms minimum, is a 'proper' eight Ohms load.

The 2.83 Volt datum is used for sensitivity because it's the voltage which will cause an eight Ohms

load to draw 1 Watt of power from an amplifier. Change the eight Ohms load for a four Ohms load and the amplifier will have to deliver twice the current and hence twice the power. Halving the impedance is effectively the same as 'pinching' an extra 3dB of apparent sensitivity.

No one is really a winner here. Amplifier makers feel obliged to make extra current available to handle 'difficult' loads, so speaker makers take advantage of the fact by deliberately making their loads more 'difficult' in order

to gain apparent sensitivity. Anyone who tries to stay out of the game risks being left on the showroom shelf because the speakers don't sound as 'loud' as the competition.

To be fair, four Ohms loads have been the norm among European speakers for many years, and these make up more than half our test group. Nevertheless, it's potentially worrying to see signs of impedances dropping below a minimum of four Ohms – witness the Chario, KEF and Acoustic Energy models.

BEST BUYS & RECOMMENDATIONS



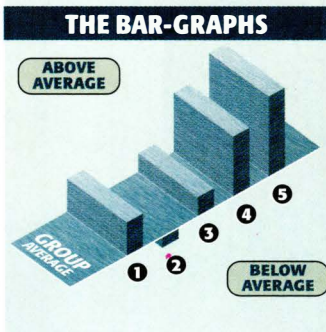
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Behind *Hi-Fi Choice's* unique bar-graphs are some of the most advanced measurements made anywhere on the planet. They are provided by our Technical Editor, Paul Miller, using both GPIB-controlled measurement hardware and his own award-winning, PC-based Virtual Instrument software. Each bar-graph value is derived from a weighted statistic of several key measurements and is displayed relative to a notional zero per cent which represents the group average for that particular category.



1 EASE OF DRIVE: This is derived from the reactive and resistive components of the speaker load, indicating how tricky it is for the amp to drive.

2 RELATIVE LOUDNESS: Speaker sensitivity is measured at 1m with a 2.83V input across third-octave bands 17-29, then weighted according to the human loudness contour to indicate how 'loud' one speaker will sound relative to another.

3 MAXIMUM LOUDNESS: This takes into account the speaker's sensitivity, distortion, the maximum useable amplifier power and the effects of placement in an 'average room' to gauge the maximum practical Sound Pressure Level.

4 AUDIBLE DISTORTION: This test momentarily raises the output to 96dBa with dynamic signals through bass, midrange and treble. This allows us to more realistically assess distortion.

5 BASS EXTENSION: This gives an indication of the likely bass extension in an 'average' room, according to the maker's suggestions for positioning.

RIVAL BUYS

CASTLE HARLECH £880
Imaginative 'quarter wave' loaded floorstander. Twin main drivers, one mounted on the top, give an unusually spacious sound. Lovely real wood finish.

CELESTION A1 £899
Large stand mount, gives an impressive sense of scale and a deliciously musical, laid-back sound (below).



JMLAB TANTAL 515 £495
This compact floorstander has a prosaic appearance but delivers a vigorous and communicative performance, which might be a bit bright for some tastes.

KELLY KT2 £700
Two good size aerogel main drivers give unusually high sensitivity, with dynamics to match, alongside a laid-back balance.

LINN KEILIDH £750
This long-standing compact floorstander has fine urgency and drive. Can be upgraded with a heavy plinth or active operation.

MISSION 752 FREEDOM £578
This delicately-voiced, two-way floorstander has one of the prettiest suits of clothes around, though some might find it a little short of grunt.

SPEAKER COMPARISON TABLE

MAKE MODEL	JBL 4312 MKII	KEF Q65	MUSICAL TECH. FALCON	OPERA PRIMA	SNELL K5 MONITOR	SYSTEM AUDIO 1150	TRIANGLE ZEPHYR II
PRICE	£1,000 REC	£799.95	£625+£55 BB	£495	£750	£750	£599 BB
SOUND	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
BUILD	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
VALUE	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
GUARANTEE	2 yrs	5 yrs	2 yrs	2 yrs	5 yrs	2 yrs	5 yrs
SIZE (WxHxD)	36x60x30cm	29x95x31cm	33x117x30cm	19x34x31cm	22x46x30cm	16x105x26cm	22x94x29cm
WEIGHT	21kg	17kg	20kg	8kg	12kg	13kg	13kg
RECOMMENDED PLACEMENT	quite close to wall	well clear of walls	clear of walls	clear of walls	clear of walls	clear of walls	clear of walls
ACTUAL SENSITIVITY @ 1M/2.83V	94.1dB	91.2dB	89.7dB	88.4dB	86.3dB	88.1dB	90.4dB
ACTUAL IMPEDANCE (MEAN)	5.9 Ohms	7.2 Ohms	6.15 Ohms	7.1 Ohms	10.5 Ohms	7.78 Ohms	6.9 Ohms
ACTUAL BASS EXTENSION (-6DB)	45Hz	30Hz	34Hz	55Hz	38Hz	40Hz	40Hz



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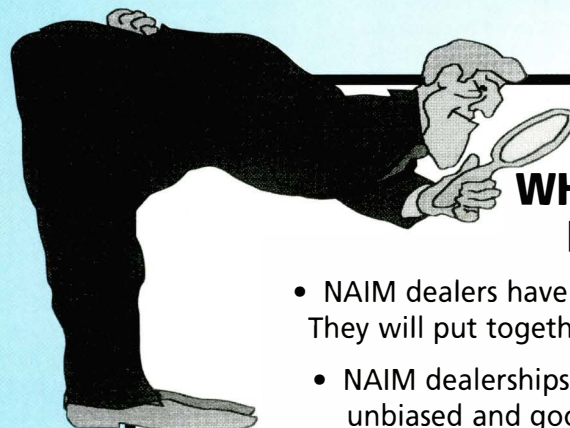
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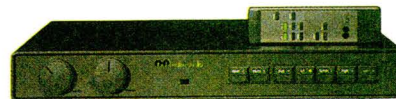
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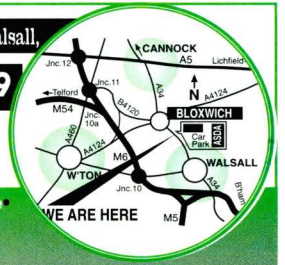
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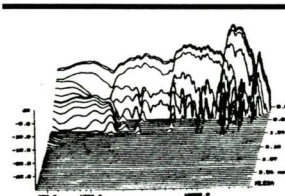


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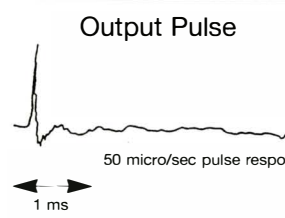
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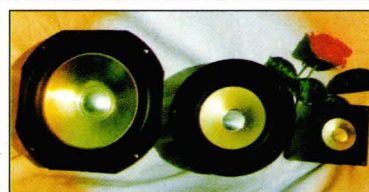
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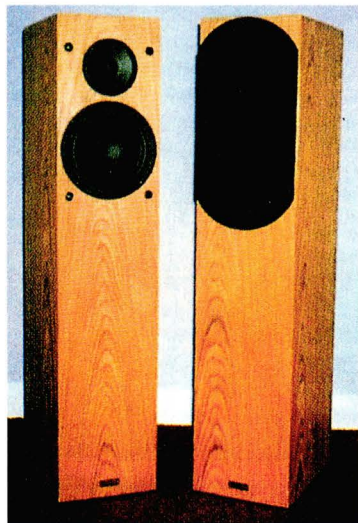
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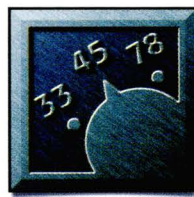
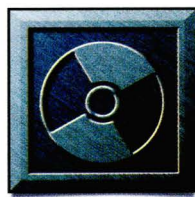
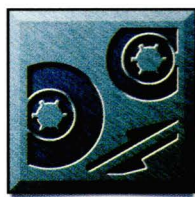
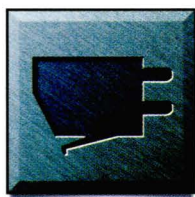
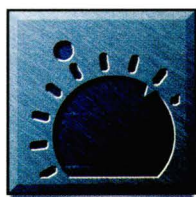
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HOW TO USE THE BUYERS' GUIDE

Best Buys, Recommendations & Editor's Choices

B BEST BUYS: Awarded to group-tested products which display an unbeatable blend of performance and value for money.

R RECOMMENDED: Top performers in group tests; perhaps not the cheapest but possibly more sophisticated than Best Buys.

E EDITOR'S CHOICE: More expensive components which exhibit outstanding engineering, industrial design and sound quality.

Our Three Step Guide to Buying Hi-Fi

The *Hi-Fi Choice Price Guide and Directory* are extremely simple to use, but contain all the information you need to select and buy the perfect hi-fi system. Here's how it works.

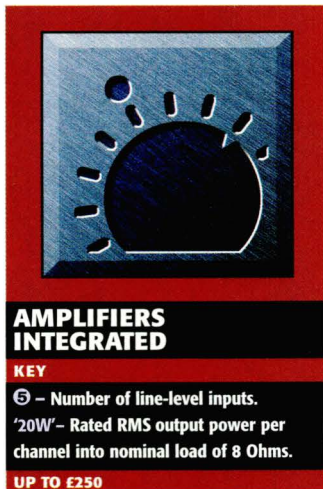
STEP 1 DISCOVER which products fall within your budget by using our Price Guide, which starts on this page. The product listing is updated using manufacturers' data every other month, and aims to include every hi-fi component currently available in the UK. (But please fax us on 0171-917 5512 with any omissions!) It is an alphabetical listing divided into different types of hi-fi component, and also into price bands.

STEP 2 PRODUCTS whose names are printed in **RED** are those we have reviewed, which you can read about in the Directory (starts after the Price Guide). Here you will learn which items have been singled out for our famous Best Buy, Recommended or Editor's Choice awards, denoting products of exceptional quality and value. The Directory is sorted by product type and listed alphabetically, and the beginning of each section provides essential information about each kind of hi-fi component.

STEP 3 FIND your nearest hi-fi store in our Dealer Directory (at the end of the Directory) to book a demonstration of the hi-fi equipment you want to hear. Remember to take your own LPs or CDs!

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AMPLIFIERS INTEGRATED

KEY

Ⓔ - Number of line-level inputs.
 '20W' - Rated RMS output power per channel into nominal load of 8 Ohms.

UP TO £250

Akai AM1100	Ⓔ	50W	230
AMC 3020	Ⓔ	20W	100
AMC 3025A	Ⓔ	30W	140
AMC 3050A	Ⓔ	45W	170
Arcam Alpha One	Ⓔ	35W	230
Ariston AX910	Ⓔ	30W	80
Cambridge A1 Mk III	Ⓔ	30W	100
Cambridge A1 Mk3 SE	Ⓔ	30W	120
Cambridge A3i	Ⓔ	60W	200
Cambridge A500RC	Ⓔ	50W	200
Denon PMA-250SE	Ⓔ	30W	140
Denon PMA-350SE	Ⓔ	50W	180
Denon PMA-535R	Ⓔ	50W	230
Denon PMA-100M	Ⓔ	80W	240
Goodmans Delta 900A	Ⓔ	100W	130
H/K HK630	Ⓔ	40W	230
H/K HK3270	Ⓔ	65W	250
JVC AX-A372BK	Ⓔ	40W	200
JVC AX-R5BK	Ⓔ	45W	200
Kenwood KA-1080	Ⓔ	60W	140
Kenwood KA-3080R	Ⓔ	70W	170
Kenwood KAF-3010R	Ⓔ	70W	180
Marantz PM-48	Ⓔ	50W	150
Marantz PM-57	Ⓔ	50W	200
Marantz SR-47	Ⓔ	40W	200
Marantz PM-66SE	Ⓔ	50W	230
Musical Fidelity E1	Ⓔ	30W	199
NAD 310	Ⓔ	20W	100
NAD C320	Ⓔ	40W	200
NAD 312	Ⓔ	25W	200
Pioneer A-105	Ⓔ	30W	130
Pioneer A-204R	Ⓔ	25W	160
Pioneer A-300R	Ⓔ	50W	200
Pioneer A-305R	Ⓔ	50W	200
Pioneer A-407R	Ⓔ	45W	230
Pioneer A-405R	Ⓔ	45W	250
Rega Brio	Ⓔ	30W	229
Rotel RA921	Ⓔ	20W	100
Rotel RA931	Ⓔ	35W	150
Rotel RA971	Ⓔ	70W	200
Sansui AUX-410R	Ⓔ	50W	150
Sansui AUX-510R	Ⓔ	70W	230
Sherwood AX 4050R	Ⓔ	50W	150
Sherwood AX-7030R	Ⓔ	95W	230
Sony TA-FE210	Ⓔ	40W	130
Sony TA-FE320R	Ⓔ	60W	150
Sony TA-F248E	Ⓔ	50W	200
Teac AE-2000	Ⓔ	50W	180
Teac AR-600	Ⓔ	90W	200
Technics SU-V300	Ⓔ	25W	150
Technics SU-V500	Ⓔ	30W	180
Technics SU-A600 Mk3	Ⓔ	37W	200
Technics SU-V620	Ⓔ	70W	230
Technics SU-A700 Mk3	Ⓔ	45W	250
Yamaha AX-392	Ⓔ	60W	170
Yamaha AX-9	Ⓔ	50W	200
Yamaha AX-492	Ⓔ	85W	220

£251 TO £500

Arcam Alpha 7R	Ⓔ	40W	280
Arcam Alpha 8R	Ⓔ	50W	300
Arcam Alpha 9	Ⓔ	70W	500
Audio Analogue Puccini	Ⓔ	40W	475
Audiogram MB1	Ⓔ	40W	493
Aura VA-100 II	Ⓔ	70W	350
Creek 4330	Ⓔ	35W	279
Creek 4340	Ⓔ	35W	279
Creek 4330R	Ⓔ	35W	355
Creek 5250	Ⓔ	50W	450
Cymbol CA1	Ⓔ	40W	499
Cyrus SL	Ⓔ	50W	398
Denon PMA-735R	Ⓔ	65W	300
Denon PMA-1500R	Ⓔ	70W	500
EMF Audio Sequel	Ⓔ	50W	450
H/K HK650	Ⓔ	60W	330
Kenwood KA-5090R	Ⓔ	65W	300
Magnum IA120	Ⓔ	65W	265
Magnum IA170	Ⓔ	96W	330
Magnum IA170SE	Ⓔ	90W	430

Marantz PM-68	Ⓔ	90W	300
Marantz PM-66 Kl Sig.	Ⓔ	50W	400
Micromega Minium Series 2	Ⓔ	40W	400
Monrio Asty	Ⓔ	55W	400
Musical Fidelity E11	Ⓔ	60W	300
Musical Fidelity X-A1	Ⓔ	50W	480
Musical Fidelity A2	Ⓔ	25W	500
Myryad T-40	Ⓔ	50W	400
NAD 314	Ⓔ	35W	260
NAD 317	Ⓔ	80W	470
Onkyo A9210	Ⓔ	40W	260
Onkyo A921	Ⓔ	50W	350
Onkyo A922	Ⓔ	70W	400
Orelle SA-100	Ⓔ	50W	499
Pioneer A-400X	Ⓔ	50W	300
Pioneer A-605R	Ⓔ	80W	400
Pioneer A-300R Precision	Ⓔ	35W	400
Rega Luna	Ⓔ	40W	375
Rega Mira	Ⓔ	60W	450
Shearman 2.5	Ⓔ	35W	499
Sony TA-FB920R	Ⓔ	65W	300
Sony TA-F30E5	Ⓔ	80W	400
Sony TA-F300E5	Ⓔ	40W	500
Talk Electronics Storm 1	Ⓔ	50W	500
Teac AH-500	Ⓔ	50W	280
Technics SU-A800D Mk2	Ⓔ	55W	300
Technics SU-A900D Mk2	Ⓔ	70W	400
Thule Audio Spirit IA60	Ⓔ	60W	449
Token K50	Ⓔ	55W	350
Yamaha AX-592	Ⓔ	100W	280

£501 TO £700

Alchemist Kraken APD6A	Ⓔ	55W	600
Alchemist Nemesis	Ⓔ	80W	700
Audio Analogue Puccini SE	Ⓔ	40W	635
Audio Note Kanji Line SE	Ⓔ	9W	699
Audio Note First integrated	Ⓔ	40W	699
Audiogram MB2	Ⓔ	60W	599
CR Dev CR324se	Ⓔ	150W	569
CR Dev Kalypso	Ⓔ	15W	599
CR Dev CR325	Ⓔ	175W	699
Creek 5250R	Ⓔ	50W	575
Creek 5250SER	Ⓔ	60W	665
Cyrus IIII	Ⓔ	50W	598
Densen Beat B-100 MkII	Ⓔ	60W	650
Exposure XX Super	Ⓔ	55W	700
Gamma Gemini	Ⓔ	12W	699
H/K HK690	Ⓔ	100W	530
Hi Q Sound MCI	Ⓔ	30W	565
Jolida 202	Ⓔ	40W	695
LFD Integrated 0	Ⓔ	50W	549
Linn Majik (Line)	Ⓔ	33W	650
Lynwood Opal	Ⓔ	80W	685
Magnum IA200	Ⓔ	100W	599
Magnum Class A	Ⓔ	85W	690
Micromega Tempo 1	Ⓔ	50W	700
Musical Fidelity A220	Ⓔ	50W	700
Myryad MI 120	Ⓔ	60W	600
Naim Nait 3	Ⓔ	30W	590
Orelle SA-100RX	Ⓔ	75W	649
Primare A20 Mk II	Ⓔ	40W	600
Quad 77 Integrated	Ⓔ	85W	700
Rose Scion	Ⓔ	65W	615
Shearman Phase 2	Ⓔ	50W	689
Sugden Audition T	Ⓔ	65W	549
Talk Electronics Storm 2	Ⓔ	50W	650
Teac AB-X7R	Ⓔ	50W	700
Thule Audio Spirit IA100	Ⓔ	100W	599
Thule Audio Spirit IA60B	Ⓔ	60W	699

£701 TO £1000

Alchemist Nexus	Ⓔ		799
Alchemist Forseti Integrated	Ⓔ	100W	1,000
Arcam Alpha 10	Ⓔ	100W	800
Audio Note Oto Line PP	Ⓔ	12W	950
AVI S2000MI	Ⓔ	100W	999
Copland CSA8	Ⓔ	60W	899
Creolo IMP702	Ⓔ	70W	850
Creolo IMP703	Ⓔ	70W	1,000
Electrocompaniet ECI-2	Ⓔ	50W	995
Exposure XV Super	Ⓔ	55W	800
Holfi Audis Signature	Ⓔ	65W	750
LFD 0 LE Integrated	Ⓔ	60W	799
Linn Majik (Phono)	Ⓔ	33W	800
Magnum Class A SE	Ⓔ	80W	795
Marantz PM-17	Ⓔ	60W	900
Meridian 551	Ⓔ	55W	795
Micromega Tempo 2	Ⓔ	70W	900
Naim Nait 3 R	Ⓔ	30W	780
Opera Aida	Ⓔ	60W	795
Pioneer A-07	Ⓔ	80W	999
Rega Elicit	Ⓔ	40W	730
Roksan Caspian	Ⓔ	70W	795
Shearman Phase 2 Reference	Ⓔ	50W	799
Sonneteer Alabaster	Ⓔ	50W	900
Sugden A21a Int	Ⓔ	25W	799
Sugden Audition C	Ⓔ	60W	799
TAG McLaren 60i	Ⓔ	60W	799
TAG McLaren 60iRV	Ⓔ	60W	999
Thule Audio Spirit IA150B	Ⓔ	150W	999

£1001 TO £2000

Art Audio Integra	Ⓔ	30W	1,499
ATC SIA2-150	Ⓔ	150W	1,984

Audio Note Soro Line PP		20W	1,200
Audio Note Oto Line SE	Ⓐ	12W	1,200
Audio Note Oto Phono SE	Ⓐ	12W	1,500
Audio Note Soro Line SE		18W	1,699
BB Audio BB 30-60	Ⓒ	30W	1,495
Beam-Echo SA-50	Ⓒ	50W	1,950
Bow Technologies Wazoo	Ⓒ	50W	1,795
Bryston B-60	Ⓒ	60W	1,249*
Copland CSA14	Ⓒ	60W	1,199
Copland CSA28	Ⓒ	60W	1,249
Copland CTA402	Ⓒ	35W	1,698
CR Dev Romulus V3	Ⓒ	35W	1,198
CR Dev Athena	Ⓐ	38W	1,499
CR Dev Remus V3	Ⓒ	60W	1,989
Credo LIM 702			1,191
Credo LIM 703			1,249
EAR 859	Ⓒ	13W	1,999
EAR 834	Ⓒ	40W	1,999
Golden Tube Audio SI-50 MkII	Ⓒ	50W	1,100
Graef Venticque	Ⓒ	20W	1,790
Jadis Orchestra	Ⓒ		1,345
LFD Integrated 1	Ⓒ	65W	1,099
Meracus Intrate	Ⓒ	60W	1,095
Primare A301	Ⓒ	100W	1,500
Rogers E-20a	Ⓐ	20W	1,229
Rogers E-40a	Ⓐ	40W	1,900
Sonic Frontiers Anthem Integrated	Ⓒ	25W	1,299
T+A R1200R	Ⓒ	90W	1,750
Thule Audio Space IA250B	Ⓒ	250W	1,799
Unison Simply Two	Ⓒ	12W	1,095
Unison Simply Four P	Ⓒ	24W	1,595
Unison Simply Four T	Ⓒ	11W	1,650
Woodside ISA230 Line	Ⓒ	30W	1,099
Woodside ISA230 Disc	Ⓐ	30W	1,249
YBA Integre DT	Ⓒ		1,650

OVER £2000

Adyton Opera	Ⓐ	50W	2,595
AMP Flux System 2	Ⓒ	50W	3,000
Audio Note Meishu Line		9W	2,750
Audio Note Ongaku	Ⓒ	26W	56,000
Audio Research CA50	Ⓒ		3,399
Belcanto SET140		40W	4,450
Belcanto Orfeo 30S1		35W	4,540
Cary CAD-500SE1	Ⓐ	11W	3,995
Conrad-Johnson CAV-50	Ⓒ	50W	2,495
EAR V20	Ⓒ	24W	2,495
Electrocompaniet ECI-1	Ⓒ	100W	2,195
Gamma Rhythm	Ⓒ	18W	2,499
Gamma Rhythm Ref	Ⓒ	20W	3,499
Gamma Moment	Ⓒ	40W	19,999
Jadis DA30	Ⓒ	30W	2,690
Jadis DA60	Ⓒ	60W	4,483
Krell KAV300i	Ⓒ	150W	2,495
Krell KAV300R			3,333
McIntosh MA6400E	Ⓒ	100W	3,999
McIntosh MA6800E		150W	5,995
Meracus Onesta	Ⓐ	75W	2,999
Musical Fidelity A1001	Ⓒ	200W	2,500
Pioneer A-09	Ⓒ	45W	4,200
Rowland Concentra	Ⓒ	100W	5,500
Sonus Faber Musica			2,295
T+A R1500R	Ⓒ	135W	2,015
Tube Tech Unisig Sig. Int.		30W	2,300
Tube Tech Synergy PPS	Ⓒ	150W	6,900
Unison Simply 845	Ⓒ	24W	3,195

PREAMPS

KEY
 Ⓒ (etc) - Number of line-level inputs.
 Ph - Phono input fitted as standard
 (may be an option on some other models).

UP TO £500

Arcam Alpha 9C	Ⓒ		400
Art Audio Minuet			499
Audio Analogue Bellini	Ⓒ	Ph	495
Audio Note The M			350
Beam-Echo PP-21		Ph	499
Bryston BP1	Ⓒ	Ph	438
CR Dev Themis		Ph	349
Creek P43/R	Ⓒ		350
Creek P52	Ⓒ		499
Crimson CS610C	Ⓒ	Ph	450
Cyrus aEQ7		Ph	498
DPA Enl'ment phono		Ph	275
EAR 834P		Ph	349
EAR 834L	Ⓒ		449
EAR 834P/MC		Ph	499
Electrocompaniet ECP-1		Ph	495
Henley HMCS0			150
Henley HMC100			350
Hi Q Sound LCP2			149
LFD Mistral Linestage	Ⓒ		449
LFD LSO Linestage	Ⓒ		499
Lumley PP70	Ⓒ		345
Lumley PP1	Ⓒ		345
Magnum MP120	Ⓒ		500
Magnum MP660	Ⓒ		500
Magnum MP330	Ⓒ		500
Monrio ADN-N		Ph	295
Monrio Asty L	Ⓒ		500
Moth 30 Passve	Ⓒ		149

Moth 30 Phono	Ph	249
Moth 30 Line stage	Ⓐ	349
Musical Fidelity X10-D		120
Musical Fidelity X-LP	Ph	130
Musical Fidelity X-PRÉ	Ⓐ	200
Musical Fidelity E20	Ⓒ	400
NAD 114	Ⓒ	270
NAD 116	Ⓒ	430
Naim Prefix	Ⓒ	360
Naim NAC92	Ⓒ	485
NVA P50	Ⓐ	350
Parasound P/HP-100	Ph	130
Parasound P/HP-850	Ⓐ	400
Rega EOS	Ⓐ	398
Rega Cursa	Ⓒ	450
Roksan Artaxenes 10	Ph	395
Rose RV-23	Ⓒ	450
Rotel RQ970BX	Ph	130
Rotel RC971	Ⓒ	150
Rotel RC972	Ⓒ	225
Sunfire Phono	Ph	430
Talk Electronics Hurricane 1	Ⓒ	500
Technics SU-C1000 Mk2	Ⓒ	300
Thule Audio Spirit PR100	Ⓒ	400
Trilony 905		375
Trilony 904	Ph	375
Trilony 900	Ⓒ	499
Unison Simply Phono	Ph	500

£501 TO £2000

Adyton Chorus		1,995
Alchemist Kraken Pre	Ⓒ	549
Alchemist Forseti Pre	Ⓒ	999
Alchemist Signature Pre	Ⓒ	1,499
Art Audio Headline	Ⓒ	700
Art Audio VPL		741
Art Audio Conductor Phono		750
Art Audio VP1		952
Art Audio Conductor	Ⓒ	1,250
Art Audio Conductor Export		2,000
Audio Note M1 Line		550
Audio Note M1 RIAA	Ph	550
Audio Note M2 Line		999
Audio Note M2 Line		999
Audio Note Discovery		999
Audio Note M2RIAA	Ph	1,099
Audio Prism Mantissa	Ⓒ	1,995
Audio Research LS8		1,449
Audio Research PH3	Ph	1,490
Audio Research LS9		1,949
Audio Synthesis Pro Passion	Ⓒ	595
Audio Synthesis Passion	Ⓒ	695
Audio Synthesis Passion 8M	Ⓒ	1,295
Audio Synthesis Passion 8S	Ⓒ	1,695
Aura CA-200	Ph	700
AVI S2000MP	Ⓒ	949
AVI S2000MP+P	Ⓒ	1,199
Beam-Echo SP-21	Ⓒ	1,116
Bryston 4	Ⓒ	642
Bryston BP5	Ⓒ	889
Bryston BP20	Ⓒ	1,126
Bryston BP-25	Ⓒ	1,326
Canary Audio CA-606	Ⓒ	1,295
Canary Audio CA-601	Ⓒ	1,595
Cary SLP-50	Ⓒ	995
Cary SLP-74	Ⓒ	1,795
Cary PH-301	Ph	1,795
Chord Phono		1,898
Chord CPA 1800	Ⓒ	1,905
Concordant Exhilarant		900
Concordant Exquisite		1,950
Conrad-Johnson PV-10AL	Ⓒ	995
Conrad-Johnson PV-10A	Ⓒ	1,295
Conrad-Johnson PV-12AL	Ⓒ	1,990
Conrad-Johnson EF-1	Ph	1,990
Conrad-Johnson PF-2	Ⓒ	1,990
Copland CSA303	Ph	1,099
Copland CTA301 MkII	Ⓒ	1,249
CR Dev Carmenta	Ⓒ	659
CR Dev Argento	Ph	699
Credo CMP004		1,246
Credo CMP005		1,876
Cyrus aCA7	Ⓒ	798
Densen DM-20	Ⓒ	1,200
DNM 3 Start	Ⓒ	1,000
DNM 3A Start	Ⓒ	1,650
DPA Enlightenment pre	Ⓒ	795
Dynavector L200		995
Dynavector P100	Ph	1,495
Dynavector L100	Ⓒ	1,995
Earmax Pre	Ⓒ	1,895
ECA Vista S	Ⓒ	760
ECA Vista HD	Ⓒ	880
ECA Prisma	Ⓒ	880
Electrocompaniet EC-4.5		1,195
Electrocompaniet EC-4.6		1,750
Exposure XIX		800
Exposure XVII	Ph	850
Golden Tube Audio SEP-2	Ⓒ	990
Golden Tube Audio SEP-3	Ⓒ	1,995
Graef WFB Two	Ⓒ	1,350
Graef WFB One	Ⓒ	1,750
Henley HMC200	Ⓒ	600
Hi Q Sound MCB2	Ph	545
Hi Q Sound MCL2	Ⓒ	645
Jadis DPL2	Ⓒ	1,590
Krell KAV250p	Ⓒ	1,999

LFD MC1 Phonostage	Ph	949
LFD LS1 Linestage		999
LFD MC2 Phonostage	Ph	1,499
LFD LS2 Linestage		1,599
LFD LS3 Linestage	Ⓒ	1,999
Linn Wakonda	Ⓒ	750
Linn Linto	Ⓒ	850
Linn Kairn	Ⓒ	1,400
Lumley LVL1.5	Ⓒ	895
Lumley LV1	Ⓒ	1,150
Lumley PV1.5	Ⓒ	1,700
Lumley PV1	Ph	1,700
Matisse Atom	Ⓒ	1,000
McIntosh C712	Ph	1,999
Meracus Ingredi	Ⓒ	925
Meridian 501	Ⓒ	695
Meridian 562		765
Meridian 562V		995
Meridian 56Z	Ⓒ	1,295
Michell Orca	Ⓒ	1,650
Michi RHC-10		795
Michi RHQ-10	Ph	1,150
Michi RHA-10		1,150
Micromega Tempo P		1,150
Muse Model 3	Ⓒ	1,990
Musical Fidelity F25	Ph	1,500
Myriad MP100	Ⓒ	600
NAD 118	Ⓒ	1,000
Naim NAC92R	Ⓒ	650
Naim NAC72	Ⓒ	745
Naim NAC102	Ⓒ	1,080
Quad 77 Pre	Ⓒ	850
Quad 99 Pre	Ph	1,300
Rega Hal	Ⓒ	998
Roksan ROK-L2.5	Ⓒ	1,250*
Rose RV-23S	Ⓒ	525
Rotel RC995	Ⓒ	525
Shearman Phase 6 Pre	Ⓒ	999
Shearman Phase 1 Pre Ref	Ⓒ	1,499
Siemel MC20	Ph	1,250
Siemel MM20	Ph	650
Siemel TU10	Ⓒ	1,599
Siemel TR20	Ⓒ	1,599
Sonic Frontiers Anthem Pre 1P	Ph	899
Sonic Frontiers Phono 1	Ph	1,999
Sonographe SC26	Ⓒ	995
Sugden Audition Pre	Ⓒ	549
Sugden Masterclass Pre	Ⓒ	1,995
Sumo Athena II Line	Ⓒ	767
Sumo Athena II/III LS	Ⓒ	987
Sumo Athena III	Ⓒ	987
Sumo Artemis uP	Ⓒ	1,595
Sunfire The Classic	Ⓒ	1,630
T+A P1200R	Ⓒ	965
TAG McLaren PA10	Ph	849
TAG McLaren PPA20	Ph	1,499
TAG McLaren PA20R	Ⓒ	1,499
Talk Electronics Hurricane 2	Ⓒ	650
Talk Electronics Hurricane 3	Ⓒ	900
Talk Electronics Hurricane 4	Ⓒ	1,550
Talk Electronics Hurricane 5	Ⓒ	1,900
Technics SU-C2000	Ph	700
Thorens TTP-2000F	Ⓒ	699
Thule Audio Spirit PR150B	Ⓒ	699
Trilony 901	Ⓒ	750
Trilony 906	Ⓒ	995
Trilony 902	Ⓒ	1,595
Tron Retro	Ⓒ	1,000
Tron Nucleus Phono	Ph	2,000
Tron Nucleus	Ⓒ	2,000
Tube Tech Seer Line	Ⓒ	935
Tube Tech Mac Phono	Ph	1,150
Tube Tech Prophet	Ⓒ	1,970
Unison Feather One	Ⓒ	795
Unison Mystery Two	Ⓒ	1,750
Unison Mystery One	Ⓒ	1,750
van Den Hul Pre-amp	Ⓒ	1,700
Wilson Benesh Stage One	Ph	995
Woodside SC27 Line	Ⓒ	949
Woodside SC26 Line	Ⓒ	1,557
XTC PRE-1	Ⓒ	1,250
Yamaha CX-2	Ⓒ	650
YBA 3	Ⓒ	1,199
YBA Integre	Ⓒ	1,199
YBA 2	Ⓒ	1,999

OVER £2000

Adyton Temper		2,495
Adyton Modus	Ⓒ	2,695
ATC SCA2		2,599
Audio Note M3Line		2,650
Audio Prism Avanti	Ⓒ	7,995
Audio Research LS15	Ⓒ	3,399
Audio Research LS25		4,999
Audio Research REF 1	Ⓒ	8,495
Boulder L3AE	Ⓒ	2,100
Boulder L5AE	Ⓒ	3,400
Boulder L5M	Ⓒ	3,800
Boulder 2010	Ⓒ	22,000
Canary Audio CA-801	Ⓒ	3,750
Cary SLP-98L	Ⓒ	2,595
Chord CPA 2200	Ⓒ	2,530
Chord CPA 3200	Ⓒ	3,785
Chord CPA 4000	Ⓒ	6,675
Conrad-Johnson PF-R	Ⓒ	2,490
Conrad-Johnson PV-12A	Ph	2,590

Conrad-Johnson Premier 15	Ph	3,995
Conrad-Johnson Premier 14	Ⓒ	4,495
Conrad-Johnson Premier 16LS	Ⓒ	7,995
Conrad-Johnson Art	Ⓒ	14,995
CAT SL1 Sig. Mk3	Ⓒ	6,500
CR Dev Kastor	Ⓒ	2,995
Credo LPR 001	Ⓒ	2,815
DNM 3C Primus	Ⓒ	2,550
DNM 3C Twin	Ⓒ	3,800
DNM 3C Six	Ph	5,050
EAR 802MC	Ⓒ	2,599
EAR C88	Ⓒ	9,999
EAR P52	Ph	15,999
Gamma Era Ref	Ⓒ	7,999
Graaf GM13.5B	Ⓒ	3,750
Jadis DPL		2,900
Jadis DPMC	Ph	2,900
Jadis JPL	Ⓒ	4,200
Jadis JPP200	Ⓒ	4,290
Jadis JPSOMC	Ⓒ	5,290
Jadis JPS2	Ph	6,690
Jadis JP80MC	Ⓒ	10,166
Jadis JP200MC	Ⓒ	15,900
Krell KRC3	Ⓒ	2,998
Krell KRC-HR		6,949
LFD Disc Preamp	Ph	4,499
Mark Levinson 25S	Ph	2,950
Mark Levinson 380	Ⓒ	3,995
Mark Levinson 380S	Ⓒ	6,495
Matisse Fantasy	Ⓒ	2,500
Matisse Reference	Ⓒ	3,500
McIntosh C22	Ph	2,999
McIntosh C40	Ph	2,999
McIntosh C39	Ph	5,999
Meracus Prearef	Ⓒ	2,195
Naim NAC82	Ⓒ	2,225
Naim NAC52	Ⓒ	3,450
Roksan ROK-L1.5	Ⓒ	2,250
Rowland Synergy	Ⓒ	4,999
Rowland Coherence	Ⓒ	14,999
Sonic Frontiers Line 1	Ⓒ	2,499
Sonic Frontiers Line 2	Ⓒ	3,299
Sonic Frontiers Line 3	Ⓒ	4,999
T+A Pre DA3000		

H I - F I P R I C E G U I D E

POWER AMPS (CONTINUED)

Audio Note P2SE	18W	1,499
Audio Note Conqueror	8W	1,599
Audio Prism Antares	35W	1,695
Audio Research D130	130W	1,890
Audio Research VT60	35W	1,999
Aura PA-100	100W	700
Aura PA-200	110W	1,200
Aura PA-200 C	100W	1,250
AVI S2000MM	150W	1,399
Bryston 2B-LP	75W	750
Bryston 3B-ST PRO	150W	1,160
Bryston 3B-ST	150W	1,160
Bryston THX3B	150W	1,262
Bryston 7B-ST PRO	500W	1,545
Bryston 4B-ST PRO	300W	1,756
Bryston 7B-ST	500W	1,815
Bryston THX4B	300W	1,850
Bryston THX7B	500W	1,886
Canary Audio CA-706	40W	1,695
Canary Audio CA-708	50W	1,950
Chord SPM 400	100W	1,425
Chord SPM 600	130W	1,850
Conrad-Johnson MV-55	50W	1,995
Copland CSA515	150W	1,299
Copland CTA505	67W	1,899
CR Dev Amphion	12W	1,949
Credo PMP 804		1,876
Creek AS2SE	100W	599
Crimson CS630C	100W	800
Cyrus aPA7	150W	948
Densen B-300	100W	800
Densen DM-30	100W	1,200
DNM PA Start	45W	1,000
DNM PA1 Start	45W	1,650
DPA Enlightenment pwr	100W	995
Dynavector HX75	75W	1,995
Earmax Power	25W	1,895
ECA Lectern S	50W	880
ECA Lectern HD	50W	1,480
Electrocompaniet AW60FTT	60W	1,095
Exposure XVIII Super	70W	850
Golden Tube Audio SE-40	40W	1,100
Golden Tube Audio SE-300B MkII	8W	1,790
Graaf Ventiquatre P	25W	1,425
Hi Q Sound MCM	70W	715
Jadis DA5	40W	1,749
Krell KAV150a	150W	1,990
Lexicon 212	120W	1,850
LFD PA1 Powerstage	60W	999
LFD PA2 Powerstage	75W	1,599
LFD PA2M Powerstage	90W	1,999
Linn LK100	50W	650
Linn LK240	120W	750
Linn AV5105	100W	1,200
Lynwood Ruby	120W	985
Magnum MF330	150W	685
Magnum MF660	125W	825
Magnum A500SE	200W	1,485
Magnum A50SE	200W	1,595
McIntosh MC7100	1999	1,999
Meracur Ciere	60W	1,095
Meridian 555	60W	750
Meridian 556	100W	895
Meridian 557	200W	1,400
Meridian 505	160W	1,590
Michell Alecto Stereo	50W	1,150
Michell Alecto Mono	100W	1,950
Michi RHB-05	100W	1,100
Michi RHB-10	200W	2,000
Micromega Amp	100W	1,150
Monrio Asty P	100W	950
Moth Stereo 60	60W	599
Moth 30 Mony 100	100W	879
Muse Model 100	100W	1,490
Musical Fidelity X-A200	200W	1,000
NAD 218THX	200W	850
Naim NAP140	45W	770
Naim NAP180	60W	1,090
Naim NAP135	75W	1,705
Naim NAP250	70W	1,705
NVA A60	43W	560
Papworth TVA50	50W	1,425
Parasound HCA-1000A	125W	600
Parasound HCA-1500A	205W	1,000
Quad 77 Power	85W	600
Quad 909	140W	800
Quad 707	140W	800
Quad 99 Monoblock	150W	1,200
Rega EXS	70W	598
Rega Exon	125W	1,196
Roksan Caspian Power	70W	595
Roksan ROK-S1.5	100W	1,495
Rose RP-190 (Dual Mode)	75W	550
Shearne Phase 3	50W	639
Shearne Phase 3 Reference	50W	749
Shearne Phase 5 Mono	100W	1,598
Sonic Frontiers Anthem Amp 1	40W	1,299
Sonographe SA250	125W	1,195
Sonographe SA400	220W	1,695
Sugden Audition Power		549
Sugden A21a Power	25W	649
Sumo Polaris III	164W	950
Sumo Model Five	60W	1,975
Sumo Andromeda III	240W	1,975
T+A A1210	90W	875

T+A PA1200R	90W	1,445
T+A A1500	140W	1,535
T+A PA1500R	135W	1,665
TAG McLaren 60P	60W	849
TAG McLaren 100P	100W	1,099
Talk Electronics Tornado 2	65W	600
Talk Electronics Tornado 3	100W	750
Talk Electronics Tornado 4	110W	1,100
Technics SE-A2000	100W	1,100
Thorens TTA-2000	30W	599
Thule Audio Spirit PA100	100W	600
Thule Audio Spirit PA150B	150W	699
Trilogy 948	50W	1,895
Trilogy 948T	22W	1,895
Tube Tech Syrix	45W	1,150
Tube Tech Unisis Sig. Pwr	30W	1,900
Unison Power 35	35W	1,500
Woodside SA240	40W	1,199
Woodside MA100	100W	1,733
Woodside STA50	50W	1,880
XTC POW-2	150W	1,450
Yamaha MX-2	75W	1,500
YBA 3 stereo		1,299

OVER £2000

Adyton Cordis 1.6	120W	3,495
Adyton Cordis 3B	280W	12,995
Art Audio Tempo	30W	2,499
Art Audio Quintet SE	-W	2,500
Art Audio Maestro	100W	3,524
ATC SPA2-200PRO	200W	2,056
ATC SPA2-150	200W	2,699
Audio Note P3	90W	2,150
Audio Note Quest	9W	2,750
Audio Note Yubi	18W	3,850
Audio Note Conquest	18W	4,450
Audio Note Tomei	8W	8,500
Audio Note Neiro	30W	11,360
Audio Note Ankoru	60W	14,500
Audio Prism Debut Mk II	35W	2,495
Audio Prism Mana	100W	12,995
Audio Research VT50	50W	2,950
Audio Research 100.2	100W	3,395
Audio Research VT100 MkII	100W	4,950
Audio Research VT200	200W	8,790
Audio Synthesis Desire Decade	200W	2,495
Beam-Echo DL7-35	30W	3,525
Belcanto SET40	40W	3,450
Belcanto Orfeo 30S	45W	4,750
Belcanto SET80	80W	6,750
Border Patrol 300B SE	9W	3,995
Border Patrol 300B SE (WE)	10W	4,495
Boulder 102AE	100W	2,800
Boulder 102M	100W	3,100
Boulder 500AE	150W	4,995
Boulder 500M	150W	5,500
Boulder 2060	600W	25,000
Boulder 2050	999W	43,500
Bryston THX8B	100W	2,385
Canary Audio CA-304	20W	2,695
Canary Audio CA-301	42W	2,995
Canary Audio CA-303	24W	5,495
Cary CAD-572SE	20W	2,495
Cary CAD-300SE	12W	3,995
Cary 300SE Sig	12W	4,795
Cary CAD-805	50W	8,995
Chord SPM 1000B	200W	2,920
Chord SPM 1200B	250W	3,790
Chord SPM 1200C	350W	4,210
Chord SPM 1400B mono	350W	8,420
Chord SPM 5000	415W	14,570
Conrad-Johnson MF2250	130W	2,295
Conrad-Johnson MF-2500	250W	3,495
Conrad-Johnson Premier 11A	70W	3,500
Conrad-Johnson Premier 12	140W	6,900
Conrad-Johnson Premier 8XS	150W	17,000
Conrad-Johnson Premier 8A	275W	17,000
CAT J11	100W	18,000
CR Dev Artemis		4,995
Credo LPO 804		2,456
Credo PMP 155		2,676
Credo LPO 455		4,975
Credo LPO 155		6,983
DNM PA3	50W	2,500
DNM PA3S	23W	3,750
Dynavector HX1.2	130W	3,995
EAR 861	32W	3,599
EAR 509 Mk II	100W	3,999
EAR 519	100W	4,699
EAR 549	200W	6,499
Electrocompaniet AW120DMB	120W	2,695
Electrocompaniet AW250R	250W	3,995
Electrocompaniet AW180MB	180W	4,595
Exposure IV	80W	2,199
Exposure XVI	125W	4,000
Gamma Aeon	20W	4,999
Gamma Space Ref	70W	7,999
Gamma Aeon Ref	18W	49,999
Golden Tube Audio SE-100	100W	2,495
Graaf 5050	50W	2,100
Graaf GM20	50W	2,850
Graaf GM100	100W	4,250
Graaf GM200	200W	7,500
Jadis DA8	80W	2,990
Jadis DA7	100W	4,790
Jadis JA30	30W	5,180

Jadis SE300B	10W	7,980
Jadis JA80	60W	9,580
Jadis JA100	100W	10,298
Jadis JA200	160W	13,980
Jadis JA500	400W	19,990
Krell KAV250a	250W	3,145
Krell KAV500/2	100W	3,195
Krell KAV500i	200W	4,499
Krell FPB200	200W	5,998
Krell FPB250m	250W	8,994
Krell FPB300	300W	9,500
Krell FPB600	600W	12,900
Krell FPB350m	350W	15,994
Krell FPB650m	650W	23,800
Lexicon 225	250W	2,500
Lexicon 501	500W	5,000
Linn Klout	80W	2,400
Lumley M125	120W	3,750
Lumley M250	250W	7,500
Magnum Class A mono	180W	2,450
Magnum A200SE	275W	3,750
Mark Levinson 334	125W	5,495
Mark Levinson 335	250W	7,495
Mark Levinson 336	350W	8,995
Mark Levinson 33H	150W	19,395
Matisse Ref Monoblocks	180W	8,000
McIntosh MC150	150W	3,499
McIntosh MC300	300W	3,999
McIntosh MC500	500W	8,999
McIntosh MC1000	999W	14,999
Meracur Tentare	75W	2,245
Meracur Cantare	-W	8,995
Muse Model 160 Ser. II	160W	2,290
Muse Model 150	125W	2,690
Muse Model 175 Ser. II	175W	3,490
Muse Model 300 Ser. II	300W	3,990
Musical Fidelity F16	200W	2,500
Musical Fidelity F19	300W	4,000
Papworth M100	100W	2,645
Papworth M200	200W	3,825
Roksan ROK-M1.5	160W	2,250
Rowland Model 2	75W	4,999
Rowland Model 6	150W	10,999
Rowland Model 8T	250W	12,499
Rowland Model 9T	350W	27,999
Shearne Phase 1 Pwr Ref	100W	2,399
Siemal TA20	50W	2,350
Sonic Frontiers Power 1	55W	2,499
Sonic Frontiers Power 2	110W	4,999
Sonic Frontiers Power 3	220W	8,599
Sugden Masterclass Power	75W	2,995
Sumo Model Ten/M	240W	4,200
Sunfire Load Invariant	300W	2,280
Sunfire Signature	600W	2,600
T+A A3000	190W	2,850
TAG McLaren 125M	145W	2,399
Talk Electronics Tornado 5	200W	2,100
Trilogy 958T	45W	3,395
Trilogy 958	100W	3,395
Tube Tech Genesis Sig.	100W	4,700
Tube Tech Synergy DMA	150W	6,400
Unison Smart 845	24W	3,500
Unison Smart 300B	24W	4,250
van Den Hul Power amp	65W	2,500
XTC POW-1	200W	2,250
YBA 2 stereo		2,200
YBA 1 HC stereo		4,999

Audioquest Ruby x3	●	80.00
Audioquest Quartz x3	●	125.00
Audioquest Opal x3	●	200.00
Audioquest Emerald x3	●	260.00
Audioquest Lapis x3	●	399.00
Cable Talk Improved 2/CD	⊗	26.00
Cable Talk Improved 2	⊗	34.95
Cable Talk Improved 2/Tape	⊗	47.00
Cable Talk Monitor 2.1	⊗	50.00
Cable Talk Studio 2	⊗	65.00
Cable Talk Professional 2	⊗	85.00
Cable Talk Broadcast 2	⊗	100.00
Cable Talk Reference 2	⊗	150.00
Cable Talk Signature 2 Gold	⊗	300.00
Cambridge Atlantic	⊗	10.00
Cambridge Arctic	⊗	20.00
Cambridge Pacific	⊗	30.00
Cambridge Studio Reference	⊗	40.00
Cambridge Silver Spirit 40	⊗	70.00
Cambridge Silver Spirit 60	⊗	100.00
Cardas Audio 300B-Microtwin	⊗	115.00
Cardas Audio Quadlink-Five	⊗	200.00
Cardas Audio Cardas Cross	⊗	360.00
Cardas Audio Hexlink-Five C	⊗	530.00
Cardas Audio Hexlink Golden-5 C	⊗	600.00
Cardas Audio Golden Cross	⊗	700.00
ChordCo Chrysalis	⊗	40.00
ChordCo Cobra 2	⊗	55.00
ChordCo Siren	⊗	69.00
ChordCo Chorus	⊗	199.00
Connections UK Ultra	⊗	28.00
Connections UK Midas	⊗	39.00
Connections UK HD	⊗	46.00
DBF Acoustics Black Velvet	⊗	30.00
DBF Acoustics Black Velvet SE	⊗	40.00
DBF Acoustics Azure SE	⊗	75.00
DNM-Reson TCC75	●	35.00
DPA Slink	●	41.00
DPA White Slink	●	75.00
DPA Black Slink	●	220.00
Ecosse Ref CA1	⊗	65.00
Ecosse Ref CS1	⊗	75.00
Ecosse Ref MA2	⊗	155.00
Ecosse Ref MS2	⊗	165.00
Ecosse Ref US1	⊗	550.00
Expressive Tech IC-1	⊗	700.00
Gamma Wow Balance	⊗	799.00
Goertz M1 Interconnect	⊗	145.00
GT Audio Intercon	●	130.00
Harmonix HS-102	⊗	195.00
Harmonix HS-101	⊗	265.00
Henley HSP10	⊗	20.00
Henley HSP50	⊗	35.00
Henley HSP100	⊗	65.00
Henley HSP200	⊗	95.00
Henley HSP250	⊗	150.00
Heybrook Black Flash	●	39.00
Insert Audio Focus 1.2	⊗	21.50
Insert Audio IC100 Mk II	⊗	46.95
Insert Audio Image 5.1	⊗	84.95
Insert Audio Status 3.4	⊗	160.00
Ixos 104	⊗	20.00
Ixos 1003	⊗	30.00
Ixos Gamma 1002	⊗	39.95
Ixos 103	⊗	45.00
Ixos 102	⊗	60.00
Ixos 101	⊗	100.00
Ixos 100X03	⊗	150.00
Kimber PBJ	⊗	68.00
Kimber KC1	⊗	96.00
Kimber Hero	⊗	110.00
Kimber Silver Streak	⊗	180.00
Kimber KCAG	⊗	390.00
Kimber KCTG	⊗	720.00

Precious Metals Silver Signal 103	160.00
Precious Metals Silver Signal 104	190.00
Precious Metals Silver Signal 200	220.00
Precious Metals Silver Signal 202	290.00
Precious Metals Silver Signal 203	360.00
Precious Metals Silver Signal 204	430.00
Prowire Silver	60.00
PAD Elementa	145.00
QED Qnect 2	30.00
QED Qnect 4	60.00
Roksan ROK-Intercon	75.00
Shinpy Red Devil	80.00
Shinpy Red Star 2	120.00
Shinpy Black Star 2	240.00
Shinpy Pulsar 2	495.00
Shinpy Quasar 2	850.00
Siltech MC2-12	308.00
Siltech MC4-24S	400.00
Siltech FTM-35	730.00
Silver Sounds SS2	99.00
Silver Sounds SS1	199.00
Silver Tone Ex-Static	35.00
Silver Tone Sci-Fi	95.00
SME S2LB-4	46.18
SME S3LB-4	52.06
SME 900A	76.83
SME 9500A	102.57
SonicLink Red	25.00
SonicLink Silver pink	35.00
SonicLink Black	50.00
SonicLink Brown	70.00
SonicLink Violet	85.00
SonicLink Maroon	125.00
SonicLink Blue Nickel	150.00
SonicLink Vermilion	195.00
SonicLink Red earth	300.00
SonicLink Black earth	450.00
SonicLink Blue earth	695.00
SonicLink Black Rhodium	995.00
Straightwire Chorus	40.00
Supra DAC-X	60.00
Supra EFF-ISL	80.00
Supra EFF-XLR	90.00
Tara Prism 3	17.95
Tara Prism 5	21.95
Tara Prism 8	25.95
Tara Prism 11	37.50
Tara Prism 22	63.50
Tara Prism CD	76.25
Tara Prism 33-i	88.25
Tara Prism 55	115.00
Tara RSC-CD	138.00
Tara RSC-Prime	170.00
Tara RSC-Ref Gen. 2	229.00
Tara RSC-Master Gen. 2	464.00
Tara RSC-Decade	935.00
Tara The 2	1,170.00
Tara The One	2,230.00
Transparent Cable Musichord	48.00
Transparent Cable The Link	92.00
Transparent Cable Music Link	119.00
Trichord Pulswire 75	169.00
Vampire Wire CC	24.00
Vampire Wire CCC/II	58.00
Vampire Wire SC/II	98.00
Vampire Wire SC/IV	144.00
Vampire Wire Al/2	259.00
Vampire Wire SL	412.00
van Den Hul Storm	25.00
van Den Hul Source HB	50.00
van Den Hul D102 III	69.99
van Den Hul Thunderline HB	130.00
van Den Hul First	210.00
van Den Hul Second	240.00
van Den Hul MC Gold	400.00
van Den Hul MC Silver IT	1,240.00
van Den Hul MC Silver IT Bal	1,560.00
Wireworld Orbit	30.00
Wireworld Solstice II	40.00
XLO Type 150	50.00
XLO Type 0.1	180.00

CABLES

Digital Interconnects

KEY

- ☉ – Stranded construction.
- – Solid-core construction.

Prices of interconnects are for a one-metre terminated pair.

Apertura Model A	255.00
Art Yam Church 5000	275.00
Audioquest Digital/video 1	30.00
Audioquest Digital/video 2	60.00
Audioquest Optlink X	90.00
Audioquest Digital PRO	100.00
Audioquest Optlink Pro	150.00
Audioquest Optlink Z	180.00
Cable Talk Digital 2	78.00
Cardas Audio Lightning	190.00
ChordCo Codac	38.00
ChordCo Optichord	40.00
ChordCo Prodac	50.00
DNM-Reson DIG100	26.00
DPA Opti-link	20.00
DPA Digi-link	27.50
Ecosse Ref MD2	71.50
Harmonix HS-101DIG	240.00
Insert Audio Dataline 500	24.95
Insert Audio Optic 2.1	29.95
Insert Audio Dataline 700	39.95
Insert Audio Image 5.1	44.95
ixos 105	25.00
ixos 106	30.00
Kimber Opti-link	50.00
Kimber Illuminati DV-30	70.00
Kimber Illuminati D-60	325.00
Kimber Illuminati DX-50	350.00
Kimber Illuminati Orchid	750.00
LAT International DI-20-D	79.00
Monster Datalink 100	47.00
Monster Lightspeed 100	47.00
Moth Leyline Datalink	140.00
Nordost Moonglo	155.00
Precious Metals Silver Dig 35	20.00
Precious Metals Silver Dig 100	50.00
Precious Metals Silver Dig 200	110.00
Precious Metals Silver Dig 202	145.00
QED DigiFlex	20.00
QED Optiflex	25.00
Roksan ROK-Intercon	45.00
Shinpy Digital	265.00
Siltech HF-6	145.00
SonicLink Green	60.00
Supra ZAC	44.95
Supra EFF-ID	45.00
Supra DAC-XLR	45.00
Theta Digital AT&T	550.00
Transparent Cable PDL	199.00
Trichord Pulswire 75D	75.00
Vampire Wire DI/1	150.00
van Den Hul Source HB	30.00
van Den Hul Videolink	60.00
van Den Hul AES-EBU 110	65.00
van Den Hul First	125.00
van Den Hul Second	130.00

Speaker Cables

KEY

- ☉ – Stranded construction.
- – Solid-core construction.

Price per mono metre, unterminated.

Acoustic Energy AESC-C3	11.95
ALR/Jordan QMM	5.00
Apertura Silver	82.50
Art Yam Church M2000	470.00
Art Yam Church 5000	795.00
Audio Note AN-D	4.50
Audio Note AN-B	16.50
Audio Note AN-L	29.50
Audio Note AN-SP	150.00
Audio Note AN-SPx	450.00
Audioquest Type 2	3.50
Audioquest F-18	3.60
Audioquest Type 6+	9.00
Audioquest Indigo +	15.00
Audioquest Crystal +	25.00
Audioquest Forest +	75.00
Audioquest Argent +	125.00
Audioquest Clear 3	200.00
Cable Talk Theatre 2	1.50
Cable Talk The Flat One	2.00
Cable Talk Talk 3.1	2.25
Cable Talk Talk 4.1	4.25
Cable Talk Talk 3.1 Biwire	4.50
Cable Talk Concert 2.1	7.00
Cable Talk Talk 4.1 Biwire	8.50
Cable Talk Symphony 3	12.50
Cable Talk Concert 2.1 Biwire	14.00
Cardas Audio 300B-Microtwin SC	35.00
Cardas Audio Quadlink-Five SC	59.00

Cardas Audio Cross SC	99.00
Cardas Audio Hexlink-Five SC	109.00
Cardas Audio Hexlink Golden5 SC	175.00
Cardas Audio Golden Cross SC	789.00
ChordCo Carnival	3.00
ChordCo Myth	6.00
ChordCo Legend	15.00
ChordCo Odyssey	17.00
DNM-Reson LSC	6.95
DNM-Reson LSCB	13.95
Ecosse Ref FS2.16	1.75
Ecosse Ref CS2.2	2.50
Ecosse Ref CS2.3	3.75
Ecosse Ref CS2.15	5.75
Ecosse Ref MS2.2	15.00
Ecosse Ref MS2.3	20.00
Ecosse Ref MS2.15	30.00
Ecosse Ref US2	450.00
Gale XL 105	1.00
Gale XL189	1.00
Gale XL315	2.00
Gale XL160-2	2.50
Gale XL315-2	3.99
Gamma Wonder Line	99.00
Goertz M1	16.00
Goertz M2	32.00
Goertz Big Boy	64.00
GT Audio Speaker	50.00
Harmonix Harmonic-Strings	30.00
Harmonix HS-101T-1	56.00
Harmonix HS-101SC	88.00
ixos 607	2.00
ixos 6004	3.00
ixos 6003	3.00
ixos 605	3.00
Kimber 4PR	3.90
Kimber 4VS	9.00
Kimber 4TC	19.60
Kimber 8TC	32.70
Kimber 4AG	394.00
Kimber 8AG	656.00
LAT International SS 800	16.00
LAT International BiWIRE	23.00
LAT International SS 1000	36.00
Lieder Pad	133.00
Lieder Bel Canto	188.00
Lieder Spoor	253.00
Lieder Straat	463.00
Lieder Weg	663.00
Linn K20	4.00
Linn K400	10.00
Linn K600	15.00
Lumley Silver 12/2	35.00
Lumley Silver 14/4	40.00
Mission Duet	1.90
Mission Quartet bi-wire	3.90
Monster XP Clear	2.20
Monster XP Navajo	2.40
Monster Superflat Mini	2.75
Monster XP HP	3.70
Monster Original	4.40
Monster New Monster	5.50
Naim NAC A5	5.70
Nordost Octava	3.00
Nordost 4-Flat	12.00
Nordost Solar Wind Bi-wire	27.95
Nordost Blue Heaven Spkr	55.00
Nordost Red Dawn	110.00
Nordost SPM	325.00
Ortofon SPK100	3.00
Ortofon SPK200	5.00
Ortofon SPK300	8.00
Precious Metals Silver L'r 32	7.50
Precious Metals Silver L'r 102	10.00
Precious Metals Silver L'r 150	15.00
Precious Metals Silver L'r 204	20.00
Precious Metals Silver L'r 106	30.00
Precious Metals Silver L'r 108	40.00
Puresonic OFC 7892	1.20
Puresonic OFC 7844	1.65
Puresonic OFC 7845	1.95
Puresonic OFC 7891	2.85
Puresonic OFC 7816	3.75
Puresonic OFC 7832	3.75
Puresonic OFC 7812	3.75
Puresonic OFC 7825	6.95
Puresonic PSOCC 7801	9.50
Puresonic PSOCC 7802	18.00
Puresonic PSOCC 7803	27.00
QED Qudos Micro	1.25
QED Qudos micro 4 core	2.00
QED Qudos 4 core	4.00
QED Qudos Bi-Wire	4.50
QED Qudos Silver	4.95
QED Profile 4x4	9.00
QED Profile Silver 12	15.00
Rega REGA	2.00
Roksan ROK-Speaker	6.00
Shinpy Red Devil	30.00
Shinpy Red Star 2	39.00
Shinpy Black Star 2	62.00
Shinpy Pulsar 2	104.00
Shinpy Quasar 2	208.00
Siltech LS2-45	109.00
Siltech FT-12 Mkl	240.00
Siltech LS4-120	549.00
Silver Sounds 12 Gauge	15.00

HI-FI HELP

Let our experts help with your hi-fi problems. Send your query to 'Help' at the usual address.

Silver Sounds 10 Gauge	35.00
Silver Sounds 8 Gauge	75.00
Silver Tone Silver-Sonic	10.00
Silver Tone Silver-Sonic HC	15.00
Silver Tone Silver-Voice	55.00
Silver Tone Silver-Voice Ultra	85.00
SonicLink AST50	1.95
SonicLink AST60	2.50
SonicLink AST75	2.95
SonicLink AST200	5.95
SonicLink AST200x2	10.00
SonicLink S300	18.00
SonicLink S130x2	20.00
SonicLink S300x2	40.00
SonicLink S900	60.00
SonicLink S600x2	80.00
SonicLink Black Rhodium 4	1,000.00
Straightwire Quartet	8.00
Supra Classic 2.5	2.49
Supra Linc 2.5 Flex	3.49
Supra Classic 4.0	3.95
Supra Ply 2.0	4.95
Supra Linc 4.0 Flex	4.95
Supra Ply 3.4	6.95
Supra Quattro 4x4	8.95
Supra Classic 10	9.95
Tara Prism Extra	1.95
Tara Klara	2.95
Tara Prism Omni	3.95
Tara Prism 2+2	8.20
Tech + Link SPC 79	1.20
Transparent Cable Musichord	11.00
Transparent Cable The Wave	23.00
Transparent Cable Music Wave	25.00
Vampire Wire SC-384	11.00
Vampire Wire SC-554	15.00
Vampire Wire ST-I	30.00
Vampire Wire SC-1108	30.00
Vampire Wire ST-II	48.00
Vampire Wire ST-III	73.00
van Den Hul Skyline HB	3.50
van Den Hul Snowline	5.00
van Den Hul Skytrack HB	5.50
van Den Hul Gold Water	7.00
van Den Hul Clearwater	7.00
van Den Hul Snowtrack	10.00
van Den Hul CS122 HB	12.00
van Den Hul Cleartrack	13.00
van Den Hul D352 HB	20.00
van Den Hul Teatrac HB	22.00
van Den Hul SCS12	34.00
van Den Hul Magnum HB	38.00
van Den Hul The Wind HB	40.00
van Den Hul Revolution HB	76.00
van Den Hul Revelation HB	120.00
van Den Hul The Third	900.00
XLO Pro 625	4.00
XLO Pro 600	16.60

CARTRIDGES

KEY

- MM – Moving-magnet type.
- MC – Moving-coil type.

UP TO £100

Audio Note IO1	MM	99
Audio Technica AT-91	MM	15
Audio Technica AT-95E	MM	20
Audio Technica AT-110E	MM	28
Audio Technica AT450E	MM	70
Audio Technica AT440ML	MM	90
Benz-Micro MC20EII	MC	70

Apertura Model B	139.00
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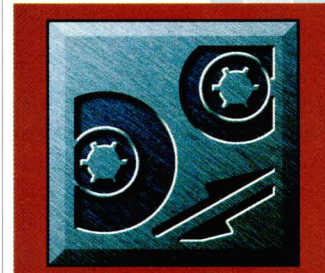
CARTRIDGES (CONTINUED)

Denon DL110	MC	70
Denon DL160	MC	90
Denon DL103	MC	100
Goldring Elan	MM	19
Goldring Elektra	MM	29
Goldring 1006	MM	59
Goldring 1012GX	MM	79
Goldring 1022GX	MM	99
Grado ZTE+1	MM	27
Grado ZCE+1	MM	37
Grado ZF3E+1	MM	48
Grado Prestige Black	MM	49
Grado Prestige Green	MM	59
Grado Prestige Blue	MM	69
Grado ZF1+	MM	83
Grado Prestige Red	MM	99
N'ham Tracer I	MM	98
Ortofon OM 3E	MM	16
Ortofon OM 5E	MM	20
Ortofon OM 10	MM	30
Ortofon 510	MM	40
Ortofon OM DJ	MM	50
Ortofon OM 20	MM	70
Ortofon 520	MM	70
Ortofon MC1 Turbo	MC	75
Ortofon Concorde DJ	MM	80
Ortofon OM 30	MM	90
Ortofon 530	MM	100
Pickering TE-15	MM	20
Pickering VE-15	MM	25
Pickering T-E	MM	25
Pickering V15-DJ	MM	28
Pickering TL-E	MM	35
Pickering TL-2E	MM	45
Pickering XV15-625E	MM	50
Pickering XV15-150-DJ	MM	50
Pickering TL-2-S	MM	55
Pickering XV15-757S	MM	60
Pickering XV15-625DJ	MM	60
Pickering XV15-1800S	MM	70
Pickering TL3S	MM	80
Pickering XEV-3001E	MM	95
Pickering XLZ-3500	MM	100
Pickering TL-4-S	MM	100
Rega Bias	MM	39
Rega RB78	MM	39
Rega Super Bias	MM	59
Rega Elys	MM	85
Shure M70BX	MM	21
Shure M92E	MM	22
Shure SC35C	MM	29
Shure M447X	MM	35
Shure M44GX	MM	35
Stanton 500AL II	MM	35
Stanton 500EL	MM	44
Stanton 680AL/X	MM	59
Stanton 680EL/X	MM	74
Sumiko Oyster	MM	30
Sumiko Black Pearl	MM	50
Sumiko Pearl	MM	70
Sumiko Blue Point	MC	100

OVER £100

Audio Note IO2	MM	139
Audio Note Soara	MC	795
Audio Note IO1V	MC	1,095
Audio Note IO1Ld	MC	4,500
Audio Technica AT-OC9	MC	330
Benz-Micro The Glider	MC	600
Benz-Micro Reference	MC	1,100
Benz-Micro Reference Ruby	MC	1,500
Benz-Micro Ruby Open Air	MC	1,600
Denon DL304	MC	200
Dynavector 10X4H	MC	189
Dynavector DV20XH	MC	299
Dynavector DV20XL	MC	299
Dynavector 17D2	MC	450
Dynavector XX-1L	MC	998
Dynavector XX-1	MC	998
Dynavector Te-Katora	MC	1,698
Goldring Eroica LX	MM	110
Goldring Eroica	MM	110
Goldring 1042	MM	120
Goldring Elite	MC	220
Goldring Excel VX	MC	525
Grado Prestige Silver	MM	119
Grado Prestige Gold	MM	149
Grado Signature Junior	MM	150
Grado Signature 8M2	MM	250
Grado Signature MCZ	MM	375
Grado Signature TLZ	MM	650
Grado Signature XTZ	MM	975
Grado Reference	MM	995
Koetsu Red T	MC	1,359
Koetsu Red K Sig	MC	1,899
Koetsu Urushi	MC	1,999
Koetsu Signature	MC	2,999
Koetsu Gold PR	MC	5,498
Linn K9	MM	125
Linn Klyde	MC	500
Linn Arkiv	MC	1,000
London Decca Maroon	MM	299
London Decca Gold	MM	319
London Decca Maroon Dp	MM	379

London Decca Gold Dp	MM	399
London Decca S Gold Dp	MM	439
London Decca Jubilee	MM	519
Lyra Lydian Beta	MC	999
Lyra Clavis Da Capo	MC	999
Lyra Parnassus DCt	MC	1,895
N'ham Tracer II	MM	310
N'ham Tracer III	MM	410
N'ham Tracer IV	MM	660
Ortofon MC15 Super II	MC	140
Ortofon 540	MM	140
Ortofon MC3 Turbo	MC	150
Ortofon MC25E	MC	200
Ortofon MC25FL	MC	250
Ortofon MC10 Supreme	MC	300
Ortofon MC20 Supreme	MC	450
Ortofon MC30 Supreme	MC	550
Ortofon MC2000II	MC	800
Ortofon MC Rohmann	MC	1,000
Ortofon MC3000 II	MC	1,200
Ortofon MC Jubilee	MC	1,250
Ortofon MC7500	MC	2,000
Pickering TL-3003	MM	145
Pickering XLZ-4500	MM	150
Pickering TL-4004	MM	175
Pickering XSV-5000U	MM	200
Pickering XLZ-7500	MM	200
Pickering TLZ-7500-S	MM	200
Reson Mica	MM	185
Reson Recca	MM	250
Reson Aciore	MC	299
Reson Etile	MC	455
Reson Lexe	MC	1,300
Roksan Corus Black	MM	150
Roksan Shiraz	MC	990
Shure V15XMR	MM	295
Stanton 890AL/X	MM	120
Sumiko BPS	MC	250
Transfiguration Spirit	MC	1,000
Transfiguration Temper	MC	1,950
van Den Hul MM-1	MM	250
van Den Hul MM-2	MM	300
van Den Hul DDT-II	MC	600
van Den Hul MC-10	MC	750
van Den Hul MC-One	MC	900
van Den Hul MC-ONE Super	MC	1,050
van Den Hul MC-Two	MC	1,200
van Den Hul The Frog Low o/p	MC	1,500
van Den Hul Grasshopper IISLA	MC	2,000
van Den Hul Grasshopper IIIGLN	MC	2,800
van Den Hul Grasshopper IIIGLA	MC	2,800
van Den Hul Grasshopper IIICMN	MC	2,800
van Den Hul Grasshopper IIICHN	MC	2,900
van Den Hul Grasshopper IINGLA	MC	3,000
Wilson Besenich Matrix	MC	786
Wilson Besenich Analog	MC	1,572
Wilson Besenich Carbon	MC	1,573



CASSETTE DECKS

KEY
 - Autoreverse - no need to remove and turn around the tape.
3-H - 3 heads, i.e. separate record and replay heads.

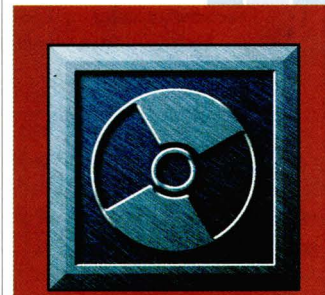
UP TO £200

Akai DXW1100		200
Akai DX1200		200
Ariston WX-510		60
Denon DRM-550		160
Denon DRW-585		200
Goodmans Delta 801		130
H/K DC520		200
JVC TD-X372BK		170
JVC TD-R472BK		200
Kenwood KX-W4080		160
Kenwood KX-3080		160
Kenwood KX-W6080		200
Kenwood KX-5080S		200
Marantz SD-455		170
Marantz SD-57		199
Onkyo K 185		200
Pioneer CT-S250		150
Pioneer CT-W205R		160
Pioneer CT-W505R		180
Pioneer CT-S450S		200

Pioneer CT-W606DR		200
Sony TC-KE200		120
Sony TC-WE525		160
Sony TC-KB820S		180
Sony TC-WE725		180
Teac W-416		100
Teac V-615		130
Teac RH-300		160
Teac W-790R		170
Teac V-105R	3-H	180
Teac RH-500		200
Technics RS-BX501		170
Technics RS-TR373		180
Technics RS-TR474		200
Technics RS-AZ6	3-H	200
Yamaha KX-393		130
Yamaha KX-W321		170
Yamaha KX-493		180

OVER £200

Denon DRM-650S		230
Denon DRM-740	3-H	270
Denon DRS-810	3-H	310
H/K TD420		250
JVC TD-V662BK	3-H	270
JVC TD-W718BK		300
NAD 613		230
NAD 614		270
NAD 616		300
Onkyo TA 6210		230
Onkyo TARW 211		270
Onkyo TARW 311		320
Onkyo TA 6310		330
Onkyo KR 609		350
Onkyo KW 606		370
Onkyo TARW 411		370
Onkyo K 611	3-H	460
Pioneer CT-S550S	3-H	250
Pioneer CT-W806DR	3-H	300
Pioneer CT-S550S Precision	3-H	340
Pioneer CT-S830S	3-H	500
Pioneer CT-95	3-H	1,000
Rotel RC960BX		250
Sony TC-WE825S		230
Sony TC-KA6ES	3-H	550
T+A CC1200R	3-H	1,180
Teac W-860R	3-H	230
Teac W-6000R		450
Teac V-6030S	3-H	550
Teac V-8030S	3-H	650
Technics RS-AZ7	3-H	270
Technics RS-TR575		280
Yamaha KX-580SE		250
Yamaha KX-W592		280



CD PLAYERS

KEY
 - Multiplayer: disc can be loaded with more than one disc.
 - Electrical (coaxial) digital output.
Many players also include an optical (Toslink) output.

UP TO £250

Akai CD1100		200
Akai CDM1200		230
AMC CD9		130
AMC CDBA		150
Ariston CDX700		70
Ariston CDC610		90
Ariston CDX710		100
Cambridge CD4		150
Cambridge CD45E		200
Cambridge CD6		250
Denon DCD-435		130
Denon DCD-635		180
Denon DCD-735		230
H/K HD720		200
H/K FL8350		200
JVC XL-V120BK		110
JVC XL-V130BK		120
JVC XL-V230BK		140
JVC XL-F116BK		180
JVC XL-F216BK		200
JVC XL-Z574BK		250

Kenwood DP-1080		110
Kenwood DP-2080		130
Kenwood DP-R3090		140
Kenwood DP-R4090		170
Kenwood DP-3080		160
Kenwood DP-R6090		200
Kenwood DP-4090		250
Marantz CD-38		130
Marantz CC-38		200
Marantz CD-48		200
Marantz CD-57		230
Marantz CD-67II		250
NAD 522		170
NAD 510		200
NAD 523		250
NAD 512		250
Philips CD711		120
Philips CD721		130
Philips CD751		150
Philips CD751		150
Philips CDC751		180
Pioneer PD-106		130
Pioneer PD-206		150
Pioneer PD-F606		200
Pioneer PD-M603		200
Pioneer PD-S505		200
Pioneer PD-F706		250
Rotel RCD-930AX		180
Sansui CD220		120
Sherwood CD-4030R		180
Sherwood CDC680		180
Sherwood CDC6050R		180
Sony CDP-EX220		110
Sony CDP-M205		110
Sony CDP-M305		130
Sony CDP-EX310		140
Sony CDP-EX520		150
Sony CDP-CE105		150
Sony CDP-XB720E		200
Sony CDP-CE315		

Sony CDP-CX260	500
Synergy CDJ2010	300
Yamaha CDX-993	400

£501 TO £1000

Acurus ACD11	899
Alchemist Nexus	600
Arcam Alpha 8	520
Arcam Alpha 8SE	600
Arcam Alpha 9	800
Audio Analogue Paganini	750
Audiomeca Obsession	999
AVI S2000MC 24 Ref	999
Creek CD42	599
Cyrus dAD3	598
Cyrus dAD3Q	898
DPA Renaissance int CD	950
Helios Model 3	650
Helios Model 2	950
Linn Mmmk	875
Magnum CD2020	595
Marantz CD-17	800
Micromega Premium 10	650
Micromega Premium 20	850
Monrio Asty PL	675
Monrio Privilège	995
Musical Fidelity X-RAY	799
Myryad T-20	600
Myryad MC100	700
Orelle CD100eA	649
Orelle CD-100eSA	999
Pioneer PDS-06	550
Primare D20	700
Quad 77 Bus	700
Quad 77 Mains	900
Roksan Caspian	895
Rotel RCD991	750
Sony CDP-XA50ES	1,000
Sugden Audition	649
Talk Electronics Thunder 3	1,000
Teac VRDS-8	600
Teac VRDS-9	700
Teac VRDS-25X	1,000
Technics SL-P2000	1,000
Thule Audio Spirit CD100	599
Thule Audio Spirit CD150B	699
Trichord Genesis	569
Trichord Digital Jukebox 25	619
Trichord Digital Jukebox 50	669
Trichord Digital J-box 100	719
Trichord Revelation	819
YBA Special	625

OVER £1000

Acoustic Precision Eikos	1,850
Alchemist Kraken CD	1,249
Alchemist Forseti Int.	1,249
Alchemist Forseti	1,995
Audio Research CD2	3,399
Audiomeca Keops	1,500
Audiomeca Talisman	2,150
Audiomeca Talisman SE	2,300
Cary CD-301	2,495
Classe CDP-3	1,395
Conrad-Johnson DF-2	1,695
Conrad-Johnson DV-2b	2,495
Copland CDA-266	1,199
Copland CDA277	1,649
Copland CDA288	1,999
Cymbal CDP12	1,299
Helios Model 1	1,250
Helios Stargate	2,250
Jadis Orchestra	1,345
Krell KAV250cd	2,490
Krell KAV300cd	3,599
Krell KPS25s+	19,995
Marantz CD-17K1S	1,100
Mark Levinson 39	4,995
McIntosh MCD7009	3,699
Meracur Tanto	1,395
Meracur Imago Player	4,495
Meridian 506	1,100
Meridian 508	1,995
Micromega Solo	2,500
Myryad MCD500	1,300
Naim CD3-5	1,050
Naim CDX	2,200
Oracle CD Player	9,499
Pink Triangle Numeral	1,049
Pink Triangle Litaural	2,200
Primare D502	1,500
Proceed CDP	3,395
Quad 99	1,300
Resolution CD50	2,995
Roksan Attezza-DP3	1,495
Shearman Phase 7	1,499
Shenwood CD1	1,100
Sonic Frontiers Anthem CD1	1,699
Sonic Frontiers SFCD-1	3,799
T+A CD1210R	1,185
T+A CD1220R	1,540
TAG McLaren CD20R	1,249
Theta Digital Miles SE	2,390
XTC CDP-1	1,250
YBA Integre	1,250

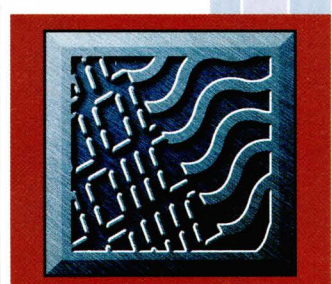
YBA CD3	2,250
YBA CD2	3,350
YBA CD1	4,500



CD TRANSPORTS

KEY
D - Electrical (coaxial) digital output.
M Many players also include an optical (Toslink) output.

Alchemist Forseti Drive	1,100
Altis CDT III	4,995
Arcam Delta 250	800
Audio Synthesis Transcend Decade	3,295
Audiomeca Damnation	999
Audiomeca Damnation SE	1,100
Audiomeca Talisman	1,850
Audiomeca Talisman SE	1,999
Audiomeca Talisman DOB	2,250
Conrad-Johnson DR-1	1,795
DPA Enlightenment Drv	775
Jadis JD3	1,999
Jadis JDI	9,190
Linn Kank	1,850
Mark Levinson 37	3,995
Mark Levinson 31.5	9,295
Meracur Imago	3,995
Micromega Drive 3	1,000
Micromega Data	2,000
Monrio Bitmatch	950
Muse Model 5	1,800
Muse Model 8	3,500
Oracle CD Drive	7,399
Pink Triangle Cardinal II	909
Resolution VT960	3,500
Rogers SC-8t	2,699
Roksan Attezza-DP3	1,295
Sonic Frontiers Transport 3	5,999
T+A CM1200R	875
TAG McLaren CDT20R	1,499
Teac VRDS-T1	550
Teac P-30	2,500
Theta Digital Pearl	1,349
Theta Digital Jade	2,650
Thorens TCD-2000	999
Trichord Digital Turntable	719
Tube Tech Fulcrum	1,000
Wadia 8	3,195
Wadia 20	4,370

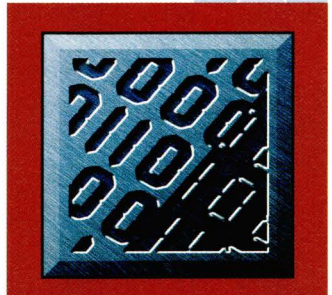


DIGITAL TO ANALOGUE CONVERTERS (DACs)

KEY
4 - Number of digital inputs

Alchemist TS-D-1	300
Alchemist Forseti DAC	1,100
Altis Reference	4,995
Arcam Black Box 50	350
Arcam Black Box 500	500
Audio Note DAC1	675
Audio Note DAC2	1,099
Audio Note DAC3	1,750
Audio Research DAC5	2,335
Audio Research DAC3 MkII	3,999
Audio Synthesis DAX Decade	2,795
Audiomeca Elixir	799
Audiomeca Ambrosia	1,850
Boulder 2020	21,000
Chord DSC900	1,850
Chord DSC100	2,765
Chord DSC1500	4,800
Conrad-Johnson D/A-3	1,195

Conrad-Johnson D/A-2b	1,990
dCS Elgar	8,500
DPA Little Bit 3	325
DPA Renaissance DAC	595
DPA Enlightenment DAC	850
DPA SX128	2,000
DPA SX256	4,000
DPA SX512	8,000
Harmonix Reimyo DAP-77	2,790
Jadis JS2	2,499
Jadis JS1	6,990
LFD DAC2	1,950
LFD DAC3	3,000
Linn Numerik	1,500
Mark Levinson 360	4,395
Mark Levinson 360S	6,895
Mark Levinson 30.5	15,950
Meracur Auriga	1,295
Meracur Flagrare	2,495
Meridian 566	1,095
Micromega DAC 2	750
Micromega Dialog	1,750
Monrio 18B2	795
Muse Model 2	2,190
Muse Model 2 Plus	2,500
Muse Model 2/96	3,000
Musical Fidelity X-ACT	200
Musical Fidelity X-24K	300
Musical Fidelity X-DAC	300
Onkyo DX 7310	330
Resolution D92	1,500
Rogers SC-8m	1,899
Roksan Attezza-DA2	595
Sonic Frontiers Processor 3	5,999
Sumo Theorem II	945
Sumo Theorem IIB	1,155
TAG McLaren DAC20	1,249
Teac D-T1	500
Theta Digital Chroma 396 Std	799
Theta Digital Pro Geny	1,099
Theta Digital Pro Prime IIa	1,699
Theta Digital Pro Basic IIIa	2,990
Theta Digital Casablanca LS	6,158
Thorens TDA-2000	700
Trichord Pulsar Ser One	1,395
Tube Tech Fulcrum	1,400
Wadia 12	1,530
Wadia 15	3,790
Wadia 64.4	4,750
Wadia 16	7,395
Wadia 7	9,995
Wadia 9	12,790
Woodside DVAC-18	1,499



DIGITAL RECORDERS

KEY
MD - MiniDisc
DAT - Digital Audio Tape
portable

Denon DMD-1000	300
Kenwood DM-7090	500
Kenwood DM-9090	550
Marantz DR700	600
Onkyo MD-121	450
Onkyo MD 122	700
Philips CDR880	499
Pioneer PDR-555RW	480
Pioneer PDR-04	700
Pioneer D-05	900
Pioneer PDR-05	1,000
Pioneer D-C88	2,000
Sharp MD-R3H	300
Sharp MD-R2	300
Sharp MD-R1E	300
Sharp MD-MS200H	350
Sharp MDXV300H	1,000
Sony MZ-R50	1
Sony MDS-539	1
Sony MZ-R35	1
Sony MZ-R5T	1
Sony MDS-IE520	230
Sony MDS-IB920	300
Sony MDS-IA20ES	500
Sony MDS-IA50ES	1,300
Teac MDH300	300
Teac MD-H500i	350
Teac MD-8	600
Teac MD-5	600

Teac MD-10	MD	900
Yamaha MDX-9	MD	300



HEADPHONES

KEY
D - Dynamic type, compatible with virtually all normal headphone outputs.
E - Electrostatic type; generally includes a separate power supply.
OB - Open-back construction.
CB - Closed-back construction.

UP TO £40

AKG Rox	D	30
Aural Envelope DX200	D	20
Aural Envelope DX220	D	30
Beyer DT111	D	15
Beyer DT211	D	31
Beyer DT211 TV	D	35
Hama SL273	D	20
Hama SL275	D	25
JVC HA-CD88	D	18
JVC HA-CD525	D	20
JVC HA-F65	D	20
JVC HA-D626	D	25
Kenwood KPM-310	D	18
Kenwood KPM-410	D	25
KLH KHP201TW	D	21
KLH KHP-300V	D	25
KLH KHP-420V	D	33
Maxell HP-2000	D	20
Pioneer SE-A40	D	20
Pioneer SE-A20V	D	23
Pioneer SE-M250	D	25
Pioneer SE-M350	D	30
Sennheiser HD56	D	18
Sennheiser HD433	D	20
Sennheiser HD400	D	25
Sennheiser HD470	D	35
Sennheiser HD60TV	D	40
Sony MDR-W20G	D	18
Sony MDR-V50	D	18
Sony MDR-ED238ML	D	20
Sony MDR-A34L	D	20
Sony MDR-E848LP/MP	D	20
Sony MDR-V400	D	40
Sony MDR-D11	D	20
Stanton ST Pro	D	25
Technics RP-F200	D	30
Technics RP-HT300	D	40
Vivanco SR200	D	20
Vivanco SR150	D	20
Vivanco SR250	D	25
Vivanco IR5700	D	30
Vivanco IR5800	D	40

OVER £41

AKG K301	D	80
AKG K240DF	D	100
AKG K222R	D	100
AKG K401	D	120
AKG K501	D	150
AKG K333R	D	150
AKG K444R	D	180
AKG K290S	D	250
AKG K1000	D	700
Audio Technica ATH910PRO	D	80
Audio Technica ATHD40FS	D	120
Audio Technica ATH-M40	D	120
Audio Technica ATH911	D	120
Beyer DT311	D	50
Beyer DT411	D	63
Beyer DT431	D	81
Beyer DT511	D	106
Beyer DT801	D	125
Beyer DT831	D	140
Beyer DT811	D	145
Beyer DT100	D	160
Beyer DT901	D	160
Beyer DT911	D	170
Denon AH-D210	D	45
Denon AH-D350	D	65
Denon AH-D550	D	80
Denon AH-D650	D	95
Denon AH-D750	D	130
Denon AH-D950	D	150

HEADPHONES (CONTINUED)

Grado SR40	D	45
Grado SR60	D	79
Grado SR80	D	100
Grado SR125	D	150
Grado SR225	D	200
Grado SR325	D	300
Grado RS2	D	495
Grado RS1	D	695
Hama SL276	D	50
Hama IR Cordless	D	60
Jecklin Float Model 1	D	79
Jecklin Float Model 2	D	99
Jecklin float ELS	E	399
JVC HA-D727	D	43
JVC HA-W60	D	49
JVC HA-D910	D	65
JVC HA-W200RF	D	75
JVC HA-D1000	D	250
JVC HA-F25	D	699
Koss R/100	D	100
Philips SBC 3396	D	70
Philips SBC H 9000	D	90
Pioneer SE-M550	D	50
Pioneer SE-M750	D	60
Precide Ergo Model 1	D	120
Precide Ergo Model 2	D	140
Sennheiser HD490	D	50
Sennheiser IS 380	D	55
Sennheiser HD495	D	60
Sennheiser HD500	D	70
Sennheiser RS400	D	80
Sennheiser HD570	D	80
Sennheiser HD25 SP	D	90
Sennheiser HD345 Ref	D	100
Sennheiser IS450	D	110
Sennheiser HD265 Linear	D	125
Sennheiser HDC 451-1	D	130
Sennheiser HD250II	D	150
Sennheiser HD565 Oval'n	D	150
Sennheiser HD25-13	D	160
Sennheiser Lucas	D	160
Sennheiser HD25	D	160
Sennheiser HD 580 P'cision	D	200
Sennheiser HD600	D	250
Sennheiser Lucas/HD580	D	260
Sennheiser IS850	D	859
Sennheiser HE60/HEV70	E	998
Sennheiser Orpheus	E	9,652
Sony MDR-605LP	D	50
Sony MDR-ED268LP	D	50
Sony MDR-E888LP	D	55
Sony MDR-IF130K	D	60
Sony MDR-V600	D	70
Sony MDR-F1	D	100
Sony MDR-NC5	D	100
Sony MDR-IF420RK	D	100
Sony MDR-D77	D	130
Sony MDR-IF520RK	D	150
Sony MDR-CD1700	D	200
Stanton DJ Pro 101/HB	D	65
Stanton DJ Pro 1000	D	95
Stanton DJ Pro 1001	D	150
Stax SR-0001	E	280
Stax SR-Lambda Nova C	E	370
Stax Lambda Nova Basic	E	449
Stax SR-Lambda Nova S	E	450
Technics RP-F800	D	50
Technics RP-HT600	D	60
Technics RP-DJ1200	D	130
Vivanco SR650	D	45
Vivanco FMH 3000	D	50
Vivanco SR750	D	50
Vivanco SR850	D	50
Vivanco FM7980	D	60
Vivanco SR909	D	60
Vivanco SR1000IFL	D	90
Vivanco FM8180	D	99
Vivanco SR2000IFL	D	99

Alphason GMH1P	1	150
Alphason VR17/17	3	190
Alphason GR17/17-AS	4	275
Audiophile Base 01	1	79
Audiophile S4T120	4	280
Audiophile S4T120P	4	560
BCD Model 1006/8	1	795
BCD Model 1000	3	1,250
Custom Design Aspect 650	4	240
Custom Design e'Lite E4	4	250
Custom Design Aspect 500AV	3	270
Custom Design Aspect 850	5	270
Custom Design e'Lite AV	6	350
Deadrock 701	1	60
Deadrock 802	2	90
Deadrock 705	3	130
Deadrock 705	5	230
Deadrock 704	4	250
Elemental Isotube X1	1	169
Elemental Isotube BS	1	199
Elemental Isotube TS	1	209
Elemental Isotube IS	1	209
Elemental Reference B1	1	329
Elemental Isotube X2	2	379
Elemental Isotube X3	3	489
Elemental Reference BS	1	499
Elemental Reference X1	1	499
Elemental Reference TS	1	549
Elemental Reference IS	1	549
Elemental Isotube X4	2	599
Elemental Reference X2	4	799
Elemental Isotube X4/Ref	4	1,199
Elemental Reference X3	3	1,199
Elemental Isotube X4Rse	4	1,349
Elemental Reference X4	4	1,599
Fi-Rax R4	6	399
Finite Elemente A03 pagode	4	479
Finite Elemente E03 pagode	4	649
Finite Elemente HDO3	4	1,995
Frameworks H175	1	139
Frameworks FS1	1	150
Frameworks H500	3	265
Frameworks FT2	2	285
Frameworks FT3	3	350
Frameworks H700	3	355
Frameworks H900	3	389
Impulse Iso-plate	1	190
JPW 3 Tier	3	80
JPW 5 Tier	5	100
Kudos Audio Corinthian Linn K3000	5	600
Mana Sound Frame	85	85
Mana Mini Table	725	725
Mana Power supply table	150	150
Mana Reference flat top	150	150
Mana Sound Shelf	175	175
Mana Sound Stage	200	200
Mana Sound Table	235	235
Mana Ref Shelf	325	325
Mana Reference Table	350	350
Mana 2 Tier Stand	375	375
Mana 3 Tier Stand	450	450
Mana 4 Tier Stand	500	500
Mana 5 Tier Stand	600	600
Mana 6 Tier Stand	700	700
Mana 7 Tier Stand	800	800
Mana 8 Tier Stand	900	900
Mission Hark	5	298
Optimum G2	2	69
Optimum G2/Pedestal	2	99
Optimum G4/Pedestal	2	150
Optimum OPT 3406	3	149
Optimum C5/Pedestal	6	150
Optimum OPT 4906	4	199
Optimum OPT 6606	5	249
Optimum OPT 340	3	249
Optimum OPT 490	4	299
Optimum OPT 440	4	299
Optimum OPT 10206	6	299
Optimum AV 300	3	329
Optimum OPT 700	5	349
Optimum OPT 610	5	349
Optimum OPT 660	4	349
Optimum OPT 1020	6	399
Optimum OPT 1190	6	450
Projekt A3	3	145
Projekt A4	4	190
Projekt A5	5	235
Projekt B3	5	255
Projekt A6	6	280
Projekt B3i	6	300
Projekt B4	6	340
Projekt B Multi	8	345
Projekt B3ii	7	345
Projekt C3	9	375
Projekt D3	12	420
Projekt C3i	8	420
Projekt B5	10	425
Projekt C3iii	11	465
Projekt C3ii	10	465
Projekt D3i	12	500
Projekt C4	12	500
Projekt C3iv	10	510
Projekt D3ii	14	545
Projekt C Multi	9	555
Projekt D4	16	560
Quadraspire Q4S mini shelf	1	65

Quadraspire Q4S shelf	1	65
Quadraspire QKS Cabinet shelf	1	80
Quadraspire QAV shelf	1	130
Quadraspire Q4M mini table	4	250
Quadraspire Q4 table	4	250
Quadraspire Q4SP Table	4	320
Quadraspire QAV table	3	350
Quadraspire QAVSP Table	3	400
Quadraspire QK Cabinet	4	450
Reson DOMOPS	1	195
Reson DOMOWS	1	195
Sound Org 6022	1	65
Sound Org 2021	2	78
Sound Org 2030	3	100
Sound Org Z060	4	120
Sound Org Z038	5	135
Sound Org Z540	4	140
Sound Org Z545	4	150
Sound Org Z560	5	160
Sound Org Z530	3	170
Soundstyle X300	3	180
Soundstyle X305	3	210
Soundstyle X053	4	210
Soundstyle X050	4	210
Soundstyle X6300	3	215
Soundstyle X100	4	230
Soundstyle X6110	4	230
Soundstyle X058	5	240
Soundstyle X310	3	250
Soundstyle X105	5	250
Soundstyle X6053	4	255
Soundstyle X6100	4	265
Soundstyle X6310	3	275
Soundstyle X6058	5	290
Soundstyle X6105	5	300
Soundstyle Finewoods W105	5	326
Stands Unique Isolation Platform	1	52
Stands Unique Sound Support	4	249
Stands Unique Sound Tower	5	289
Stands Unique Compact Sound Supp	4	315
Stands Unique Sound Support 10	4	315
Stands Unique Sound Twr Cabinet	5	369
Stands Unique Ref Wall Support	1	550
Stands Unique Ultimate Tower	10	689
Stands Unique Ref Floor Support	6	799
Target B5	5	175
Townshend Seismic Sink 1-CD	1	110
Townshend Seismic Sink 1-3D	1	400
Townshend S/Sink Stand 1-4	4	999
Townshend Seismic Sink Stand	4	1,245
Vibraplane Passive	1	1,895
Vibraplane Active	1	3,600
Wilson Benesch Standard Shelf	1	130
Wilson Benesch Mono Block	1	265
Wilson Benesch Kevlar Shelf	1	270
Wilson Benesch Asside Basic	4	590
Wilson Benesch Asside	4	720
Wilson Benesch Triptych	1	990

Atacama SE1000S	80
AVI Tower P6144BP	35
BCD Model 1010	60
Credo STD 001	284
Custom Design Tri 100	50
Custom Design R/S300	60
Custom Design M3	55
Custom Design M2	55
Custom Design M1	55
Custom Design Tri 300	55
Custom Design SC5 24	60
Custom Design X24	109
Deadrock 903	60
Deadrock 902	47
Deadrock 901	39
Elemental Reference SB1	8
Elemental Isotube S2	49
Elemental Isotube S2se	49
Elemental Isotube SC2	49
Elemental Isotube SC2se	49
Elemental Reference S2	52
Elemental Reference SC2	52
Harbeth HL-Stands	21
Heybrook Stand-ULT	2
Heybrook Stand-S6	63
Heybrook Stand-S4	48
JPW MS2	45
JPW MS3	61
JPW MS1	46
JPW HS1	58
JPW HS2	45
Kudos Audio Arrow	60
Kudos Audio S-50	60
Kudos Audio S-100	63
Mana Sound Base	175
Opera WS1/E	60
Opera S1	295
Opera S2	60
Pioneer CP-7	50
Pioneer CP-8	80
Projekt Signature	55
Revolver RS1	50
Royd	55
SD Acoustics SD Alexandra	50
Silverado Silverado 1 Stand	60
Sonus Faber Ironwood	475
Sonus Faber Stonewood	497
Sound Org 2037	55
Sound Org 2027	55
Sound Org 2026	55
Sound Org Z518	45
Soundstyle X6118	42
Stands Unique Speaker support	59
Stands Unique Tuned Spkr Support	59
Stands Unique Tuned Carbon Fibre	59
Stands Unique Vivas CF Spkr Supp	60
Target TR60	60
Target R1	53



EQUIPMENT SUPPORTS Hi-Fi Tables

KEY
4 - Number of shelves


Alphason SM17	1	49
Alphason VSM17	1	85
Alphason GSM17	1	85
Alphason GMV1P	1	110
Alphason R17/17	3	120



EQUIPMENT SUPPORTS Speaker Stands

KEY
60 - Height of stand in cm

Alphason NCI	60	47
Alphason Akros I	60	49
Alphason RS1	120	49
Alphason NCI	60	84
Alphason HDS-40/M	60	85
Alphason Titan S	60	125
Apollo AZ6	66	80
Atacama BD21	56	55
Atacama BD17	55	55
Atacama BD25	60	60
Atacama SE16	65	65
Atacama SE12	65	65
Atacama SX500	67	67
Atacama F2	70	70
Atacama F1	70	70
Atacama SX600	70	70
Atacama SL200	70	70
Atacama SE24	70	70
Atacama SE20	61	70
Atacama SX700	70	70
Atacama SL300	73	73
Atacama TP600	75	75
Atacama TP500	75	75
Atacama SE615	75	75
Atacama SE515	75	75
Atacama SE415	75	75
Atacama SL400	76	76



LOUDSPEAKERS

KEY
 ≡ - Floorstander; larger models requiring no separate stand.
 ≡ - Stand mount; smaller models designed to be raised above the floor.
 ≡ - Wall mount; designed to be sited on or near the wall.
 □ - Box type, including infinite baffle, reflex and transmission line types.
 ≡ - Horn type; mostly large and very efficient.
 □ - Panel type, including electrostatic and planar magnetic types.

UP TO £130

Allison Micro Monitors	95
Allison Mini References	120
Ariston MSX 05	30
Anston MSX 05	50
Celestion 12i	119
Denon SC-M2	80
Denon SC-E3135E	130
Gale Mini Monitors	70
Gale Gold Monitors	90
Gale 2i	130

Genexa GX300	80
Genexa GX330	80
GLL Arena	90
GLL Imagio IC208	100
Goodmans Active 75	65
Heybrook Prima 2	129
Interaudio XL1000	130
Jamo Studio-80	70
Jamo D-110	100
Jamo SAT-170	110
Jamo Studio-110	110
Jamo Artina	120
Jamo D-115	120
Jamo 28	125
Jamo Comet 145	130
JBL CM40	90
JBL MX300	90
JBL Control 1X	100
JBL CM42	130
JPW Mini Monitor	60
JPW ML110	70
JPW Gold Monitor	80
JPW ML210	80
JPW ML310	90
JPW ML410	100
JPW ML510	130
JVC SX-5C1VBK	60
JVC SP-V50	100
JVC SP-X220TBK	100
JVC SP-X550BK	130
KEF Coda 7	129
Kenwood LS-90UK	130
Mission 700	130
Mordaunt-Short MS812	100
NAD 801	100
Paradigm Micro v2	100
Paradigm Atom v2	120
Pioneer CS-3030	120
Polk AB410	100
Realistic Minimus 26	56
Realistic Minimus Pro-77	100
Revolver Beretta	100
R Allen Minette 2	129
Solid HCM2	130
Sony SS-86E	100
Tangent Monitor 3	60
Tangent Monitor 5	80
Tannoy Mercury M1	120
TDL Nucleus 1	75
TDL Nucleus 2	130
Teac LS-X8 Mk II	80
Technics SB-CS55	80
Technics SB-CS65	100
Technics SB-CS75	100
W'dale Valdis 100	80
W'dale Diamond 7.1	100
W'dale Valdis 200	110
W'dale Modus Music	110

£131 TO £200

Acoustic Energy Aegis One	150
Acoustic Energy AE100i	200
Allison Model 4A	170
B&W DM302	150
B&W CWM5	170
B&W DM601	199
Bose 201 IV	200
Boston CR6	149
Boston 325	149
Boston Micro 80 Sat	169
Boston Runabout	169
Boston 335	179
Boston 351	189
Boston CR7	199
Boston Runabout II	200
Celestion 15i	199
Cerwin-Vega CT-165	200
Etax Liberty 3+	149
Genexa GX650	140
Genexa Pro	160
GLL Imagio IC218	140
GLL Imagio IC318	200
Heybrook Heylette B	199
Heybrook HB1	199



Townshend Seismic Sink stand.

Interaudio XL2000	200
Jamo Comet 165	150
Jamo 58	150
Jamo 525	150
Jamo 560	150
Jamo 660	170
Jamo Studio 180	180
Jamo D165	200
Jamo 68	200
Jamo 892	200
JBL CM52	150
JBL MX1000	170
JBL LX20	200
JBL MX1500	200
JPW ML610	170
JPW SS551	200
KEF Coda 8	189
KEF Model 60S	199
KEF Q15	200
Kenwood LS-200G	200
KLH Model 21	155
KLH Model 11	155
KLH Model 31	185
Magnat Vector 22	179
Mission 701	160
Mission 771	170
Mission 702	200
M-A Monitor 1	200
Mordaunt-Short MS814	150
Paradigm Mini Monitor	200
Pioneer CS-5030	170
Polk M2	180
Polk RT3	200
Polk AB610	200
Rega Kyte	198
Revolver Colt	139
Revolver The 230	169
Revolver Purdey MkII	199
R Allen Minette 3	159
R Allen Dim'n 5/1 Compact	179
R Allen RA6	199
Rogers GS1	179
Royd A7X	155
Sequence 200	199
Solid Monitor	200
Sony SS-126EB	150
Sony SS-176E	200
Tangent Monitor 9	150
Tangent Monitor 11	180
Tannoy Mercury M2	140
Tannoy Revolution R1	200
TDL Nucleus 3	200
Technics SB-CS95	150
Technics SB-M20	200
TLC Maestro 70S	159
W'dale Valdis 300	159
W'dale Diamond 7.3	150
W'dale Modus Music Two	200
W'dale Diamond 7.2 Ann'y	200
W'dale Valdis 400	200

£201 TO £300

Acoustic Energy AE200	250
Arcadyis Baby 1	299
Audio Gem Opal	230
B&W CWM6i	280
B&W DM602	300
Bose 151	220
Bose 301 IV	300
Boston 361	219
Boston CR8	239
Boston 381	259
Boston CR9	279
Boston Voyager	299
Castle Isis	250
Celestion C1	299
Celestion 25i	299
Cerwin-Vega VS-8	250
Cerwin-Vega CT-330	300
Chario Syntar 100	249
Chario Ref 100	299
Chario Hyper 1000	300
Dali 102B	260
Dali 150	300
Etax Linear Response	249
GLL Imagio IC238TL	250
Heybrook Optima	259
Heybrook Heylios	269
Interaudio XL3000	230
Interaudio XL4000	260
Jamo Comet 175	230
Jamo Classic 4	250
Jamo Art	300
Jamo D265	300
JBL CM62	250
JM Lab Tantal 507	295
JPW ML710	230
JPW ML810	260
JVC SX-SW10	300
KEF Coda 9	299
KEF Model 70S	299
KLH 83A	205
KLH 183A	265
KLH Soundbites System	276
KLH Model 81	280
KLH Model 41	290

Linn Kan	295
Mission 772	230
Mission 750	248
Mission 703	300
M-A Monitor 2	250
M-A Silver 3	300
Mordaunt-Short MS815	250
Mordaunt-Short MS816	300
Mus Tec Kestrel SE	300
NAD 802	280
Paradigm Monitor 5	250
Paradigm Monitor 7	300
Pioneer CS-7030	230
Pioneer CS-9030	280
Pioneer S-LC1	300
Polk AB50S	220
Polk M3 II	220
Polk RT5	250
Polk RT7	300
Polk M5	300
Promenade SP1	299
Rega EL8	298
Revolver The 250	250
R Allen Dimension Five 1	239
R Allen RA8	249
R Allen RA8M	249
R Allen Dimension Five 2	269
Rogers db101	250
Rogers GS3	279
Royd The Envoy	249
Royd Minstrel	275
Ruark Epilogue	239
Sequence 300	249
Solid HCM1	250
Sony SS-176EB	250
Tannoy Mercury M3	230
Tannoy Precision P10	300
TDL Nucleus 4	300
TLC Maestro 130S	289
TLC Voyager 350	289
W'dale Modus Music Four	230
W'dale Valdis 500	300
Yamaha NS10M	300
ZYP A1	219
ZYP A2S	295

£301 TO £500

Acoustic Energy AE105SE	320
Acoustic Energy AE109	350
Acoustic Energy AE209	450
Acoustic Energy AE120	500
Allison Model 2A	420
Arcadyis Baby 2	399
Arcadyis ASC	399
Arcadyis AK1	449
Audiovector C1	399
AVI Neutron	499
B&O Beovox CX50	325
B&O Beovox CX100	425
B&W CWM8i	350
B&W DM305	350
B&W CDM2SE	400
B&W DM603	500
B&W Signature 7	500
Bandor Pictures	352
Blue Room Mini Pod	400
Boston Micro 90 Sat	369
Boston Micro 80 Sys	369
Boston WR20	380
Castle Kendal	400
Castle Eden	500
Celestion 25i	399
Celestion 30i	449
Celestion 35i	499
Cerwin-Vega VS-10	350
Chario Syntar 100T	399
Chario Ref 1000	499
Clements 300si	395
Dali 104B	370
Dali 606	400
Dali Royal	500
Def Tech Celsius	395
Dynaudio Audience 40	399
Epos ES12	499
GLL Imagio IC248TL	350
GLL Imagio IC258TL	450
GLL Imagio IC348TL	500
Heybrook Heylio	359
Heybrook Ultima	399
Jamo Classic 6	330
Jamo Comet 195	350
Jamo BX-100A	350
Jamo 98	350
Jamo D365	400
Jamo Classic 8	400
Jamo Graphic	400
Jamo 128	450
Jamo BX-150A	450
Jamo Atmosphere	500
JBL LX60	350
JBL Ti 200	400
JM Lab Micron	395
JM Lab Tantal 515	495
JM Lab Megane	495
Jordan Watts JHFLG	380
Jordan Watts JH200	420



Acoustic Energy AE1 SE

JPW ML910	350
JPW SS553	400
JPW ML1010	400
JPW Ruby 1	400
JPW Ruby 2	500
KEF Q35	349
KEF Q55	499
KEF RDM One	499
Keswick Aria II	379
KLH 283A	310
KLH 383A	335
KLH Model 51	375
KLH Model 71	420
KLH Model 62T	486
Linn Sekrit	395
Magnat Vector 55	349
Magnat Vector 77	449
Mission 751f	348
Mission 773	350
Mission 704	450
Mission 774	500
M-A Monitor 3	350
M-A Silver 5	400
M-A Studio 2SE	500
M-A Monitor 4	500
M-A 700 PMC	500
Mordaunt-Short MS817	500
Mus Tec Hamer	400
Mus Tec PM15	475
NAD 804	400
Neat Critique	445
Opera Duetto	395
Opera Prima	495
Origin Live OL-1AS	399
Origin Live Monarch	399
Paradigm Studio/20	350
Paradigm Monitor 9	400
Pentachord A	469
Pioneer S-LC2	450
Polk AB705	330
Polk RT8	400
Polk RT10	500
Polk AB805	500
Prof Monitor Co TB1SM	403
Prof Monitor Co TB1	410
Prof Monitor Co TB1S	430
Prof Monitor Co TB1M	447
Prof Monitor Co XB1	499
Promenade SP2	399
Promenade SP3	499
Rega Jura	450
Rega ELA MkII	498
Revolver The 260	350
R Allen Dimension Five 3	349
R Allen Dimension Five 4	429
Rogers GS5	379
Rogers GS6	429
Rogers GS8	479
Rogers Cg/20	499
Royd The Squire	350
Royd Minstrel SE	399
Royd Doublet	485
Ruark Icon	399
Sequence 400	329
Solid Verticale	400
S Coast Odette	325
Spendor SS/5	499
System 1130	500
Tannoy Precision P20	400
TDL G20	380
TDL Chiltern CF100	450
TDL G30	500
Technics SB-M300	350
Technics SB-M500	450
TLC Altus 300	366
Triangle Titus TZe	379
Triangle Lunn	500
W'dale Modus Music Six	330
W'dale Modus Music Eight	430
W'dale Modus Music 1/6	500

LOUDSPEAKERS (CONTINUED)

£501 TO £800

Acoustic Energy AE505	700
Acoustic Precision Ekos FR1	800
Allison Model 3A	525
Arcaydis AK3	599
Arcaydis AS2	699
Arcaydis AK4	699
Audio Gem Emerald	540
Audio Note AN-K/D	620
Audio Note AN-J/B	799
Audiovector M1	759
Audiovector C2	799
AVI Biggatron	599
B&O Beolab 2500	750
B&W CDM1 SE	600
B&W P4	675
Bose 501	600
Bose A/mass AM3	650
Boston VR30	600
Castle Severn 2	600
Celestion 45i	599
Celestion C2	699
Cerwin-Vega VS-12	550
Cerwin-Vega VS-15	700
Chario Ref 100T	599
Chario Hiper 1000T	699
Clements 600si	595
Cura CA-10	699
Dali 107	600
Dali 550	600
Dali 450	700
Dali 109	800
Def Tech BP6B	750
Diapason Micra II	750
Dynaudio Audience 50	577
Dynaudio Audience 60	729
Epos ES14	675
Harbeth BBC LS3/5A	699
Harbeth HL-P3ES	799
Heybrook Duet	799
Infinity Kappa 60	595
Infinity Kappa 70	795
Jamo BX-200A	530
Jamo Classic 10	600
JBL LX80	550
JBL TI 400	550
JBL SVA1500	650
JBL TI 600	650

JM Lab Cobalt 807	595
JM Lab Cobalt 810	775
Jordan Watts JH400	515
JPW Ruby 3	800
KEF LS3/5a	649
KEF RDM Two	699
KEF Q65	799
Kelly KT2	700
Keswick Volante	729
KLH Model 82Ta	690
Linn Tukan Passive	550
Linn Keilidh Passive	750
Magnat Vintage 710	799
Meridian A500	750
M&K S-85	700
Mission 752f	578
Mission 705	600
Mission 753f	798
M-A Silver 7	600
M-A 702PMC	600
M-A 703PMC	800
Mus Tec Falcon	575
Naim Intro	680
Neat Mystique 2	575
Neat Petite II	745
Opera Seconda	595
Opera Platea	795
Origin Live Resolution	732
Paradigm Studio/60	650
Paradigm Studio/80	750
Pentachord B	519
Pentachord Pentode	729
Polk RT12	600
Polk RT16	799
Polk LS50	800
ProAc Tablette 50	599
ProAc Studio 100	699
Promenade SP4	650
Quad 10L	600
Rogers CS9	579
Rogers LS3/5A	699
Rogers C6/25	799
Roksan ROKone 1	595
Roksan Ojan 3	795
Royd The Sorcerer	595
Royd Abbot	695
Ruark Templar II	559
Ruark Sceptre	599
Ruark Talisman II	799
Ruark Prologue One	799
SD Acoustics SD3R	649

Shinpy Polays	595
Silverado Raider	695
Sonus Faber Concertino	599
S Coast Hades	695
Spendor S1	549
T+A TB 100	700
Tannoy Precision P30	600
Tannoy Definition D100	689
Tannoy Precision P40	800
TDL Coltswood CF200	650
Titan Logic T/26	646
Titan Logic T/2	704
TLC Classic 2	535
TLC Classic 1	800
Totem Mite	599
Totem Rakk	765
Triangle Cornete TZe	525
Triangle Zephyr	799

£801 TO £1500

Acoustic Energy AE509	850
Acoustic Energy AE520	1,000
Acoustic Energy AE2-II	1,095
Acoustic Solutions Eight	1,200
Apertura Prima	1,095
Apertura Nova	1,395
Arcaydis AC1	1,099
Arcaydis AK5	1,399
ATC SCM10	1,000
Audio Note AN-I/D	930
Audio Note AN-K/SPx	1,060
Audio Note AN-E/B	1,299
Audio Note AN-I/SPx	1,415
Audio Physic Step	1,299
Audiovector M1 Super	999
Audiovector M2	1,399
Audiovector M1 Sig	1,449
AVI Positron	899
B&O Beolab 4000	1,100
B&W P5	875
B&W CDM7	1,000
B&W DM604	1,000
B&W P6	1,095
B&W Matrix 805 V	1,095
Bandor Trident	846
BKS Audio Hybrid 107	1,500
Bose A/mass AM5	900
Bose 701	1,000
Boston VR40	1,000
Castle Harlech	900
Celestion A1	899
Celestion C3	999
Celestion A2	1,499
Cerwin-Vega AL-1000	1,100
Cerwin-Vega 1515	1,300
Chario Ref 1000T	999
Chario Academy 1	1,299
Clements Reference 1	995
Cura CA-21	1,199
Dali 850	1,100
Def Tech BP8B	1,000
Def Tech BP10B	1,500
Diapason Prelude II	875
Diapason Kais	1,275
Dynaudio Contour 1.1	879
Dynaudio Audience 70	1,100
Dynaudio Contour 1.3	1,198
Dynaudio Audience 80	1,460
Electrocompaniet EC-M1	995
Electrocompaniet EC-Qube	1,195
Electrocompaniet EC-Qube SE	1,495
Epos ES15	890
Epos ES22	1,185
Harbeth HL-K6	1,049
Harbeth HL-Compact 7	1,499
Harbeth BBC LS5/12A	1,499
Heybrook Quintet	1,199
Impulse Kora	1,250
Infinity Overture 1	900
Infinity Kappa 80	995
Infinity Kappa 90	1,295
Infinity Overture 2	1,500
Jadis Orchestra	999
Jamo Concert 8	1,365
JBL SVA 1600	850
JBL 4312 MkII-WX	1,000
JBL SVA 1800	1,000
JBL SVA 2100	1,250
JM Lab Cobalt 815	900
JM Lab Electra 905	1,095
JM Lab Cobalt 820	1,175
Jordan Watts JH1+1	1,150
JPW Ruby 4	1,000
KEF Q75	999
KEF Ref. Model One	1,199
Kelly KT3	1,200
Keswick Tonno	999
Keswick Figaro Evolution	1,099
Keswick Milano	1,199
Keswick Legato	1,199
Keswick Amber	1,499
Linn Tukan Aktiv	1,050
Linn Keilidh Aktiv	1,250
L Voice Auditorium	1,500
Lowther Accolade 2	1,199
Lumley L/M3.5	1,050

Magnat Vintage 720	1,199
Magneplanar SMG-C SE	990
Magneplanar MG-0.6 SE	1,370
Meridian Argent 1	995
M&K S-125	1,150
Mission 705a	900
Mission 754f	1,298
M-A Studio 6	900
M-A Silver 9	1,000
M-A 705PMC	1,150
Mus Tec Condor	1,000
Mus Tec Hawk	1,250
Mus Tec Eagle	1,500
Naim Credo	1,090
Opera Terza	995
Opera Callas Gold	1,095
Opera Divina II	1,495
Origin Live Sovereign	1,130
Paradigm Studio/100	950
Polk LS70	1,200
Polk RT20p	1,500
ProAc Tablette 50 SIG	899
ProAc Response 1 SC	1,199
Prof Monitor Co LB1	935
Prof Monitor Co AB1	1,496
Rega XEL	1,040
RMS Revelation S 1	1,299
Rogers C6/28	1,399
Roksan Ojan 3X	995
Royd The Albion	985
Ruark Broadsword II	899
Ruark Paladin	1,099
Shahinian Super Elf	875
Shahinian Starter	1,195
Shahinian Compass	1,395
Shinpy Micraphonica	1,099
Silverado Ryder	1,395
Sonus Faber Concerto	945
Sonus Faber Concerto GP	999
S Coast Merlin Monitor	849
S Coast Classic	1,495
Spendor SP3/IP	825
Spendor FL6	1,099
Spendor SP2/5	1,187
Spendor FL8	1,355
T+A TAS 1200E	1,050
T+A TB 120	1,060
Tannoy Definition D300	999
TDL Cheviot CF300	850
Technics SB-M1000	1,500
Titan Enigma T/3	822
Titan Sovereign T/4	1,292
Totem The Arro	959
Totem The Staaf	1,249
Totem Model One	1,249
Triangle Antal	1,099
Veritas 7	1,000
Veritas 20	1,400

Acoustic Energy AE1 Sig	1,995
Acoustic Energy AE2 Sig	2,995
Alon I Mk II	1,795
Alon II Mk II	2,495
Apertura Agora Signature	2,295
Apertura Tanagra	2,395
Apertura Tanagra Sig.	2,795
ATC SCM20SL	1,750
ATC SCM20 Tower SL	2,400
Audio Note AN-E/D	1,520
Audio Note AN-E/SPx	2,250
Audio Physic Spark 2	1,749
Audio Physic Tempo	1,999
Audio WK'p Cyclone 34	2,000
Audiostatic DCI	2,495
Audiovector M3	1,899
Audiovector M3 Sig	2,499
B&O Beolab 6000	1,550
B&O Beolab 8000	2,100
B&O Beolab Penta 3	2,650
B&W Matrix 804	1,695
B&W Matrix 803s2	2,495
B&W Matrix 802s3	2,995
Bandor Bandora/Mora	2,350
Bandor Siren	2,800
BKS Audio Hybrid 128	2,549
Bose 901 VI	1,650
Boston Lynfield 500L	2,000
Bravura Virtuoso Bronze	2,995
Cary SP-301	2,295
Celestion A3	2,399
Celestion Kingston	2,500
Chano Academy 2	1,649
Clements Reference 7	1,995
Credo SPB 003	1,820
Credo SPB 009	2,453
Cura CA-30	1,799
Dali Grand Coupe	2,500
Def Tech BP2002	2,400
Diapason Adamantes III	1,995
Dynaudio Contour 1.8	1,894
Dynaudio Craft	2,598
Dynaudio Contour 3.0	2,930
ECA Servo A.2	2,450
ELS res'ch Vision	2,800
Epos ES30	2,385

£1501 TO £3000

Magnat Vintage 720	1,199
Magneplanar SMG-C SE	990
Magneplanar MG-0.6 SE	1,370
Meridian Argent 1	995
M&K S-125	1,150
Mission 705a	900
Mission 754f	1,298
M-A Studio 6	900
M-A Silver 9	1,000
M-A 705PMC	1,150
Mus Tec Condor	1,000
Mus Tec Hawk	1,250
Mus Tec Eagle	1,500
Naim Credo	1,090
Opera Terza	995
Opera Callas Gold	1,095
Opera Divina II	1,495
Origin Live Sovereign	1,130
Paradigm Studio/100	950
Polk LS70	1,200
Polk RT20p	1,500
ProAc Tablette 50 SIG	899
ProAc Response 1 SC	1,199
Prof Monitor Co LB1	935
Prof Monitor Co AB1	1,496
Rega XEL	1,040
RMS Revelation S 1	1,299
Rogers C6/28	1,399
Roksan Ojan 3X	995
Royd The Albion	985
Ruark Broadsword II	899
Ruark Paladin	1,099
Shahinian Super Elf	875
Shahinian Starter	1,195
Shahinian Compass	1,395
Shinpy Micraphonica	1,099
Silverado Ryder	1,395
Sonus Faber Concerto	945
Sonus Faber Concerto GP	999
S Coast Merlin Monitor	849
S Coast Classic	1,495
Spendor SP3/IP	825
Spendor FL6	1,099
Spendor SP2/5	1,187
Spendor FL8	1,355
T+A TAS 1200E	1,050
T+A TB 120	1,060
Tannoy Definition D300	999
TDL Cheviot CF300	850
Technics SB-M1000	1,500
Titan Enigma T/3	822
Titan Sovereign T/4	1,292
Totem The Arro	959
Totem The Staaf	1,249
Totem Model One	1,249
Triangle Antal	1,099
Veritas 7	1,000
Veritas 20	1,400



Mission 771

Gamma Epoch Ref Five	2,999
Harbeth HL-58	1,999
Helius Syrius II	2,395
Helius Syrius I	2,850
Heybrook Octet	1,799
Hi Q Sound SM108	2,000
Impulse Lali	1,850
Infinity Overture 3	1,750
Infinity Kappa 100	1,895
Jamo Concert 11	2,250
JM Lab Electra 915	1,795
JM Lab Electra 920	2,350
Jordan Watts JH2K	2,400
Jordan Watts JH5K	3,000
KEF Ref. Model Two	1,599
KEF Ref. Model Three	1,999
Linn Kaber Passive	2,000
Linn Kaber Aktiv	2,640
L Voice Aud'm Avatar	2,100
Lowther Fidelio	1,999
Lowther Academy	2,399
Lowther Bel Canto	2,699
Lumley L/M2 Mk3	2,995
Magnat Vintage 760	1,999
Magneplanar MG-10 SE	1,650
Magneplanar MG-1,5 SE	1,780
Magneplanar MG-2,7 SE	2,650
Martin-Logan Aerius i	2,199
Meridian M60	2,150
M-A Studio 20SE	2,500
Naim SBL Active	1,885
Naim SBL Passive	2,030
Neolith NEO 1	2,999
Opera Caruso II	2,495
Origin Live Conqueror	1,750
Pentachord PCcolumn	1,649
Polk LS90	1,700
Posselt Albattross	2,500
ProAc Response 25	2,000
ProAc Response 2.5	2,700
Prof Monitor Co IB15	2,099
Rehdeko RK115	1,700
Rogers LS5/9	1,549
Ruark Crusader II	1,649
Ruark Equinox	2,000
Ruark Accolade	2,699
SD Acoustics SD5	1,549
Shahinian Arc	1,875
Shahinian Obelisk	2,695
Shinpy Euritmica	1,995
Shinpy Altair	2,895
Silverado Silverado 1	1,995
Sonus Faber Electa Amator 2	2,849
Sound-Lab Quantum	2,150
S Coast Excalibur	2,750
Spendor SP1/2	1,674
Spendor SP100	2,234
T+A TB 140	1,760
Tannoy Definition D500	1,999
Tannoy Stirling TW	2,200
Tannoy Definition D700	2,500
TDL Studio Monitor-m	2,750
Totem Tabu	2,299
Totem The Forest	2,675
Triangle Zays	1,750
Triangle Allinis	2,250
Triangle Extan	2,950
Veritas 40	1,900
Veritas H1	2,995
Wilson Benesch Orator	2,900

OVER £3000


Acoustic Energy AES	7,995
Alon Lotus SE	3,500
Alon V Mk III	5,495
Alon Adriana	8,500
Alon Circe	12,000
Alon Phalanx	19,000
Apertura Athena	6,995
Apertura Atlante	8,995
ATC SCM20A PRO	3,049
ATC SCM20TASL	3,995
ATC SCM50PSL	4,250
ATC SCM100PSL	4,950
ATC SCM50ASL	5,775
ATC SCM100ASL	6,475
ATC SCM200ASL	15,595
ATC SCM300ASL	17,731
Audio Note AN-JSE Silver	7,900
Audio Note AN-ESE Silver	9,600
Audio Physic Virgo 2	3,399
Audio Physic Avanti 2	6,699
Audio Physic Caldera	10,599
Audio Physic Medea	24,999
Audiostatic DCI Plus	3,750
Audiovector 5X	3,999
Audiovector 6X	5,699
Avalon Avatar	5,995
Avalon Arcus	6,995
Avalon Eclipse Classic	8,995
Avalon Radian HC	13,995
Avalon Eidolon	20,495
Avalon Sentinel	79,995
AVI Gravtron	4,250
B&W Matrix 801s3	3,995
B&W Silver Signature	5,500

B&W Nautilus 801	8,500
B&W Nautilus	35,000
Bandor Bandoline	3,290
BKS Audio Hybrid 175	3,995
Boston Lynfield 500L	4,449
Bravura Virtuoso Gold	3,395
Bravura Virtuoso Reference	3,995
Bravura Accelerando	6,600
Chario Academy 3j	5,999
Credo SPB 012	3,147
Credo SDL 001	5,677
Dali Grand	4,000
Def Tech BP2000	3,600
Diapason Adamantes Ltd	3,995
Dynaudio Contour 3.3	4,815
Dynaudio Confidence 3	4,846
Dynaudio Confidence 5	5,924
Dynaudio Consequence	14,566
Dynaudio Evidence	50,909
Electrofluidics Sonolith 2.xi	5,999
ELS Res'ch Vista	3,900
ELS Res'ch Illusion MkII	9,000
Impulse Ta'us	3,100
Inner Sound Eros	3,995
Jadis 2	5,900
Jadis 1	18,900
Jamo Oriel	9,000
JM Lab Mini Utopia	4,500
JM Lab Mezzo Utopia	7,250
JM Lab Utopia	18,300
JM Lab Grande Utopia	35,000
Jordan Watts JH10K	7,570
KEF Ref. Model Four	3,299
Keswick Zero 2	7,000
Linn Keltik Aktiv	6,000
L Voice Air Scout	19,500
L Voice Air Partner 5	37,200
Lowther Delphic	3,099
Lowther Opus One	4,999
Lumley L/M 2 Sig. Mk3	4,500
Magnat Vintage 770	3,500
Magneplanar MG-3.5SE	3,800
Magneplanar MG-20 SE P	10,300
Magneplanar MG-20 SE A	11,000
Martin-Logan SL3	3,399
Martin-Logan CLS IIz	4,555
Martin-Logan Re-Quest Z	5,875
Meridian DSP5000	3,295
Meridian DSP5000	5,950
Meridian DSP6000	9,400
M-A Studio 50	3,300
M-A Studio 60	5,000
Naim DBL Active	8,050
Neolith NEO 2	3,499
Neolith NEO 3	4,999
ProAc Response 3.8	3,990
ProAc Response 5	9,000
ProAc Response 4	12,000
Prof Monitor Co MB1P	4,370
Prof Monitor Co BBS A	16,688
Quad ESL63	3,450
Rehdeko RK125	3,200
Rehdeko RK145	4,800
Rehdeko RK175	8,800
Revel Gem	5,295
Rockport Syzygy	15,000
Rockport Procyon	32,500
Ruark Solstice	4,000
Ruark Excalibur	7,000
SD Acoustics SD1E	3,495
Shahinian Hawk	4,995
Shahinian Diapason	8,895
Shinpy Enigma	3,995
Shinpy Euphonia	5,995
Shinpy Magnifica Suprema	14,500
Shun Mook Bella Voce	6,000
Sonus Faber Guarneri Homage	5,795
Sonus Faber Amati Homage	11,450
Sound-Lab Dynastat	3,790
Sound-Lab Aura	6,490
Sound-Lab Pristine III+	7,990
Sound-Lab A-3	11,990
Sound-Lab Ultimate II	13,950
Sound-Lab A-1	13,990
Sound-Lab Ultimate III	18,950
Sound-Lab Ultimate I	23,950
S Coast King Arthur	3,095
Spendor FL10	3,475
T+A A4D	3,850
T+A A3D	4,550
T+A A2D	8,400
Tannoy Edinburgh TW	3,250
Tannoy Definition D900	3,999
Tannoy GRF Memory TW	4,000
Tannoy Westminster TW	6,600
Tannoy Canterbury 15 TW	7,720
Tannoy Westminster Royal	14,920
TDL Ref Standard-m	6,000
Titan Goliath T/4	4,112
Totem Mani-2	3,100
Totem Shaman	9,999
Triangle Nemo Altair	4,250
Veritas H2	4,495
Veritas H3	5,995
Wilson Audio Cub	5,495
Wilson Audio WATT 5	8,390
Wilson Audio WITT II	10,995



B&W ASW 1000 subwoofer

Wilson Audio Maxx	34,995
Wilson Benesch Actor	3,900
Wilson Benesch ACT1 spkr	6,900
Wilson Benesch Act 2	8,900
Wilson Benesch The Bishop	20,000



SUBWOOFERS

KEY

A - Active; includes a dedicated power amplifier.

THX - THX-approved by LucasFilm for use in Home THX installations.

Acoustic Energy AE108S	300
Allison Mini Ref Sub	210
Alon Poseidon	12,000
ATC SCM 0.1/15	3,810
Audio Physic Terra	3,499
B&W ASW1000	500
B&W AS6	500
B&W ASW2000	800
B&W ASW3000	1,000
B&W Matrix 800ASW	1,500
Boston CR400	300
Boston VR500	450
Boston VR2000	800
Celestion CS135	139
Celestion CSW MkII	329
Celestion 51i	349
Celestion A6s	800
Cerwin-Vega HT-10D	200
Cerwin-Vega HT-12D	250
Chario Syntar Bass	299
Chario Hiper Bass	499
Credo SDC 001	3,054
GLL Le Bass	350
Jamo SW303E	200
Jamo SW400E	250
Jamo SW410e	300
Jamo SW505E	300
Jamo Sub One	400
JBL Control Sub 6	200
JBL Control Sub 10	300
JM Lab Tantal SW20	349
JM Lab Cobalt SW27A	595
JM Lab Electra SW33A	895
JM Lab Sub Utopia	2,200
JPW Subwoofer	130
JPW SW40	199
JPW SW60	350
JPW SW-120	500
KEF Model 20B	349

KEF Model 30B	499
KEF Model AV1	2,499
Kenwood SW500	250
Kenwood SW501	349
Keswick Alto	1,299
KLH ASW10-100	350
KLH ASW12-120	380
Linn AV5150	2,850
L Voice RW24	11,500
Magnat Vector Sub 30P	199
Magnat Vector Sub 30A	249
Meridian M2500	1,595
M&K VX-7MKII	450
M&K V-75 MKII	650
M&K V-125	800
M&K V-125 (THX)	800
M&K MX-70	900
M&K MX-150 (THX)	1,500
M&K MX-700	1,595
M&K MX-200	1,800
M&K MX-350THX	1,995
M&K MX-5000 (THX)	2,900
Mission 70as	300
Mission 75as	548
M-A ASW110	500
M-A ASW210	700
Mus Tec Sub	650
Muse Model 22	1,890
Muse Model 18	3,790
Neat Gravitas	1,095
Paradigm PDR10	250
Paradigm Servo 15A	800
Polk PSW50	350
Polk PSW150	500
Polk PSW300	750
REL Q50	375
REL Q-100E	495
REL Strata II	575
REL Strata III	600
REL Storm	695
REL Stadium II	995
REL Stentor II	1,800
REL Studio II	4,000
Revel Sub-15	2,195
Revolver The Recoil	100
R Allen Gold Sub	149
R Allen Dim'n Active	499
R Allen Magnum Active	699
Rogers AB1	549
Rogers Sub-bass	679
Roksan Ojan 35	795
Sequent FW120	249
Solid PB100	350
Sony SA-W305	130
Sunfire Sub Junior	1,099
Sunfire True Sub	1,499
Sunfire Tru Sub Sig.	1,699
TDL Nucleus SBR	200
TDL CF75	700
Triangle Sat III	650
Tsunami TS300	300
Tsunami TS200	300
Tsunami TS210	399
W'dale Modus Sub Bass	180
Wilson Audio Puppy 5.1	8,450
Wilson Audio Whow III	10,999
Wilson Audio XS	17,000
Yamaha YST-SW40	140
Yamaha YST-SW80	180

Factsback

For access to past reviews see page 129.



Pro-Ject 0.5/OM10	⊕	⬇	170
Pro-Ject 1/510	⊕	⬇	200
Pro-Ject 2/510	⊕	⬇	250
Pro-Ject Classic/510	⊕	⬇	360
Pro-Ject 6/510	⊕	⬇	400
Pro-Ject 6.9	⊕	⬇	500
Rega Planar 78	⊕	⬇	214
Rega Planar 2	⊕	⬇	214
Rega Planar 3	⊕	⬇	274
Roksan Radius	⊕	⬇	470
Sherwood PM8550	⊕	⬇	160
Sony PS-LX1 50H	⊕	⬇	90
Sony PS-LX300H	⊕	⬇	150
Technics SL-1110D	⊕	⬇	120
Technics SL-BD20	⊕	⬇	160
Technics SL-BD22	⊕	⬇	180
Technics SL-1210MKII	⊕	⬇	400
Technics SL-1200MKII	⊕	⬇	400
Thorens TD-180 AT91	⊕	⬇	190
Thorens TD-180 IV/UK	⊕	⬇	210
Thorens TD-166 VI/UK/RB	⊕	⬇	400
Thorens TD-318 III TP50	⊕	⬇	500

OVER £500

Audio Note AN-TT 2			995
Audio Note AN-TT 3			1,995
Audiomeca Romance	⊕		1,895
Audiomeca J1			3,500
Basis 2000			1,995
Basis 2001			2,995
Basis Ovation II			5,400
Basis 2500			5,495
Basis 2800	⊕	⬇	7,495
Basis Debut Gold Std III			8,200
Basis Debut Gold Vacuum			10,300
Chantry QT Level 2	⊕		705
DNM-Reson Rota 1		⬇	3,900
DNM-Reson Rota 2	⊕	⬇	5,600
Impulse Moskito			695
Kuzma Stabi S			695
Kuzma Stabi Reference			1,950
Linn LP12 Basik			1,100
Linn LP12 Lingo			1,750
Michell Gyrodek			875
Michell Orbe			1,995
N'ham Spacedeck			750
N'ham Graphic			1,200
N'ham HyperSpacedeck			1,500
N'ham Mentor			2,600
N'ham Anna Log			5,500
Oracle Delphi			3,370
Oracle Delphi 15th Anniv			3,800
Pink Triangle Tarantella			680
Pro-Ject Perspective			750
Rega Planar 9	⊕	⬇	1,598
Reson RS1M	⊕	⬇	695
Reson Rota 1	⊕	⬇	3,900
Rockport Capella II			7,000
Rockport Sirius III	⊕		50,000
Roksan Xerxes 10			1,295
Roksan TMS			2,750
SME Model 20/2			3,403
SME Model 20/2A	⊕		4,863
SME Model 30/2			10,675
SME Model 30/2A	⊕		12,135
Sratosphere ST1			6,500
Technics SL-1200LTD	⊕		700
Thorens TD-146 VI TP50	⊕		550
Thorens TD-2001 TP90	⊕		700
Thorens TD-520 SME			1,050
Well Tempered Record Player	⊕		1,850
Well Tempered Classic	⊕		2,980
Well Tempered Super	⊕		3,900
Well Tempered Reference	⊕		5,300
Wilson Benesch Circle			795
Wilson Benesch WB Turntable			1,775
Wilson Benesch Full Circle	⊕	⬇	1,995

LOUDSPEAKERS (CONTINUED)

Yamaha YST-SW150	⊕	280
Yamaha YST-SW300	⊕	350



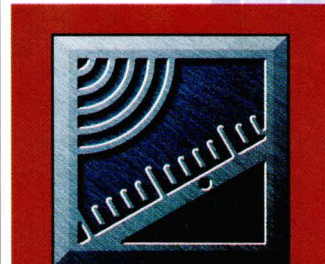
TONEARMS

KEY

⊕ – Pivoted.
– Parallel tracking.

Air Tangent IC	##	4,600
Air Tangent 10B	##	8,600
Air Tangent Reference	##	14,000
Audio Note AN-ARM 1	⊕	169
Audio Note AN-0s	⊕	795
Audio Note AN-1s	⊕	995
Audiomeca SL5	##	2,500
Dynavector 507	⊕	1,995
Graham 1.5 Basic	⊕	1,695
Graham Mk 2.0	⊕	2,650
Helius Orion 4 Copper	⊕	549
Helius Cyalene 2	⊕	1,495
Kuzma Stogi S	⊕	399
Kuzma Stogi	⊕	750
Kuzma Stogi Ref	⊕	1,250
Linn Akito	⊕	500
Linn Ekos	⊕	1,500
Moth Mk I	⊕	109
Moth MkIII Stainless	⊕	146
Moth Mk III Tungsten	⊕	174
Moth Moth 900	⊕	598
Naim ARO	⊕	1,070
N'ham Space	⊕	450
N'ham Paragon 3	##	550
N'ham Paragon 2	##	800
N'ham Mentor	⊕	800
N'ham Foot	⊕	1,100
N'ham Paragon 1	##	1,600
Pro-Ject 9	⊕	350
Rega RB250	⊕	109
Rega RB300	⊕	174
Rega RB900	⊕	598
Rockport Series 7000	##	6,000
Roksan Tabriz Zi	⊕	350
Roksan Artemiz	⊕	450
SME 3009 Ser II Imp	⊕	895
SME 3009 S2 Ser II Imp	⊕	309
SME Series II 3009-R	⊕	338
SME Series II 3010-R	⊕	514
SME Series II 3012-R	⊕	526
SME 309	⊕	565
SME 310	⊕	689
SME 312	⊕	705
SME Series IV	⊕	802
SME Series V	⊕	983
Triplanar V1A	⊕	1,461
Triplanar V1B	⊕	3,500

Wilson Benesch Act 0.5	⊕	795
Wilson Benesch ACT2	⊕	1,350
Zeta AS	⊕	469
Zeta VDH	⊕	549



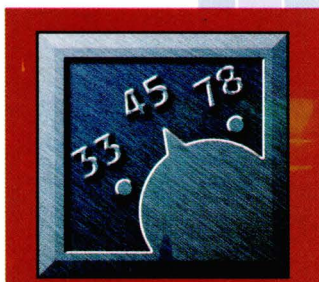
TUNERS

KEY

'P20' (etc.) – Number of presets.
RDS – Radio Data System; receives text information on station, programme type etc.

Akai AT1200	P30	170
AMC T7	P30	130
Arcam Alpha 7	P24	230
Arcam Alpha 8	P24	280
Arcam Delta 280	P20	300
Ariston TX-510	P20	60
Aura TUBO	P30	350
AWI S2000MT	P16	599
AWI S2000MT2	P99	899
Creek T43	P68	399
Cyrus FM7	P29	398
Davidson-Roth FM Ref Classic		5,590
Denon TU-260L MkII	P40	130
Denon TU-215RD	P40	150
Denon TU-425RD	P40	200
Denon TU-1500RD	P40	250
Fanfare FT1	P08	1,395
H/K TU930	P30	150
H/K TU950	P30	200
Kenwood KT-2080	P20	130
Kenwood KT-3080	P30	180
Linn Kudos	P50	775
Linn Kremlin	P80	2,600
Magnum Dynalab FT11		499
Magnum Dynalab FT-101A		795
Magnum Dynalab Etude		1,250
Magnum Dynalab MD108		4,990
Marantz ST-48	P60	120
Marantz ST-17	P60	600
McIntosh MR7084	P50	2,499
McIntosh MX118	P50	4,999
McIntosh MX130	P50	6,999
Meridian 504	P30	695
Michi RHT-10	P16	895
Micromega Minium FM Mk2	P39	330
Micromega Tuner	P39	700
Musical Fidelity E50	P20	300
Myriad T-30	P39	400
Myriad MT100	P39	530
NAD 412	P24	190
NAD 414RDS	P30	250
NAD 710	P24	270
NAD 712	P24	330
Naim NATO3	P24	615

Naim NATO2		1,130
Naim NATO1		1,780
Onkyo T 4210RDS	P30	180
Onkyo T 409	P30	230
Onkyo T 411RDS	P30	260
Pioneer F-204RDS	P30	140
Pioneer F-504RDS	P40	250
Pioneer F-504RDS Precision	P40	300
Quad 99	P25	700
Quad 77FM	P25	700
Rega Radio	P24	298
Roksan Caspian	P50	695
Rotel RT-935AX	P20	160
Rotel RT940AX	P20	200
Sony ST-SE200	P30	100
Sony ST-SE300	P30	120
Sony ST-SE500	P30	140
Sony ST-SB920	P30	180
Sony ST-SA3ES	P30	250
T+A T1200R	P60	790
TAG McLaren T20	P39	1,099
Teac T-R400	P40	100
Teac TR-460	P40	120
Teac T-H500	P40	170
Technics ST-GT350L	P30	130
Technics ST-GT550L	P39	180
Technics ST-GT650L	P39	230
Thorens TRT-2000	P59	499
Thule Audio Spirit TU100	P40	499
Yamaha TX-480L	P40	100
Yamaha TX-10 II	P40	130
Yamaha TX-492RDS	P40	130
Yamaha TX-59 2RDS	P40	180
Yamaha RX-396RDS	P40	250



TURNTABLES

KEY

⊕ – Arm included.
⬇ – Cartridge included.

UP TO £500

Audio Note AN-TT 1		349
Dual CS435-1	⊕	150
Dual CS455	⊕	190
Dual 505-4 UK	⊕	250
Eclipse TT430	⊕	70
Genexa Lab-710	⊕	60
Genexa Lab-810	⊕	70
Kenwood KD-492F	⊕	100
Michell Mycro		455
Moth Alamo	⊕	199
Moth Kanoot Mkl Arm	⊕	279
Moth Kanoot Mk3 Arm	⊕	329
NAD 533	⊕	220
N'ham Interspace	⊕	500
Pioneer PL-J2500-C	⊕	80
Pioneer PL-990	⊕	130

PRODUCTS TESTED & RATED

Turn over for a full round-up of all reviewed products!



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We carry the finest range of Hi-Fi in London and you can be sure that any of the products you see advertised here are on display and available for audition. Our helpful experienced staff are always on hand to help explore new possibilities open to you. This month - New goodies from Arcam, Linn, Naim, Rega, Yamaha, DVD and - some great ex-dem bargains, call now!

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TAG McLAREN - here now! Set your pulse racing - Come and audition the superb F3 series

REGA - NEW PRODUCTS - Come and listen. **JUPITER** CD Transport & **Io** DAC plus **JURA** spkrs

LINN CD 12 - A statement. Hear how much more is on your CD bring it with you and come & listen.

NAIM AUDIO - The new **CDS/2** is now available, texture mapping for the ears - call in for a listen!

PIONEER Re-writable - THE NEW PDRW 555 Record your own CD's - & re-record & re-record... use it like a cassette deck but with digital clarity (Re-recordable media available) **PDRW555 £499**

PIONEER PDR-04 (WAS £599.00) **Now £449**
PIONEER PDR-05 (WAS £999.00) **Now £749**
PIONEER DVD 515/717 Great sound and vision!

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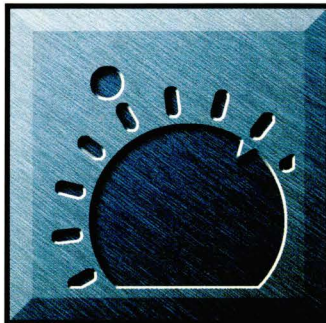
NEW ARRIVALS & FIRM FAVOURITES

<i>source</i> - COMPONENTS	
Arcam Alpha 7 CD	£329.00
Arcam Alpha 8 CD	£449.00
Linn Karik Player	£1850.00
Marantz CD 670se	£279.00
Marantz CD63KI Signature	£399.00
Naim CD 3.5 Player	£1050.00
Pioneer DVD 717 Player	£550.00
Rega Planet CD Player	£449.00
Rega Jupiter CD & Io DAC	£949.00
Rega Planar 3 T/T inc arm	£274.00
Rega Planar 25 inc arm(NEW!)	£600.00
Tag McLaren CDR20 (NEW!)	£1499.00
Yamaha DVD S700 plus AC3	£599.00
Linn LP12/Arm - combs from	£1725.00
<i>selected</i> - AMPLIFIERS	
Arcam Alpha 1 (NEW!)	£229.00
Linn Majik (line level)	£650.00
Marantz PM66Ki amplifier	£399.00
Naim Nait 3 Amplifier	£590.00
Pioneer A300R Precision	£399.00
Rotel RA 931ax Amplifier	£179.00
Rega Brio Amplifier (NEW!)	£298.00
Tag McLaren 60i amp(NEW!)	£799.00
<i>am/fm</i> - TUNERS	
Arcam Alpha 7 Tuner	£229.00
Naim NAT 03 FM Tuner	£615.00
Rega Radio Tuner (NEW!)	£298.00
Tag McLaren T20 Tuner(NEW)	£1099.00
<i>RECORDED</i> - RECORDERS	
Pioneer CT-830S Cassette	£499.00
Pioneer PDR-05 CD-R (NOW)	£749.00
Pioneer PDR-04 CD-R (NOW)	£399.00
Pioneer PDRW 555 (NEW!)	£479.00
Yamaha KX393 Cassette	£129.00
Yamaha KX580se Cassette	£249.00
<i>loud</i> - SPEAKERS	
AVI Neutron (NEW!)	£499.00
B&W DM 302	£149.00
B&W DM 601	£199.00
B&W CDM 2se	£400.00
Linn Tukon Mini Monitor	£550.00
Linn Kellidh Speakers	£750.00
Mission 701	£129.00
Mission 702	£159.00
Naim INTRO	£660.00
Naim CREDO	£1060.00
ProAc Response 2.5	£2700.00
Rega Jura speakers	£449.00
Tannoy R1 (NEW!)	£199.00
ALL PRICES CORRECT AT PRESS E&OE	

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ON EX DEM & END OF LINE SOME AS NEW WITH 1 YR WARRANTY. 24HR DEL ONLY £5. CHECK AVAILABILITY BEFORE ORDERING

Arcam Alpha 9 Amplifier	(499.00)	£395.00	Mission 773 Spkrs (WOW!)	(349.00)	£229.00
AVI S2000 Pre amp/phono stage (WOW!) ..	(1199.00)	£799.00	Mission 771 Spkrs As New (WOW!)	(169.00)	£109.00
AVI S2000 Mono power amps (WOW!)	(1399.00)	£899.00	Naim 92/90 Pre/Power Combo	(1110.00)	£849.00
B&O Avant 28" inc Video	(3700.00)	£2750.00	Naim CDi Player S/H	(1800.00)	£1095.00
B&O AV5 TV/Hi-Fi/CD	(4650.00)	£3250.00	Naim HiCap Power Supply	(720.00)	£469.00
B&O MX4002 21" T.V. (WOW!)	(1290.00)	£899.00	Pioneer PDR04 CD Recorder As New (WOW!) ..	(449.00)	£359.00
B&O CX50 Speakers (WOW!)	(325.00)	£199.00	Pioneer CLD 2950 Laser Player S/H	(600.00)	£299.00
B&O CX100 Speakers	(425.00)	£339.00	Rotel RCD 930 CD Player	(200.00)	£139.00
B&W P4 Speakers - Black	(675.00)	£499.00	Rotel RCD 971 CD Player	(400.00)	£319.00
Linn Kudos (Sneaky) Module Tuner	(500.00)	£295.00	Rega XEL Monitor Speakers (black) (WOW!) ..	(1040.00)	£699.00
Linn Majik phono amplifier S/H	(800.00)	£479.00	Yamaha CDX890 CD Player (WOW!)	(349.00)	£249.00
Linn Kairn Preamp - Line	(1400.00)	£1095.00	* 0% APR offered on combined Ex/dem purchases of more than £660. Call for details		



Amplifiers

The amplifier is at the heart of any hi-fi system, accepting the outputs from various music sources, increasing the amplitude of their signal and then driving the loudspeakers to produce sound. One-box 'integrated' amps rule the roost at low-to-middle price points, but if you pay more, the low-level and high-level signal processes are separated into preamp and power amp boxes, and even separate 'outboard' power supplies come into play. Another luxury is a separate amp for each stereo channel: such devices are known as monoblocks. Finally, output power and sound quality are not necessarily related. Some of the finest amplifiers output only 12 Watts, but will yield loudness aplenty when partnered with high-efficiency loudspeakers.

KEY TO SPECIFICATIONS

LINE INPUTS: Number of input sockets for line-level (non-vinyl) sources such as CD players, tuners and cassette decks.
MM PHONO INPUT: An input specially designed for moving magnet (high output) phono pickup cartridges.
MC PHONO INPUT: An input for moving coil (low output) phono pickup cartridges.
REMOTE CONTROL: An infra-red handset to adjust volume etc.
HEADPHONE SOCKET: An integral output for headphones.
POWER OUTPUT (Watts): Our measurement of an amp's RMS power output into 8 Ohms.
RECEIVER: An amplifier with built-in radio receiver (tuner).
FACTSBACK REFERENCE: The Factsback Reference number permits direct access to our faxed review reprint service. For full info, see the Factsback advert on the penultimate page of the mag.
ISSUE NUMBER: The issue of *HI-FI CHOICE* in which an original review appeared.
High End Review



Amplifiers

SPECIFICATIONS

STATUS

MM PHONO INPUTS
MC PHONO INPUTS
REMOTE CONTROL
HEADPHONE SOCKET
POWER OUTPUT (W)
RECEIVER
FACTSBACK NO.
ISSUE NUMBER

PRODUCT	(£)	COMMENTS	LINE INPUTS	MM PHONO INPUTS	MC PHONO INPUTS	REMOTE CONTROL	HEADPHONE SOCKET	POWER OUTPUT (W)	RECEIVER	FACTSBACK NO.	ISSUE NUMBER
Alchemist Maxim	319	Vivid and colourful-sounding amp, but just too bold and brassy	5					30		1737	154
Alchemist Kraken APD6A	579	Compact, with Darth Vader styling, yet sound quality is meek and mild, despite strong midband dynamics	5					55		2150	175
Alchemist Nemesis	700	Good if ultimately undistinguished amplifier whose strengths include warmth, authority and distinctive aesthetics	6					80		2006	168
AMC 3025a	140	Surprisingly potent and easy on the ear, if not especially analytical – classic bargain-basement material, in fact	4					30		2045	171
AMC 3050a	170	Tremendous value for money, and a full, big, if rather uninformative sound	4					45		1970	167
AMC 3100a	200	A head banger's delight, but sound quality can be muggy and brash on occasions	6					100			186
AMC CVT3030a	400	Beer-budget valve amp, with valve-like virtues (euphony with dynamics) and vices (system dependency, noise)	6					30		2001	168
Arcam Alpha One	230	Rather like an Alpha 7 but without the remote control and an what appears to be better sound quality still	6					35			186
Arcam Alpha 7	260	Decent, if slightly system-fussy amplifier that generally pulls all the right strings	5					40		1971	167
Arcam Alpha 8	360	Enjoyably soft-centred amp, won't frighten the animals. Upgradeable via preamp output, and optional remote	5					50		1853	162
Arcam Alpha 9	500	Not quite a match for the Alpha 9/9P combo, the solo integrated is nevertheless colourful and explicitly detailed	7					70		2007	168
Arcam Alpha 10	800	Although not the best sounding in its class, the Alpha 10's modular nature demands it be taken seriously	5					100			181
Audio Analogue Puccini	450	Superbly finished, the entry-level Audio Analogue performs way out of its class	5					40		2147	175
Audio Analogue Puccini SE	595	Upgraded, more powerful Puccini is disappointingly sluggish and curiously lacking in musical vitality	5					40			181
Audiogram MB1	493	The only flaws are the amateurish build, a number of technical problems and inconsistent sound quality	4					40		2235	178
Audio Note Oto SE	1,200	Transparent, dynamic, clear and subtle, but offers limited power output	4					24			126
AVI S2000MI	999	Fine, detailed amplifier with excellent timing and strong control of a wide range of loudspeaker loads	5					100		2155	175
Bryston B60R	1,249	Great build, but the lazy bass and opaque treble bracket an articulate midband. Comes with 20 year guarantee	5					60		2156	175
Cambridge Audio A500RC	200	Load tolerance may be a problem for some, but this is an otherwise impressive, if tonally muted amp	6					50			186
Copland CSA8	945	Sophisticated yet transparent, this is one of those amplifiers that sounds good even when the glass has worn off	5					60		2010	168
Copland CSA 28	1,249	Elegant Scandinavian cool, abundantly detailed if somewhat system dependent	5					60			189
CR Developments CR324	569	Solid and capable on paper, this is a bit of a blunt instrument when let loose on the music	5					150			181
Cymbal CA1	499	Lacklustre amplifier tends to underperform with complex material. Best with straightforward compact loudspeakers	6					40		2236	178
Creek 4330	279	Compact, even pretty, but sounds dark and uninviting, with coarse treble and 'woomy' bass	5					40		2052	171
Cyrus III	598	Beautifully presented, but mid-dominated balance was not liked. Upgradeable using PSX PSU unit	6					50		1854	162
Cyrus SL	398	Articulate amplifier with build quality to die for, superb, outgoing midband and lean, though well-extended bass	6					50			168
Denon PMA-250SE	140	This amp can sound rough when extended, but within its limits it is open, detailed and likeable	5					30		2046	171
Denon PMA-350SE	180	Reinvented in the minimalist tradition, this SE model is a control freak, but can sound wonderful	5					50		1856	162
Denon PMA-425R	230	Well-equipped and generally enjoyable but slightly ragged performer	3					45		1973	167
Denon PMA-725R	350	Warm, bold, up-front presentation, but musically unexciting	5					97		1802	157
Denon PMA-1500R	500	Recommended for its outrageous power, especially with problem speakers.	5					70			181
Densen Beat B-100 MkII	650	High 'air guitar' factor, and can punch above its weight, but check it will complement your system	5					60		1855	175
Densen DM-10	1,375	Big, bold and expressive amplifier, but sometimes rough around the edges, and not as powerful as it appears	6					75			189
DPA Renaissance	595	DPA's first integrated amp is typically innovative, but a little too 'crisp n' dry' for our tastes	5					40		1582	140
EMF Audio Sequel	450	Relaxed and restrained design from Mike Creek	5					50			109
Exposure XX Super	700	Rather transistorised, unexciting sound. Good coherence and rhythm. Best played loud	6					55		1743	154
Exposure RCXXV	1,000	Unaccountably rather underwhelming top of the line integrated sounds a little soft and detached	6					60			189
Electrocompaniet EC1-2	995	A 50 watt amplifier which sounds more powerful, and makes 'real sounding' music.	4					50		2158	175
Harman/Kardon HK610	180	Lively and friendly sound, but could prove too exciting for the faint hearted	6					30		1465	149
Harman/Kardon HK620	250	Capable and musical amplifier which is one of the nicest at this price. Optional add-in MM/MC board available	6					40		1858	162
Hofli Audis Signature	750	A 'no-feedback' circuit giving outstanding resolution, but significant load dependency	4					65			181
Jolida 202	695	Well-built and technically accomplished, affordable valve integrated with subtle refined, if not quite gripping sound	4					40		2011	168
JVC AX-V4	200	Respectable performance for a Pro-Logic AV amplifier. Lacks resolution and sparkle, though	5					63		1805	157
JVC AX-R5	200	Versatile, and lots of even-handed, articulate detail; but let down by superficiality	5					45		1466	149
Kenwood KA-5090R	300	Large, well equipped and high tech integrated, but TRAITR output still gives a harsh, unsmooth performance	5					65		2053	171
Kenwood KAF-3010R	180	Plenty of twiddly bits yet weak on inputs, and basically good, but somewhat uneven sound quality	4					70			186
Lavardin Model IIT	3,200	Banishment of 'memory distortion' delivers an amp with the best of valve and transistor sound characteristics	4					40			184
LFD Integrated Zero	549	Lively and brisk, but at the same time cold and unsympathetic	6					50		1584	140
Linn Majik (phono)	800	The cornerstone of Linn's modular hi-fi system is innovative, but sounds vague and confused	5					33		1013	129
Magnum IA 120	265	Mirror finish amplifier with bold, colourful delivery, but needs careful system matching to avoid loss of clarity	6					65		2054	171
Magnum IA1 70	330	Gives a realistic sense of instruments playing within a very believable acoustic; preserves colour and dynamics	6					96		1260	142
Magnum IA200	599	Sweet, valve-flavoured solid state amplifier which flatters where it doesn't cast light	7					160		1860	162
Magnum Class A	690	Lashings of rich and compelling music, but the Class A circuits trade lushness for accuracy	4					60			116
Magnum Class A SE	795	A MOSFET amplifier drawing inspiration from the world of valves, this is an erratically refined, detailed amplifier	5					80		2159	175
Marantz PM-48	150	Fine entry level amplifier has excellent midband resolution and top, with a slightly coarse textured bass	5					50			186
Marantz PM-57	200	Well equipped but ultimately anodyne amplifier which lacks for nothing but star quality	5					50		2049	171
Marantz PM-66SE	230	A bit lush, and power output is limited, but it gives airy, large-scale music. An excellent budget buy	5					50		1969	167
Marantz PM66 KI-Signature	400	It knows how to rock and roll with holographic detail and stereo, but prefers small/medium scale acoustic material	5					50		2003	168
Marantz PM-17	900	Probably worth it for the WBT terminals and other build features alone, but this model doesn't sing as it should	6					60			181
Marantz CD-17KI Signature	1,300	Full feature audiophile amp where the end results doesn't quite justify the fantastic ingredients	6					60			189
Micromega Tempo 2	900	Idiosyncratic but flexible amplifier with an attractively forward and expressive sound quality	7					70			181
Monrio ASTY	400	Engaging, but ill-disciplined, even OTT amplifier with unpredictable system compatibility	5					55		2237	178
Musical Fidelity E1	199	Richly flavoured tone and realistically-scaled imagery distinguish this entry-level Richer Sounds special	6					30		2050	171

CONTINUED

Amplifiers

STATUS

SPECIFICATIONS

MM PHONO INPUTS
MC PHONO INPUTS
REMOTE CONTROL
HEADPHONE INPUTS
POWER OUTPUT (W)
RECEIVER
FACTSBACK NO.
ISSUE NUMBER

PRODUCT	(£)	COMMENTS	MM PHONO INPUTS	MC PHONO INPUTS	REMOTE CONTROL	HEADPHONE INPUTS	POWER OUTPUT (W)	RECEIVER	FACTSBACK NO.	ISSUE NUMBER
Musical Fidelity E11	299	Well built minimalist amp with a 5 year guarantee, but can sound congested when extended	6				60		2232	178
Musical Fidelity X-A1	479	Idiosyncratic visuals just another plus for an amp that is powerful, well built, and serves the music superbly	6				50			181
Musical Fidelity A2	500	Lucid, transparent midband and a full upper bass are provided by this highly proficient A1 replacement	5	●			25		1862	162
Musical Fidelity A220	700	Powerful, authoritative and well turned-out amplifier that is easy to match with comparably priced speakers	5	●			50		2012	168
Musical Fidelity X-A100R	999	Sings like a thoroughbred, but better with Mozart than Motorhead	6			●	75			189
Myryad MI120	600	Well styled, well built: a good, even tempered amplifier, though it can sound rather brittle	6			● ●	60		2153	175
NAD 310	100	Fleet and sure of foot, it seems likely to set all appendages tapping with its blend of enthusiasm and artfulness	5				20		1468	149
NAD C320	200	Excellent budget amp from the makers of the seminal 3020 offers better clarity and neutrality and good build	6			● ●	40			186
NAD 314	260	Lively if coloured presentation that is musically engaging and easy on the ear	6	●			53		1807	157
NAD S300	1,900	Substantial integrated with loads of power and no shortage of finesse, slightly bass strong	5			●	100			189
Naim Nait 3	575	Distinctive and highly musical sounding integrated amp. Perhaps too distinctive for some tastes	5				30		1748	154
Naim Nait 3R	780	Remote control variant of the basic Nait has a similarly dynamic credible sound but ultimately lacks power.	5			●	30			189
Orelle SA-100	499	A musically rewarding amplifier that grows on you. Trace of coarseness in treble	5				50		1749	154
Orelle SA-100RX	649	In its latest guise, this is a fluid, articulate and transparent design – and excellent value	7			Opt	75			181
Pioneer A-300R	200	Its bright and breezy sound is a natural tonic to those of us worn down by the ongoing stress of life	5	●		● ●	50		1469	149
Pioneer A-407R	230	Clean, consistent, finely detailed sound, good finish and (mainly) good build	5	●		● ●	45			186
Pioneer A-400X	300	On second audition, this amp was tonally unchanged but less compelling than on its first outing	6	● ●	●	●	50		1545	138
Pioneer A-300R Precision	400	Sophisticated variant of the A-300R. Not an obvious winner, but will slowly ply you with its subtle charms	5	●		● ●	35		1863	162
Pioneer A-07	999	Curious blend of high-end attributes and inconsistent, though undeniably detailed sound	5	●		●	80		2160	175
Præcisa Acustica Sonoro	1,800	It is not often that transistor amplifiers are made to sound so palpably valve-like	5			● ●	100			189
Primare A-20 Mk II	799	Everything except packaging has changed in mkII version: but ballsier model has lost none of its refinement	5			●	70			181
Primare A30.1	1,499	Superb build and aesthetics, and undemonstrably musical down to its smallest screw	6			●	100			189
Pro-ject Model 7	300	A minimalist amplifier brimming with good intent, but too quirky for its own good. Either MM or MC phono	5	●			40		1264	142
Quad 77 Integrated	700	Compact and sophisticated amp. Has limited inputs when used with 'foreign' components. (Optional system remote)	3				84		2013	168
Rega Elex	398	Minimalist amplifier, derived from Elicit, is a little uninspiring, though at least it is well behaved	4	●			50		1865	162
Restek Fantasy II	1499	Muscular, but ultimately rather strident amplifier which needs careful system matching	6			●	100			189
Roksan Caspian	695	Well-built, open and articulate amplifier, which is also consistent from system to system, and well built	6			●	70		2014	168
Rose Scion	615	Unique two-box integrated gives real subtlety and low level resolution, but the sound lacks scale and weight	5	● ●	●		65		2009	168
Rotel RA-931	150	Rather dry and unforgiving sound from this internally well specified and attractively priced amplifier	4	●		●	35		2048	171
Rotel RA-971	200	Budget buy par excellence, especially for large rooms and insensitive speakers	6				70			186
Sony TA-F448BE	250	Minimalist interface is matched to carefully considered circuit with satisfactory effect – but keep the volume in check	5	●		● ●	55		2055	171
Sony TA-F3000ES	500	Champagne 'shoebbox amp' may lack power reserves, but is quick and articulate. In every sense a knockout	5	● ●	● ●	● ●	35		2239	178
T+A PA-1220R	1445	Unique presentation and feature set, but sometimes rather relentless sound quality	7			● ●	100			189
TAG McLaren 60i	800	Clean, slightly antiseptic sound from this beautifully turned out entry level Audiolab 8000LX replacement	6			●	60			189
TAG McLaren 60iRv	999	Looks, feels and sounds better than the Audiolab it supersedes. Smooth, open, refined but lacks body and drive	6			● ●	60			184
Talk Electronics Storm 1	500	Good soundstaging and strong detail are provided by this unassuming and not especially powerful model	6				50		1868	162
Talk Electronics Storm 2	650	Crisp, clean, well defined sound, arguably lacking warmth, but a good midrange purchase overall	6			●	50		2154	175
Teac A-BX7R	700	Characterful balance mars a meticulously designed amplifier. Includes a balanced input, optional MM/MC stage	5			●	50		1869	162
Technics SU-A660 Mk 3	200	Plenty of wellie for the price, but the sound can be a tad coarse and lacking in fine detail	5	● ●			37			186
Technics SU-A700 Mk 3	250	Fully equipped, high-tech amplifier ultimately fails the authenticity test, and can sound messy and inarticulate	5	● ●		●	45		1870	162
Technics SU-A800D Mk 2	300	Two-box amplifier looks great, has plenty of gadgets, and makes good, if slightly over-exuberant music	5	● ●		● ●	55		2234	178
Technics SU-A900D Mk 2	400	Looks like a pre/power amplifier, but in effect it's an integrated, with a rather soft-centred sound to match	5	● ●		● ●	70		2149	175
Token Audio K50	350	Stainless steel finish, others available. Sound is warm and attractive, though a little undynamic	5				50			186
Woodside ISA230 Disc	1,249	Smooth and inoffensive valve amplifier, though it lacks the sparkle and euphony required for ultimate success	3	●			30			116
Yamaha AX-492	220	Powerful, well equipped amplifier at an attractive price, offers powerful and engaging music-making	5	● ●		● ●	85		2231	178
Yamaha AX-592	280	Fine, middle ranking amplifier, with a detailed midband but performance declines at frequency extremes	5	● ●	● ●	● ●	100		2056	171
PREAMPLIFIERS										
Amp Flux System 2	3,000	Three-box affair with a clean, spacious sound and plenty of slam. A touch steely, but undeniably potent	5			● ●	50			187
Alchemist Kraken APD7A MKII	549	Unusual looks and unusual sound too, rather rough and lacking detail	6							187
Arcam Alpha 9C	400	Well specified and flexible preamp with sound only just lacking in greatness	6			● ●				187
Copland CTA-301MKII	1,399	Sweet sounding, but never gets bogged down in audio treacle	4	●					1630	151
Creek P43R	350	Excellent sound, remote control operation and upgrade options from this fine value preamp	6			● ●				187
Crimson CS610	450	Good, clear sound, including a decent phono stage, but flexibility is limited	3	● ●						187

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CONTINUED

Amplifiers

SPECIFICATIONS
 MM PHONO LINE INPUTS
 MC PHONO INPUTS
 REMOTE CONTROL
 HEADPHONE INPUTS
 POWER OUTPUT (W)
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PRODUCT (€) COMMENTS

PREAMPLIFIERS (CONTINUED)

▶	Crimson 610C	875	Not entirely satisfactory preamp which has dynamic strengths, but underachieves when the volume is raised	4	●				181
▶	EAR 802MC	2,599	Tested with 509 Mk 2 power amp. (See Power Amplifier section.)	4	●	●			63
▶	ECA Vista	760	Wind up the volume and blow a breath of fresh music into your system. (Tested with Lectem power amp)	5				1302	145
▶	Exposure XVII	850	Superbly rhythmic; maybe a bit overpowering in the midband. Tested in Sessions with XVIII Super	5	●	●			142
▶	Jadis JP-30MC	5,978	French tubes, beautiful build, nostalgic styling and delightful midrange. (Tested with JA 30 power amp)	5	●				60
▶	LFD Mistral Linestage	449	Strong ergonomics, generally decent sound, but a little lacking in detail	6				1930	165
▶	Meridian 501	695	Tight, positive sound, but dispassionate; intense at high levels. (Tested with 555 power amp)	5	●		●	1303	145
▶	Meridian 562V	995	Transparent and capable preamp, also features six digital inputs	9	●		●		140
▶	Meridian 502	1,295	Extremely sophisticated analogue controller with tremendous flexibility and a fast and tidy presentation	7			●		162
▶	Michell Orca	1,650	Line-level design with a gorgeous remote and focused, spacious sound. (tested with Alecto power amps)	6			●		187
▶	Moth 30 Passive	149	Modular system gives cracking results. Passive preamp and power amp warrant Best Buy	4					109
▶	Moth 30 Active Line Stage	349	Excellent-sounding ultra-simple miniature preamp	4				1931	165
▶	Muse Model Three	1,990	Natural sounding tranny preamp with useful audiophile features. Works beautifully with 160 power amp	5			●		166
▶	Musical Fidelity X-PRE	200	Cleverly configured preamp with many upgrade options, and open, lively and engaging sound	4				2152	175
▶	Musical Fidelity Nu-Vista	1295	Fully remote, nuvistor tube equipped, with fine coherence and musicality	5	●		●		182
▶	NAD 114	270	Beer-budget preamp, sounds focused, detailed and consistent	6	●	●	●	1932	165
▶	Naim NAC92R	630	Upgradeable preamp uses proprietary socketry. (Tested with NAP90 power amp)	5			●	1936	165
▶	NVA P50	350	Passive preamp that's more likely than most to cause treble loss	4					187
▶	Quad 77 Pre	850	Sophisticated design with 2-way remote control console; open colourful sound and very flexible	4	●	●	●	1941	165
▶	Rega Hal	998	Passive line stages dedicated to Exon power amps	6	●	●	●	1942	165
▶	Rose RV-23	450	You can pay more to get a more transparent sound, but it's hard to criticise at the price	3	●				77
▶	Rotel RC-971	150	Low price is offset by rather coarse sound quality with certain types of music. (Tested with RB-971 power amp)	5			●		178
▶	Sumo Athena IIB	767	Big, natural and tidy-sounding with very natural reproduction of acoustic and electric instruments	6				1305	145
▶	TAG McLaren PA20R	1,500	Refinement of Audiolab original with clean, detailed sound but limited thrill power. (t/w 125M monoblocks.)	6			●		184
▶	Talk Hurricane 2L	649	Design of integrity which gets to the heart, if not the soul, of the music	6				1937	165
▶	Technics SU-C3000	2,997	Price includes SE-A3000. Supremely clean and even sounding combo, though it could be more musically involving	5	●				188
▶	Thule Spirit PR100	400	High-tech preamp slightly marred by tendency to veil the sound	5			●		187
▶	Woodside SC26 Phono	2,233	Synergistic with STA35, with a cool, controlled sound, good focus and transparency. (Tested with STA35)	5	●	●			100

POWER AMPLIFIERS

▶	Alch. Kraken APD8A Mk II	549	Unusual looks and unusual sound too, rather rough and lacking detail	1				55	187
▶	Arcam Alpha 9P	400	Clear, colourful and well-disciplined, the Arcam is a strong all-rounder that can compete with conviction	1				60	1929 165
▶	Arcam Alpha 10P	600	Well made and flexible: upgradeable to 3 channels. Good sound lacking the last degree of detail	1				100	187
▶	Art Audio Quintet	1,393	Switchable triode, ultralinear output stage. In triode mode, these are 15 of the sweetest Watts around	1				15	109
▶	Border Patrol 300B SE	3,995	Single ended valve power amp with passion, grace and fire, and plenty of grunt to boot	1				8.5	186
▶	Copland CTA-505	2,099	Grown-up amplifier with a refined, yet never over-civilised air	1				67	1630 151
▶	Creek AS2SE	599	Well designed and built amplifier with plenty of power, detail and refinement	6				100	187
▶	Crimson CS630	800	Space-saving slimline monoblocks with both grunt and finesse	1				100	187
▶	Crimson 620C	875	Not entirely satisfactory power amp which has dynamic strengths, but underachieves when the volume is raised	1				50	181
▶	Cyrus Power	498	Detail and midband clarity and stand-out qualities. Smooth and refined with most types of music but bass-soft	1				50	183
▶	Densen B-300	800	Expensive but highly musical. Colourful and warm sound with strong timing and listener involvement	1				100	183
▶	EAR 509 Mk II	3,699	Combining sonic strengths of transistors and valves, this amp warrants attention. (Tested with 802 Preamp)	1				100	63
▶	ECA Lectem	880	Tested with Vista. Wind up the volume and blow a breath of fresh music into your system	1				50	1302 145
▶	LFD Mistral Power	449	Infectious upper band vitality, but LF dynamics lacking – likewise 'grip' and transparency	1				60	1930 165
▶	Meridian 555	750	By providing an open window on the music, this amp is wide open to RF and low level IM distortions	1				60	1303 145
▶	Michell Alecto stereo	1,150	Open, well-focused imagery with natural, refined textures	1				50	1940 165
▶	Michell Alecto Monoblocks	1,950	Hefty beasts offering real power and striking imaging. Not the last word in timing (tested with Orca preamp)	1				100	187
▶	Moth 60 Watt Stereo	599	Miniature power amp lacks control and finesse – not comfortable with difficult speaker loads	1				60	1931 165
▶	Moth 30 Series Monoblocks	879	Tested with Active Preamp. Demonstrated solid balance and proved adept at delivering vital musical qualities	1				100	155
▶	Musical Fidelity X-A50	500	Cleverly configured and attractively packaged, open, lively and engaging sound. Reviewed with X-PRE	1				50	175
▶	Myrrad MA120	450	Based on MI120 integrated – see latter for comments, but sounds significantly better when bi-amped with MI120	1				60	1935 165
▶	NAD 214	370	A little lightweight, but detailed, consistent sound quality, and excellent value for money	1				80	1932 165
▶	Naim NAP90	450	Power amp from a Nait integrated with some improvements	1				30	1936 165
▶	NVA A60	560	Rather coarse and uninviting sound	1				60	187
▶	Technics SE-A3000	2,997	Price includes SU-C3000. Supremely clean and even sounding combo, though it could be more musically involving	1			●	100	188
▶	Thule Spirit PA100	600	More successful than matching preamp: sound is gutsy and lively, and generally clean	1				100	187
▶	Quad 77 Power	600	Open, bold and colourful, with mild compression	1				85	1941 165
▶	Rega Exon	1,196	Monoblock, priced each, dedicated for Hal preamp. Bold, outgoing, in-command kind of sound	1				125	1942 165
▶	Roksan Caspian Power	595	Excels musically and in conventional hi-fi terms. A power amp for people with long-term satisfaction in mind	1				70	183
▶	Rotel RB-971	200	Somewhat better than the accompanying preamp – clean, mean and bridgeable. (Tested with RC-971)	1				70	178
▶	Rotel RB-980BX	450	Tames enthusiastically recorded material with a laid-back and occasionally smeared sound	1				120	155
▶	Sirius D200	2995	Single MOSFET pair per side gives tremendous resolution and timing (balanced only)	1				200	183
▶	Sumo Polaris III	950	Tested with Athena IIB. Big and tidy-sounding with very natural reproduction of acoustic and electric instruments	1				164	1305 145
▶	TAG McLaren 125M	2400	Refined Audiolab replacement monoblocks with clean sound but limited thrill power. (t/w PA20R preamp)	1				145	184
▶	Talk Tornado 2	600	Good, but slightly retiring sound which lacks the authority to stand out in a crowd	1				65	1937 165
▶	Thorens TTA2000	599	Low power shoe-box format, but gutsy and surprisingly subtle and articulate	1				30	1938 165

PHONO STAGES

▶	Creek OBH-9	160	A neat little unit with an essentially neutral and listenable character	0		●			189
▶	Cyrus aEQ7/PSX-R	826	Very hi-tech product which tends too much towards smoothness except at dimaxes, which can be rough	0	●	●			189
▶	Densen DP-Drive/DP-02	350	Quite unusual design in many ways: sound is mostly good but never quite shakes off a 'synthetic' quality	0		●			189
▶	Electrocompaniet ECP-1	495	An excellent phono amp that combines well-rounded balance with detail and low noise	0	●	●			189
▶	Michell Iso/Lithos	599	With the Lithos power supply upgrade, the Iso is a very capable phono stage with just a hint of bass fullness	0	●	●			189
▶	Moth 30 Series Phono	249	Fine sound all round, in any kind of music, from this bargain phono stage	0	●	●			189
▶	Musical Fidelity X-LP	130	A little bass lightness does not seriously mar the performance of this fine value unit	0	●	●			189
▶	NAD PP-1	40	A basic phono stage that does its job rather coarsely: a bit bass-shy too	0	●				189
▶	QED Discsaver DS-1	35	It's cheap, it's cheerful, it's OK – perfectly adequate for use with a phono-less integrated, though not very refined	0	●				189
▶	Roksan Artaxerxes X/DS1.5	1,150	Delicate and well balanced, slightly congested at dimaxes. Power supply expensive, but runs two Roksan components	0	●	●			189
▶	TAG McLaren PPA20	1,549	One of the best-equipped phono stages available. Resolution is excellent, but timing is marginally behind the best	0		●	●		187



Cables

Cables are an integral part of a hi-fi system, required to connect source components to amplifiers, and the latter to speakers.

- Analogue Interconnects connect source components and amplifiers, and run between pre and power amps. They are priced for one-metre terminated pairs.
- Digital interconnects connect CD transports to DACs or digital recorders. They come in optical and electrical varieties, the former being made of plastic or glass. The prices shown are for a terminated linear metre.
- Speaker cables are used between the amplifier and speaker. Our prices are per unterminated metre. Termination (plugs and soldering) costs vary.

KEY TO SPECIFICATIONS

- **SYMMETRICAL:** A twisted pair of conductors.
- **COAXIAL:** A central 'hot' conductor and a shield that carries the negative signal.
- **STRANDED:** Multiple strands with no intervening insulation.
- **SOLID CORE:** Single or multiple, individually insulated strands.
- **COPPER:** Material used for conductor.
- **SILVER:** Material used for conductor.
- **DIG CABLE TYPE:** O - optical digital, E - electrical digital for CD Players, DACs and digital recorders.
- **FACTSBACK REFERENCE:** The Factsback Reference number permits direct access to our faxed review reprint service. For full info, see the Factsback ad on the penultimate page of the mag.
- **ISSUE NUMBER:** The issue of *Hi-Fi Choice* in which an original review appeared.

H High End Review

B BEST BUY

R RECOMMENDED

E EDITOR'S CHOICE

Cables

SPECIFICATIONS

SYMMETRICAL COAXIAL STRANDED SOLID CORE COPPER SILVER DIG CABLE TYPE FACTSBACK NO. ISSUE NUMBER

STATUS

PRODUCT	(£)	COMMENTS	SYMMETRICAL	COAXIAL	STRANDED	SOLID CORE	COPPER	SILVER	DIG CABLE TYPE	FACTSBACK NO.	ISSUE NUMBER
Acoustic Precision Eikos	89	Not entirely neutral: probably best suited to upbeat music. Very stiff construction				●	●	●			188
Audio Note AN-A	18	Not especially impressive: warm but well-rounded balance that restricts 'air' but is quite clear			●		●	●			108
Audio Note AN-C	35	Neutral but lacking in subtle texture and unable to distinguish fine detail						●	●	1687	131
Audio Note AN-S	99	Up-beat and enthusiastic sound with satisfyingly deep and grumbly bass	●				●	●		1687	131
Audio Note AN-V	179	15 individually insulated silver strands make up this very clean and dynamically unchallenged cable			●		●	●		1687	131
Audioquest Turquoise	40	A 'fit and forget' cable that sounds distinctly lazy			●		●	●			160
Audioquest Topaz X2	60	Well made but let down by a pervading sense of muddle and congestion in the sound			●		●	●			188
CableTalk Advanced 2	35	Slight roughness in loud music barely detracts from a well-balanced performance with good imaging			●		●	●		2166	176
Cable Talk Studio 2	65	A first-class performer from tonal, dynamic and rhythmic standpoints			●		●	●			160
Cambridge Pacific	30	Lacks subtlety and bass impact but is otherwise quite serviceable for the price				●	●	●		2167	176
Cambridge Audio Studio Ref	40	Dynamic cable with strong soundstaging and only a slight lack of detail				●	●	●			160
Cambridge Silver Spirit 60	100	Good bass but a lack of detail and differentiation of instruments			●		●	●			188
Chord Cobra 2	50	Good, strong sound with full-bodied music, less happy with smaller forces					●	●		2167	176
Chord Chameleon 2	90	Deep bass is fine but despite that the sound can be a bit hard and lacking body and resonance			●		●	●			188
Connections Midas HD	39	Canary yellow cable with excellent plugs and an open sound. Slight treble glare	●				●	●			160
DNM TCC75	34	Price for 0.75m. High resolution cable, but best in short runs due to higher than average series impedance					●	●		1690	131
DPA Slink	41	Slightly bright and zingy with flat soundstaging and hollow bass, though vocals and strings sound convincing	●		●					1690	131
DPA White Slink	75	Bass recedes as the music gets complex; midrange and treble better with quite good detail and imaging					●	●		2168	176
DPA Black Slink	245	Initially dark and meaty but after running in, it's lucid and transparent. Quad geometry, Gore-Tex dielectric	●				●	●		1691	131
Goertz M1 Interconnect	145	Soft sound lacking in bite, with excessive and plummy bass (NB sample used in review was only 0.5m)			●		●	●		2168	176
Insert Audio IC100 MkII	47	Mostly good sound is let down by pervasive dryness					●	●		2169	176
Ixos 104	20	Open and detailed presentation, full bass and silky if overly smooth treble				●	●	●		1692	131
Ixos Gamma 1002	39	Lumpy bass, grainy treble, and poor integration. Nice colour, though			●		●	●		2169	176
Ixos 103	45	Even-handed and generous sound, bass has a well-rounded, bouncy quality			●		●	●		1692	131
Ixos 102	60	A bit bright and undynamic, this cable is nevertheless a good all-rounder, whose faults are largely subtractive				●	●	●			160
Ixos 101	100	A cable with personality: its veiled and shut in quality bring an earthiness to vocals and rhythm guitar alike				●	●	●	●	1693	131
Kimber PBJ	68	Assured sound, solid and natural bass and clear treble - excellent performance all round					●	●			188
Kimber Hero	110	Slight roughness detracts from some music; seems well suited to rock and jazz. Lively and detailed	●				●	●		2170	176
Moth Ley Line Black	100	Offers a full sound, neutral yet very solid and confident in delivery. Expansive imaging retains music's energy	●				●	●	●		108
Moth Ley Line Grey	200	Detailed, but there's a sense of distance between music and listener: vocals are coarse rather than liquid			●		●	●			108
Nordost Black Knight	60	Flat black cable that is distinctive but slightly coloured - but not in a wholly negative manner			●		●	●			160
Nordost Solar Wind	85	Good tone and dynamics, with just occasionally a touch of bass-lightness in busy music			●		●	●			188
Nordost Blue Heaven	145	Very good bass and only slightly grainy treble add up to a well integrated, natural-sounding cable			●		●	●			176
Precious Metals SS35	50	Extended bass, but dry character suits electronic music better than acoustic				●	●	●			188
Prowire Silver	60	A good cable in every way, with just the occasional hint of coloration and coarseness					●	●	●	2171	176
PAD Elementa	145	A fat, heavy and frankly rather lazy-sounding cable; best with music for small forces			●		●	●		2171	176
QED Qnect 2	30	Very well balanced, refined and detailed, this is everything a good cable should be, and excellent value					●	●		2172	176



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Esoteric High Fidelity CABLES

Dealers in: Absolute, Audio Note, Audioquest, Deltec, Electrocompaniet, Harmonix, Kimber, Mandrake, MIT, Siltech, Symo, Transparent, Van den Hul, WBT and others.

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CONTINUED

Cables

STATUS

SPECIFICATIONS

SYMMETRICAL COAXIAL STRANDED SOLID CORE COPPER SILVER DIG. CABLE TYPE FACTSBACK NO. ISSUE NUMBER

PRODUCT	(£)	COMMENTS	SYMMETRICAL	COAXIAL	STRANDED	SOLID CORE	COPPER	SILVER	DIG. CABLE TYPE	FACTSBACK NO.	ISSUE NUMBER	
QED Qnect 4S	70	Some coloration and roughness in the midrange and treble, but bass is gratifyingly solid			●		●	●			188	
Reference CS1	75	A moderate performer, with a little coloration and a tendency to lose bass at climaxes	●				●	●			188	
Silvertone Ex-Static	35	Pleasantly unfatiguing and competitively priced cable that lacks detail and insight				●	●	●			160	
SonicLink Silver Pink	35	Dynamically sensitive and muddle-free. We're unsure about the flesh-coloured finish though...	●			●	●	●	●		160	
SonicLink Black	49	Nickel-plated copper with a slight dryness in the bass and a hint of treble roll-off don't compromise integration	●				●	●		2172	176	
SonicLink Lilac	65	Some dryness can affect transient sounds, though tone is generally good, especially in the bass				●	●	●			188	
Straight Wire Chorus	60	A very confident cable with good bass, though perhaps a shade of treble loss				●	●	●		2173	176	
Straight Wire Sonata	80	Tonal balance favours lower frequencies but despite this it's a very listenable cable				●	●	●			188	
Supra EFF-ISL	80	Excellent sound in all areas – nothing to criticise	●			●	●	●			188	
Tara Labs Prism 22	64	Mild tendency to plumminess offsets some hardness in complex music with mixed results				●	●	●			188	
van den Hul The Storm	25	Price for 0.8m. Rich and warm but bass is rolled off: however there's plenty of drive and top end is clean				●	●	●		1701	131	
van den Hul Source HB	50	Price for 0.8m. Hybrid carbon-fibre/copper cable that is a paragon of naturalness				●	●	●			160	
van den Hul PB5	50	A highly neutral cable with fine dynamic and rhythmic performance too – excellent				●	●	●			188	
van den Hul D102 MkIII	70	A cable with everything: good bass, treble, imaging and naturalness				●	●	●		2173	176	
van den Hul The First	210	Using 12,000 carbon fibres, a gentle and subtle sounding cable that conveys oodles of information				●	●	●			1702	131
van den Hul The Second	240	Wonderfully open and relaxing but also intimately detailed, slightly softens percussive dynamics	●				●	●	●		1702	131
XLO Type 150	50	A restrained but useful cable for taming lively CD players, dynamics lack freedom, treble lacks clarity				●	●	●			1703	131
XLO Type 0.1	180	Unusual but highly expressive and detailed with a hint of graininess on powerful vocals					●	●			1703	131
DIGITAL INTERCONNECTS												
Audioquest Digital Pro	100	A silver cable with all the drive of Video Z but lacking its clear-cut transparency					●	●		E	108	
Chord Codac	36	A connection with a stranded inner core and a sound that lacks integration					●	●	●	E	108	
Chord Prodac	50	Price for 0.6m length. Lively detailed treble, drives music along confidently with no hint of fizz	●				●	●		E	1706	131
DPA Opti-link	20	Sound is lacklustre								O	108	
DPA Digi-link	28	Can seem slightly impassive but there's no avoiding its exceptionally detailed sound					●	●	●	E	108	
Ixos 105	25	Extended but soft-edged treble that's mercifully free of fatiguing colorations; plenty of weight, smooth					●	●	●	E	1707	131
Kimber Kable Opti-link	50	Appears to be a bog-standard PMNA fibre, yet sounds a little brighter and livelier than most								O	108	
Moth Leyline Datalink	140	A thin, coaxial version of Leyline Black with a rather hard and unforgiving character. Too expensive					●	●	●	E	108	
QED DigiFlex	20	A top performance, low-loss 75 Ohm coax with a very open, almost liquid quality					●	●	●	E	108	
Siltech HF-6	145	Sounds detailed, very clean and extended, but bass is less well resolved – a treat for high-end systems	●				●	●	●	E	1709	131
SonicLink Green	60	Spacious, positive and engaging if a bit over-crisp at times – very compelling, however					●	●	●	E	1709	131
van den Hul The First	125	Exceptionally natural albeit slightly cautious compared to some. Plenty of subtle information and integration					●	●		E	1710	131
LOUDSPEAKER CABLES												
ALR Jordan QMM	5	Generally neutral, if sometimes bass-shy, but not very communicative					●	●	●		183	
Audio Note AN-D	4.50	Supplied in linear, non-polarised lengths that are twisted into stereo pairs. Sounds rather grippy and forward						●	●		109	
Audio Note AN-B	16.50	Well suited to valve systems, elastic bass, methodical but unintrusive and musical					●	●			1711	133
Audio Note AN-L	29.50	Fruity bass and expressive vocal rendition was appreciated by the panel, which was happy to accept its foibles	●				●	●	●		1712	133
Audio Note AN-SP	150	A calm and civilised presentation, very quiet in the way it reveals subtle low level detail. Great poise and clarity	●				●	●	●		109	
Audioquest F-14	2.2	Ideal for laying under carpets. F-14 encourages a slightly warm and vibrant sound					●	●	●		109	
Audioquest Type 4	5	Four 18-gauge OFHC copper conductors wound in a Litz-type fashion increases capacitance but restrains 'bite'	●				●	●	●		109	
Audioquest Type 6	9	A very inflexible cable in which the sonic ends don't quite justify the means	●				●	●			183	
Audioquest Crystal	25	Neutral balance is spoiled by some graininess and smearing	●				●	●			168	
Bandridge LC7409	4	Detailed and up-beat cable. A bit too steely for classical strings					●	●			1800	157
Cable Talk Talk 3.1	2.25	Quite well-balanced but tends to lose bass lines in complex music	●				●	●			168	
Cable Talk Talk 4.1	4.25	Smooth and cultured sound that lacks fine detail and is a bit too restrained					●	●			1800	157
DNM LSC350	6.95	Majors on midband and lower treble lucidity at the expense of bass and extreme treble extension	●					●	●		168	
DNM LSCB500	12	High impedance can influence the treble response, but this was a winner on sound per pound. Bi-wire						●	●		1716	133
DPA Black Sixteen	100	Unflappable resolution of musical details. No dampening of dynamics, simply oodles of taut information	●				●	●	●		1717	133
Gale XL189	1	Slightly bright and not too subtle, but a perfectly acceptable cable for any starter system	●				●	●	●		168	
Gale XL315	2	A little lacking in detail but plenty of life and excellent value					●	●	●		1800	157
Gale XL160-2	2.50	Rhythmic and bouncy-sounding bi-wire cable. Can be slightly manipulative					●	●	●		1800	157
Goertz M2	32	Remarkably detailed, smooth, neutral and with excellent bass; check amplifier compatibility	●				●	●			168	
Heybrook Heywire	3.5	This well-meaning facsimile of earlier ribbon cables ends up sounding lumpy and uneven						●	●		109	
Hitachi LC-OFc	7	Very crisp, very clear and very confident. In the right system would be very expensive to better	●				●	●			109	
Kimber 4TC	19.6	A well-balanced cable with good performance in all areas	●				●	●			168	
Kimber 4VS	9	A good mix of virtues including particularly fine bass	●				●	●			183	
Linn K20	4	Seems to work best with lively, unobtrusive music - can be dry and edgy	●				●	●			183	
Naim NACA 5	5.5	A 'dinosaur of a cable', this stiff wire rod doesn't belong outside Naim systems, where it works a treat					●	●			109	
Nordost Octava	3	Fair bass but confused treble and some coloration	●				●	●			168	
Ortofon SPK100	3	Grey-sounding – strips instruments of their natural richness and resonance. A bit bass-shy, too					●	●			133	
Ortofon SPK200	4.99	Good strong bass and fair detail, only slightly marred by a little dryness	●				●	●			183	
Ortofon SPK300	8	Tremendously open and atmospheric, with robust, full-blooded bass – if slightly bright at times	●				●	●			133	
Precious Metals SL102	10	Unusual construction gives rather strained sound, only really cheering up with simple musical textures	●				●	●			183	
Puresonic 7845	1.95	Big, weighty sound – but too messy and bloated for its own good	●				●	●			183	
Puresonic 7891	2.85	Chunky cable design; shame about the sound quality	●				●	●			1800	157
QED Qudos	2.25	Despite high-tech design and excellent Air-Loc plugs, its music-making failed to gel					●	●			1800	157
QED Profile 4x4	9	Good midrange and treble balance, but bass is rather slack and detail not outstanding					●	●			168	
QED Qudos Silver	5	Basic figure-8 cable adds value with silver plating, to generally smooth and detailed effect	●				●	●			183	
Silver Sounds 12 gauge	15	Basic 'homemade' construction gives fairly neutral sound. Price not outstandingly competitive	●				●	●			168	
SonicLink S300	18	Happiest with simple music; tends to smudge detail in complex pieces	●				●	●			168	
SonicLink AST50	1.95	It may look like bell-wire, but AST50 sounds detailed, ordered and balanced					●	●			1800	157
SonicLink AST150	3.95	Slightly plummy bass and a useful way of holding musical strands together					●	●			1800	157

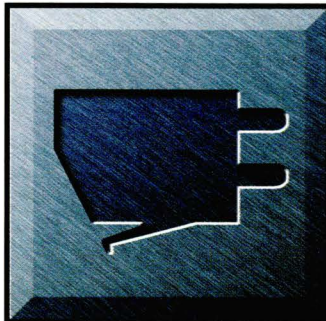
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Cables

STATUS

SPECIFICATIONS

PRODUCT	(£)	COMMENTS	SYMMETRICAL	COAXIAL	STRANDED	SOLID CORE	COPPER	SILVER	DIG CABLE TYPE	FACTSBACK NO.	ISSUE NUMBER
▲ Straight Wire Quartet	8	A good all-rounder with full tone, clear detail and natural ambience	●				●	●			183
▲ Supra Ply 3.4	6.95	Clean sound which stays together well at high levels, with full bass - perhaps a touch of treble restriction	●				●	●			183
▲ Tara Labs Klara	2.95	A good budget cable with an even spread of virtues - and very minor vices - across the board	●				●	●			183
van den Hul Gold Water	7	Bass becomes shy when there's a lot happening, and detail could be clearer	●				●	●			183
van den Hul The Clearwater	7	Despite its evocative title, the Clearwater turns out to be a disappointingly murky-sounding cable					●	●	●		109
van den Hul The Magnum	38	Touted as vdH's most prestigious twin-lead cable, Magnum sounds soft and old fashioned					●	●	●		109
▲ van den Hul The Wind	40	'The Wind' kicks up a storm with its lush midrange and bone-crunching bass!					●	●	●		109
van den Hul Revolution	76	Silver-plated OFC combined with carbon fibre prompts a sombre character with an easy and relaxed treble					●	●	●	1726	133
XLO Pro Type 625	4	Lively but natural and relaxed-sounding - a hint of congestion at frequency extremes					●	●	●	1726	133
XLO Pro 600	16.60	Basically neutral tonality but can become aggressive and two-dimensional	●				●	●			168



Cartridges

Cartridges fall into two groups: high output MM (moving magnet) models, capable of working directly into most phono inputs; and generally more expensive low- and very-low-output MC (moving coil) models. MC cartridges usually have better mechanical integrity, tighter tolerances and give better performance. Many amplifiers are no longer equipped with the necessary phono input for a cartridge, and a separate phono stage is necessary. Phono-input-equipped valve amps need a transformer to cope with MC cartridges.

■ Even basic high-output MM cartridge designs will benefit from a customised amplifier input load. Consult your dealer for further details on this topic.

KEY TO SPECIFICATIONS

- **MM:** Moving-magnet cartridge with a normal output, suitable for all amplifier phono inputs.
 - **MC:** Moving-coil cartridge with a low output, only suitable for high-sensitivity MC amplifier phono inputs.
 - **REPLACEABLE STYLUS:** Most MM cartridges have a stylus (needle) that can be removed and replaced when worn out.
 - **OUTPUT (mV):** Cartridge output in millivolts.
 - **MASS (g):** The mass of your chosen cartridge
- affects the choice of partnering tonearm. Consult dealers or manufacturers to establish which arms and pickups work well together.
- **FACTSBACK REFERENCE:** The Factsback Reference number permits direct access to our faxed review reprint service. For full info, see the Factsback ad on the penultimate page of the mag.
- **ISSUE NUMBER:** The issue of *Hi-Fi Choice* in which an original review appeared.
- **High End Review**

B **BEST BUY**

R **RECOMMENDED**

E **EDITOR'S CHOICE**

Cartridges

STATUS

SPECIFICATIONS

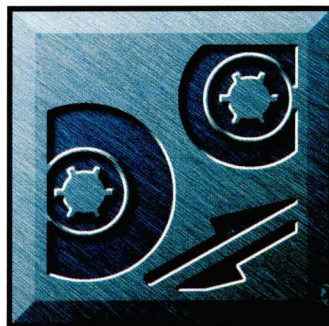
PRODUCT	(£)	COMMENTS	MM	MC	REPLACEABLE STYLUS	OUTPUT (mV)	MASS (g)	FACTSBACK NO.	ISSUE NUMBER
▲ Audio Technica AT-95E	20	Clear and dynamic, though richly balanced	●			2.8			48
▲ Clearaudio Signature	1,495	A great all-round performer with fine dynamic vitality and a seductive midband intimacy		●		0.55	11.5	2142	175
▲ Denon DL110	70	A fine all-rounder, this high output MC model is likely to perform well		●		1.0	6		48
Denon DL160	90	Although listeners just preferred the 110, its brother here survived lab tests and is still 'thoroughly competent'		●		0.1	6		43
Denon DL103	100	Good performance in bass and good 'life'. Is seriously let down by its spherical stylus which kills subtle detail		●		0.1	6		103
▲ Denon DL304	200	Uncoloured, detailed, tracks superbly. Top notch altogether, and a bargain at the price		●					103
Dynavector Karat 17D2 mk2	450	Clean and controlled sound with taut, tuneful bass. Detailed and musically cogent		●		0.15	5.3		158
▲ Dynavector Te-Kaitora	1,698	A real smoothie, but pricey. Worth checking out for its delicate laid-back transparency and low needle-talk		●		0.25	8.5	2142	175
▲ Dynavector XX-1L	998	Very clear, very detailed; a response lift around 20kHz seems to do no harm		●		0.25	12		84
Dynavector XX-1	998	Good, but not immensely competitive at the price, and not helped by comparison with the low output version		●		2.0	12		84
▲ Goldring Elan	19	A lightweight and frisky-sounding MM apparently based on Nagaoka MM4 body	●			5.0	7		67
▲ Goldring 1012GX	79	Slightly harsh but plenty of life and detail. Some high frequency coloration apparent		●		6.5	7		85
▲ Goldring 1022GX	99	As with 1012, a touch harsh; detail and transient purity improved		●		6.5	7		85
▲ Goldring Eroica LX	110	Not the most subtle cartridge in the world: can sound edgy at times, but lively and informative		●		0.5	8		84
Goldring 1042	120	Not terribly subtle, and not such good value alongside 1012 and 1022. Quite lively, though		●		6.5	6		91
Goldring Elite	220	The basics are right, and it will cheerfully tackle any source material, but its sound is not the cleanest		●		0.5	8		103
Goldring Excel VX	525	Good bass drive but dull and imprecise higher up. An old-fashioned sound that falls short of the true high end		●		0.45	8	2143	175
▲ Grado Prestige Gold	149	Rich sounding with an unusually refined top-end for a moving magnet-type cartridge	●			4	6		158
Grado Reference	995	Loads of tracking headroom but treble is limited. A prospect for mid-oriented valve amp users	●			1.7	6.5	2143	175
▲ Linn K9	125	Linn improved this model by beefing up the Basik's bodywork and adding a super stylus	●			4.5	5		Col
London Decca Maroon	259	Now manufactured under the London brand name, this Decca cartridge is as iconoclastic as ever		●		5.0	6		67
London Decca S Gold	399	Immediate and detailed, but coloured and nonlinear, with a questionable effect on records		●		5.0	6		84
▲ Lyra Lydian	649	Superbly capable all-round musical performer that improves markedly when its body cover is removed		●		0.3	7		158
▲ Lyra Clavis Da Capo	995	A stable tracker, and one of the finest cartridges we've heard		●		0.1	7		143
Lyra Pamassus D.Ct	1,895	A real little jewel of a cartridge, with many good qualities, but handicapped by a rather too obvious treble peak		●		0.22	10.5	2144	175
▲ Ortofon 510/P	38	For the price, a good blend of virtues - weight, clarity and neutrality	●			3.0	5		85
▲ Ortofon 520/P	65	Sensitive to load capacitance, but the 520/P has a lively, effervescent sound	●			3.0	5		67
▲ Ortofon MC3 Turbo	130	The 3 Turbo is bright, cheerful and bouncy, but unsubtle - take it as it comes!		●		3.3	4		103
▲ Ortofon MC15 Super II	130	A good all-rounder, with outstanding resolution, if slightly bright and close up		●		0.35	7		103
Ortofon MC25E	180	An excellent upgrade for a mid-price turntable		●		0.5	11		139
Ortofon MC25FL	250	A bit too stark and honest, but faithful to what's on the LP		●		0.5	11		139
Ortofon MC30 Supreme	525	Highly detailed and even-sounding cartridge that has a special affinity with female vocal recordings		●		0.5	10.7		158
▲ Ortofon Rohmann	1,000	A class act in nearly every respect, with fine groove security and a very smooth and even-handed sound		●		0.25	8.5	2144	175
▲ Ortofon MC3000II	1,100	A real ear-opener. Nothing to criticise anywhere - one of the very best		●		0.12	10		84
Ortofon MC5000	1,500	Limited tracking ability, bright and forward sound, but good stereo		●		0.12	10		91
Rega Bias	39	Difficult to mount in some arms due to its shallow body, but the Bias offers a gentle, refined sound		●		5	4		67
▲ Rega Elys	85	Clearly superior to the Bias, the Elys is more detailed, accurate and convincing		●		5.0	5		67
▲ Roksan Corus Black	130	Recognisably related to the Corus Blue, but smoother and more civilised		●		6.5	5		91
▲ van den Hul MM-1	250	If woody midrange could be tamed, imaging and security would pull it through		●		5.5	6		103

Cartridges

STATUS

SPECIFICATIONS

PRODUCT	(£)	COMMENTS	REPLACEABLE STYLUS	OUTPUT (mV)	FACTSBACK NO.	ISSUE NUMBER
van den Hul DDT-II	600	Outstanding stereo imaging and neutral balance are appealing, but rhythmically the DDT-II is a bit lazy	●	0.35	76	158
van den Hul MC-10	750	A neutral, balanced performer, gives fine depth and focus and a firm, extended bass	●	0.4	6	60
van den Hul MC-One	900	This extends all the positive qualities of the 10, but adds greater authority and scale – worth all the extra money	●	0.4	6	60
van den Hul MC-Two	1,200	MC-Two rewards with a highly detailed yet fluid and musically convincing portrayal	●	0.4	6	72
van den Hul Frog	1,500	Seems to control/suppress surface noise better than its rivals. This delicate and subtle performer has great charm	●	0.65	7	2145 175
van den Hul C' hopper III/CLA	2,800	Undoubtedly one of the finest cartridges available. It has tremendous bandwidth, energy and finesse	●	0.4	6	122
Wilson Benesch Matrix	786	Extraordinarily well balanced cartridge: neutral and detailed yet lively and rhythmically assertive	●	0.58	6	158
Wilson Benesch Carbon	1,573	Carbon fibre body contributes to a delightfully clean and open midrange, and a quick, lively and coherent sound	●	0.45	7	2145 175



Cassette Decks

The compact cassette is still the world's most versatile and ubiquitous music storage medium. Cassette decks hook up to the 'tape loop' inputs and outputs offered by modern amplifiers. It's worth taking care to choose the best tapes for a specific machine. For example, expensive metal tapes will be a wasted investment for a cheap deck. Many better-specified decks have manual or automatic bias adjustment to get the best from specific samples of tape. Twin decks offer the possibility of copying from tape to tape, playing two cassettes sequentially or recording onto two tapes at once. Autoreverse is a useful feature, but uni-directional mechanisms promise better sound. Dolby S is the ultimate noise reduction system, and three-head decks permit record monitoring off-tape.

KEY TO SPECIFICATIONS

- **DOLBY B/C:** The first and second Dolby hiss-killers.
 - **DOLBY S:** A desirable derivative of Dolby SR professional noise-reduction.
 - **DOLBY HX-PRO:** Extends headroom for cassette recording.
 - **3-HEAD:** Permits monitoring off-tape while you're recording.
 - **TWIN DECK:** Contains two decks for dubbing and continuous play.
 - **AUTOREVERSE:** Automatically plays both sides of the cassette.
 - **AUTO CALIBRATION:** The deck will automatically set up bias and EQ for any tape.
 - **ADJUSTABLE BIAS:** Permits manual optimisation of tape.
- **FACTSBACK REFERENCE:** The Factsback Reference number permits direct access to our faxed review reprint service. For full info, see the Factsback advert on the penultimate page of the mag.
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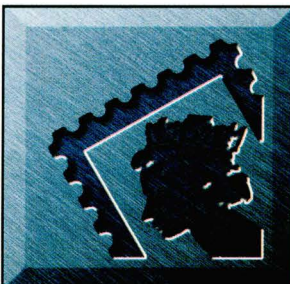
B BEST BUY
R RECOMMENDED
E EDITOR'S CHOICE

Cassette Decks

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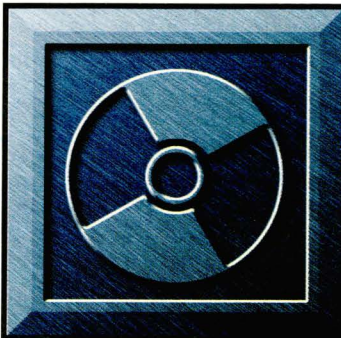
SPECIFICATIONS

PRODUCT	(£)	COMMENTS	DOLBY C	DOLBY S	DOLBY HX PRO	3-HEAD	TWIN DECK	AUTO REVERSE	AUTO CALIBRATION	ADJUSTABLE BIAS	FACTSBACK NO.	ISSUE NUMBER
Aiwa AD-F450	120	Basic but well-designed deck. Astonishing value; only the poor metering gives the game away	●			●					1513	136
Aiwa AD-WX727	170	High-class twin for those who want bells, whistles – and music	●			●					1377	146
Denon DRM-550	160	There are some technical limitations, but this remains a fine-sounding deck, and excellent value	●			●					158	
Denon DRW-580	200	Twin deck: OK for casual use, but will quickly pall with more quality critical applications	●			●					171	
Denon DRS-640	200	Draw-loading deck, with simple facilities and smooth, well-adjusted sound	●			●					1591	140
Denon DRM-650S	230	An improvement on predecessors, it offers a wide-ranging, sound. Dolby S is not the best feature	●	●		●					1920	164
Denon DRM-740	270	Breathed-on DRM-710, with good external treatment, offers good, if somewhat detached sonics	●			●					1514	136
Denon DRS-810	310	Draw-loading deck, carefully designed yet lacking in subtlety on audition	●			●					127	
Harman/Kardon TD420	310	Minor inconsistencies detract from a well-conceived, minimum features design	●			●					1592	140
Harman/Kardon TD450	350	Draw loader with poor tape navigation features; good midband but shallow bass	●			●					1920	164
JVC TD-R472	200	Excellent auto-reverse deck which doesn't suffer the usual disadvantages and is very sharply priced	●			●					158	
JVC TD-V662BK	270	Assured, clean and agile-sounding recorder, if not quite the most refined in its class	●			●					1380	146
JVC TD-W718	300	Twin deck. Good for creative live recording, but no timer standby. Respectable performance	●			●					2039	171
Kenwood KX-W6080	200	Modestly decent-sounding twin deck, with some transport instability and ragged bass	●			●					2040	171
Marantz SD455	170	Works well as a single deck, especially on replay, but dubbing at high/low speed compromises sound	●			●					184	
NAD 613	230	Rough and ready, but enjoyable sound, though marred by mechanical motor noise	●			●					158	
NAD 616	300	Twin deck with basic features. No Dolby setting memory, transport is too unstable for audiophile use	●			●					2041	171
Onkyo K-611	460	Cute drawer-loading mini-size component with 3-heads and dual capstan transport	●			●					1384	146
Pioneer CT-S550S	250	Great features, good with cheap low bias tapes, but slightly synthetic sound quality	●	●		●					1920	164
Pioneer CT-W806DR	300	Had it not been for the iffy transport quality, this sophisticated twin would have been Recommended	●			●					2042	171
Pioneer CT-S830S	500	High-class mechanism, if lacking in battleship externals, and superb sound	●			●					1385	146
Sony TC-KE600S	300	Mild setting-up problems notwithstanding, this UK-tweaked design has a smooth, open sound	●			●					158	
Teac V01050	180	One of the cheapest 3-head machines around, but it shows in very 'thick' sound	●			●					184	
Technics RS-AZ6	200	For those who can't afford the RS-AZ7; clarity over the widest bandwidth thanks to AZ thin-film head	●			●					1920	164
Technics RS-AZ7	270	Thin-film head gives a solid, almost CD-like bass and midrange. A clear advance in state-of-the-art	●			●					158	
Yamaha KX-490	200	Electricityingly transparent and capable deck whose only flaw is a trace of audible wow and flutter	●			●					158	
Yamaha KX-580SE	250	Subtle, engaging and transparent deck, with a lightweight tonality, but stability and strong detail	●			●					2043	171



HI-FI CHOICE LETTERS

TELL US WHAT YOU THINK ABOUT ALL MATTERS HI-FI AND WIN A GIFT FOR YOUR EFFORTS! SEE PAGE 19



CD/DVD Players

All CD players offer a basic selection of facilities, and some can keep you entertained for hours as you programme in disc names and track orders. All but the excessively inexpensive feature remote control. Most CD players can be upgraded by adding an outboard DAC (see below). To do this the player needs a digital output of either electrical or optical type. The former is preferable for the ultimate sound. A CD player can be split into two basic components: the disc drive or transport, and a device which converts the disc's digital bitstream into an analogue audio signal. This is called a digital to analogue converter, or DAC. Although most players are contained within a single box, expensive players are usually two-box affairs. The first new DVD players have not excelled with CD software.

B BEST BUY

R RECOMMENDED

E EDITOR'S CHOICE

KEY TO SPECIFICATIONS

- **ELECTRICAL DIGITAL OUTPUT:** For electrical connection to an outboard DAC
- **AES/EBU ELEC DIG OUTPUT:** Balanced digital output to be used with similarly equipped DACs
- **OPTICAL DIGITAL OUTPUT:** For optical connection to an outboard DAC
- **ST OPT DIG OUTPUT:** High-speed optical output to be used with similarly equipped DACs
- **BAL ANALOGUE OUTPUT:** Balanced analogue output for amplifiers equipped with balanced inputs
- **HEADPHONE SOCKET:** For 'can' users
- **VARIABLE OUTPUT:** Remotely adjustable output level (usually non-audiophile)
- **MULTI-DISC:** Equipped with a carousel or multi-tray system for continuous play of multiple discs
- **DAC TYPE:** BS - Philips Bitstream; MB - multibit; Hyb - hybrid of multibit and bitstream technologies; 1bit - single bit types eg MASH, bitstream, PWM, etc; CC - constant calibration
- **FACTSBACK REFERENCE:** The Factsback Reference number permits direct access to our faxed review reprint service. For full information, see the Factsback advert on the penultimate page of the magazine
- **ISSUE NUMBER:** The issue of *Hi-Fi Choice* in which an original review appeared. Factsback information page.

H High End Review

CD/DVD Players

SPECIFICATIONS

ELEC DIGITAL OUTPUT AES/EBU ELEC DIG OUT OPTICAL DIG OUT ST OPT DIG OUT BAL ANALOGUE OUT HEADPHONE SOCKET VARIABLE OUTPUT MULTI-DISC DAC TYPE FACTSBACK NO. ISSUE NUMBER

STATUS

PRODUCT	(£)	COMMENTS	ELEC DIGITAL OUTPUT	AES/EBU ELEC DIG OUT	OPTICAL DIG OUT	ST OPT DIG OUT	BAL ANALOGUE OUT	HEADPHONE SOCKET	VARIABLE OUTPUT	MULTI-DISC	DAC TYPE	FACTSBACK NO.	ISSUE NUMBER
B Acurus ACD11	899	First-rate if costly player, which combines a delightful transparency with an uncontrived naturalness	●									1bit	1962 166
Acoustic Precision Eikos	1,850	Seriously customised Pioneer with extraordinary resolution and world beating imaging and bass	●									1bit	165
R Alchemist Nexus APD32A	597	Refined treble, constrained yet capable bass and attractive all-round presentation	●									Hyb	169
AMC CD8A	150	Has balanced output, but is otherwise rather grey and unremarkable					●					BS	2071 172
R AMC CD9/DAC8	200	Beer-budget two-box system (player + DAC) is smooth, attractive and easy on the ear	●									CC	2261 179
Anthem CD1	1,595	Unusual combination of high-end player, complete with HDCD, and changer. Good, but noisy	●	●								MB	2219 178
B Arcam Alpha 7	330	Mildly rehashed favourite comes up smelling of roses	●									BS	1872 179
Arcam Alpha MCD	450	Excellent bass and natural midband, but just a touch of treble dryness, from this very listenable changer	●									● MB	2220 178
Arcam Alpha 8	520	Refined, intricately detailed but a little cautious. Should be broadly compatible with a variety of amps	●									BS	1873 163
B Arcam Alpha 8SE	600	Excellent (and very reasonably priced) HDCD-compatible player is a strong all-rounder	●				●					1bit	176
R Arcam Alpha 9	800	Refined, articulate player which employs new DAC technology to great effect	●									Ring DAC	188
Audio Research CD1	3,290	Suspends disbelief with a real yet obviously coloured sound. A rare proposition among CD players	●	●	●	●						BS	1875 163
Audio Note CD1	600	Easy on the ear, and for a valve player, easy on the pocket, but a bit Radio 2 flavoured	●									Hyb	188
AVI S2000MC2	899	A chip off the old block. This model's in-ye-face balance obstructs an otherwise finely detailed sound	●									MB	2179 176
R AVI S2000MC Reference	1,399	Lean, dry, high resolution player, built to outlast most of us. A fine performer in a sympathetic system	●									MB	169
Cambridge Audio CD4	150	Basic appearance and sluggish track access/track search belies its up and at 'em sound quality	●									Hyb	1268 147
R Cambridge Audio CD4SE	200	Among the best encountered at the price, considerably more refined and convincing than the CD4	●									BS	1877 163
B Cambridge Audio CD6	250	A sharp, articulate player, a real thoroughbred in fact, perhaps too sharp and lively for some systems	●						●			BS	159
Copland CDA-266	1,199	Simple yet elegant design is unexpectedly sophisticated under the skin, and effective in execution	●									MB	2183 176
Copland CDA-288	2,199	A gentle giant of a player that errs in favour of pastel shades rather than bold daubs of colour	●			●						MB	1880 163
R Cymbol CDP12	1,299	Clean, detailed and airy HDCD-equipped player with minimalist trappings	●									Hyb	2184 176
Cyrus dAD1	398	Typical excellent Cyrus packaging, but sonically more enthusiastic than polished	●									Hyb	188
Cyrus dAD3	598	A relaxed style of delivery that convinces with guile and subtlety rather than orchestral ordnance	●									BS	1887 163
R Cyrus dAD3Q	898	Lucid, transparent and uncontrived sound quality, superb build, and readily upgradeable	●				●					MB	1887 169
R Denon DCD-635	180	Modest presentation gives little clue to the thoroughbred electronics ticking away inside	●				●			●		MB	2075 172
Denon DCD-625	200	DCD-615 replacement is generously equipped but lacks sophisticated sound of its forebear	●									MB	1269 147
R Denon DCD-835	280	Refined version of Denon's multibit technology is a bit of a star	●				●					MB	184
Denon DCD-1550AR	350	Disappointing bland and ploddy sound from an immaculately constructed, high tech player	●									MB	2266 179
R Denon DCD-1015	350	Excellent, mid-range player - fast, fluid and lean	●			●						MB	1599 141
Denon DCD-3000	1,000	Sings with the temperament of a huge orchestra under the baton of a timid conductor	●				●					MB	1881 163
Exposure CD player	1,049	Slightly weak sounding, but otherwise well optimised, if costly player	●									MB	188
harman/kardon HD710	200	A player of integrity, but can sound a bit hard and rough when extended, and is amplifier fussy	●									1bit	159
R harman/kardon HD730	300	Competitive at the price, with a coloured but dynamic and outgoing sound, good features	●									BS	1957 166
R harman/kardon FL8300	300	Generally capable changer with relaxed sound and firm bass. Just a hint of roughness on occasion	●				●					MB	2220 178
R Helios Model 2	950	This player may not be to everyone's taste, but it is an individual, with some interesting things to say	●									1bit	2180 176
Helios Model 3	650	Disappointing entry level model from Helios lacks verve and transparency.	●									DS	188
R JVC XL-V184BK	120	Excellent budget player, well presented, a little opaque, but its heart is in the right place	●									1bit	2072 172
R JVC XL-V284BK	140	Featuring a new set of bitstream innards, this flexible player has a refined sound	●				●					1bit	1270 147
JVC XL-Z574	250	Strong resolving power, good midband and dynamics, but slightly raw and thin	●									1bit	159
R JVC XL-Z674BK	300	Even-handed, but glosses over the most intimate moments	●									1bit	1637 151
R Kenwood DP-3080	170	Bold, dynamic and outgoing sound, though somewhat aggressive. Poor build quality and finish	●				●					1bit	159
R Kenwood DP-4090	250	Focuses a clear, wide aperture lens on the music - and has CD Text too!	●				●					1bit	2076 172
Kenwood DP-5090	300	Disappointing senior brother to the excellent DP-4090, but surface interface is good	●									1bit	2267 179
R Kenwood DP-7090	400	A lively and compelling performer with an even-handed and coherent disposition	●				●					MB	1885 163
Linn Mimik	875	Useful multi-room features matched to strong bass, but poor imagery and transparency	●									Hyb	1762 155
Marantz CD-48	200	Somewhat inconsistent, middle ranking player which hints at better things	●									1bit	2077 172
R Marantz CD-67 Mk II	250	The digital equivalent of a safe pair of hands. Smooooth	●			●						BS	2268 179
Marantz CD-670SE MkII	300	Lacks dynamic consistency to justify the stunning performance with simple material	●				●					BS	184
R Marantz CD-63 MkII Kl Sig	500	It's the quintessential sound of Marantz - warm, open, and smooth almost to a fault	●				●					Hyb	169
R Marantz CD-17	800	Fabulous packaging and an excellent all round performer: smooth, detailed and consistent	●									BS	1763 155
R Marantz CD-17KIS	1,100	Minor QC problems aside, this is a superbly turned-out machine, but ultimately a little bland	●				●					BS	2181 176
R Mercus Tanto	1,395	Believable tonal colours and textures, refinement takes preference over dynamics - but it's not cheap	●									DS	169
R Meridian 506	1,100	Revised 506 includes MSR remote and a new D/A chip, which makes it livelier and more detailed	●				●					1bit	2182 176

CONTINUED

CD/DVD Players

STATUS

SPECIFICATIONS

PRODUCT	(£)	COMMENTS	SPECIFICATIONS										ISSUE NUMBER			
			AES/EBU ELEC DIG OUT	OPTICAL DIG OUT	BAL ANALOGUE OUT	ST OPT DIG OUT	HEADPHONE SOCKET	VARIABLE OUTPUT	MULTI-DISC	FACTSBACK NO	TYPE	DAC				
Monrio Privilege	995	Costly and well-engineered, but ultimately rather heavy-handed and dull, if refined player	●													MB 1963 166
Musical Fidelity E60	300	This entry-level player lacks proper stereo localisation and clarity	●			●										BS 1959 166
Musical Fidelity E624	500	Similar to X-RAY, but both better sounding and cheaper	●			●										MB 188
Musical Fidelity A2	500	Warm (too warm), attractive and open player, a great improvement on (related) E60	●			●										BS 169
Musical Fidelity X-RAY	799	Brilliantly packaged and clean but slightly antiseptic sounding player	●			●										MB 184
Myryad T-10	400	Rather ordinary player fails to shine with good music recordings	●													DS 184
Myryad MC100	700	A little extra get-up-and-go wouldn't go amiss, but its sheer maturity and composure ensure listenability	●			●										BS 1889 163
Myryad MCD500	1,300	Well-built, attractive player, showing much promise, but can be a little heavy-going on audition	●													1bit 2185 176
NAD 522	170	Crude, mechanical sounding player fails to tickle the music buds														1bit 2262 179
NAD 512	250	Simple, well-focused presentation, and articulate with it. Hard-nosed quality is not everyone's cup of tea	●													1bit 159
NAD 514	370	Boisterous sound, but undeniably attractive	●													BS 1639 151
NAD S500	1,100	24-bit player with considerable transparency and bass grunt	●			●										MB 189
Naim Audio CD3.5	1,000	Forward and explicit sound needs careful system matching														Hyb 188
Naim Audio CD2	2,000	Provides bags of detail with a solid stereo focus but not all the romanticism we know to be possible														MB 1890 163
Naim NACDSII/XPS	5,625	Brings you the Naim sound, but for once doesn't have to rely on Naim ancillaries to get the results														MB 188
Onkyo DX-7210	260	Well-bred CD player features an unusual digital filter, is smooth and cultured without appearing boring	●			●										BS 1273 147
Onkyo DX-7510	400	Strongly flavoured, assertive sound	●			●										BS 1640 151
Orelle CD-100EA	649	Excellent imagery, timing and transparency, and readily upgraded or reconfigured	●			●										MB 1964 166
Parasound C/DP-1000	499	Comes on like a high end player, but ultimately sounds a tad weak and soft-centred	●													Hybrid 184
Philips CD-721	130	Surprisingly well-sorted, articulate if slightly glossy and attractively presented sound. Captive signal lead														1bit 159
Philips CD751	150	Inconsistent and occasionally opaque and scrawny sounding cheapie	●													1bit 172
Pioneer PD-S705	300	This machine was loved by some for its articulation and disliked by others for sounding too impressive!	●			●										BS 1891 163
Pioneer PD-S707	300	Idiosyncratic Legato Link dominated sound, but always subtle and interesting	●			●										MB 184
Pioneer PD-F906	350	Interesting appearance and concept, but this changer's sound is lacklustre and ergonomics frustrating	●			●										1bit 2223 178
Pioneer PD-S904	400	Too much legato – literally – in sound, but a very smooth performer	●			●										1bit 1641 151
Pioneer PDS-06	550	Technologically sophisticated. Pioneer's first multi-bit player for years is polished and capable	●			●										MB 2176 176
Pioneer PD-S505 Precision	460	Assured, fluid-sounding player, with great spatial coherence	●			●										1bit 1965 166
Primare D20	799	Well presented player doesn't quite cut the mustard, though it performs promisingly	●													BS 188
Quad 77	900	A true thoroughbred combining a penetrating insight into detail with poise rarely found at the price														Hyb 1893 163
Revox Exception E426	2,250	Very stylish with a light, agile sound that extends superbly and has fine timing	●													BS 182
Roksan DP3P	1,495	Dramatic and compelling. Classical listeners should be ready to 'air conduct' when auditioning	●													BS 1896 163
Roksan Caspian	895	Solid, articulate, and fundamentally well-engineered player, but with some subtle low-level limitations	●													Hyb 169
Rotel RCD-971	350	Odd disc handling logic, but bold, detailed and refined sound make this a must	●			●										MB 184
Rotel RCD-970BX	375	A combination of solid build, useful facilities and an attention-grabbing sound make this a winner	●													BS 1897 163
Sherwood CD-4030R	180	Easy on the ear, smooth-sounding player, with limits set by the slightly soft, compressed quality				●										BS 159
Sherwood CD1	1,100	A very neutral, even handed sounding player with a rather flat, lifeless sound. Beautiful construction	●			●										BS 1899 163
Sony CDP-XE310	140	Excellent value and bright as a button, but can sound OTT in some systems				●										1bit 179
Sony CDP-XE510	180	Souped up CDP-XE500 which tells a rather bland and unengaging story				●										1bit 172
Sony CDP-XB720E	200	Good basic performance and a number of filter settings make this an interesting player for tweaks	●			●										Low bit 184
Sony CDP-XE900E	300	Refined and analytical disc scavenging tool, some distinctive colorations make auditioning vital				●										BS 159
Sony CDP-XA20ES	450	High tech, with a long list of gadgets, oddly configured player that ultimately sounds less than compelling	●			●										1bit 2177 176
Sony CDP-X3000ES	500	Shoobox format player, looks to die for, switchable digital filters to tweak the already excellent sound	●			●										BS 169
T+A CD1210R	1,185	Intriguing player with rather pushy basic sound, but has switchable digital filters.	●													DS 188
TAG McLaren CD20R	1,249	Dry and unatmospheric, but plenty of presence – recommended with caution	●													BS 188
Teac CDP-3450SE	200	For once a budget player where gadgets take second place to respectable, budget amp-friendly sonics	●			●										1bit 1960 166
Teac CD-5	350	Bright, breezy and up-beat – but short in the trouser department	●			●										BS 1643 151
Teac VRDS-7	599	Although bold and outgoing, this player can sound both intrusive yet lacking in fine detail	●			●										BS 1769 155
Teac VRDS-8	600	Superb build quality is matched to good, but not exceptional sound quality	●			●										MB 184
Teac VRDS-9	700	Well-presented. This Teac is crisp, yet shallow, and inconsistent in sound quality and partnering skills	●			●										1bit 2178 176
Teac VRDS-10SE	850	Superbly built and presented, but rather leaden bass, with an over-prominent mid/top	●			●										BS 169
Teac VRDS-25	1,300	A solid player in all respects, combining powerful sound with state-of-the-art technology	●			●										MB 1903 163
Technics SL-PG480A	130	Full driving sound, but somewhat uneven in balance with a unsubtle, slightly harsh top end														1bit 159
Technics SL-PS670D	200	Fine, middle ranking player which sounds solid, sometimes even a little stolid				●										1bit 2264 179
Technics SL-PS770D	250	High tech and well built technology battleship which smooths the rough edges off the music				●										BS 2080 172
Technics SL-MC410	250	If you fancy a CD player that holds 111 discs, this one's cheap, pretty capable, and easy to use														Hyb 2224 178
Thule Spirit CD100	600	Definitely a try before you buy machine, but the bass and mid are excellent	●													DS 188
Trichord Genesis	549	Breathed-on Pioneer is warm and mellifluous, but ultimately lacks drive and authority	●													Hyb 169
Trichord Revelation	799	Well-ordered and clean sound that may be a little too refined for some, images well	●													1bit 1966 166
XTC CDP-1	1,250	Bright and sometimes abrasive, but detailed player	●													MB 2186 176
Wadia W830	3,000	Envelope busting dynamics, power and imaging in a rather unexciting box (digital volume control)														MB 183
Wadia 860	7,450	Flagship CD player has unique digital volume control, superb neutrality and awesome bass	●			●										MB 189
Yamaha CDC-665	220	This player offers many features and highly listenable sound, with tidy and tuneful bass and good imaging	●			●										1bit 2225 178
Yamaha CD-X993	400	A bit of a lush, though the sound is singularly free of grain, and equipment levels are strong	●			●										BS 184
TRANSPORTS																
Linn Karik	1,850	Based on early Linn transport, the Karik is dry but very positive, detailed and engrossing	●			●										1323 144
PS Audio Lambda	2,250	With Ultralink Two, sound positively sparkles with colour and resonant detail	●			●										1106 133
Roksan Atessa ATT-DP3	1,295	Not the most detailed or refined but capable of sounding exciting with the right material	●			●										1bit 1867 162
Teac VRDS-T1	550	Superb quality engineering is mated to tidy and composed sound (tested with D-T1)	●			●										1325 144
Theta Data Basic II	2,397	Uses a Philips CDM9 Pro mechanism and works a treat with more lively DACs	●													1494 130
Thorens TCD2000	999	Lively presentation not helped by rather loose bass and splashy treble. (Tested with TDA 2000 DAC)	●			●										1867 162
Trichord Digital Turntable	699	Very detailed, precise, controlled yet involving; a first-rank performer	●			●										1867 162
Wadia 8	3,195	Budget version of Teac's VRDS mechanism in a fancy case; too expensive for the performance on offer	●			●										1495 130

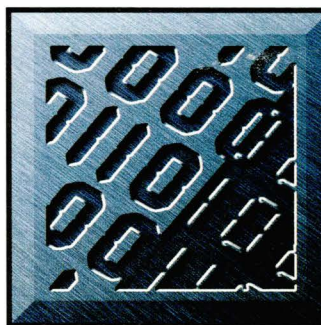
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CD/DVD Players

SPECIFICATIONS
 ISSUE NUMBER
 FACTSBACK NO.
 DAC TYPE
 MULT-DISC
 VARIABLE OUTPUT
 HEADPHONE SOCKET
 BAL ANALOGUE OUT
 ST OPT DIG OUT
 OPTICAL DIG OUT
 AES/EBU ELEC DIG OUT
 ELEC DIGITAL OUTPUT

STATUS

PRODUCT	(£)	COMMENTS	SPECIFICATIONS										
DACS													
Alchemist TS-D-1	300	24/96-equipped DAC sounds tidy but a little shut-in with both 16-bit CDs and 24-bit, 96kHz DVDs										BS	187
Audio Note DAC1	675	Oddball DAC with manual de-emphasis switch. Needs a high preamp input impedance or bass will suffer										MB	127
Linn Numerik	1,500	A new 20-bit DAC and revised Karik transport have cleaned up; but sounds a bit dry and humourless										MB	1323 144
Musical Fidelity X-24K	300	24/96 ready with a warm, natural sound and good soundstaging (tested with Pioneer DV-717)										MB	187
PS Audio UltraLink 2 HDCD	2,590	The sound positively sparkles with colour and resonant detail. (Tested with Lambda transport)										MB	1106 133
PS Audio Reference Link	4,550	Consolidates reputation of PS Audio for high performance digital electronics										MB	1069 132
Roksan Attessa ATT-DA2/DS5	1,145	Not the most detailed or refined but capable of good excitement with the right material										1bit	1867 162
Teac D-T1	500	Teamed with VRDS-T1 for test, this superb quality unit is tidy and composed										BS	1325 144
Teac D-700	600	With P-700, the D-700 may lack the resolution, but is bubbly and entertaining										MB	120
Thorens TDA2000	700	Lively and up-front presentation not helped by rather loose bass and splashy treble										BS	1867 162
Trichord Pulsar Series One	1,395	Very detailed, precise, controlled yet involving; a first-rank performer. Switchable phase, dither etc										Hyb	1867 162
DVD PLAYERS													
Denon DVD-5000	1,600	The first DVD-V player that ain't bad as a CD player. A fine musical device										BS	187
Denon DVD-3000	700	Enjoyable rather than analytical, includes 24/96 and AC-3/MPEG-2 Audio										BS	180
Micromega Premium DVD	1,500	Unique lack of regional coding constrictions but both DVD and CD replay are compromised										BS	183
Panasonic DVD-A350	700	24/96 converter and AC-3 & MPEG-2 Audio included, well balanced, if slightly blurred and shut in										BS	180
Pioneer DV-505	450	Plenty of analysis, with a slightly ragged edge. Rescued by the price & S/PDIF capabilities										BS	180
Pioneer DV-717	600	DVD-V transport with 96/24 dig o/put, concedes only image depth to like priced CD players										1bit	186
Pioneer DVL-909	900	DVD and LD player: self-recommending to AV nuts; musically detailed but occasionally seems disjointed										BS	180
Sony DVP-S715	600	24/96 converter for DAD compatibility, sharp, forward, but slightly unsubtle sound										BS	180
Toshiba SD3107B	550	Dynamic sound and good stereo which lacks lowest stratum of detail										BS	180



Digital Recorders

Domestic digital recording has been possible since the launch of digital audio tape (DAT) in the '80s. Since then DAT has remained expensive and largely esoteric, favoured only by well-heeled or professional users. Digital Compact Cassette and MiniDisc (MD) were launched in the early '90s but only MD has stayed the course. A little later came domestic CD-Recorders using CD-R discs, while the latest twist is the arrival of re-recordable CDs known as CD-RW discs. The recording quality hierarchy is as follows: DAT, CD-R/CD-RW, MD. MD is probably the most convenient to use, and offers sophisticated editing facilities, while CD-R is ideal for making digital 'clones' of prerecorded CDs. DAT is the medium of choice for high-quality location recording.

KEY TO SPECIFICATIONS

- **FORMAT:** Type of recorder – see left for descriptions.
- **DAC TYPE:** Digital to analogue converter: BS - Philips Bitstream; MB - multibit; Hyb - hybrid of multibit and bitstream; 1bit - single bit types such as MASH, bitstream, PWM etc
- **ADC TYPE:** The analogue to digital converter (ADC) converts sound into digits during live recording. Types of ADC are as per DACs (qv).
- **PORTABLE:** Battery operable, but not necessarily personal-stereo-sized.
- **OPTICAL IN/OUTPUTS:** Digital socketry for optical cable.
- **ELEC IN/OUTPUTS:** Digital socketry for electrical cable.
- **FACTSBACK REFERENCE:** The Factsback Reference number permits direct access to our faxed review reprint service. For full info, see the Factsback advert on the penultimate page of the mag.
- **ISSUE NUMBER:** The issue of *Hi-Fi Choice* in which an original review appeared.

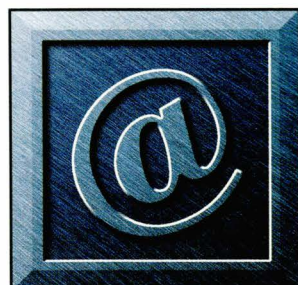
B BEST BUY **R** RECOMMENDED **E** EDITOR'S CHOICE

STATUS

Digital Recorders

SPECIFICATIONS
 ISSUE NUMBER
 FACTSBACK NO.
 ELEC IN/OUTPUTS
 OPTICAL IN/OUTPUTS
 PORTABLE
 ADC TYPE
 DAC TYPE
 FORMAT

PRODUCT	(£)	COMMENTS	SPECIFICATIONS														
MINIDISCS																	
Denon DMD-1000	300	A good machine, but it still doesn't manage to shake off the MiniDisc plague of losing the listener's interest										MB	BS	N	●	●	184
Denon DMD-1300	500	Sound sometimes lacks integration but tonal balance is good and it handles loud music with panache										MD	BS	BS	●	●	2193 177
Kenwood DM-9090	550	Slight sibilance and image vagueness do not detract from excellent balance and solid bass										MD	BS	BS	●	●	2194 177
Onkyo MD-121	450	Mid-sized deck that sounds slightly coloured at times, though immediate and lively										MD	BS	BS	●	●	2195 177
Sharp MDR3H	300	Nifty machine combining a 3-disc CD changer with a MD recorder. Sound on both is rather below par, though										BS	BS	N	●	●	184
Sharp MD-R2	300	Budget recorder that loses little or nothing in comparisons with much more expensive models – highly capable										MD	BS	BS	●	●	2196 177
Sony MDS-JB920	300	One of the better MD decks, its sound is neutral and dynamic. European Audio Recorder of the Year '98-'99										BS	BS	N	●	●	184
CD RECORDERS																	
Philips CDR-880	499	Capable of making perfect copies of CD digital, and very acceptable copies of anything analogue too										BS	BS	N	●	●	184
Pioneer PDR-555RW	480	Competitor to Philips' CDR880; it can't make perfect copies but has the edge in replay and analogue record sound										BS	BS	N	●	●	184
Pioneer PDR-04	700	Scaled down version of the PDR-05 with auto level setting but all the socketry and features you need to make CDs										CD-R	BS	BS	●	●	171
Pioneer PDR-05	1,000	The first domestic CD-R deck – excellent sound quality										CD-R	BS	BS	●	●	1652 152



HI-FI CHOICE WEBSITE

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Headphones

There are several different ways of making a headphone. The most expensive models employ electrostatically-driven diaphragms within an open-backed earcup. Most mid-price designs feature dynamic, moving-coil-driven diaphragms in open, semi-open or closed-back designs. An open-backed headphone can sound remarkably transparent, but also permits the ingress of external noise. Closed-back designs keep out unwanted sound, but may be less comfortable to wear and more coloured. The latest development is the cordless headphone using either infrared light or, more recently, radio waves. Quality is improving, but has yet to match the best corded designs.

KEY TO SPECIFICATIONS

- **TYPE:** Operating principle: D - dynamic; E - electrostatic.
- **SUPRA-AURAL:** Where a flat pad presses on the outer ear.
- **CIRCUMAURAL:** Where the earcup encloses the ear.
- **OPEN BACK:** Offers an open sound but lets in noise.
- **CLOSED BACK:** Keeps out external noise.
- **MASS (g):** Mass in grams
- **IMPEDANCE (Ω):** Load offered to the headphone amplifier. Many headphones offer a significantly higher value than loudspeakers, for example, but this does not mean they will be incompatible with the majority of amplifiers.
- **3.5MM JACK ADAPTOR:** Compatible with mini-jacked components, eg personal stereos.
- **FACTSBACK REFERENCE:** The Factsback Reference number permits direct access to our faxed review reprint service. For full info, see the Factsback advert on the penultimate page of the magazine.
- **ISSUE NUMBER:** The issue of *HI-FI Choice* in which an original review appeared.
- **High End Review**

B BEST BUY **R** RECOMMENDED **E** EDITOR'S CHOICE

Headphones

SPECIFICATIONS

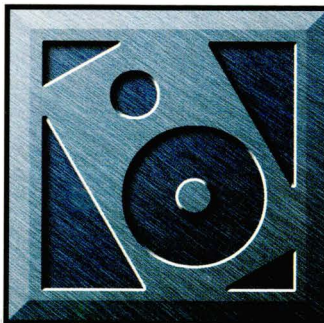
STATUS

PRODUCT	(£)	COMMENTS	TYPE	SUPRA-AURAL	CIRCUMAURAL	OPEN BACK	CLOSED BACK	MASS (g)	IMPEDANCE (Ω)	3.5mm JACK ADAPTOR	FACTSBACK NO.	ISSUE NUMBER	
AKG K1000	700	One of the best dynamics on the market, hooks directly into speaker outputs	D					270	120			99	
AKG K 240 DF	100	Inoffensive 'phones that are very laid back, if lacking in grunt	D					240	600			186	
Audio Technica ATH910PRO	80	The closed back 910s are an improvement on the 909s, with a nice rhythmic quality rarely found	D					280	40			55	
Audio Technica ATH-M40	120	Incredible detail and honesty from these classically designed studio 'phone	D					250	60			186	
Beyer DT311	50	Uncharacteristically tight, unrefined sound quality from this otherwise well engineered 'phone	D					124	40		1098	133	
Beyer DT411	63	A reasonable but not very thrilling headphone that doesn't really offer enough at the price	D					120	250			111	
Beyer DT431	81	Nice looking 'phones that may not be the best players on the field, but will always give 100 per cent	D					210	40			186	
Beyer DT100	160	Rugged, modular professional design, but bass is woolly and treble lacks detail	D					350	600			157	
Beyer DT511	106	Superb midband clarity and speed slightly at odds with soft bass. High tingle factor, even so	D					200	250		2063	172	
Beyer DT531	135	A good buy for serious, heavy-duty music making	D					245	250			144	
Beyer DT831	140	These provide silky, smooth textures in abundance and we're not just talking about the velvet ear pads	D					295	250			186	
Beyer DT911	170	Probably too revealing for many headphone amps: these are very subtle and fine, if expensive cans	D					275	250			111	
Denon AH-D550	80	A competent 'phone with integrity, but little panache or charisma. Hard headband causes brain strain	D					200	35		1801	157	
Denon AH-D750	130	Loud and gutsy, meaty bass, good with rock and dance. Can sound thick and clumsy	D					250	30		2063	172	
Grado SR-40	45	Cheap and nasty appearance largely redeemed by cheerful, up-beat sound. Very comfortable	D					120	32		2064	172	
Grado SR-80	100	Open and dynamic with pedantically open mid-band. Crude physical design, rough frequency extremes	D					60	8		1801	157	
Grado SR125	150	What these 'phones lack in style they make up for ten-fold in musical quality	D					200	32			186	
Grado SR-225	200	Warm, darkly-coloured tonally and ultimately lacking in clarity, but true to the spirit of the music	D					200	32		1883	163	
Jecklin Float Model 1	79	While very unusual in appearance, the Floats give remarkable sound quality and openness	D					400	200			55	
Jecklin Float Model 2	99	Helmet shaped, but open sounding and comfortable in the long term, despite lack of adjustment	D					400	200			63	
JVC HA-W60	49	Remarkable lack of interference and hiss ameliorates adequate sound of this cordless design	D					165	I/R			172	
JVC HA-D910	65	Broadly acceptable if unexciting design with low level losses and some colorations	D					220	32			121	
JVC HA-W200RF	75	Distinct lack of hiss from these FM cordless 'phones ensures that detail and depth are easily heard	D					280	20,000			186	
Koss R/100	100	Rather cheap looking 'phones that supply good detail but are severely lacking in midrange excitement	D					215	60			186	
Pricide Ergo Model 2	140	Still has much of the spaciousness of the Float from which it is derived, but coarse mid/top	D					380	100			1892	163
Philips SBC 3396	70	Remarkably airy for closed-back designs. Fine tonal balance, punchy delivery. Amazing for money	D					255	32		2064	172	
Philips SBC HP900	90	Sharper, snappier midrange than 3396: initially impressive but blows it on balance and listenability	D					200	32		2065	172	
Sennheiser IS 380	55	As close as you'll get to real hi-fi with infra-red phones at this price. Inevitable hiss spoils the illusion	D					192	I/R			172	
Sennheiser HD 455	55	Inoffensive, if nondescript sound; modular, but can become dislodged from head	D					185	60		1801	157	
Sennheiser HD 500	70	A disappointing pair that offer good stereo-imaging, but little else	D					210	32			186	
Sennheiser HD 475	80	Elegant, uncluttered sound and very comfortable but lean bass saps satisfaction	D					120	60		2065	172	
Sennheiser RS 400	80	FM cordless 'phones that are very wearable, but slightly woolly sounding with interference problems	D					160	N/A			186	
Sennheiser HD 545	125	Fine all-rounder that takes all styles of music in its stride. Ear-clamping headband	D					255	150		2066	172	
Sennheiser HD 565 Ovation	150	Wide bandwidth design which is refined, expressive and extremely comfortable	D					255	150		1801	157	
Sennheiser HE 60/HEV70/UK	998	Very nearly a superb electrostatic, with a pure midband, but top end is sibilant and edgy	E					260	N/A			1898	163
Sony MDR-605LP	50	Funky looking headphones that have a very bold, but tiring sound, with coloured bass	D					145	40			186	
Sony MDR-CD770	100	Neutrality and comfort make the Sony easy to live with. Correct-sounding too, yet musically unrewarding	D					-	-		1801	157	
Sony MDR-CD1700	200	Astonishingly detailed, uncoloured and free of the usual artefacts from a sealed back headphone	D					325	32		1901	163	
Sony MDR-F1	100	Natural, easy-going sound teamed with great looks and comfort. Shame about the lightweight bass	D					300	12		2066	172	
Technics RP-DJ1200	130	Functional design with head-pulping bass and muggy tonal balance. Good job they're sweat-proof	D					230	32		2067	172	
Stax Lambda Nova Basic	449	Refined, articulate, yet with real presence - and a notable bargain by electrostatic standards	E					347	N/A		1902	163	
Vivanco Cyberwave FMH3000	40	The only cordless 'phone to offer genuine walkabout freedom, but sounds like a cheap FM tuner	D					210	FM			172	
Vivanco IR5800	50	Consistently musical infra-red design. Doesn't reach for sonic heights so hiss can be forgiven	D					226	I/R			172	
Vivanco SR650	50	Unusually comfortable 'phone with excellent detail resolution but aggressive	D					175	-		1801	157	
Vivanco SR750	60	Coosetting physical design, attractive sound, though suffers overhang and lacks ultimate dynamics	D					188	-		1801	157	
Vivanco FM7980	80	A fair amount of whine and crackle detracts from 'phones which are otherwise very listenable	D					280	9,000			186	
Vivanco FM8180	99	Well thought out features and a better than average sound are, at times, marred by intrusive hiss	D					240	9,000			186	



HI-FI CHOICE HELP

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Hi-Fi Loudspeakers

As the last link in the hi-fi chain, loudspeakers are at the mercy of incoming signals. Nevertheless, distortions introduced by loudspeakers (and rooms) tend to be the most obvious. The average loudspeaker comprises an enclosure containing two drive units. Inside the box, a simple electrical circuit (the crossover or dividing network) splits the incoming, full-frequency-range signal into the right portions for specific drive units to handle: highs to the 'tweeter', lows to the 'woofer'. For any given box size, designers must balance the 'sensitivity' of the loudspeaker (how loud it goes for a given electrical input) against bass extension (how low it goes). Subwoofers augment bass and are either passive (unamplified) or, preferably, active (self-amplified).

KEY TO SPECIFICATIONS

- **SIZE wXhXd (cm):** Width by height by depth in centimetres.
- **FLOORSTANDER:** Requires no stand support.
- **SENSITIVITY (dB/W):** How much sound results for a given electrical input – the higher the figure, the louder the speaker.
- **IMPEDANCE (Ω):** Impedance, measured in Ohms, indicates how much resistance the speaker presents to an amplifier. As impedance decreases, demands on an amplifier increase.
- **BASS FROM (Hz):** The lowest frequency that a speaker can reproduce effectively.
- **FREE SPACE:** Speakers which should not sit close to walls.
- **CLOSE TO WALL:** Speakers which should sit between 3 and 12cm from the rear wall.
- **FACTSBACK REFERENCE:** The Factsback Reference number permits direct access to our faxed review reprint service. For full info, see the Factsback advert on the penultimate page of this issue.
- **ISSUE NUMBER:** The issue of *Hi-Fi Choice* in which an original review appeared.

B BEST BUY

R RECOMMENDED

E EDITOR'S CHOICE

Hi-Fi Loudspeakers

SPECIFICATIONS

- SIZE wXhXd (CM)
- FLOORSTANDER
- SENSITIVITY (dB/W)
- IMPEDANCE (Ω)
- BASS FROM (Hz)
- FREE SPACE
- CLOSE TO WALL
- FACTSBACK NO.
- ISSUE NUMBER

STATUS

PRODUCT	(£)	COMMENTS	SIZE wXhXd (CM)	FLOORSTANDER	SENSITIVITY (dB/W)	IMPEDANCE (Ω)	BASS FROM (Hz)	FREE SPACE	CLOSE TO WALL	FACTSBACK NO.	ISSUE NUMBER
Acoustic Energy Aegis One	150	At a new low price, this has a very natural and transparent midband, erring a little on the dull side	19,36,5,24		87	6	40	●			187
Acoustic Energy AE200	250	Metal-cone miniature has a tendency to shout but is still lots of fun, and well built too	18,5,30,25		87	6	40	●		2199	177
Acoustic Energy AE109	350	Lots of mass-loaded twin-driver speaker for the money, especially for loud, driving bass	18,90,25	●	88	4	25	●		1904	164
Acoustic Energy AE120	500	Attractive presentation and good sonic headroom, but a heavy, uneven overall balance	18,98,28	●	89	4	25	●		1904	170
ATC SCM20	1,599	Massively built, invariably informative but the rather forward presentation can be uncomfortable	24,44,31		83	8	28	●	●		86
Audio Gem Emerald	540	Pretty compact floorstander with lively if lightweight sound	18,94,21	●	87	6	40	●		1905	164
Audio Note AN-J/B	799	Light damping and local unevenness add some coloration, but don't spoil the speaker	38,58,25		93	8	25	●			110
Audio Note AN-E/B	1,299	Coherent, dynamic and transparent, with extended bass and high sensitivity – but ugly!	36,84,28	●	94	8	20	●			106
Audio Physic Tempo	1,999	Tall and unusually-styled floorstander has stunning stereo but suspect bass tuning	22,107,47	●	88	8	28	●	●	1344	143
Audiovector M2	1,399	High-class, smooth and slightly laid-back performer has driving bass. It's upgradeable, too!	20,102,30	●	89	4	22	●			180
AVI Positron	899	This 'mini-floorstander' is capable of great precision and delicacy, but in a rather small scale way	17,5,74,24.5	●	85	6	40	●		2130	174
B&W CDM2SE	400	Beautifully styled and finished, respectable midband. Lacks definition towards frequency extremes	22,32,25		87	6	40	●	●		183
B&W DM302	150	Highly competent and neutral all rounder, clever Prism enclosure	19,32,22		88	4	45	●	●	1778	156
B&W DM601	199	Great main driver for the price, entertaining dynamics	20,5,35,5,23		88	6	30	●		1779	156
B&W DM602	300	Prefers tall stands and space, but offers impressive midband dynamic and musical tension	24,49,31		90	8	30	●		1654	152
B&W DM305	350	Ridged paper cone gives lively sound, clever box, but a little uneven	22,87,31	●	89	4	40	●		1908	164
B&W DM603	500	Squat floorstander with decent dynamics and well-judged, restrained balance; bass could go deeper	23,5,88,29	●	89	7	45	●		2030	170
B&W CDM1SE	600	A great looking stand-mount with one of the best midbands around, and a subtle blend of other qualities	22,37,29		88	5	40	●		2209	177
B&W CDM7	1,000	A combination of serious welly and physical elegance; but a basic lack of midband smoothness	22,97,29	●	90	4	22	●		2151	174
B&W Nautilus 802	6,000	Out standing example of the high tech speaker builder's art, needs real power but gives real sound	39,111,55	●	91	8	34	●			183
B&W Nautilus 801	8,500	The 801 is a magnificent loudspeaker in nearly every respect, but it is one that likes to play loud	52,111,69	●	91	8	34	●			186
Cabasse Farella 400	950	Exciting but very upfront-and-in-her-face sound. High sensitivity, fine build and good dynamic drive	26,92,32	●	92	5	28	●			180
Castle Isis	250	A great miniature at a competitive price. Sound is lightweight but very coherent, with a fine overall balance	17,35,5,21		87	8	45	●		2019	170
Castle Kendal	500	A beautifully finished compact floorstander with a decidedly forward but communicative sound.	17,76,20	●	86	6	45	●		2204	177
Castle Severn 2	539	Carbon fibre cone gives lovely, subtle midband but treble is a bit dull and bass a bit thumpy	21,84,25	●	87	8	30	●		2120	174
Castle Avon	730	Lovely box and lovely voices from carbon-fibre composite cone	22,91,28	●	85	8	22	●		1909	164
Castle Harlech	880	Handsome big-sounding floorstander, great value and dynamic midrange	20,96,33	●	88	8	28	●		1820	160
Castle Howard S2	1,200	Able fills the gap between Chester and Winchester, has a rich, laid-back balance	26,104,41	●	90	8	40	●		1078	132
Celestion 12i	119	Not without virtue, but the relentless enthusiasm and mid-band colorations can become wearing	19,31,21		88	6	45	●		2254	179
Celestion 23i	300	Cosmetically flawed, but the bottom end has fine get-up-and-go, and works well with dance tracks	24,86,27	●	89	6	30	●		2200	177
Celestion A1	899	Rich, warm and laid-back, but a true quality sound; lovely build	24,41,35		88	6	25	●		1910	164
Celestion A2	1500	Full scale, big sound from ultra-elegant floorstander. Smooth and slightly laid back presentation	24,93,39	●	89	6	22	●			180
Cerwin-Vega VS10	350	Not very refined but extremely balsy; these rock boxes have no shortage of gung-ho	33,70,29	●	95	6	37	●		1758	155
Chario Syntar 100	249	Pretty with a pleasantly easygoing balance, but not the most communicative or exciting sound around	18,32,27		87	6	45	●		2020	170
Chario Hiper 1000	300	Classy looking stand mount has a sweet, easygoing sound with fine midband voicing	18,35,28		87	4	45	●			187
Chario Academie	1650	Pricy Italian stand mount, has high class sound and appearance. Solid walnut enclosures	25,40,31		84	8	40	●			180
Dali 606	400	A big bruiser at a tempting price. Sounds refined and polite, but also packs some punch	22,97,32	●	91	4	25	●		2121	174
Dynaudio Audience 5	400	Follows the Dynaudio tradition for fine midband transparency, but the overall timbre is a bit thin	20,31,26		85	4	40	●	●	2205	177
Dynaudio Audience 50	577	This stand-mount doesn't look big, but sound quality can match many models at twice the price	20,33,25		86	4	30	●		2122	174
Dynaudio Contour 1.8 MkII	1,842	Wonderful voice-band delicacy and loads of deep bass from a very elegant and compact box	21,95,29	●	85	4	20	●		1986	167
Eltax Liberty 3+	150	Bright, bassy, laid back and attractively evenhanded, but dynamically challenged. Big box for your dosh	20,5,38,34		86	4	25	●			187
Eltax Linear Response	249	A curiously dumpy shape, but smooth, laid-back performer is easy on the ears, with fine tonal accuracy	25,35,32		85	4	40	●		2201	177
Epos ES12	499	High quality luxury stand-mount has great midband and stereo imaging	20,38,25		85	8	45	●		1823	160
Epos ES14	675	Substantial stand-mount delivers delightful midrange focus and delicacy with good bass control	23,49,29		87	8	25	●			98
Epos ES25	1,655	Handsome floorstander with a rather uneven and bass heavy balance	24,90,35	●	88	6	22	●		1346	143
Faraday Siren	445	High mass concrete cabinet is let down by imbalance of ageing driver combination	25,27,46		90	4	48	●			94
Gale 2i	140	Unspectacular sound and appearance fail to help this solid little miniature stand out from the crowd	22,40,27		88	7	40	●		2021	170
Genexa Pro	160	Terrific treble and upper-mid but coloured and cuppy lower-mid and bass. A mixture of genius and grot.	14,27,14		86	8	90	●		2255	179
GLL Imagio IC130	500	Lots of speaker for the money, but sound is decidedly dull and shut in	22,112,29	●	88	4	20	●		1824	160
Heybrook Prima 2	159	Great openness, speed and timing. Sounds fresh and vital, though sometimes lacks scale and weight	20,29,18		87	6	50	●		2256	179
Heybrook Heylette B	200	Attractive traditional-style near-miniature with classy main driver now has fine overall balance to match	19,5,30,22		88	4	45	●			187
Heybrook Heylios	389	Great all-round performance in a pretty package at a sharp price	24,36,27		87	6	25	●		1912	164
Heybrook Heylo	439	Good vocal reproduction, but sounds thin and bass seems an afterthought	23,73,19	●	88	8	30	●		1658	152
Heybrook Ultima	649	Has the bass wallop to justify its dual hi-fi/home cinema roles, but doesn't excite	22,97,29	●	89	6	45	●		2126	174
Heybrook Octet	1800	Good-looking but pricy floorstander with novel drivers and a fine ceramic-enclosure midband	24,97,31	●	90	6	25	●			180
Infinity Delta 60	700	Striking and massive floorstander, lots of speaker for the price, but seems a victim of its own complexity	16-29,115,41	●	90	4	25	●			183

CONTINUED

Hi-Fi Loudspeakers

SPECIFICATIONS

ISSUE NUMBER
FACTSBACK NO.
CLOSE TO WALL
FREE SPACE
BASS FROM (Hz)
IMPEDANCE (Ω)
SENSITIVITY (db/W)
FLOORSTANDER
SIZE WxHxD (CM)

STATUS

PRODUCT	(£)	COMMENTS	SIZE WxHxD (CM)	SENSITIVITY (db/W)	FLOORSTANDER	BASS FROM (Hz)	IMPEDANCE (Ω)	CLOSE TO WALL	FREE SPACE	ISSUE NUMBER	FACTSBACK NO.
Infinity Reference 1i	150	Although not to our tastes, this is a competent speaker, and decent material value	20,34,20	89	6	50	●	●	●	1403	148
Jamo BX100A	350	Offering a cracking output for their size, these rock boxes can be a bit bright but have decent bass	31,5,4,28	91	8	40	●	●	●	1758	155
Jamo Classic 8	400	A lot of speaker for the money, good when playing quietly, but boom'n'tizz character sounded crude	22,90,29	●	90	4	28	●	●	1659	152
Jamo Cornet 195	350	Loads of bass, should have plenty of yooof-appeal – it looks the business, and is priced attractively	20,5,91,31	●	90	3	26	●	●		183
Jamo 477A	500	Very prettily styled, but build and sound quality are disappointing at the price	19,77,28	●	88	4	40	●	●	1549	138
Jamo 507A	700	Imaginative styling keeps the front view super slim yet still it packs a punch. Glass top is a nice touch	22,94,37	●	88	3	40	●	●	2126	174
JBL LX2	250	Invigorating, if a touch crude, this good-hearted speaker reproduces music with considerable enthusiasm	22,40,27	87	8	40	●	●	●	2022	170
JBL L20	700	Pricey, heavy and a bit laid back, but this is a fine rock'n'roller which is dynamic and communicative	26,42,28	86	8	30	●	●	●	1550	138
JBL SVA1500	700	A distinctive Pro-style bi-radial horn tweeter, with a fun sound, enlivened by a juicy bass thump	17,5,51,31	86	8	40	●	●	●	2127	174
JBL L40	1,000	Classic, large, stand-mount three-way is full of vim and vigour, with a superb sense of balance	30,65,31	88	4	23	●	●	●	1976	167
JBL SVA 2100	1,250	Monstrously large and brutish styling, goes very loud as well as deep. Fine focus but some boxiness	37,114,52	●	91	8	<20	●	●		180
JBL L90	1,500	A classic monitor which communicates with gusto and enthusiasm, though it can sound a bit crude	24,94,35	●	91	6	23	●	●	1348	143
JBL LX70	550	Bassmeister supreme, shame the rest doesn't match up. Fine sensitivity but an itchy scratchy treble	26,5,94,30	●	91	4	33	●	●		183
JM Lab Spectral 909.1	1,375	Multi-driver array in a large and very substantial enclosure. Good scale but lacks delicacy and sweetness	27,107,35	●	90	4	20	●	●		180
JM Lab Tantal 515	495	Lively and open if bright. Sound is entertaining and informative, but presentation is nondescript	20,94,26	●	92	5	32	●	●		183
JM Lab Mezzo Utopia	7,250	Looks good and sounds even better. A genuinely big speaker with fantastic coherence	35,115,47	●	92	4	30	●	●		186
Jordan Watts JH400	565	Piano-finish hexagon has controversial sound, with uneven balance but delightful mid	28,38,21	86	8	50	●	●	●		106
JPW Mini Monitor	60	Ultra-cheap miniature works well in a limited way	18,27,17,5	86	8	50	●	●	●	1781	156
JPW Gold Monitor	80	More informative than Mini Monitor – but fiercer too	18,27,17,5	86	8	50	●	●	●	1782	156
JPW ML510	130	Lots of good-quality speaker for the price, but not an ideal match for cheap budget components	20,34,22	88	5	50	●	●	●		169
JPW ML710	230	Good material value but disappointingly uneven bass – check out the 510s instead	20,88,30	●	88	5	40	●	●	2202	177
JPW ML910	330	Loads of speaker for the money, plenty of headroom and loudness capability, but sounds dull	23,104,30	●	91	4	43	●	●		183
JPW ML1010	400	A seriously substantial speaker for the price, and an obvious choice for those who like their music loud	22,5,115,40	●	91	6	25	●	●	2031	170
JPW Ruby 1	400	Very pretty but pricey luxury metal-cone miniature has good, if slightly edgy balance	19,32,21	87	6	55	●	●	●	1572	139
JPW Ruby 4	1,000	Twin metal-cone main drivers improve the dynamic performance and bass extension, with little sacrifice	22,94,26	●	88	8	25	●	●	2132	174
KEF Coda 7	129	Lovely open voice reproduction, but bass could be tauter; build tougher	18,30,23	88	6	50	●	●	●	1783	156
KEF Coda 8	189	Outstandingly well-balanced, bass is deep but a little vague	20,32,5,29	86	6	28	●	●	●	1784	156
KEF Q15	200	Beautifully balanced and voiced stand-mount, but a potentially tricky amplifier load at high frequencies	20,5,31,27	90	2.5	30	●	●	●		187
KEF Coda 9	299	Uneven budget 3-way floorstander with poor bass definition	20,86,28	●	89	6	30	●	●	1785	156
KEF RDM One	499	Cute and tiny, nice midband but lack of bass warmth and weight	23,30,24	88	6	70	●	●	●	1913	164
KEF RDM Three	1500	Definitely a speaker aimed at long-term satisfaction rather than immediate impressiveness. Nice	24,100,27	●	90	4	40	●	●		189
KEF Reference Model 2	1,599	Classy, large floorstander that has massive headroom and clean mid-to-treble, but limited deep bass	23,103,34	●	89	4	30	●	●	1987	167
Kelly KT2	700	Chunky floorstander has tacky finish but whopping sensitivity and a very involving, (if characterful) sound	23,89,34	●	94	4	33	●	●		183
Kelly KT3	1,200	Super-high-sensitivity, hefty floorstander sacrifices smoothness for dynamic realism	25,95,36	●	95	4	28	●	●	2133	174
Keswick Audio Aria II	379	Confident and dynamic sound, if a little crude and shut in	21,42,24	89	8	20	●	●	●	1405	148
Keswick Audio Torino	999	Good value, lively contender with distinctive styling. Goes loud and deep but could be smoother	18-26, 93,28	●	90	4	20	●	●	1977	167
Linn Kan	295	Great bass discrimination from size, ensuring a very informative, if slightly shut in experience	19,31,19	86	4	45	●	●	●		187
Linn Keilidh Passive	750	Stunning timing and coherence, and awesome bass drive	20,83,28	●	87	4	22	●	●	1552	138
Linn Kaber Passive	2,000	Dry, bright balance emphasises dynamics and transients, but can sound unforgiving	20,90,28	●	87	4	25	●	●		118
Living Voice Auditorium	1,500	Pretty, compact floorstander has wonderful coherence, high sensitivity and fine dynamic integrity	21,5,98,29	●	91	4	25	●	●		180
Magnat Vector 77	450	Tall, dark and a lot of speaker for the money. Beautiful balance, but lacking in subtlety and transparency	22,115,29	●	89	5	30	●	●		183
Magnat Vintage 720	1,200	Slightly crude in some respects but lots of heart, fine scale, decent dynamic coherence and integrity	29,113,32	●	88	4	20	●	●		180
Mission 700	130	A lot of speaker for the money. Good bass weight and extension and goes loud with ease	18,34,26	87	8	40	●	●	●	2257	179
Mission 731 PRO	140	Cautious balance makes a fine match with budget equipment. A classy baby for smaller rooms	17,5,31,5,20	89	8	55	●	●	●		169
Mission 771	170	Beautiful stand-mount miniature has a delightfully well balanced and voiced sound, and real wood finish	17,31,22	86	7	45	●	●	●		187
Mission 750LE	250	Fabulous cosmetics and a great midband carry the day, though size will out and bass is inevitably limited	17,28,27	86	7	45	●	●	●	2203	177
Mission 733i	330	New tweeter gives a more open sound; a good all-rounder that doesn't sound as big as it looks	20,5,88,30	●	88	8	45	●	●	2027	170
Mission 774	500	Gorgeous floorstander is an entertaining communicator, despite some balance oddities (bright treble)	18,95,31	●	90	4	40	●	●		183
Mission 752 Freedom	578	A beautifully judged compromise in the art of combining presentation with a decent sound	20,90,25	●	89	8	45	●	●	2123	174
Mission 753 Freedom	798	Great styling. New, more restrained tweeter reveals fine midband dynamics	21,90,31	●	89	4	40	●	●	1914	164
Mission 754 Freedom 5	1,298	Tall but exceptionally elegant floorstander gives fine midband projection; goes loud but limited deep bass	22,111,31	●	88	4	40	●	●	1981	167
Monitor Audio Monitor 3	400	An exceptionally discreet floorstander; sonically uneven, but capable of fine results	16,91,21	●	88	5	30	●	●	2032	170
Monitor Audio Monitor 4	500	An oddball balance but an entertaining sound, and a good looking real-wood-box at a realistic price	20,87,24	●	84	6	23	●	●	2210	177
Monitor Audio MA700 PMC	600	Good-looking luxury compact with all-metal diaphragms: lovely midrange, but occasionally edgy	22,35,26	89	8	45	●	●	●	1661	152
Monitor Audio 702PMC	700	A good all-round stand-mount with intimate midband focus	20,40,25	87	8	30	●	●	●	2128	174
Monitor Audio MA703 PMC	800	Lovely but pricey floorstander has up-front, coherent, 'shiny' sound	20,89,27	●	88	8	50	●	●	1826	160
Monitor Audio Studio 12	1,000	A real looker, but sound and content are a bit on the small side for the price	17,92,20	●	90	8	28	●	●	1349	143
Monitor Audio 705PMC	1400	Beautifully finished compact floorstander with fine midband coherence, but limited bass and top end	20,94,28	●	89	4	25	●	●		180
Mordaunt-Short MS812	100	Quirky styling and a very laid back presence, but great musical integrity and solid value for money	20,5, 42, 25	88	5	44	●	●	●		187
Musical Technology Kestrel SE	300	Brighter and drier-sounding than the standard Kestrel (and not the better for it)	20,84,19	●	84	5	50	●	●	1915	164
Musical Technology Harrier	400	Very pretty package, good measured performance and even sound. Sensitivity is low, and dynamics limp	25,80,23	●	86	8	25	●	●	1663	152
Musical Technology PM15	450	A subtle, understated but very involving example of the 'classic' luxury-finish compact standmount.	20,41,27	88	5	38	●	●	●		183
Musical Technology Condor	1,000	Lots of clever ideas in a floorstander, which places transparency and smoothness ahead of dynamic drama	25,91,23	●	85	4	28	●	●	2134	174
Naim Intro	660	Great dynamic range and info retrieval, but thin, lacks warmth	24,89,27	●	89	6	30	●	●	1916	164
Naim Credo	1,060	Involving sound, but rather forward and cold. Good clarity, but some coloration and a lack of richness	24,89,30	●	88	8	28	●	●		180
Naim SBL Passive	1,970	Lively and punchy – smoother but more upfront than before	27,89,27	●	88	6	25	●	●	1352	143
Neat Critique 2	445	Contemporary standmount has a clean, crisp sound with lovely natural midband voicing	22,32,24	86	6	50	●	●	●		183
Neat Mystique Mk2	575	This elegant package delivers a fine overall sound quality; some might find the top end too insistent	20,86,18	●	85	6	23	●	●	2211	177
Neat Petite II/Gravitas	2,000	Beautifully presented miniature/subwoofer combo with ribbon tweeter gives smooth, laid-back sound	23,105,40	●	85	6	25	●	●	1988	167
Origin Live Conqueror	1,650	Chunky floorstanding three-way has lovely cabinetwork and lively sound, but limited deep bass	24,94,27	●	88	8	30	●	●	1989	167
PMC TB1S	430	Pro-audio version of TBI	20,41,30	87	6	40	●	●	●	2207	177

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Hi-Fi Loudspeakers

SPECIFICATIONS

SIZE WxHxD (CM) FLOORSTANDER SENSITIVITY (db/W) BASS FROM (HZ) FREE SPACE CLOSE TO WALL FACTSBACK NO. ISSUE NUMBER

STATUS

PRODUCT	(£)	COMMENTS	SIZE WxHxD (CM)	FLOORSTANDER	SENSITIVITY (db/W)	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	FACTSBACK NO.	ISSUE NUMBER
PMC TB1	482	A classy, laid-back performer that likes going loud and loves the bass guitar	20,40,31	87	8	45	●	●	1830	160
PMC LBI	935	Delightful smoothness and transparency, though bass and treble are both limited	18,53,25	89	4	33	●	●		110
PMC AB1	1,496	Lovely panel-like transparency, slightly shut-in balance, needs a big room	26,79,43	89	6	22	●	●		114
Polk LS50	800	No enthusiast tweaks here, but powerful and beautiful balance	27,83,29	89	8	25	●	●	1155	138
Polk RT16	799	Bass rich, lively and powerful, but suspect top end; big and not very pretty	22,105,39	91	4	22	●	●	1831	160
Polk LS70	1,200	High sensitivity, but balance has too much midbass boom; mid-top is laid back	31,94,37	90	8	22	●	●	1084	132
Proac Response 2.5	2,700	For aspirant high-enders looking for seriously good boxes, this speaker should be first port of call	22,107,25	86	8	30	●	●	1457	149
QLN Signature	1,000	Attractive pyramidal stand-mount with heavy, laid-back balance but remarkably unboxy sound	27,37,36	83	4	25	●	●		167
Quad ESL-63	3,450	Classic electrostatic lacks punch, but has strengths some can't live without	66,93,27	86	8	34	●	●		60
Rega Kyte	198	Has splendid timing and coherence, sounds very explicit and informative	19,31,19	87	8	50	●	●		114
Rega EL8	298	Kyte drivers in compact floorstander give more bass but less coherence	17,72,20	86	8	55	●	●		122
Rega ELA Mk II	498	Pretty and smooth, the latest incarnation has a superb midband and excellent communicative skills	30,80,20	87	8	40	●	●	1578	139
Rega XEL	1,040	Looks and sounds great: balance bright but even, with delightful coherence and timing	20,82,30	89	6	40	●	●	1083	132
Rehdeko RK 115a	1,700	Single-driver system has limited bandwidth and obvious coloration, but wondrous dynamic coherence	34,42,27	95	8	55	●	●	1982	167
Revolver Colt	139	A good all-rounder, if a little bland, and excellent value for money	30,19,22	88	6	48	●	●	1407	148
Revolver 250	250	A nice price for a floorstander, but over-bright sound balance has potentially fatiguing consequences	21,85,5,25	87	8	22	●	●	2023	170
RMS Revelation Series 1	1,299	Innovative metal-box compact with integral port/stand – clean with good timing but very laid-back balance	20,99,24	81	8	22	●	●	1983	167
Rogers dB101	100	This shapely sub-miniature is fast and agile but lightweight and forward: great voices; lacks bass	20,26,20	88	6	45	●	●	2024	170
Roksan ROKone	595	Large stand-mount is musically very communicative if a little coloured	21,45,33	89	6	30	●	●	1834	160
Roksan Ojan 3 Black	795	Squat, stylish and black, great bass extension and somewhat uneven balance	28,76,46	88	8	20	●	●	1082	132
Roksan OJX Black	995	Innovative low-line, 2-way floorstander with decoupled tweeter; great bass and fine dynamic range	28,79,46	84	8	20	●	●	1979	167
Royd Minstrel	275	Not much wellie or loudness but fine coherence and timing; a bit bright	18,69,12	86	8	30	●	●	1167	135
Royd Doublet	485	Great value compact floorstander: lively and very informative, if a little uneven	18,93,19	90	4	28	●	●	1835	160
Royd The Sorcerer	595	Extremely musical and communicative speaker that's fun to listen to. Aesthetics could be better, though	20,31,18	86	8	35	●	●		139
Royd Abbot	695	Dynamic and fine transient qualities are hampered by a rather coloured mid-forward balance	20,81,30	90	8	43	●	●		118
Ruark Epilogue	269	Beautifully finished miniature with a lively balance and plenty of charm; best suited to smaller rooms	17,29,23	87	8	47	●	●		183
Ruark Sceptre	599	'Traditional' cabinetwork with classy veneer and shiny gilt fixings, hampered by rather wayward sound balance	21,38,31	87	8	40	●	●	2129	174
Ruark Talisman II	749	Less ideologically committed than some, strength lies in fine all-round coherence	23,84,32	88	8	30	●	●		118
Ruark Crusader	1,599	Elegant luxury three-way with wonderfully even-handed, if rather laid-back balance	24,94,31	85	6	22	●	●	1990	167
Ruark Equinox	1,849	The primary strength of this speaker is its ability to vanish behind the music	25,88,34	88	6	45	●	●	1227	140
Ruark Excalibur	7,000	A big handsome speaker with a big, laid-back, but open sound, rocking bass and loads of headroom	30,125,53	90	4	30	●	●		186
SD Acoustics SD3R	649	SD3 has the agility and charm of a quality miniature, good bass and low sensitivity	20,38,30	87	8	25	●	●		106
SD Acoustics SD5	1,549	Bass suspect but forward midband is delightfully smooth. Has ribbon tweeter	20,110,30	88	8	30	●	●	1081	132
Sequence 400	329	Clever hang-on-wall panel is well voiced, though bass isn't too great	25,100,7	86	8	45	●	●	1917	164
Shahinian Arc	1,875	Occasionally wonderful, small, floorstanding omni directional design: bright but coherent and revealing	35,69,25	88	6	24	●	●		110
Silverado Raider	695	Beautifully built audiophile compact: neutral if bright, tough work for amps	20,40,25	83	3	30	●	●	1918	164
Spendor 2030	599	Discreet slimline floorstander with delicately coherent, laid-back sound	18,89,27	87	8	30	●	●	1836	160
System Audio 1130	499	Super-slim, super smooth, involving experience, but not ideal if you like your bass deep and loud	3,100,21	89	4	43	●	●		183
Tangent Monitor 5	80	An uneven performer best suited to small rooms and generous volume levels	17,5,27,18	83	8	55	●	●		169
Tangent Monitor 9	150	Budget floorstander that motors when the music demands, with a solid bass but occasionally raw treble	19,5,75,5,22,5	90	6	45	●	●	1926	165
Tannoy Mercury M1	120	Sounds much bigger and expensive than it is. Solid, tuneful bass, wide open soundstage, excellent imaging	17,30,20	87	8	50	●	●	2259	179
Tannoy Mercury M2	140	A fine all-rounder with big box and deep bass for the price; could be sweeter and tighter	20,5,38,28	87	8	25	●	●		169
Tannoy R1	200	Pretty little mini-monitor is smooth, well mannered, and polite to a fault, lacks dynamic expression	17,30,22	86	4	30	●	●		187
Tannoy Mercury M3	230	Good-looking floorstander; very neutral and evenhanded, with fine midband but weak dynamics and drive	20,5,87,28	87	7	20	●	●	2025	170
Tannoy Precision P20	400	A creative and attractive design with time-aligned drivers, but the sound lacks sufficient excitement	21,80,30	88	5	25	●	●	2208	177
Tannoy D300	999	Gorgeous-looking compact floorstander. And a fine all-round performer, too!	16-24,85,23	87	6	26	●	●		167
Tannoy D500	1,999	Plenty of muscle and stereo, but short of poise and delicacy. Hard work for amps	31,93,34	91	6	20	●	●	1355	143
Tannoy Westminster TW	6,600	These awesome horn-loaded speakers are remarkably controlled and impressive	large	99	8	38	●	●		C93
TDL Nucleus 2	130	A very competent miniature. Could be smoother, but no serious flaws, and hence good basic value	20,29,22	88	4	45	●	●		187
TDL RTL3SE	450	A touch of boom'n'tizz might be to taste, but this is a lot of box for the money, with floor-shaking bass	20,91,39	89	6	22	●	●	2124	174
TDL CF100 Chiltern	450	Tiny but classy monitor has a laid-back balance, a fine midband and a surprising bass; but needs space	20,29,23	85	8	50	●	●		183
TDL CF200 Cotswold	650	Fine midband tonality and dynamic range, but less happy towards the bandwidth extremes	22,5,78,23	86	6	40	●	●	2212	177
TDL T-Line 3	700	Plenty of bass and treble, but broad midband is rather repressed	20,97,38	86	8	20	●	●	1921	164
Technics SB-M20	200	Well-balanced with natural perspectives and fine midband coherence, but bass is a bit boxy and uneven	20,32,23	70	8	50	●	●	1413	148
Technics SB-M500	450	This model offers a clean, open sound, offset by midbass, heavy balance and low sensitivity	25,78,37	85	8	25	●	●	1666	152
Totem Model One	1,195	Utterly delightful but exasperatingly expensive luxury miniature sets the benchmark for its size	17,31,23	87	4	28	●	●		122
Vandersteen 2Ce	1,395	Elegant staggered baffle contributes to a refreshing freedom from boxiness	41,101,27	88	7	23	●	●		86
Wilson Benesch Bishop	20,000	Deep and even bass sets new standards for cleanliness and clarity; lovely open midband too	23,161,561	89	4	S20	●	●		189
Wharfedale Diamond 7.2	140	A good-hearted, lively and up-front performer that's a little lacking in subtlety and smoothness	19,29,5,23	88	4	45	●	●		169
Wharfedale 72 Anniversary	200	Lively and exuberant, but a tad untidy with it; can sound a bit cold and hard	19,29,5,24	88	4	40	●	●		187
Wharfedale Valdsus 400	200	Very loud with a minimum of amplification, but the sound is thick and uneven, with a heavy upper bass	25,80,26	91	8	30	●	●	1414	148
Wharfedale Valdsus 500	30	These rock boxes can move plenty of air, albeit not as subtly as alternatives	25,108,26,5	91	4	40	●	●	1758	155
Wharfedale MFM-3	350	Smooth broad midband gives fine voice rendition; bass could be better	22,89,28	87	8	40	●	●	1922	164
ZYP AI	199	Cute metal-cased micro-miniature is quite coloured but great fun	14,22,12	88	8	30	●	●		110
SUBWOOFERS										
Acoustic Energy AE108S	299	Lots of loud subwoofer for your money, though ultimately more film than music oriented	50,42,43			20	●	●	2247	179
B&W ASW1000	499	(Active) Very competently engineered all round, and goes (unnecessarily) very loud	54,47,48			20	●	●	2248	179
B&W AS6	500	(Active) Good material value with a fair amount of low bass from 100W design	45,51,45,5	●		30	●	●	1736	154
Celestion CS135	139	Compact hideaway passive sub lacks deep bass for high sensitivity speakers	52,19,34	●	86	8	45	●		128
Jamo SW600	530	(Active) Has some neat styling touches and remote control, but deep bass is limited	38,41,53	●		30	●	●	1736	154
JPW SW60	349	A real heavyweight, sounds clean and transparent, if perhaps a little understated. Usefully flexible	55,47,39			20	●	●	2249	179

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Hi-Fi Loudspeakers

STATUS

SPECIFICATIONS

PRODUCT	(£)	COMMENTS	SIZE WxHxD (CM)	SENSITIVITY (dB/W)	FLOORSTANDER	BASS FROM (Hz)	IMPEDANCE (Ω)	FREE SPACE	CLOSE TO WALL	FACTSBACK NO.	ISSUE NUMBER
KEF Model 30B	499	(Active) Commendably discreet with good sense of timing but limited extension	38.5,37,43	●		45				1736	154
KEF AV1	2,499	(Active) Works well, looks great, shakes the windows but costs a lot and is bulky	56,43,50	●		45					128
M&K VX-7B	450	(Active) Baby of a big range; this active design delivers deep, plenteous bass but lacks transparency	35,25,37	●		40				1736	154
M&K MX70	900	(Active) Justifies cost and belies its diminutive size, with an agility that makes sense of the toughest material	25.5,46,35			25		●		2250	179
REL Q50	375	(Active) Genuinely deep, clean bass from an attractively compact and cost effective package	40,41,42			20		●		2251	179



Stands & Supports

Hi-fi supports are more important than you might imagine – they can have very subtle effects on the sound of your system! There are two kinds of support: those for equipment and those (stands) for loudspeakers. Equipment supports keep vibrations and resonances from affecting electronic components, while speaker stands hold enclosures stock-still and ensure they are at the correct height for your ears. Equipment supports may be rigid affairs fabricated from steel or more exotic materials; or they may have a form of suspension. Speaker stands come in a variety of sizes and styles to suit different models, and vary between open-frame and solid-pillar types. Always check with speaker and electronics manufacturers to see which supports they recommend.

KEY TO SPECIFICATIONS

- **HEIGHT (cm):** How tall is your support?
- **TOP PLATE SIZE (cm):** Dimensions of top surface on stand or equipment support.
- **FILLABLE:** Some speaker stands can be loaded with sand or lead-shot to improve sound.
- **WELDED:** The better stands and supports are welded together rather than just bolted.
- **NUMBER OF SHELVES:** The number of tiers on an equipment rack or support.
- **SHELF TYPE:** The material from which shelves are made. Wood generally means Medium Density Fibreboard (MDF).
- **FACTSBACK REFERENCE:** The Factsback Reference number permits direct access to our faxed review reprint service. For full info, see the Factsback advert on the penultimate page of the magazine.
- **ISSUE NUMBER:** The issue of Hi-Fi Choice in which an original review appeared.

B BEST BUY
R RECOMMENDED
E EDITOR'S CHOICE

Stands & Supports

STATUS

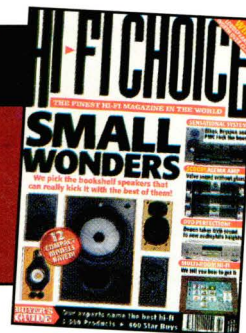
SPECIFICATIONS

PRODUCT	(£)	COMMENTS	TOP PLATE SIZE (cm)	FILLABLE	NUMBER OF SHELVES	WELDED	SHELF TYPE	FACTSBACK NO.	ISSUE NUMBER
EQUIPMENT SUPPORTS									
Alphason GR 17/17-AS	275	Great looks but sound can be bettered at this price	36	60,39	4	Glass		181	
Elemental Isotube x 4/Ref	1199	Blockbusting size and build. Super sound quality	92	45,49	4	Marb		181	
Fi-Rax R4	399	Lively, exuberant sound, slightly weak bass			5	Glass	1633	151	
Frameworks H500/H175	404	Two-shelf stand and isolation platform combo in tubular steel – made a spectacular impression on audition	70	52,34	3	Glass	1952	166	
Ixos Deadrock 704	250	Looks unassuming but sound is full and inviting		46,39	4	Resin		181	
Kudos Corinthian	599	True heavyweight that doesn't quite manage knockout sound	91	46,38	4	Wood		181	
Mana Acoustics Ref. Table	350	King of its type: angle iron, chipboard and glass combine to make a significant difference to sound quality	56	49,39	1	Glass		147	
Mana 5 Tier Sound Table	600	Infinitely upgradeable. Persuasive and thrilling glass and angle-iron design that adds speed and bandwidth	91	49,39	5	Glass	1633	151	
Optimum Int 2000 OPT490	299	25kg stand with shelves between variable-height tubular uprights. Sounds smooth and relaxed with sturdy bass	50	60,40	4	Glass	1953	166	
Optimum Int 2000 OPT860	349	Glitzy style isn't reflected in sound, which is wholesome	82	60,52	5	Glass		181	
Quadraspire Q4	250	Easy to live with, tonally neutral	54	40,49	4	MDF	1633	151	
Sound Organisation Z038	135	Too lively and lacking order – but inexpensive	50	84,40	5	Wood	1633	151	
Sound Organisation Z560	160	Welded and bolted members give structural integrity. While performance is not up with the best, it's great value	90	46,36	5	Wood	1954	166	
Soundstyle X100	230	Looks lovely, sounds lively but slightly bright	64	49,28	4	Glass		181	
Soundstyle Select 6105	290	Respectable sonics: structurally solid and smart	78	43,36	5	Glass	1633	151	
Soundstyle Finewoods W105	320	Veneered shelves clamped between tubular uprights. Delivers with classical material	82	48,27	4	Wood	1955	166	
Sound Organisation Z545	150	Budget gem from the stalwarts of sound supports	70	46,36	4	Glass		181	
Stands Unique Sound Tower	289	Wooden uprights combine with glass shelves to provide a fresh, forward sound, but bass could be quicker	81	72,42	5	Glass	1633	151	
Target B5	175	Free of colorations, fine grip and good value	81	49,36	5	Wood	1633	151	
Townshend Seismic Stand	1245	It's big, it wobbles and it's pricey. But this is the ultimate equipment support	72	58,45	3	Wood		181	
Wilson benesch Asside	590	Sounds even better than it looks. And it looks wonderful	72	37,50	4	Wood		181	
SPEAKER STANDS									
Alphason NC I	45	Filled single-column design without threaded spike holes, that's appropriate for non-critical applications	40-60	16,16	●			1373	146
Alphason NCII	85	Tall, slim and elegant, though sound and value are unexceptional	40-60	17,17	●				159
Alphason HDS	85	A reasonable stand with a smooth but rather bland sound balance. Good finish options.	45-60	15.5,15.5	●				189
Alphason Titan	125	Excels in the midband and allows voices to come across in a detailed and expressive fashion	40-60	16,16	●	●		1373	146
Apollo Olympus	75	A popular stand and a decent performer, but unremarkable by today's standards	40-60	15,12.5	●	●			189
Apollo AZ6	80	Fine engineering value, but sound is unexceptional and top-plate small	66	15,13	●	●			159
Atacama BD21	55	Good-looking and good value, but doesn't match the SE24's sound quality	56	15,17	●				159
Atacama R724	150	Atacama uses its market strength to deliver a superbly appointed product at a very reasonable price	60	15,17	●	●			189
Atacama SE24	70	Stands out from the budget crowd because of the consistency and overall quality of its performance	61	19,5,17	●	●		1373	146
AVF Tower 400	35	Ridiculously cheap and much better than no stand at all	54	17,20	●				159
Black Box Speaker Stand	797	A strange and costly beast. Bass is a touch thick, but performance with synthetic music types is worthy of the price	92-112	40					189
Custom Design R/S 300	70	Combining strong aesthetic and sonic appeal at a popular price point, this is a good stand all-round	40.6-60.9	15,15	●				189
Elemental Isotube SZse	599	Stands of distinction, able to free the speaker's sound from its box in a way budget stands simply can't	61	23,27	●	●			189
JPW HS1	120	A purposeful stand, a touch dry-sounding but particularly strong with bass. Great for rock and dance music	61	19,21	●	●			189
Kudos S50	100	Better sound than the budget stands, particularly in low-frequencies	60	15,21	●				159
Kudos S100	270	The best all-round stand around... Probably...	63	15,21	●				159
Mana Soundframes	125	For use under floorstanders and equipment racks, these make music effortless and natural. Can be stacked	5		●	●		1373	146
Partington A-4	119	An odd-ball stand with a sound that's sheer class. More open and focused than almost anything below £150	50-100	19,22	●	●			189
Revolver RS1	70	A good blend of performance and appearance for the price	53	18,18	●				159
RMS/Stands Unique Vivus	349	Pricey carbon fibres give ultra-clean sound with exceptional voices	50	N/A					159
Russ Andrews Torlyte	599	Subtle and musical-sounding stands, though a touch more 'pizazz' is need for Recommendation at this price	61	33.5,24					189
Sound Organisation Z524	69	A coherent-sounding stand with particular strengths in the midband, though quality drops at the frequency extremes	61	16,17					189
Stands Unique HP	220	Real wood disguises high-performance tuned technology	59	22,23					159
Target R1	280	Truly high-mass four-pillar design with superb weight and speed, giving music delicious attack	53	15,21	●	●		1373	146
Target TR60	68	Lively, dynamic midrange and detailed treble from a less-than-audiophile-oriented, twin-column design	60	15,15	●			1373	146



HI-FI CHOICE ARCHIVE

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Tonearms

Less expensive turntables are usually supplied with a matching tonearm (and often a 'starter' cartridge, too). However, hard-core vinyl fans should invest in a more expensive separate motor unit with specialist tone-arm – the only way to make the most of vinyl LPs. It is essential to achieve operational synergy between such components, so this is one area of hi-fi where the skills of a knowledgeable dealer are invaluable. The quality of a tonearm's construction and design affect sound quality significantly. There are three basic arm designs listed in the key, and each has strengths, but pivoted designs are the most popular, being usually the most practical and affordable.

KEY TO SPECIFICATIONS

- **EFFECTIVE MASS:** This relates to cartridge compliance. Generally high mass arms are suitable for low compliance cartridges and vice versa.
- **PARALLEL TRACKING:** An arm which allows the cartridge to track the disc in a linear fashion.
- **PIVOTED:** Arms which allow the cartridge to describe an arc as they traverse the record.
- **UNI-PIVOT:** Pivoted arms with a bearing that allows movement in two planes.
- **EFFECTIVE LENGTH (CM):** Length of arm from bearing to cartridge mounting.
- **ADJUSTABLE HEIGHT:** important for accurate cartridge set-up.
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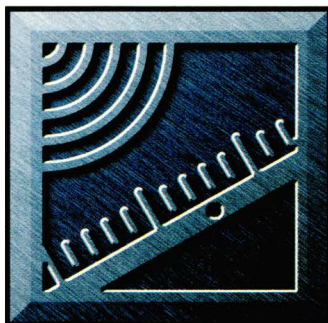
B BEST BUY **R** RECOMMENDED **E** EDITOR'S CHOICE

Tonearms

SPECIFICATIONS

PARALLEL TRACKING EFFECTIVE MASS PIVOTED UNI-PIVOT EFFECTIVE LENGTH (cm) ADJUSTABLE HEIGHT FACTSBACK NO. ISSUE NUMBER

STATUS	PRODUCT	(£)	COMMENTS	PARALLEL TRACKING	EFFECTIVE MASS	PIVOTED	UNI-PIVOT	EFFECTIVE LENGTH (cm)	ADJUSTABLE HEIGHT	FACTSBACK NO.	ISSUE NUMBER
▲	Kuzma Stogi Ref	1,250	Large, solid and well-made arm, gives exceptionally clear sound with just a hint of brightness	High	●	●	●				79
▲	Linn Ekos	1,500	Superb, state-of-the-art design which builds significantly on predecessor's strengths	Medium	●	●	●	229	●		67
▲	Moth Arm	95	The ultimate budget arm? Refined, sweet, detailed and natural	Low	●	●	●	237	●		60
▲	Rega RB300	174	Despite its modest price it sets exceptional standards and could be used on many high-end turntables	Low	●	●	●	237	●		60
▲	Roksan Tabriz Basic	275	Targeted at the Xerxes, this is a good alternative to the Rega arm in many cases – a touch bright though	Low	●	●	●	240	●		91
▲	SME Series IV	983	Superb engineering and finish with a finely balanced sound, impressive stereo focus and low coloration	Low	●	●	●	233	●		60
▲	SME Series V	1,461	Excellent in all respects, this arm arguably sets the standards for pivoted arms, regardless of price	Low	●	●	●	233	●		60



Tuners

TV has stolen radio's status as the foremost broadcast entertainment medium, but with its Radio Four plays and Radio Three music, the BBC still makes a potent case for audiophile reception equipment. For how much longer, under the cost-conscious Birtist régime, remains to be seen. Another new imponderable is the arrival of digital radio broadcasting, though reception apparatus is currently non-existent outside of the in-car market. These days tuners play second fiddle to hi-fi sources like CD, but in many ways they are a greater engineering challenge than digital equipment, and thus higher price-tags clearly equate to superior performance. High-quality, roof-mounted antennae are essential for audiophile listening, so factor them into your budget.

KEY TO SPECIFICATIONS

- **WAVEBANDS:** FM – (VHF), M – MW, L – LW.
- **PRESETS:** Number of station frequencies that can be stored.
- **RDS:** (Radio Data System) was originally designed for in-car applications. RDS tuners can identify and display the name of the radio station being received, traffic news and other information about broadcasts.
- **REMOTE CONTROL:** Infra-red control handset supplied.
- **SIGNAL STRENGTH METER:** Indicates strength of signal from aerial – useful for aligning your 'twig' during installation.
- **ROTARY TUNING KNOB:** Experience has shown that this analogue throwback is ergonomically far superior to the button-based approach.
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B BEST BUY **R** RECOMMENDED **E** EDITOR'S CHOICE

Tuners

SPECIFICATIONS

WAVEBANDS PRESETS RDS SIG. STRENGTH METER REMOTE CONTROL ROT. TUNING KNOB FACTSBACK NO. ISSUE NUMBER

STATUS	PRODUCT	(£)	COMMENTS	WAVEBANDS	PRESETS	RDS	SIG. STRENGTH METER	REMOTE CONTROL	ROT. TUNING KNOB	FACTSBACK NO.	ISSUE NUMBER
▲	AMC T7	130	Performance adequate but price is sharp, especially with remote control. Some hum	FM, M	30	●				1945	166
▲	Arcam Alpha 7	230	Indifferent RF performance but a touch of audiophile sound quality with clean, strong signals	FM, M, L	24					1946	166
▲	Arcam Delta 280	300	Fine sound quality marred by mild synthesiser whine; RF performance only average. Remote E60 extra	FM	20	●					120
▲	Denon TU-425RD	200	A fine all-rounder with advanced RDS, good RF performance and decent sound. Remote extra	FM, M	40	●				1947	166
▲	Denon TU-1500RD	250	A well-balanced and clean sound with good bass and treble extension	FM, M	40	●			●		184
▲	Magnum Dynalab FT11	499	All-analogue tuner: receives weak or tightly packed stations but loses out on noise and sonic neutrality	FM	3						184
▲	Harman/Kardon TU950	200	Bulky but effective, delivering fine RF performance and good sound for the price	FM, M, L	30	●				1948	166
▲	Linn Kremlin	2,600	Controversially good sound at a very high price	FM	80	●			●	1254	142
▲	Magnum Dynalab FT101	825	Although fairly expensive given its minimum set of facilities, its excellent sound provided ample compensation	FM							72
▲	Marantz ST-48	120	A classic budget model which manages a performance only just behind much more expensive models.	FM, M	60	●					184
▲	Micromega Tuner	750	Has digital output but even without the Micromega DAC, this provides exceptional sound quality. Looks good too	FM	39	●			●	1810	157
▲	Mission Cyrus FM7	400	Open, generous soundstaging gives the music plenty of foundation, if a touch shut-in at the top	FM	29				●	1254	142
▲	Musical Fidelity E50	300	Sounds involving if coloured and with a subjectively larger-than-life presentation	FM	20					1810	157
▲	Myryad T-10	530	A very smart unit which works well and offers good rhythmic drive and vitality, albeit at a price	FM	20				●		184
▲	Naim NATO1	1,730	There may be better sounding tuners in the world, but we have yet to hear one	FM						1254	142
▲	Pioneer F-504RDS	250	Cable-friendly with advanced RDS and excellent RF performance; slightly disappointing sound	FM, M	40	●			●	1949	166

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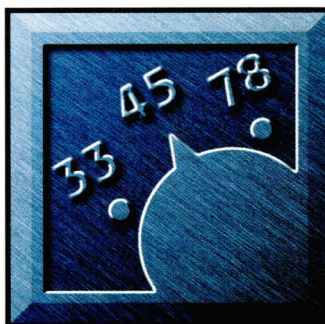
Tuners

SPECIFICATIONS

WAVEBANDS PRESETS RDS REMOTE CONTROL SIG. STRENGTH METER ROT. TUNING METER FACTSBACK NO. ISSUE NUMBER

STATUS

PRODUCT	(£)	COMMENTS	WAVEBANDS	PRESETS	RDS	REMOTE CONTROL	SIG. STRENGTH METER	ROT. TUNING METER	FACTSBACK NO.	ISSUE NUMBER
Pioneer F-504RDS Precision	300	Lots of features, plus a sound that's low on noise and high on communication, adds up to a good value package	FM,M	40	●	●	●	●		184
Roksan Caspian	595	Neat fascia with great ergonomics, but sound is not really any better than models at half the price	FM	50	●	●	●	●		184
Rotel RT-935AX	160	Good ergonomics and sound quality at a realistic price, but limited features and RF selectivity	FM,M	20					1950	166
Sony ST-SA3ES	250	Clean, lean presentation but needs a quality aerial to perform at its best	FM,M,L	30	●	●	●	●	1810	157
Sony STS-B920S	180	A little hiss and image compression don't detract from the clean performance of this feature-packed tuner	FM,M,L	30	●	●	●	●		184
Technics ST-GT350L	130	Decent RF performance is offset by sound quality more typical of a mini/midi system	FM,M,L	30	●	●	●	●	1254	142
Thorens TRT2000	499	Not exactly neutral sounding, but nonetheless makes listening fun	FM,M	59	●	●	●	●	1810	157



Turntables

Specialist turntables are at the heart of high-fidelity sound. CD players may offer ultra-low noise and a flat frequency response, but they can't match the dynamics and superlative rhythmic timing taken for granted by serious turntable users. Less expensive turntables are usually supplied with a matching tonearm (and often a 'starter' cartridge, too). Still better quality is found at higher prices among the separate motor units and tonearms. Because turntables are mechanical devices, designed to retrieve micron-small modulations engraved into vinyl, engineering quality is of paramount importance. This is also the reason why turntables cost as much as they do, and require the finest equipment support systems.

KEY TO SPECIFICATIONS

- **MANUAL:** You do all the work.
- **AUTO:** The record player does all the work.
- **SEMI-AUTO:** You put the needle on, the turntable lifts it off at the end of the record.
- **SPEEDS:** In RPM to correspond with long-playing records or seven/12-inch singles.
- **SUSPENDED SUBCHASSIS:** Spring suspension to minimise structural interference.
- **EXTERNAL PSU:** Outboard power supply; generally indicative of higher-quality performance.
- **SUPPLIED WITH ARM:** Many turntables do not come with a tonearm fitted, but if this category is checked, the deck is already thus equipped.
- **SUPPLIED WITH CARTRIDGE:** If a turntable comes complete with arm and cartridge.
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High End Review

B BEST BUY **R** RECOMMENDED **E** EDITOR'S CHOICE

Turntables

SPECIFICATIONS

MANUAL AUTO SEMI-AUTO SUSP. SUBCHASSIS SUPPLIED WITH ARM EXTERNAL PSU FACTSBACK NO. ISSUE NO.

STATUS

PRODUCT	(£)	COMMENTS	MANUAL	AUTO	SEMI-AUTO	SUSP. SUBCHASSIS	SUPPLIED WITH ARM	EXTERNAL PSU	FACTSBACK NO.	ISSUE NO.
Clearaudio Reference	3,990	Opulent beast tested with Souther TQ-1 arm. Tends to gloss over detail, but can sound bold	●						33/45	1328 144
DNM Rota 2	5,600	Tonally slightly bleached, but extracts detail like few others. Works well on its own table	●						33/45	1328 144
Dual 505-4 UK	250	Consistent sounding and well isolated turntable. It is slightly lacking in oomph			●				33/45	103
Kuzma Stabi/PS	1,950	(Tested with Stogi Reference) Solid oak plinth; sound is very clear, detailed and extended	●						33/45	91
Linn LP12 Basik	1,100	Trails the full LP12 significantly, but pace, rhythm, timing etc still top rank	●						33	103
Linn LP12 Lingo	1,750	The classic reference is improved by the Lingo, but charming character remains	●						33/45	91
Michell Gyrodec	875	Sweet and natural-sounding player, well matched to Rega RB300 arm	●						33/45	55
Moth Kanoot	329	Rather coarse-sounding deck that requires decent isolation and comes with a Rega RB300 arm	●						33/45	1907 164
Notts Analogue Spacedeck/Arm	750	No frills, just a first-rate, outstandingly natural-sounding deck that will last forever	●						33/45	159
Pro-ject 2	300	Remarkably effective at the price, with decent timing and a generally well defined sound	●						33/45	1907 164
Pro-ject 6/Sumiko	850	Don't think of this as a deck with a good arm, but as a scaled-down Oracle Delphi - it's that good	●						33/45	138
Rega Planar 2	214	A remarkable product at the price, surprisingly articulate and confident	●						33/45	48
Rega Planar 3	274	Sounds musical in a balanced manner, needs decent isolation and suffers a little pitch instability	●						33/45	1907 164
Reson RS1	600	Supplied set-up and ready-tuned, this unconventional deck is packed with mid-band detail	●						33/45	159
Roksan Model 3/Tabriz zi	890	Elegant-looking turntable with a tidy, ordered sound. Bright and breezy if a shade lightweight	●						33/45	159
SME Radius 20.2A	4,863	Beautifully built, extremely neutral damped and suspended deck with superb sound. Inc V arm	●						33/45/78	186
Thorens TD166 VI/UK/RB	400	Refined, solid sound with well-focused imagery; suitable for use with good MM/MC budget cartridges	●						33/45	103
Thorens TD2001	700	Balances convenience and sound well, but deck lacks detail and bass could be better controlled	●						33/45	159
Well Tempered Record Player	1,850	Intriguing and challenging. Musically not ideal, but its limpid quality and lack of artificiality set standards	●						33/45	1180 136

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AUDIO T, 30 Crown Street, Brentwood CM14 4BA. Tel: 01277 264730 Fax: 01277 264731. Open Tues-Sat 9.30-6 Late night Thursday until 8pm. See our main entry under Oxford. We also sell Michell, Ruark & Technics. **BADA**

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AUDIO T, 190 West End Lane, West Hampstead, London NW6 1SQ. Tel (0171) 794 7848. Fax (0171) 431 3570. Open Tues-Sat 10-6 Late Thurs until 8.00. See our main entry under Oxford. We also sell Celestion, Michell, Monitor Audio, Proac, Roksan, Van den Hul & XTC. **BADA**

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THE HI-FI CHOICE ARCHIVE

Missed *Hi-Fi Choice* the first time round? Don't worry! There are several different ways to acquire complete back issues or individual reviews. Our step-by-step guide shows how.

1. BUY AN ORIGINAL BACK ISSUE ☎ (01789) 490215

 <p>DECEMBER 1998/ISSUE 184</p> <ul style="list-style-type: none"> 11 CD Players £200-£800 7 Home Recorders (CD, MD, Cass) 7 Tuners £100-£600 TAG McLaren bonanza! 	 <p>BEST BUYS 1998/ISSUE 185</p> <ul style="list-style-type: none"> Full listing of 1998 Best Buys, Recommended and Award-winning products, plus Best of Systems, Statements and Columns 	 <p>JANUARY 1999/ISSUE 186</p> <ul style="list-style-type: none"> 10 Amplifiers £150-£350 Headphones £50-£150 High-end Loudspeaker Special Border Patrol high-end review 	 <p>FEBRUARY 1999/ISSUE 187</p> <ul style="list-style-type: none"> 12 Compact Speakers £130-£300 6 Pre/Power Amps £900-£1,100 Multi-Room special feature Michell Orca/Alecto review 	 <p>MARCH 1999/ISSUE 188</p> <ul style="list-style-type: none"> 11 CD Players £350-£1,250 14 Interconnects £50-£100 Arcam Alpha 10 DAB Technics SU-C/SE-A3000 	 <p>APRIL 1999/ISSUE 189</p> <ul style="list-style-type: none"> 12 Amplifiers £600-£1,800 10 Phono Stages £35-£1,190 10 Speaker Stands £60-£800 Wilson Benesch Bishop
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Back issues from 1988 onwards are available as shown in the table. They cost £4.00 (UK) or £6.95 (overseas). Both prices include p&p. Order by phone, on ☎ (01789) 490215. Alternatively, fax ☎ (01789) 490878. We accept AmEx, MasterCard and Visa credit, or Switch and Delta debit cards. Or write to Dennis Direct, PO Box 2505, Alcester, B50 4JU. Make cheques payable to Dennis Direct.

BACK ISSUE AVAILABILITY

YEAR	HFC N°S	SOLD OUT ISSUES	AVAILABILITY
1988	54-65	Feb, Jun, Jul, Sep, Oct	Very limited
1989	66-77	Jan, Feb, Mar, Jul	Very limited
1990	78-89	Jan, Feb, Jun, Aug, Sep, Dec	Very limited
1991	90-101	All exc. Mar, Apr, Jun, Jul	Very limited
1992	102-113	All exc. Mar	Very limited
1993	114-125	All exc. Feb, Apr, Jul, Dec	Very limited
1994	126-137	Jun, Aug, Nov	Very limited
1995	138-149	All exc. Feb	Very limited
1996	150-161	Mar, May, Jun, Oct, Nov	Very limited
1997	162-173	Feb, Jun	Very limited
1998	174-185	May, Nov, Dec	Limited
1999	186-	None sold out	Good

2. GET REVIEW REPRINTS BY FAX



Hi-Fi Choice reprints are available via fax, 24 hours a day. Our database, operated by Starcomm Ltd, holds a broad selection of

reviews and features from mid-1995 onwards. UK readers can access this service by calling ☎ (0930) 110118. You only pay for the cost of the call, which is 50p per minute.

Overseas readers can order copies of reviews, non-interactively, by sending a faxed request to Starcomm on ☎ (+44 1924) 510908 – remember to include your credit-card details. Reviews will then be faxed back to a designated number at a cost of £1.50 per page.

All pages have been designed to minimise user costs. If you experience problems with this service, or have further queries, please do not contact the editorial offices. Call Starcomm Ltd on ☎ (0870) 013 1210.

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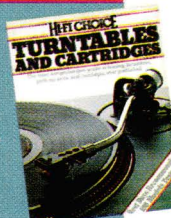
The *Hi-Fi Choice* Web site holds copies of reviews from the past two years. It also offers a user-customisable search facility for specific products and price-points. In addition, there is a unique opportunity to swap hints, tips and gossip in our online 'chat' areas. Our site has been remarkably successful since its launch earlier this year, and is currently scoring approximately 405,000 hits per month, with a total of 90,000 page impressions. The site has no less than 6,700 unique users!

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4. ORDER A REVIEW REPRINT

If you are interested in an *HFC* review of an older component, and the back issue has sold out, we can send photocopies of old reviews to any UK address for a flat fee (inc. p&p) of £5.00 per review. You must know in precisely which issue the original review appeared; we are unable to search back issues for old reviews. Send a written request, enclosing a cheque made payable to Dennis Publishing Ltd, to: *Hi-Fi Choice* Reprint Service, Dennis Publishing Ltd., 19 Bolsover Street, LONDON W1P 7HJ. PLEASE NOTE: THIS SERVICE IS ONLY FOR OTHERWISE UNOBTAINABLE REPRINTS.



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THE JUNE 1999 EDITION OF
HI-FI CHOICE WILL BE ON SALE THURSDAY
20 MAY 1999. DON'T MISS IT!

HOW TO ENTER

Find the letters in the highlighted boxes within the crossword which form an anagram of a hi-fi related word, for you to decipher.

THE HI-FI RELATED WORD HIDDEN IN THE CROSSWORD IS:

Post this entry form to:

Hi-Fi Choice Competition (CHFC 905B)
Bradley Pavilions, Bradley Stoke North,
Bristol BS12 0BQ

All entries must arrive by First Post,
Thursday 27 May 1999.

Name
Job Title
Company Name
Address (inc postcode)

Day-time Telephone Number

Please tick here if you are under 18.

Please tick here if you do not wish to receive further information on other products or services.

Please tick one only of the following:

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Competition Rules

1) The Closing Date for the Straight Wire competition is Thursday 27 May 1999.

2) Winners of the Straight Wire Competition will be judged from all correct entries submitted, and drawn at random after the Closing Date given in 1) above.

3) All winners will be notified by post.

4) The Editor's decision is final and no correspondence will be entered into.

5) The Straight Wire Competition is not open to employees of Dennis Publishing Ltd nor their suppliers, agents or associates.

6) We regret this competition is open to UK residents only.

7) No cash alternatives will be offered.

8) We reserve the right to substitute alternative prizes with equal value to those shown, in the unlikely event of stock being temporarily unavailable.

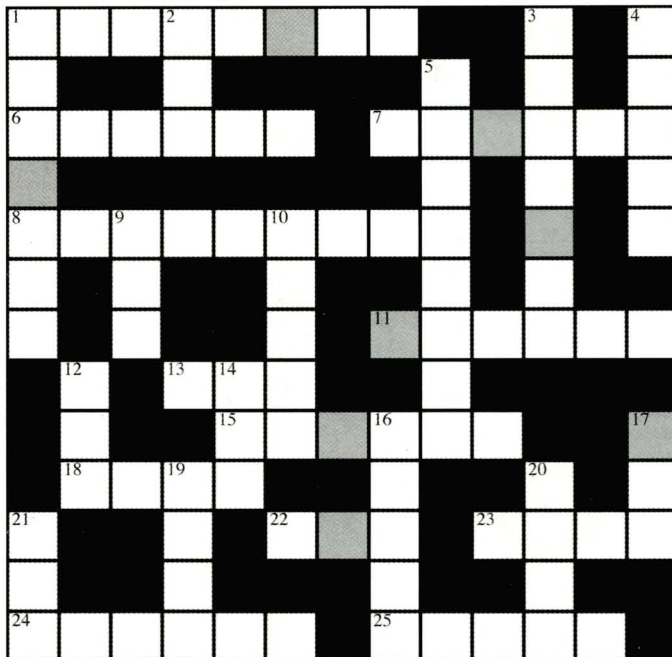
9) By entering the competition, you agree to be bound by the rules.

10) All entries must be on this official entry coupon. If you do not wish to cut your magazine, you may send a photocopy of the page instead. Please note: only one entry form per household.

CHFC 905B

THE HI-FI CHOICE CROSSWORD

Test your hi-fi knowledge and win a complete set of Straight Wire cables worth £250!



THE CLUES

CLUES ACROSS:

- 1) Well-behaved chap's Delta range maker (8)
- 6) Manufacturer of the Opera amp from Dayton? (6, anag)
- 7) Speaker specialist for Ab Fab actress, Joanna (6)
- 8) Stormy wind brings us Talk of a preamp (9)
- 11) Gamma Acoustics amplifier for the zodiac twins (6)
- 13) Little Harold gets a Rega preamp (3)
- 15) Sue him for the Audio Note Line amp (6, anag)
- 18) Mini or compact format that may have slipped in the back (4)
- 22) Special CD kept at bay (3, init, anag)
- 23) They make The Sorcerer a loudspeaker in Croydon (4)
- 24) T-series Systems in my yard (6, anag)
- 25) Force output in watts per channel (5)

CLUES DOWN:

- 1) Vivid piece of equipment that gets the equalizer (7)
- 2) Update part of a digital format (3, init)
- 3) Audio Analogue preamp in libel mix-up (7, anag)
- 4) Beery sort of headphones! (5, anag)
- 5) Pipe and a bit of technology making the Fulcrum DACS (4,4)
- 9) Radio data system featured in the latest awards? (3, init)
- 10) Speaker connector as seen on TV (5)
- 12) Golf duo looking in on a British amplifier specialist (3, init)
- 14) A new mac for the budget CD8A compact disc (3, init, anag)
- 16) One of the MiniDisc originators has a keen edge (5)
- 17) Dan returns to an audio company (3, anag)
- 19) Brooklands-related firm watch the symphony from start to finish (4)
- 20) A jumbo seems to contain such speakers (4)
- 21) Part of the body to tune up on a record deck (3)

AFTER SOLVING THE PUZZLE, UNSCRAMBLE THE LETTERS FROM THE HIGHLIGHTED BOXES TO SPELL OUT THE HI-FI RELATED PRIZE WORD.

WIN WIN WIN



It doesn't matter how good your hi-fi components are – their combined performance will only be a shadow of its potential without the right cables between them. The thing is, like everything in life, if you want real quality you've got to pay the fiscal price. Top-notch cables from a specialist like Straight Wire don't come cheap, but the musical reward can be worth so much more.

So how about this for an offer: the first two readers to find the mystery word in the adjacent crossword will get a complete set of highly-rated cables from those generous bods at Straight Wire. Each set contains no less than two one-metre pairs of Sonata interconnects worth £80 a piece, Recommended in last month's issue (HFC 188) for their strong all-round performance and particularly impressive bass. Also included is a terminated, four-metre pair of Quartet speaker cables worth £8 per metre (excluding termination), recipients of our Best Buy status in HFC 183 and described as "good all-rounders with full tone, clear detail and natural ambience".

Now, we can't say fairer than that! Get your brain in gear, complete the form opposite and get it to us by Thursday 27 May for your chance to get wired – for free!



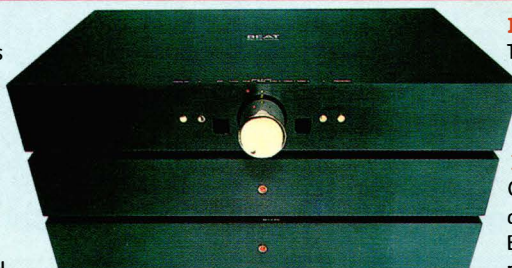
HIGHLIGHTS OF NEXT MONTH'S ISSUE ...

CD PLAYER MEGA TEST

Choice takes a look at some of the latest CD players hot on the market from the likes of Cyrus, Denon, Harman Kardon, Kenwood, Micromega, NAD, Pioneer, Rotel, Sony, and Yamaha. We put 12 models in three price groups, ranging from £130 to £700, through their paces with the most stringent tests in the business.

DIGITAL RECORDERS

Our Super Test next month looks at the world of digital recorders. With an increasing supply of models on the market, Choice gives the low-down on some of the latest arrivals to the CD-Recordable and MiniDisc formats.



The all star line-up includes examples of both digital recording disciplines from the Kenwood, Marantz, Pioneer, Sharp, Sony, Traxdata and Yamaha stables.

FEATURE

To compliment our Super Test look at digital recorders, our feature section takes a look at CD-R blank media from Maxell, Pioneer, Philips, TDK and Traxdata, helping you to make the best digital clones.

HIGH-END LOVELIES

Once again, the June issue brings you the most desirable pieces of kit with the latest Densen B200/B300 pre/power amp combo, Rotel RCD-991 CD player and ATC's substantial SIA2-150 integrated amp.

■ Plus all our regular bits for your delectation.

■ The June issue will be on sale on Thursday 20 May 1999.

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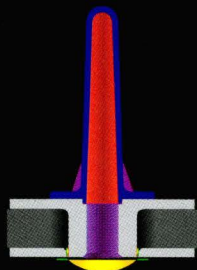


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