

Performance

Measured individually, or in a group, all these Cyrus units scored high marks and invariably met or exceeded their quite exacting specification claims. The low-level linearity of the Dacmaster, for example, is boldly claimed to be within $\pm 0.25\text{dB}$ at -90dB . I was able to confirm this and can indeed say that this is about the best result I have found on any CD player. And so it goes on: frequency response effectively flat except for a minuscule roll-off at 20kHz , residual noise and crosstalk both below the claimed -100dB , undesirable out-of-band signals practically zero. Introducing one or more PSX-R power supply units did raise the power rating but produced very little change in other test parameters. Its effect on subjective sound quality, however, was clearly beneficial.

The listening tests were mainly aimed at evaluating this four-piece

Cyrus amplifier and CD system in combination, coupled to a pair of the top model Mission 753 loudspeakers (reviewed in July 1993), though other audio sources, amplifiers and speakers were patched in from time to time to check that there were no individual unit idiosyncrasies. Compact Disc quality was lively and detailed, of the sort that suspends our disbelief that the musicians are actually playing live. The sound had a 'see through' quality with voices and instruments clearly delineated. Bass and treble stretched to the limits in marked contrast to the band-limited effect that many systems produce.

Bass impact was put to the test by a recent spectacular CD from Mercury Living Presence featuring a reissue of their renowned 1958 recording (which sold over two million LPs) of Tchaikovsky's *1812 Overture* (and Beethoven's *Wellington's Victory*) with Antal

Dorati directing the Minneapolis Symphony Orchestra, a brass band, bronze cannon at West Point and the 74 bells, including the biggest tuned bell in the world, of the Rockefeller Memorial Carillon (Mercury D 434 360-2MM, 12/95). Separate tracks on this celebratory CD provide a spoken commentary on the original recording sessions with 'clips' from the various pieces of armoury and 100 tons of bells. The Mission system handled these awesome sounds with startling realism down to the deepest (and loudest) bass. Resolution of detail was also notable.

At the other end of the scale, solo acoustic guitar can be enjoyed on a recent CD entitled "Here, There and Everywhere" on which Göran Söllscher picks his way through 17 Beatles tunes (DG D 447 104-2GH). Much of this music is very quiet indeed, yet sound quality remained clean and trans-

parent. With eyes closed one had no sense of the intervening electronics and speakers: just an almost tangible guitar 'in the room'.

At £300 a time, I was hesitant to recommend the addition of one or more of the optional PSX-R power units unless their effect on the sonic performance was sufficiently impressive to justify the extra cost. Well, they really do work. After much experimenting I came to the conclusion that an investment of £600 to power up the Dacmaster and Dacmaster does indeed raise the overall fidelity by a sizeable notch – though the differences are subtle.

A visit to a Mission stockist could be a rewarding experience; perhaps you should make an appointment to ensure a lengthy demonstration. Already, without any PSX-R additions, the Cyrus sound is up among the best at this price, and for the icing on the cake ... G

Quad 77-10L loudspeaker

John Borwick

With the autumn 1994 introduction of the Quad 77, its very first integrated amplifier, Quad signalled a move towards even more room-friendly equipment. The accompanying 77 remote controller similarly heralded a new move towards user friendliness, with its advanced programming for automatic two-way communication with all future 77 Series units. We already have the 77 CD player in a choice of mains or bus-powered versions, the 77 tuner is imminent and a pre/power amplifier combination is just around the corner.

While planning this new-look series, Quad decided to market some smaller, less costly, conventional magnetic loudspeakers alongside its world-renowned ESL-63 electrostatic. The aim was, to quote from the literature, to tackle "the perennial dilemma for most Quad customers that ESL-63s are either too large or too expensive [at almost £3,000 per pair] or both".

Accordingly, Quad commissioned Derek Hughes of Spondor, whose own-brand designs have achieved wide acclaim among professionals and keen amateurs, to come up with the answer. Designing a box loudspeaker capable of exactly matching the transparency and smoothness of the Quad electrostatics is probably an impossibility, but the idea was to use the ESL-63 sound as a reference and get as close to it as possible.

Two models of roughly 10 and 20 litres internal volume have

arrived on the scene and should create quite a stir among non-Quad users as well as the large family of Quad faithfuls. They are the 77-10L (£699 per pair) and the 77-20L (£999).

I have been listening to the smaller 77-10L and logically coupled them up to the Quad 77 amplifier and remote controller which we reviewed in February 1995, plus the Quad 77 CD player reviewed in November 1995. Let me say straightaway that the sound quality is something of a surprise – in the nicest possible way – but reserve a more detailed analysis until I have got the basic description out of the way.

The 77-10L has small bookshelf dimensions of $325 \times 190 \times 240\text{mm}$ ($12.8 \times 7.5 \times 9.5$ inches). It is a two-way design with a sealed enclosure, like so many others on the market, but has been given an out-of-the-ordinary appearance to set off the extra care and attention which has undoubtedly been expanded inside. The sturdy MDF box has internal corner battens and damping to reduce panel resonances and standing waves. All external corners are rounded and the whole exterior is coated with grey Nextel, the suede-like paint which matches all the other 77 Series units. A black 15mm-thick block is screwed to the base to act as a short pedestal and should enable a variety of stand fixings to be employed.

A deep cherry coloured grille cloth, which is a good match for the maroon-coloured 77 Series



control buttons, is wrapped over a round-edged wooden frame. This is held by four push-studs and, although the cloth is obviously not 100 per cent acoustically transparent, I would be loath to leave the grille off just for the tiny sound enhancement which this might provide. The Nextel-coated front baffle presents a rather plain appearance and both the drive units look as if they would react badly to accidental contact with prying fingers, etc.

The 25mm soft dome tweeter is set in a flared plate which in turn is mounted flush with the baffle, as is the 135mm bass driver. This has a plastics diaphragm with a rubber surround and soft dome dust cap. Much designer effort has gone into the crossover to get an electrostatic-like sound balance and the loudspeakers are pair-matched to within 1dB over a broad band to ensure a high standard of stereo imaging.

The back panel is completely blank except for a single pair of high quality terminal/binding

posts which emerge through the panel at a little wider than the normal spacing. In Europe these arrive with studs pushed into the ends as specified by recent legislation for fear of accidental insertion of mains plugs, but I removed the studs from the review loudspeakers and used the 4mm plugs at the ends of my high-performance Quad round-section loudspeaker cables (available at £5.80 per metre).

Although powerful magnets are used and the nominal impedance is the standard 8 ohms, no attempt has been made to achieve high sensitivity, which is rated at a modest 84dB at 1 metre for 2-83V input. The frequency response too has a relatively 'average' rating of 70Hz–18kHz within $\pm 3\text{dB}$ limits and low-frequency cut-off is given as -6dB at 55Hz.

Performance

That such figures provide only the sketchiest clue to a loudspeaker's actual sound quality was more G

Audio

than usually evident with the Quad 77-10Ls. From first switching on, they sounded anything but humdrum. Presence was excellent, almost producing a forward projection of individual voices and instruments, and there was very little of that depressing boxiness which to our ears rules so many rectangular enclosure loudspeakers out of court. Clearly the designer has succeeded in that part of his brief aimed at imitating the open, non-coloured sound of the Quad electrostatics. I would guess that the robust cabinet and careful internal damping play a large part in this success.

As for the midrange and treble smoothness, where the ESLs are so superb, the well chosen drive units and precision crossover design has worked very well. In-room plots using a warble tone confirmed a response well within the claimed $\pm 3\text{dB}$ limits – again a vital statistic if ESL equivalence is an objective. I looked out my original (1986) ESL-63 plots and found them reasonably similar to the 77-10L but with a good octave better bass

extension. Some bolstering of the 77-10L's lower midrange seemed to have been introduced by way of compensation for that steeper bass roll-off. This has been reasonably successful but the laws of physics remain intractable where small boxes are concerned: a lack of true bass firmness could be identified when reproducing the lowest organ or piano notes and I did feel a degree of midrange clouding in heavily modulated passages.

Straight listening comparisons with my resident ESL-63s confirmed their greater warmth and seamless midrange performance. Still, the forward presence and excellent attack of the 77-10L sound were positive ingredients in its favour, particularly when the savings in space and cost are entered into the equation. Careful experiments with wall distance produced a small degree of bass enhancement. Forward dispersion of high frequencies was wide enough to give acceptable stereo over a fair listening area, though turning the loudspeakers to point into the centre of the seating space

Specification

Type	Two-way closed box
Drive units	135mm woofer, 25mm tweeter
Frequency range	50Hz–20kHz
Frequency response	70Hz–18kHz $\pm 3\text{dB}$
LF cut-off	-6dB at 55Hz
Sensitivity	84dB for 2.83V at 1 metre
Nominal impedance	8 ohms
Power handling	70 watts
Dimensions (H x W x D)	325 x 190 x 240mm
Weight	7kg
Manufacturer	Quad Electroacoustics Limited, Huntingdon PE18 7DB
Telephone	01480 52561
UK retail price	£699 per pair

sharpened the image a little and was preferred.

The 77-10Ls did show up as requiring fairly substantial supports if loss of definition was to be avoided. They should of course be raised to bring the tweeters to about ear height, where treble response and stereo imaging are optimum. This calls for stands (or shelves/tables) about 600mm (24in) high. The makers recommend "compliant pads between loudspeaker and stand. These help to prevent cabinet resonances

from being transmitted through to the floor". This goes against the preferences of those who advise a totally bolted-down approach, but it worked very well in this case.

The Quad 77-10L loudspeaker fully deserves to wear the new-style Quad logo. It follows in the tradition of this well respected brand, producing musically refined sounds at all levels (below the ear-splitting) and will fit comfortably into rooms, and budgets, where the ESL-63 sadly cannot reach \odot

Sony TA-FA3ES integrated amplifier



When they sent along that rather fine CDP-XA2ES Compact Disc player which was reviewed last month, the Sony people included a matching integrated amplifier from the new ES range. At £399.99, a shade more than the player, this beast offered an immediate indication of value for money judged from its weight alone. Previous experience of the brand had suggested this might be due to heavy mineral-loaded base panels which Sony once favoured – the so-called Gibraltar chassis – but not so: this TA-FA3ES is all solid metalwork and hefty components.

I hope Sony won't mind me saying that its one-time near dominant presence on the audio separates scene has tended to fade a little in the past couple of years. True, there have been some outstanding products – Dolby S cassette recorders [the TC-K515S was reviewed in July last year] and a succession of audibly delectable low-cost CD players, for example

– but the emphasis otherwise has been on 'systems' and slow movers such as DAT and the yet-to-boil MiniDisc. This year will mark a turning point if Sony UK has anything to do with it (and the UK team has had a lot to do with the design aspect) as this, the second new product to reach me recently, shows.

The FA3ES shares the same style as the aforementioned CDP-XA2ES CD player; the upper section here houses seven tiny orange LEDs, lit to indicate the selected input. The corners are again rounded and the lower brushed black satin finished area carries the neatly legended controls. An attempt has been made to 'domesticate' the knobs etc. and although they are still far from subtle, those earlier ES years of resemblance to something recovered from a Second

World War Russian battle cruiser have thankfully disappeared. Even so one can't help feeling that in the second half of the 1990s a one-time progressive Sony ought to have made more effort to match the 'house trained', compact appearance of some European company products. The usual story, that it is "what the major markets demand", rather falls flat when all the foreign show reports feature enlightened styling. Certainly such dated, bulky black boxes as these are not to the fore. Even so products like the FA3ES do contain a number of innovative features which are worthy of investigation.

The chassis construction of the FA3ES is again of the 'Frame and Beam' concept, although in this case the main beam is a deep one, forming a shield between the sensitive early stages and the power

sections. Extensive use of copper-plated screws ensures enduring electrical continuity and copper plates clamped between the large output MosFet devices and the radial-vented extruded aluminium heatsinks look after their temperature regulation. There are some ten printed circuit board sections, many derived from one large original board with snap-off sections later used individually; there is therefore more than the usual amount of internal wiring and plug and socketry. The main board carries the power supply and symmetrical output driver sections and is notable for the pair of 10,000 μF Audio Elna capacitors and the centre point earthing arrangement.

Unusually in a Japanese design, the power transformer is a toroid and it is mounted on a separate small steel chassis so that it can be attached via vibration-absorbing material to the main framework. This also facilitates the installation of alternatives for other mains supplies. Unusually also, the parts so far mentioned, plus a few bits of fusing and switchery, constitute a complete and separate power amplifier.

The input, tone control, pre-driver and head-

