

QUADS IN!!

Noel Keywood listens in on Quad's new 989 electrostatics and the matching QC twenty four and II-forty valve pre and power amplifiers. Will he be suitably impressed?

Quad electrostatic loudspeakers have traditionally been admired for a whole range of properties, but powerful bass isn't one of them. Describing the preceding ESL-63, one reviewer said that bass "drifted out of the loudspeaker". To counter this criticism Quad have added two bass panels to their new 988 to come up with the imposing 989.

In case you are new to the idea of an electrostatic loudspeaker, here's a simple description. Loudspeaker cones have mass, which is a bad thing. An electrostatic loudspeaker moves air with an almost massless sheet of mylar film (a sort of non-stretch clingfilm). The film is suspended between perforated electrodes and driven by an electrostatic field modulated by the music. Sound from the film passes out through holes in the electrode panels. It sounds great in theory but there are some complex problems that make it difficult to work properly.

An electrostatic loudspeaker is a panel that radiates forward and backward. It is possible to place a box behind to contain the rear radiation, like an ordinary loudspeaker, but this is never done. Consequently, bass depth depends upon panel

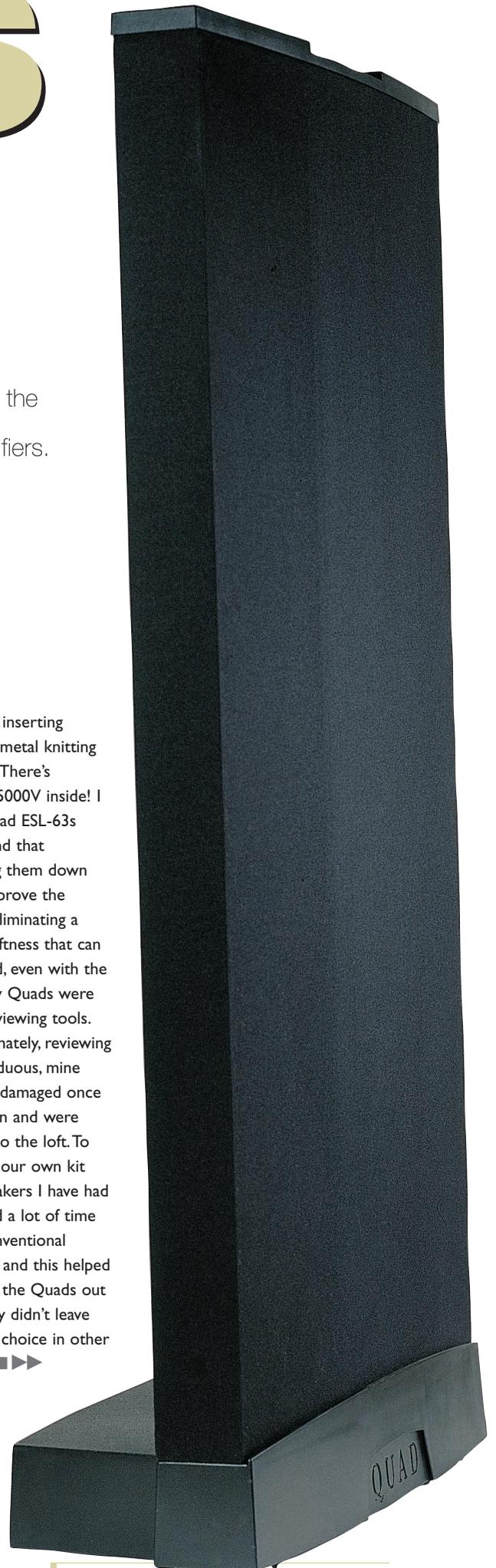
dimensions, the smallest dimension determining the frequency at which bass output starts to roll off. So for deeper bass you need a bigger panel and Quad have not flinched from extending the 988 upward to a height of no less than 133cms (4ft 4in), to come up with the 989.

Electrostatic loudspeakers need mains power, since on-board they have a high voltage supply unit, as well as electronic protection circuits. The 989s have an IEC mains socket at rear, plus illuminated power switch.

A concentric electrode structure in conjunction with a delay line generates a hemispherical radiation pattern. This makes the loudspeaker act as a point source, eliminating the inherent problem of cancellation that a panel otherwise has. In practical terms it means you get great imaging - and the images stay steady as you move your head.

Whilst the film of an electrostatic loudspeaker is massless, the electrodes either side of it are not, so the notion of masslessness is a bit simple. The trick is to ensure the electrodes, dust covers and cosmetic 'socks' between massless film and listener don't affect the sound too much. The covers must ensure the loudspeaker is safe too, preventing

children inserting pointed metal knitting needles. There's around 5000V inside! I own Quad ESL-63s and found that stripping them down does improve the sound, eliminating a slight softness that can be heard, even with the 989s. My Quads were once reviewing tools. Unfortunately, reviewing life is arduous, mine became damaged once too often and were retired to the loft. To develop our own kit loudspeakers I have had to spend a lot of time with conventional cabinets and this helped squeeze the Quads out too. They didn't leave through choice in other words! ■▶▶



review



So I am well acquainted with the wonder of Quad electrostatics, if also aware of their weaknesses. These are more to do with practicality than sound quality. Quads go loud, but not disco loud. They are large and need a long room to give their best and, of course, they are expensive. As the old saying goes, "whether you're rich or whether you're poor, it helps to be rich!"

Funnily, Quads don't lack bass. Measurement shows they go low and, in the right sort of room, I have heard them produce superb bass, good enough even for dub reggae. The problem is that in small rooms the rear wave returns from the back wall to cancel the front wave at bass frequencies. The 989s put more bass into a room however and can handle more bass power than earlier Quads. However, their sheer size demands use in a large room, since they visually dominate a small or medium sized room.

To make absolutely certain the 989s were working properly for review I left them on charge for two weeks then running in for another two weeks. I suspect only a few days of charging is important. I had a bad time with many transistor amplifiers. These loudspeakers are very revealing and they exhibit some difficulties as a load. A hard, tinny sound too often met my ears. Good valve amplifiers match if they can supply power. At least 40W is needed, because the 989s are insensitive.

RETRO REVIVAL

Quad supplied their new valve QC twenty four preamplifier and II-forty power amplifiers to accompany the 989s. These amps are only available in one complete pre and power package costing £4,000. Styled like the first Quad 22/II combination, and of similar proportions, but with lighter paintwork, they look neat and retro, yet strangely modern. Build quality was good, and the large volume control great to use, as always.

Happily Quad haven't replicated the power arrangements of the 22/II which demanded thick cabling and octal plugs. The new preamp and power amps are self powered.

The QC twenty four has seven inputs, all at line level with a sensitivity of 200mV. There are two sets of tape sockets, but no tape monitor switch. This little item is not needed with digital recorders, since no monitor signal is available.

The QC twenty four is an all-valve preamp. The only question mark at present is lack of a matching external or internal valve phono stage to validate Quad's inclusion of a phono input. There are many external phono stages from other makers that all will match, including our own World Audio Design valve stage that handles moving coil as well as

moving magnet cartridges.

Quad's new valve preamp is a quality alternative to solid-state preamps. Generally, a valve preamp behaves exactly like a solid-state unit but has better clarity and neutrality. These days the use of DC heater supplies eliminates hum, and valves are as quiet as transistors in line level preamps, but with much higher overload ceilings. Unfortunately, having said that my sample did have a little hum, something Quad will have to attend to, together with volume spindle earthing.

The II-forty power amplifiers are monoblocs, each with its own power supply and large output transformer. The output stage uses two KT88s in push-pull to deliver a rated 40W; we measured 45W. There are 4Ω and 8Ω taps.

This is one specialised and unique hi-fi system of course. In my view nothing can touch the openness, stage depth and clarity of a good valve amplifier - and this is a good valve amplifier. Designed by Andy Grove it is not a make-over of the 22/II, although it does follow the basic pattern Quad laid out all those years ago, combining compactness with style and superb sound quality. Then there are the 989 electrostatics of course, which also have enormous signal resolution.

SOUND JUDGEMENT

An outstanding property of the 989, like any Quad electrostatic, was the cohesive way it treats all instruments, due to the fact that a single drive unit - a sheet of Mylar - handles everything. Violins generate an intense spectrum of high frequency energy that's a problem for conventional loudspeakers but a doddle for the Quads - and the difference is at its largest here. In a conventional loudspeaker the lower notes are reproduced by the bass/midrange driver and the higher notes by the tweeter, giving the violin something of a split personality. Not so in the 989. The 989s revealed the complex detail of bowed strings, as well as their tonal colour and vibrancy. They also dispelled the coarseness that subtly turns strings into bowsaws with conventional loudspeakers.

The ability of the 989s here is extraordinary, but then Quads are like this. Re-introduced to them after a few years break I was transfixed by the naturalness and vibrant detail of violin, and moved by way the 989s handled a sea of violins in complex orchestral arrangements. Here they could layer an orchestra, bringing a scale to a string section in terms of depth as well as a sheer weight of instruments, all clustered in my living room! The ability to transport string sections into the home was awesome; I had the size and might of the Philharmonia laid in front of me with images that occupied swathes of space, performing the Overture of Wagner's *Reinzi* in an atmospheric old recording (1960) at the Kingsway Hall, London. Music stands clanked, people coughed, and the strings danced, hovered and soared in great sections in front of me.

Quads always were a reference for loudspeaker designers; I've seen them tucked in the corners of design labs everywhere. To hear the 989s reproduce an orchestra is to know why: cone loudspeakers are not in this league. As the *Daily Mirror* once said of the Sex Pistols, "they're number one in a field of one". You could say the same of the Quads with classical music.

But it isn't all good news. The sheer resolution of these loudspeakers favours good recordings and

sidelines bad ones. Whilst the Philharmonia performing *Lohengrin* in 1960 was a wonderful experience through the 989s, *Lohengrin* performed by the Philharmonic in 1993 was a screech. An all-digital recording, it had none of the drive, movement and passion of the earlier analogue version.

The 989s have an ability to resolve that performs peculiar tricks; some recordings gain stature, others simply become unlistenable. Some recording engineers swear by them and I can see why. The depth of revelation a Quad provides is quite extraordinary. It can make or break. The loudspeaker's a two-edged sword!

Not unsurprisingly the 989s made my room move nicely to the kettle drum prominent in Orff's *Carmina Burana*. The 'speakers reproduced the scale of this performance well, even if I found myself a little unsettled

revelation. To hear music on these loudspeakers is to hear music, rather than the loudspeaker.

The 989s are just as good with Rock in most respects, even if they reproduce bass in a different fashion to the sound we are all so used to. And what we are used to is the sound of a resonating box. Once you remove this pervasive influence it's possible to hear into a recording, but the 989s don't match the resonant power of a box unless they are placed in a suitable room. The trick is to have a long, narrow room with the Quads placed two-thirds of the way down (approx) but against the side walls. The rear wave is 'lost' down the room behind the loudspeaker, returning much weakened. The side walls extend the panel area of the loudspeaker, reducing local cancellation, Peter Walker, founder on Quad, once explained to me.

The 989s are best used in a large



(again!) about recording quality.

With Peter Hurford's fluid playing of Cesar Franck's intriguing Chorals on the organ at the Basilica of Saint-Sernin, Toulouse, the Quads displayed in full glory what I had been getting glimpses of with rock music: that strange phenomenon called "bass detail". Where my large, tuned KLS-9s would sink deep and shake the room the Quads showed me clearly there was more than just depth to be heard: there was the full majesty of this vast organ, the pump, the rush of air and of course the deep, gliding chords that shook the room and held me spellbound. Quads can deliver a sublime experience. They still take my breath away with their profound

room, two rooms knocked into one being ideal. A length of 20ft or more with a width of 10ft would suit, although any room with a dimension greater than 18-20ft should do. My own room, at 16ft long, was returning the rear wave out-of-phase with the front wave at low frequencies, causing some bass cancellation. The 989s went low and provided plenty of room shaking power, but I detected a strict limit that large box loudspeakers could exceed. Because the 989s provide much more than the ability to just go low the absence of subsonics in my particular situation was not worrying. It was a pity I could not fully hear the resolution of deep bass these loudspeakers bring. ►►

review



A compilation of 1960s hits said a lot about what the 989s do with Rock. Differences in recording quality between successive tracks were made obvious, much more so than with other loudspeakers. It's funny how box loudspeakers, with their resonant box bass, oft-accentuated frequency extremes, artificial 'detail' and mediocre insight disguise recording weaknesses but tease out the dynamics of Rock. The Quads play it the other way around. The compilation came across as a series of fascinatingly different recordings; it was best not to sit in front of the loudspeakers because the hiss of old analogue master tapes, strange effects, ropery background vocals and peculiar studio acoustics dominated listening. I never realised 'River Deep, Mountain High' was such a messy

out a complex sound stage.

I wasn't surprised though that Jackie Leven's superb recordings were given star billing by the Quads. His rolling, resonant vocals came across powerfully on *Boy Trapped In a Man*, the superb clarity these loudspeakers bring to strings allowing acoustic guitar to scythe out. Quads can amplify a performance too and with Leven's songs they did. He's a powerful singer with moving songs, sung from the heart. With beautiful recording quality the album *Fairy Tales for Hard Men* jumped from the 989s. They can offer real drama with Rock, as well as classical.

Initially I used the silky smooth Cyrus 7 solid-state amplifier with the 989s, followed by Quad's own QC twenty four valve preamplifier and Il-forty valve power amplifier. The civilised

ROUNDING OFF

Quad's new 989 electrostatics go low and can deliver real bass power, but they do need a large room. In the right setting they offer an extraordinary insight into any recording, and a level of fidelity beyond conventional loudspeakers. Like earlier Quads, the 989s are tonally neutral and totally cohesive, having little sound of their own. They construct a massive sound stage, with high definition images often of much greater scale than is usual. They go loud, but are not meant to provide disco levels, especially in the sort of large room they need for best results. This is a real monitor loudspeaker, one that holds a magnifying glass up to recording quality, which at times is disconcerting.

The QC twenty four preamplifier and Il-forty power amplifier have strong



recording until the 989s analysed it so remorselessly in front of me - I almost got up and walked away in disgust!

Electrostatics don't give you the massive resonant bass boom provided by a box, but they do give solid bass that is eerily detailed and revealing of recording method. Most of us are so tuned to the boom of a box, however, that a Quad may seem light or 'peculiar' in this department. In my view, within the right acoustic Quads provide better bass than box loudspeakers.

That the 989s go low was shown by the drifting bass behind Sting's *A Thousand Years*, which filled the room with a gentle background rumble. Well recorded albums like this were a captivating experience, vocals hanging magically in the air between the 'speakers, at a height that gave them a celestial quality.

Macy Gray's husky voice was beautifully wrought: clear, natural and full bodied with a tantalising presence in the room, the complex background arrangements of *Why Didn't You Call Me* seeming a whole extra performance in their own right, such were the 989s abilities at revealing and laying

Cyrus was a good match, where so many other amplifiers failed, sounding hard and brittle.

The valve power amps added stage depth, introduced a greater sense of clarity and, perhaps surprisingly, gave the 989s noticeably stronger bass than the Cyrus. Use of an external PSX supply would probably have improved the Cyrus in this area. However, I enjoyed its silkiness, and remote control. At 70W power output was just right for the 989s.

The 45W output of the valve Il-forty drove the Quads loud but a monitoring oscilloscope showed that the 989s, being insensitive, demand power and going from 'loud' to 'very loud' (over 100dB SPL) induced a little clipping, curiously, on high frequency peaks. I heard harshness setting in so the phenomenon is audible, but of course valve amps can shrug off overload and resist even the crowbar protection circuits that these loudspeakers retain from ESL-63 days. I didn't get the 989s to crowbar the Cyrus 7, by the way, but it has an excellent protection circuit that resets itself, so of all solid-state amps the Cyrus should cope.

output right across the audio band, giving a clean, clear and muscular performance. This is what KT88s, in conjunction with good transformers can do. They have a surprisingly 'modern' sound, by which I mean there's little of the softness and warmth people expect from valve amplifiers. Instead, there's great clarity, excellent stage depth and a lack of hardness that valves are renowned for. The QC twenty four preamp needs some tidying to eliminate a slight hum at full gain and a buzz from the volume control when touched. In spite of these niggles, this is a unique and fabulous system that could justify any price, it is so much better in terms of high fidelity, in its purest sense. It reminded me how Quad retain an almost unique grip on the concept. ■▲

QUAD ESL-989 £4,600
QUAD QC-twentyfour preamp &
QUAD Il-forty monobloc power amps £3,999

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WORLD VERDICT

ESL-989



The 989s play music like no other. Open and neutral. The sound is detailed, revealing, ruthless with bad material but downright marvellous otherwise.

Measured

Performance see

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WORLD VERDICT

QUAD QC-IFORTY



A classic combination of the old and new. A big, modern valve sound with space and depth matched with styling that harkens back to the golden age of the vacuum tube.

Measured

Performance see

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