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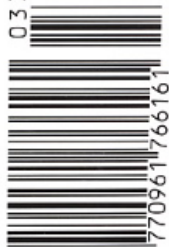
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7 PAGES OF YOUR QUESTIONS ANSWERED

REVIEW



Tony Bolton puts three of the latest and greatest valve phono stage beauties from Quad, Icon Audio and Eastern Electric against one another...

Tubular Belles

It was Michell's long-lost ISO that kicked off the phono stage craze back in the late eighties, but in the intervening twenty years the headline news has been the reappearance of the thermionic valve. So popular is the tube becoming, and so suited is it to small-scale applications such as preamplifiers, that it's no surprise to find the little glass bottle appearing in ever more phono stages, like the ones you see before you here...

There are obvious synergies; modern valve circuits aren't noisy, and the tubes themselves are compact, long lived and relatively inexpensive – something you don't find when dealing with big output

valves like the 300B! Best of all is the fact that the cartridge puts out a small signal which – in some people's view – is easily corrupted by the dreaded transistor or, horror of horrors, op-amp. Some are of the opinion that there's nothing like hearing an all-analogue sound without so much as a single transistor in the way! There are problems too however, the main one being the very small gain emanating from the output pins of a moving coil cartridge. As we shall see, however, there are ways of getting around this...

Over the past year, *Hi-Fi World* has got rather fond of the Eastern Electric Minimax Phono – its strong, musical sound providing stiff

opposition for a series of more expensive solid-state designs which we have measured of late. Then, more recently, Quad's Twenty Four P arrived on the scene, instantly winning favour with this magazine's foremost Quaddie, Mr. Keyword. As such, what better two opponents to field against the new Icon Audio PS1.2 phono preamplifier?

ON THE CATWALK

All three have a very individual appearance. The Quad's looks hark back to the original Quad II/22 series of the nineteen fifties. The front fascia contains a power switch, accompanying blue LED and a large volume control knob. The back

sports RCA phono sockets for the input and the variable and fixed outputs, and an IEC socket for the mains. There is also an earth terminal, a button to change from moving magnet to moving coil input, and a three-position rotary switch to adjust gain.

The Minimax is also conventionally styled, having a row of three exposed and one covered valves, and four transformers. The slim front panel has, on the left, a toggle switch for power, along with the inevitable blue LED, and a small knob selecting a muting circuit. The selection of RCA sockets at the back are for the signal output, MM input, and high and low sensitivity MC input. A toggle switch selects cartridge type. The back complement being finished off with the customary earth tag and mains IEC socket.

The Icon Audio PS1.2 takes a different approach. This is a two-box design with an outboard power supply connected to the phono stage via a screened lead with lockable plugs on either end. The phono stage itself is housed in a narrow black metal case, with a porthole at the front displaying the rows of valves inside. Below this are two knobs, one for volume, and the other for MM or MC selection. In between these is a vertical toggle switch for Mono or Stereo. At the back is the mains input socket, RCA input and output, and, above the earth tag, a switch to 'lift' the earth connection (occasionally too many earths in a system can induce a hum. Phono stages, because of the high gain involved, are particularly sensitive to this).

SOUND QUALITY

Going in ascending order of price, the £599 Icon Audio PS1.2 was the first to be plugged in. I started off my listening with the St. Germain LP 'Tourist'. The production is good, with nicely defined placement of instruments and some very close-miked flute work by Edouard Labor. The Icon Audio relayed the sounds with great gusto, seemingly revelling in the Dance-influenced rhythms. The breathiness around the flute in the opening riffs of 'So Flute' was nicely portrayed but not overemphasised, as was the synthesised piano that comes in soon after.

Moving onto Tchaikovsky's 'Romeo and Juliet Fantasy Overture', I found the soundstage displaying the classic horseshoe layout of the orchestra. String tone was quite accurate. I was aware of the sound of bows being dragged over a string, without the sound being overly harsh or smooth. At the bottom end of the

frequency range, the tympani in the closing moments rumbled impressively, starting quietly, like the sound of distant thunder, and growing to magnificent, earthquake-like intensity.

Edith Piaf's 1961 concert at the Paris Olympia contains probably her best known track – 'Non, Je Ne Regrette Rien'. Here the PS1.2's imaging abilities were ably demonstrated. Jaques Lesage's orchestra occupied a space just in front of the speakers, with Piaf centre stage and slightly above, surrounded by an inky black background. During her introductions it was possible to hear the echo of her voice reflecting from the back of the stage, and the presentation of the holographic image was further helped by the rustle of her clothing as she moved whilst talking. The 'Little Sparrow's' voice is one of the more difficult ones to reproduce accurately. A little too much top end emphasis and she can sound quite grating. The opposite effect can make her sound too smooth, and lacking in intensity. I felt the PS1.2 struck the right balance here, letting her rawness through but keeping the harshness at bay.

Whilst stereo grooves carry independent information on each sidewall, necessitating vertical stylus movement as well as lateral, a mono recording is cut only laterally. Any vertical movement will be caused by dirt or damage, and comes through the speakers as crackle. Playing a mono record with the vertical compliance of the cartridge negated solves this problem. For some people this is not an issue, but a sizable part of my record collection consists of mono recordings so I tend to appreciate such facilities.

Listening first in stereo, to the (mono) soundtrack to 'High Society', I was aware of the sounds of groove damage (or wear) sitting at the extreme edges of the soundstage. The central musical image was good. There was a good front of back depth and a reasonably big soundstage, occupying about two thirds of the space between the speakers. Switching to mono listening,

the central image didn't really alter but the crackles all but disappeared, only showing themselves between tracks in a centrally placed, but fairly inconspicuous way.

Adding precisely £494.99 to the cost of the Icon Audio will buy you a Quad QC Twenty Four P.I found the sonic presentation to be as far removed from that of the Icon Audio as the styling is. From the first bars of 'Tourist' I was aware of a very different tonal palette. The Quad enjoyed rhythms as much as the Icon Audio, but seemed more focused on the emotions that can drive music. This was very noticeable when listening to Tchaikovsky. Instead of concentrating on the textures and



Rear view of Icon Audio PS1.2.

tonal qualities of the sounds I found myself sitting back and letting this beautifully flowing, slightly lush sound wash over me. The presentation ideally suited the romantic nature of the piece. Strings were smoother and had a slightly more homogenous feel. They didn't have the glossiness of synthetic string sounds and were still very real - the fullness of the presentation made me think of it as the full fat, double cream version. Needless to say, the bass lines of large stringed instruments and tympani were shown off in all their glory.



Rear view of Eastern Electric MiniMax.



Rear view of Quad QC Twenty Four P.

Although the sound was large and full, the imaging was still good with appropriate gaps around performers. Piaf seemed to occupy a slightly greater part of the central image. It was still realistically sized since the soundstage also seemed a little wider, extending perhaps a foot extra either side of the speakers. Her voice had slightly less gravel in it, the roll of the Rs being less obvious, but the richness helped top up the emotional content of her voice and songs. The defiance of "Non, Je Ne Regrette Rien" was more blatant. She genuinely meant every word.

I found myself again lost in appreciation of the details during the Tchaikovsky. The separation and micro-information were such that at one point I actually tried counting the number of violins playing. The trade off for this was a less dramatic rendition. The intensity level seemed lower, switching the concentration from the overall feel of the music, to a study of its constituent parts. Don't misunderstand this as a lack of musicality; that is there, it's just a different way of focusing on the character of the piece.

I felt that some of this may be

due to a slight lightness in the extreme lower registers. The growl of double basses and cellos was a little ethereal compared to the other two phono stages, and the impact of the tympani was definitely reduced. Again, instead of sitting there feeling the power of the drums, I was more focused on the way

the percussionists were causing the sound.

The analytical nature of the Minimax delighted in the complexities of Piaf's voice. Her vibrato, and the unsophistication of her sound were clear, as was the minutiae of her accent. The image was very detailed, but I felt that there was a certain lack of the emotional theatricality which characterises her work.

Moving on to High Society, and I had more awareness of the sound of the groove walls than I did with the Quad. Again, I found myself listening to the music in a more studious manner than before, appreciating little sonic details that seemed more apparent. Whist I didn't notice the slight bass lightness as much, I still felt that 'Now You Has Jazz' lacked a touch

of enthusiasm, almost as though Louis Armstrong and his band were minding their manners a little.

Moving over to my other system, I changed to the MM input, fed by a Cartridgeman MusicMaker Mk.III. Of the three, the Quad seemed least happy about this change, losing a little of its *joie de vivre*. This system is based around my Leak Stereo 20, so I also took advantage of the Icon Audio and the Quad's ability to directly drive a power amplifier via the onboard volume controls. The result was impressive, both units produced a bigger and more detailed version of their own take on sounds. The Quad excelled itself at the end of 'Olympia '61' when I found the applause spreading across the room to surround me. For a few moments I found myself in the midst of a crowd of over excited Parisians shouting and stamping their appreciation.

CONCLUSION

Overall then, there are fairly large differences between the three units, but they all get so much right that the slightest variation from each other's performance is emphasised. I would happily live with any of them. They are all well built, well finished and offer superb performance. I could liken the differences to those between the three box sets of Beethoven symphonies that I own. The Quad is like the Von Karajan recording; somewhat lush in style and very emotional. The Icon Audio is akin to the Toscanini set - impassioned, and energised - whilst the Eastern Electric is more like the Klemperor album: very considered and somewhat cerebral.

If cost is an issue then the Icon Audio PS1.2 offers unbeatable value for money. It sounds good and has very useful facilities. If cost is no object then audition all three, and be prepared to do some serious decision making. Each has its own style, and the final choice will rest on how much you wish to trade emotional involvement for detailed analysis of the sound. Either way, these three tubular belles are a thoroughly modern way to make music - and all the better for it.

SECOND THOUGHTS

The Globe Ratings here caused - er - 'discussion' in the office. Adam and I agreed the Icon PS1.2 phono stage is superb for the price, but neither of us would rate it categorically above the Minimax. However, even I wavered on this point - and up to now the Minimax has seen off all in my system. The Minimax, like the impressive Edgar CD-1 CD player - uses valve rectification in the power supply (EZ90 full wave rectifier). Both have a light tonality and intense detailing. The PS1.2 sounds 'darker' in its delivery and didn't quite reveal studio reverb so well around Tracey Chapman, but it delivers a beautifully deep feel to the sound stage and wonderfully powerful yet impressively tight bass. On balance - and especially at the price - the PS1.2 would likely have broader appeal I feel. All the same Adam prefers the Minimax for its clarity and detail and I just about agree, so we gave both five globes. NK

There is no provision for switching to mono on the Quad, but with reasonably well preserved records I found this not too much of a problem. There was surface noise present, again at the extreme edges of the soundstage, (incidentally confirming my initial impression of greater width to the image) but again it had a deeper, slightly fuller tone which made it a little less obvious.

At £1,099, the Eastern Electric Minimax is the most expensive of the three here. After the deep pile velvet approach of the Quad, the relative coolness of the Minimax was a surprise. Where the Quad revelled in the passion of sound, this machine seemed to sit back and take a detached, almost hardheaded view of things. I found myself concentrating more on Labor's musical technique, listening to his breathing and the action of the flute's mechanism. The drive of the rhythm seemed marginally reduced, but the attack of a note was more positive.

REVIEW SYSTEMS:

Clearaudio Master Solution/Carbon Satisfy turntable
Ortofon Kontrapunkt a MC cartridge
Leema Acoustics Tucana amplifier
Chario Ursa Major loudspeakers

Linn LP12 (Origin Live PSU)/Hadcock 242 Cryo turntable
Cartridgeman MusicMaker Mk.III MM cartridge
Icon Audio Passive preamplifier
Leak Stereo 20 power amplifier
Kelly KT 3 loudspeakers

MEASURED PERFORMANCE

ICON AUDIO PS1.2

The Icon Audio PS1.2 is accurately equalised on both MM and MC inputs. Both have a little bass lift below 100Hz, amounting to +0.5dB at 20Hz. It's common for phono stages to have bass roll off as they run out of gain, and because it provides a measure of warp filtering. There's also merit in balancing out the natural low frequency lift pickup cartridges display due to arm/cartridge resonance. The Icon bucks the trend and will have bigger bass, as this sort difference is plainly audible.

The volume control rolls off treble at mid settings, due to stray capacitances acting in conjunction with a high track resistance - a common problem. It was -1dB down at 14kHz, worst case, but as most cartridges are +2dB up or so at this frequency, it will pass unnoticed.

The PS1.2 was very quiet on both MC and MM inputs, had little distortion and wide channel separation. Gain on MM was a usefully high x365, giving around 3V maximum output, whilst gain on MC was x3561, sufficient again to provide 3V or more, so the PS1.2 can drive power amplifiers directly. Overload ceilings were fine.

The PS1.2 is nicely engineered, with not a weakness anywhere. Expect stronger bass and subsonics than usual. NK

QUAD QC TWENTY FOUR P

The Moving Magnet section of the Quad has three gain options: x184 up to x737, measurement shows, wide enough to accommodate all MM cartridges. An output swing of 19V gives plenty enough volts with the high gain setting to drive power amplifiers directly from the volume control (variable) output. Hiss will be inaudible and there was a negligible hum. Frequency response measured flat from 23Hz up to 35kHz (-1dB) with MM. Our analysis shows output rolls down slowly below 100Hz, due to the presence of a slow warp filter which reduces gain by -10dB at 10Hz. The MC stage has a similar frequency response.

MC gain levels were vast, measuring x1785 (Low) to x7135 (High).

Measurement shows the Quad Twenty Four P can act as a phono stage or preamp. In both roles it measures very well.

EASTERN ELECTRIC MINIMAX

The Minimax is accurate in its equalisation from 200Hz up to and past 20kHz, within 0.1dB or so. Below 100Hz gain starts to fall. There's more roll off with MC than MM, the former measuring -1dB at 60Hz and -3dB at 22Hz, higher than is common. This isn't always a bad thing, as it suppresses warps. The roll off will audibly lighten bass though.

Gain values were fine at x128 for Moving Magnet cartridges, x627 for High output Moving Coils, and x1797 for Low output ones.

Noise was low. MM cartridges feed the first valve directly. MCs feed a tapped input transformer that in turn feeds the first valve. In use hiss with MC is all but inaudible.

The Minimax phono stage measured well in all respects, but it will have slightly lighter bass than any stage meeting RIAA equalisation requirements down to 20Hz or lower. NK

ICON AUDIO PS1.2

Frequency response	4Hz - 14kHz (MM) 4Hz - 24kHz (MC)
Separation	76dB
Noise (MM/MC e.i.n.)	0.57mV/0.07mV
Distortion	0.1%
Gain (MM, MC)	x365, x3561
Overload (MM)	60mV in/22V out
(MC)	6.5mV in/22V out

QUAD QC TWENTY FOUR P

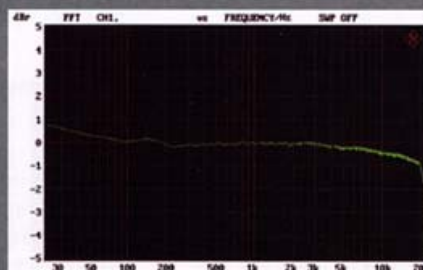
Frequency response	23Hz - 35kHz (MM) 24Hz - 32kHz (MC)
Separation	67dB
Noise (MM/MC e.i.n.)	0.6mV/0.08mV
Distortion	0.025%
Gain (MM)	x184, x366, x737
(MC)	x1785, x3565, 7135
Overload (MM)	110mV/56mV/27mV in/19V out
(MC)	11mV/5.2mV/2.7mV in/19V out

EASTERN ELECTRIC MINIMAX

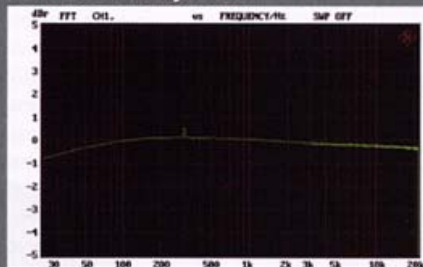
Frequency response	60Hz - 30kHz
Separation	66dB
Noise (MM/MC e.i.n.)	0.6/0.06uV
Distortion	0.02%
Gain (MM, MC H/L)	x128, x627, x1797
Overload	26V out

FREQUENCY RESPONSE

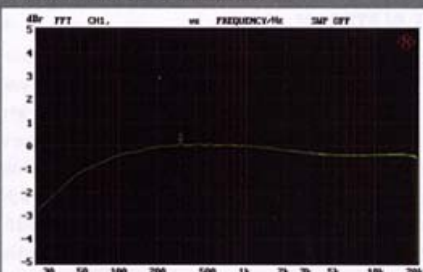
Icon Audio PS1.2



Quad QC Twenty Four P



Eastern Electric Minimax



VERDICT ●●●●●

Bargain-priced valve phono stage with excellent build quality and an engagingly uplifting sound.

ICON AUDIO PS1.2 £599

Icon Audio

☎ +44(0)1162 440593

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www.shadowdistribution.co.uk

VERDICT ●●●●●

Powerful and lavish sounding performer with excellent all-round ability.

QUAD TWENTY FOUR P £994.99

IAG

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www.quad-hifi.co.uk

NEXT MONTH

Open the pages of April's Hi-Fi World and you'll find a veritable shower of great new equipment to read about. If you're thinking about spring cleaning your system, then we have products of every type and price to consider – from Linn's super new high end Akurate DS network music player to Tonearm Audio's Model 9, a wooden pickup selling for under £200! There's everything from the brand new MF Audio Reference, possibly the world's best pre-amp, to Leak's classic Stereo 60 amplifier. Here's just some of what we hope to bring you in next month's bumper issue:

ICON AUDIO MB90 MONOBLOCK POWER AMPLIFIERS
 FEATURE: DIGITAL AUDIO PAST, PRESENT & FUTURE
 GRAHAM SLEE VOYAGER HEADPHONE AMPLIFIER
 MOON i-3 vs. MYSTERE IA21 INTEGRATEDS
 MF AUDIO REFERENCE PASSIVE PREAMPLIFIER
 LINN AKURATE DS NETWORK MUSIC PLAYER
 OLDE WORLDE: LEAK STEREO 60 AMPLIFIER
 AUDIO TECHNICA AT-H1000 HEADPHONES
 ORTOFON MC WINFELD CARTRIDGE
 CAMBRIDGE AUDIO 340R AV RECEIVER
 TONEARM AUDIO MODEL 9 TONEARM
 Q ACOUSTICS 1020i LOUDSPEAKERS
 QUAD 11L ACTIVE LOUDSPEAKERS
 WHEST AUDIO TWO PHONOSTAGE
 B&W ZEPPELIN IPOD DOCK
 TRENDS AUDIO UD-10 DAC
 PMC OB1i LOUDSPEAKERS



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