LEFT: Top view of Signature 200iQ power amp with cage removed, showing pairs of 6SN7 triodes and KT88 output tubes behind VAC's huge, proprietary speaker-coupling transformers [see boxout, below]

geometry, and insulating dielectric, all of which have profound implications for the "voice" of the component'.

He also prefers mechanical switches 'with very pure contact materials and high contact force. These deliver a superior level of sonic detail and naturalness relative to the now-common use of relays or FET switches for signal routing, and also have lower levels of distortion, microphony, and stray capacitance. As a side benefit, they allow the control knob to indicate the setting directly, rather than requiring a display readout'. And if further justification of the cost is required, Hayes told us, 'I personally audition each and every VAC instrument, be it new, updated, or repaired, and only approve them for shipment when they sound as they should'.

IT'S A KNOCKOUT

With so many inputs begging to be tried, in both single-ended and balanced modes, I played CDs and SACDs via the balanced outputs of three different DACs, and open-reel tape via RCAs and XLRs (my Otari is balanced-output-only). None of my tonearms terminate in XLRs, so phono listening was undertaken only via the Master Preamp's single-ended inputs. I tried three MCs and two MMs, and my reaction each time around was that this is a true vinyl-lover's set-up.

What threw me was starting my sessions with open-reel tape, and the wide-open Broadway performance of *Fiddler On The Roof* [RCA FTO-5032]. Before even focusing on the sound, whether the sublime violin work or Zero Mostel's distinctive vocals, my attention was grabbed by the sense of space. The recording is huge-sounding regardless of the system, and really does convey the notion of a massive theatre. It's almost a distraction, but a rewarding one.

Via this VAC set-up, this stage bordered on the cavernous. Performer placement was so precise that you could trace any movement (and I do not claim to know how 'live' was the recording session) with the smoothest of lateral transitions. If you're a soundstage and imaging obsessive, this will knock you out. But it begged a comparison I was dying to make: I dug out the same recording on LP [RCA LSO-1093], despite my declared prejudice in favour of tape.

Here the Master Preamplifier's phono stage was going to be challenged not to better the sound via 7½ips open-reel tape – that is simply not possible – but to see how much it could close the gap. The A/B comparison was an ear-opener, because

TAP DANCING

A choice of 8ohm and 4ohm (and perhaps 16ohm or 2ohm) transformer taps are typically offered on the rear of many tube amplifiers, optimising power delivery into higher and lower impedance speakers, respectively. The secondary windings in VAC's output transformers are configured in parallel when in mono mode, halving the specified 4-8ohm, 2-4ohm and 1-2ohm taps. This influences the available power [see Lab Report, p45] and, in this instance, the high frequency *response* realised by the chosen tap/speaker combination.

The right match will result in a very flat and extended response – remarkably so for a tube amp – [solid traces, inset Graph] while mis-matches can provoke a treble roll-off [dashed traces]. So, if you have a speaker with an impedance trend that's generally higher than 4ohm, then the 4-8ohm tap will realise the best result at ±0.0dB/20kHz and +0.7dB/68kHz into 8ohm [solid black trace], and +0.05dB/20kHz and +0.6dB/68kHz into 4ohm [red trace]. However, drive a '4ohm' speaker via the 2-4ohm tap in mono mode and the response droops to –1.2dB/20kHz [dashed red trace] just as a very low impedance '2ohm' speaker falls to –2.4dB/20kHz [dashed blue trace]. '1ohm' speakers are spectacularly rare but, should you own vintage Apogee Scintillas, then driving them via the 2-4ohm taps yields a soft –3.8dB/20kHz [dashed green trace]. To achieve the best results with very low impedance speakers then VAC's 1-2ohm taps are essential – reaching out to –0.6dB/100kHz with 2ohm loads [blue trace] and –0.9dB/100kHz into 1ohm loads [green trace]. PM