

hi-fi news

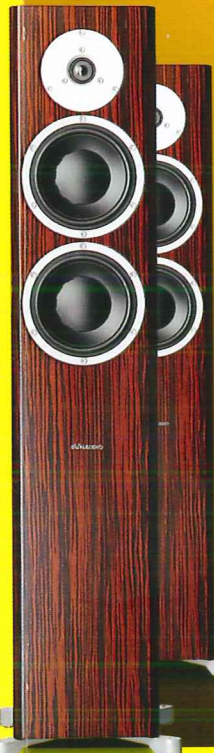
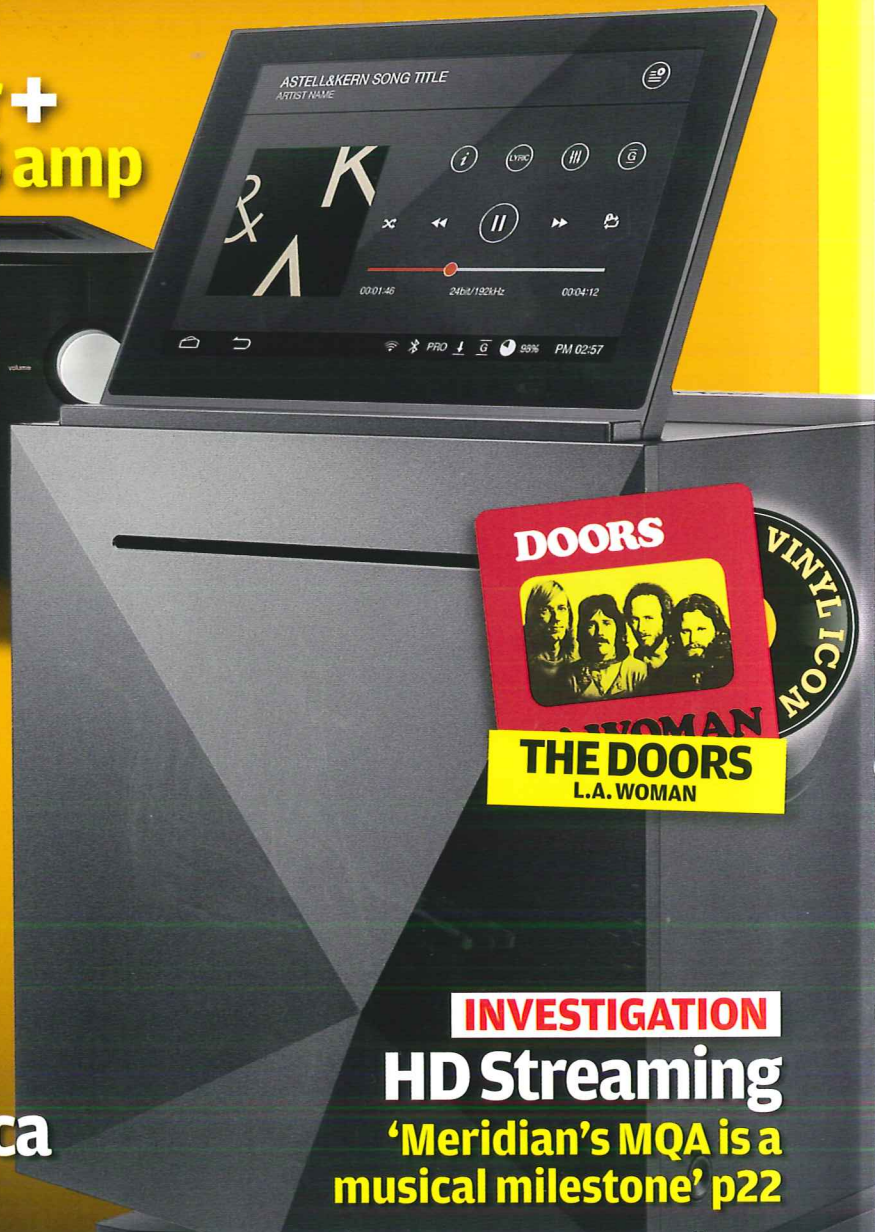
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hi-res network player +
Mark Levinson **No585** amp



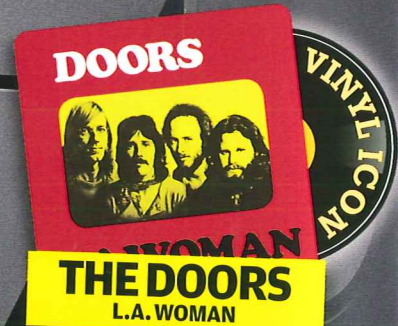
Jadis I-50
Gallic tube integrated

NAD M12/M22
Masterful pre/power

Vinyl premiere
Acoustic Signature's
TA-1000 tonearm

Budget Esoterica
Marantz HD-DAC1

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The 'connected' loudspeaker



INVESTIGATION

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'Meridian's MQA is a
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Jadis I-50

This French-built integrated tube amplifier has a novel twist – at least in valve amp terms – with the inclusion of a USB input to replay your hi-res music files
 Review: **Andrew Everard** Lab: **Paul Miller**

To open, a confession: I've admired big tube amps from afar rather than coveted them up close. It's not any kind of ideological problem, nor fears about the difficulties of having hot tubes in close proximity to small children or pets, as I have neither – it's just that, for whatever reason, valve-powered amplifiers and I have crossed paths relatively infrequently. And certainly not many valve amplifiers as ambitious as the gorgeous-looking £7200 Jadis I-50.

Made in Villedubert, close to Carcassonne in the Languedoc-Rousillon region of France, the 50W-per-channel I-50 is the latest model in a six-strong line-up of integrated amps from the company. A plate atop the I-50's power transformer housing describes it as an *Amplification à lampes*, and what 'lampes': the main output tubes here are the latest KT150s from Tung Sol, the same company responsible for the development of the classic 6550 in the 1950s, and which of course started out a century ago as a maker of lightbulbs.

SPECIAL TRANSFORMERS

A development of the famous KT120, you'll find the same tubes in designs such as the Audio Research GS150 power amplifier [*HFN* Jan '15], and the Icon Audio MB90 MkII-150 [*HFN* Mar '14], giving 120W into 8ohm against the 50W of the Jadis. But while the new valve, with its distinctive ovoid shape (designed to obviate microphony and improve heat dissipation), is much admired by valve amp designers, it brings its own problems.

Unfortunately it's not a drop-in replacement for existing power valves, such as the KT88 or KT90, but requires an amp to be designed around it, down to the output transformers, in order to make the most of its capabilities. As Jadis puts it, 'We received the first KT150 tubes earlier this year [2014]. Having seen their qualities and

characteristics, we decided to give them a try. Enraptured by the sound quality of bass notes and the details associated with the obvious power, we decided to launch a new integrated amp.'

Fortunately Jadis was able to design and build new output transformers able to accommodate the KT150s, four of which work under a slightly fiddly removable cage in the I-50's 'engine room', and play to the strengths of the new valve. Autobias removes another aspect of valve amp fiddliness, and while the designers were at it, they gave the I-50 a remote control for volume setting, and a digital input.

Yes, just the one, but it's on a USB Type-B connection, ready to accept the input from a computer in best 'Macs and DACs' style, if only able to handle signals up to a limited 48kHz/16-bit. A simple rotary control – but one beautifully finished, in common with those for balance and volume – selects between the digital input and the four line-ins, marked for CD, Tuner and Aux 1 and 2, while the main power switch is a simple toggle.

Those three transformers, and the use of surgical stainless steel for the main chassis, mean the I-50 isn't light, at 32kg, and that and the mirror-polished finish both give the amp a sense of style with substance, although some care is needed in installation, not least to avoid fingermarks.

Two sets of speaker outputs are provided for each channel (though there are no markings to identify which is which), with the amp preconfigured for speakers of 4-8ohm, and adjustment available via internal jumper bars, as detailed in the brief manual.

POLARITY INVERSION

It's worth noting that the I-50 inverts absolute phase between input and output, as I noticed when running-in/warming it up in concert with my surround system, the processor's front left/right preouts fed through one of the I-50 'aux' inputs. Of course, the centre speaker and the left/right were out of phase, remedied by reversing the speaker connections to the Jadis – and that's how I left them.

RIGHT: The pairs of KT150 output tubes are driven via a complement of two ECC83s and three ECC82s. The perspex block behind the blue electrolytics is the IR remote window





The Jadis slotted into my usual review system with minimal fuss – well, apart from that slight phase hiccup – and was soon delivering music very persuasively from both my Naim NDS/555PS network music player and my MacBook Air computer. The main speakers used for the review were my PMC OB1s, which proved well within the I-50's capabilities.

A slight lag between switch-on and being ready to play is usual with amps of this kind, but I'd also suggest you click the toggle into the 'go' position a short while before you want to settle down to listen, as the I-50 sounds a bit ragged from cold, only really filling out and settling down after about half an hour or so. Jadis suggests you leave it on, and switch off only when you're not going to be listening for a while, such as when you turn in for the night, which seems a sensible approach to getting the most from the amp.

'The Jadis has the wherewithal to dispel valve amp myths'

Mind you, if my listening experience is anything to go by, you may find yourself turning in rather later than you'd expected, as the Jadis proves a somewhat addictive listen. Initial impressions were all very valve-y: big, rich bass – check. Smooth, flowing midband – check. Sweet, delicate treble – check.

However, extended listening revealed that the bass was punchy and tight as well as rich and well extended, while that midband was packing bags of detail, and for all its sweetness the treble was capable of conveying a huge amount of ambient information, and conjuring up a very real sense of a performance taking place in a credible space.

In fact, this wasn't the 'sinking into a warm bath' listening experience of valve amplifier cliché, but something altogether more compelling and involving, that beautiful fluidity merely doing the job of


ABOVE: Jadis front panel layout plays it simple and stylish, although markings are hard to read on the polished metal – left to right: toggle for power, volume, balance and input selector

making the music easy to enjoy, the better to appreciate the way in which so much of the information on a recording was conveyed to the speakers.

ALL IN ITS STRIDE

With all the 'of course valve amps don't do...' ideas coming to the fore, I chose to kick off my main listening sessions with some Springsteen from the classic period, opening up with *Greetings From Asbury Park, NJ* and progressing to *Born To Run* [both Columbia 96kHz/24-bit downloads]. We were already a long way from what is seen as the valve amp comfort zone of string quartets and jazz trios, but the Jadis took it all in its stride, from revelling in the stripped-down, spare, almost folksy sound of Springsteen in his 1973 debut album through to thundering out the scale of 'The Boss' in all his pomp, almost unrecognisable just two years later.

The Jadis provided a fascinating insight into the changing of Springsteen's voice from the almost Dylanesque tone on 'Blinded By The Light' to the great barrel-chested roar of *Born To Run*'s 'She's The One', but was as adept with the multilayered, horn-laden epic vision as it was with the relatively simple instrumentation of that first album. Fast, able to drive hard and power out a rhythm section: surely this isn't what people think of when you mention valve amplifiers?

OK, I'm kidding: no-one ever said amplification 'à lampes' couldn't do 'le rock', but the Jadis certainly delivers music such as this with all the conviction you 

GALLIC FASHION

Like Devialet, Jadis is a 'boutique'-type French audio brand. And its story is a familiar one in audio circles: an audio enthusiast building his own prototypes in an attempt to get closer to his favourite musical performances. Buoyed by acclaim for his designs, he goes into business to make and market the products. Here, that enthusiast was André Calmettes, and the company was founded in 1983, initially making products from his own plans, then building the expertise to develop ideas. A major part of the design here, as in any valve amplifier, is the output transformer, and Jadis makes its own at its factory in Villedubert, handwinding and coating with its own formulation of resin. It's all part of the hand-assembly and extensive testing involved in the assembly of Jadis products. This manufacturing is backed up by an R&D department working in valve electronics, but also digital audio and psychoacoustics – this playing a major role in the evaluation of designs and products in the in-house Jadis listening facilities.

JADIS I-50

Judging by the I-50's power output, our sample looks to have been configured with its 4ohm tap option. Ordinarily I test all tube amps via their 8ohm tap into 8ohm and 4ohm tap into 4ohm (where applicable) but the I-50 cannot be so easily adapted without disassembly. As supplied then, the I-50 mustered 2x35W/8ohm up to 3% THD and 2x39W/8ohm with a 5% limit and with 2x50W and 2x58W meeting Jadis's specification into 4ohm at 3% and 5% THD respectively. There's little or no headroom under dynamic conditions [see Graph 1, below] although the 75W/2ohm and 38W/1ohm (or 6.2A) is respectable enough for a 50W Class A tube amp even if we know far more is possible from pairs of KT150s [HFN Mar '14].

Distortion climbs steadily with output, from 0.2%/1W to 0.7%/10W and 5%/39W into 8ohm and 0.12%/1W to 0.48%/10W and 2.4% at its rated 50W/4ohm – the lower THD and higher power into 4ohm loads confirming the output transformer's 4ohm tap. Output impedance is far lower than with earlier generations of Jadis amps, realising a very consistent 0.27ohm from 20Hz-20kHz. The response, however, was markedly flatter on the right channel through our sample where it achieved -0.08dB/20kHz into 4ohm versus -1.4dB/20kHz via the left. Overall gain (+40.5dB), the 57-62dB channel separation (20Hz-20kHz) and the 83.7dB A-wtd S/N ratio (re. 0dBW) were all perfectly matched between channels, however. The 0.1dB channel balance (re. 0dBW) also demonstrates Jadis's use of a high quality volume pot. Readers may view a comprehensive QC Suite test report for the Jadis I-50 tube integrated amplifier by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: The USB and four RCA line-ins are clearly marked for source and sets of (bi-wire) 4mm speaker terminals marked for phase – but which is right and left?

could wish for, unless your idea of fun is an evening spent with your head in an old-style PA bass bin (of blessed memory now it's almost all flown arrays).

Yes, you'll get more absolute level and less happy neighbours with a stump-pulling solid state amp packing several times the I-50's nominal output, but you won't find many amplifiers quite as communicative as this one. I wouldn't choose it if I wanted to fill the house with music at party levels but for high-quality sit-up-and-listen sessions it has much to commend it.

WEIGHT AND TIMING

And what's more it does the traditional valve amp thing, too. With music from the Engegård Quartet's latest disc of works by Britten, Haydn, Schubert and contemporary composer Maja Solveig Kjelstrup Ratkje [2L, 2L-105], it shows its ability to deliver those beautifully textured string timbres, evoke the ambience of the recording venue, and yet still have the razor-sharp timing needed ensure the music is propelled forward in thrilling fashion.

It has just the weight and full-bodied sound required for the opening movement of Britten's String Quartet No 2, then immediately shows its speed and deft handling of the signal as the piece progresses.

Switch genres and feed it with some taut jazz – in the form of Magnus Öström's 2013 *Searching For Jupiter* disc [ACT Music ACT 9541-2] – and Daniel Karlsson's sonorous piano opening the album with 'The Moon (And The Air It Moves)' has delicious weight, then is joined by Öström's drums, kicking and pattering with just the right force and metronomic timing before the bass joins the fray and the electric guitar soars out of the mix.

The sound is just as lush, but rhythmically focused on the more reflective 'Mary Jane Doesn't Live Here Anymore', and the Jadis-driven system ends the album with a real flourish as it charges through the somewhat final-sounding 'At The End Of Eternity', the band going hell for leather, but the combination of a fine recording and an excellent amplifier making it simple to follow each instrumental line.

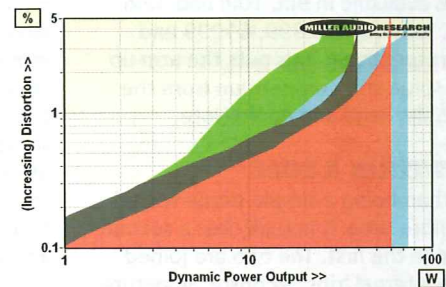
Whether you come to the idea of an unashamedly luxurious valve-powered integrated amplifier with some preconceptions or just curiosity, the Jadis I-50 has the wherewithal to dispel myths while at the same time opening up real possibilities. It has the power to drive real speakers to *real* levels, and do so with a sense of control and confidence that's hard to dispute. And it combines all that stereotypical tube amp limpidity with an ability to rock hard when required, complete with surging drums, clean, crisp cymbals and snarly guitars.

I think I may have just seen the light – or it could just be the 'amplification à lampes' coming on in my head? ☺

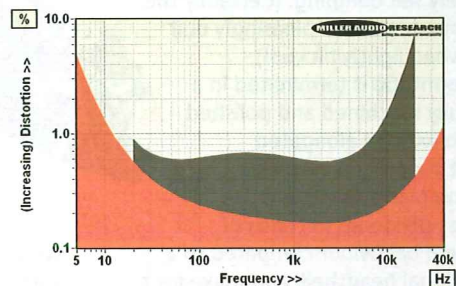
HI-FI NEWS VERDICT

There are elements of the stereotypical 'valve-amp sound' here, notably in the warmth of the overall presentation, but the Jadis defies some expectations with its agility and rendition of fine detail. The digital input, though limited, is a useful nod to the 21st century, and the I-50 proves both fuss-free in use – though the manual could be more informative – while capable of driving 'real world' speaker loads.

Sound Quality: 83%



ABOVE: Dynamic power versus distortion (via 4ohm tap) into 8ohm (black trace), 4ohm (red), 2ohm (cyan) and 1ohm (green) speaker loads up to 5% THD



ABOVE: Distortion versus frequency at 10W/8ohm (20Hz-20kHz, black) and 1W/8ohm (5Hz-40kHz, red)

HI-FI NEWS SPECIFICATIONS

Power output (<5% THD, 8/4ohm)	39W / 58W
Dynamic power (<5% THD, 8/4/2/1ohm)	40W / 60W / 75W / 38W
Output impedance (20Hz-20kHz)	0.283-0.265ohm
Frequency resp. (20Hz-20kHz/100kHz)	-0.12dB to -1.3dB/-12.9dB
Input sensitivity (for 0dBW/35W)	27mV / 170mV
A-wtd S/N ratio (re. 0dBW/50W)	83.7dB / 100.7dB
Distortion (20Hz-20kHz, 1 & 10W/8ohm)	0.56-0.16% / 0.65-7.4%
Power consumption (Idle/Rated o/p)	340W / 350W at 2x35W/8ohm
Dimensions (WHD) / Weight	500x220x330mm / 32kg