

INTEGRATED AMP/DAC

Integrated amp with triode stage. Rated at 100W/8ohm
Made by: Vinnie Rossi, Holden, MA, USA
Supplied by: Elite Audio Ltd, Fife
Telephone: 01334 570 666
Web: www.vinnierossi.com; www.eliteaudiouk.com
Price: £18,995 (£25,985 with phono and DAC modules)

AUDIO
FILE

hi-fi news
EDITOR'S
CHOICE

Vinnie Rossi L2i-SE

Can't choose between tubes and transistors? Vinnie Rossi may have the answer with the L2i-SE integrated amplifier, which deals with that conundrum in a unique manner
Review: **Ken Kessler** Lab: **Paul Miller**

So overwhelming is the matter of choice when putting together a system that it can cause as much anguish as pose a fun challenge. What type of speakers? MM or MC pick-up? Integrated or separates? These usually sort themselves out due to space or budget, but 'tubes versus transistors' almost calls for a leap of faith – unlike 'digital versus analogue' because most enthusiasts can manage two sources. The valve/solid-state conflict, though, may find a cure in the Vinnie Rossi L2i-SE integrated amplifier, the 'SE' standing for 'Signature Edition'.

Until this came along, addressing the matter usually involved either a hybrid product, eg, Radford's pioneering TT100 with solid-state input and tube output, or pairing a valve preamp and transistor power amp (or less often, a solid-state preamp and tube power amp). Vinnie Rossi's one-box solution may not be cheap at £18,995 in line-level form, or £25,985 with phono stage and DAC, but it is so clever and truly fascinating on an intellectual level that its absolute performance may even be secondary. I know that is near-heresy, but hear me out.

GLASS TIGER

Simply stated, this can be used as a strictly solid-state integrated amplifier or with a valve 'element' that can be switched in [see PM's boxout, p49, for full details]. My initial reaction was to recall Musical Fidelity's X-10D 'tube buffer' of 25 years ago, which injected euphonic tube colour into one's system. I loved it, but then I have my own peculiarities. The X-10D, though, was fun, inexpensive and thus a godsend for impoverished hobbyists.

Vinnie Rossi's concept is more complex, but also difficult to assess because switching from solid-state to 'plus valves' nearly triples the gain, as well as applying

the tube traits, so one needs to be careful when comparing the two. Swapping between them is fiddly, so A/B comparisons are not possible unless you have two units and some form of comparator to switch between them. The swap requires the removal of the two 300Bs, flicking the internal 'DHT' (Direct Heated Triode) toggles next to each valve base, refitting the tubes and then switching the amplifier back on. And there's also a warm-up pause to add to the delay.

I asked company owner Vinnie why he made it such a lengthy procedure, instead of fitting a front panel selector with level compensator. He explained, 'The unit needs to be powered off when you flip those switches, otherwise you'll get a big pop from your speakers. I actually never intended that switch to be used often. It's more like a tool to evaluate what the

triodes are adding to the sonic landscape – so you can hear what you have been missing without them'.

FULLY LOADED

It's easy to see his logic, for unlike the front-panel facility for bypassing the power amp for use as just a preamp, which might be used frequently but threatens no risks, I suspect that users will prefer one mode over the other and leave it that way. I spent several days with the unit in solid-state mode, but after injecting the tubes, I never went back. Long-term readers have already surmised that I would prefer to have the triodes in circuit, given my known passion for glassware. No surprises there, then.

Even for those who acquire the L2i-SE because of tube-vs-tranny indecision, it is still unlikely that switching between them will be a regular occurrence. If this raises



LEFT: Iconoclastic looks match the unusual design: the L2i-SE features source and volume rotaries, with buttons for power, display modes, mute and amp bypass, with more on the remote [see p53]

the question of it being too elaborate a feature if it's only to be used rarely, I prefer to look at it this way: the mere option of being able to choose between valves and solid-state alone is *precisely* the reassurance one needs if one genuinely is unable to make a permanent decision.

Now that you know the L2i-SE's main party trick, let's not let this aspect of the design overshadow the rest of what is on offer, especially in fully 'loaded' form. I loved having three phono inputs – one MM and two MC, with adjustable gain – and the ability to alter the load via remote, a must-have when assessing new cartridges. The DAC module also accepts three sources, and the remote allows you to play with the digital filters and invert phase from the hot

seat. As for line sources, the L2i-SE handles two single-ended and one XLR balanced. Then there's the preamp output option.

That is self-explanatory, and worth having if you're the sort who wants to dig out an old amp that's lying around, or to upgrade the amp section sometime in the future. But it also serves another purpose, which I learned of when I asked Vinnie why there was no headphone output in this day and age of headphone

dominance (and of late the increase in headphone usage during lockdown to prevent domestic warfare).

Vinnie said, 'Adding a headphone jack to the front panel did not visually appeal to me, especially the balanced, 4-pin XLR

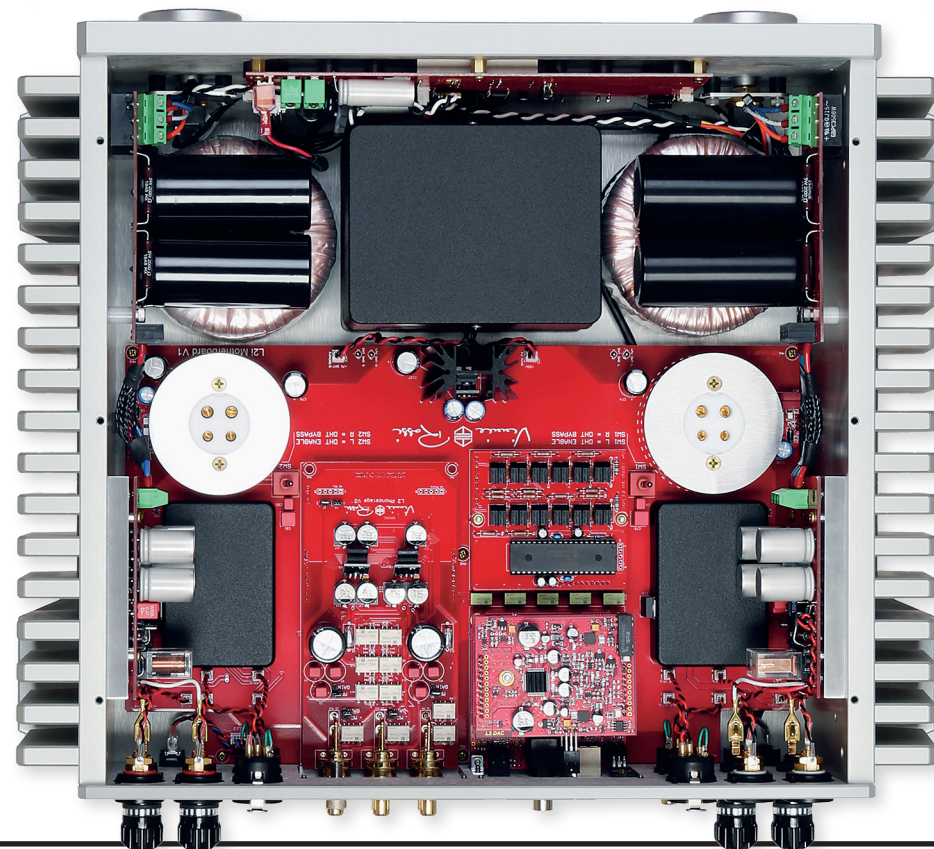
jack that most people want with the higher performance headphone models. However, there is a "secret" with the L2i-SE: with the use of an adapter cable, one can connect to the balanced XLR output jacks and convert it to a 4-pin XLR, and it drives most headphones with ease. You simply press the 'AMP' button on the front panel to turn off the speaker outputs. We do not sell the adapter cable, but Moon Audio in the USA has been making them for our customers'.

With that out of the way, I found nothing else to question. I even got a kick out of the company name, which sounds like a gunsel for Tony Soprano. The L2i-SE worked faultlessly, the quality of the construction and components was first class, especially the multi-way speaker terminals, the display was informative and I loved every second I spent with it. But to get to the heart of this, we must first address solid-state-only versus the 300Bs in operation.

TOTALLY HOOKED

Because the amp was in solid-state mode when it arrived from Editor PM, I tried that first. Here I must make a confession for I knew in my heart-of-hearts that my deep-rooted prejudices would have me preferring the triode mode, that I would switch to it after my time with the solid-state listening and thus would not have to go back and forth. However, what I wasn't anticipating was that I would actually be charmed by the solid-state-only session.

Because I purchased The Kinks' *Arthur (Or The Decline And Fall Of The British Empire)* in both LP [BMGCAT407LP] and CD [BMGCAT407BOX] form, I was able to set up both and cue them 'just so', thus allowing A/B switching between LP and CD, with levels matched. With either digital or analogue sources, the nature of the amp was obvious and consistent enough to deem both the phono stage and the DAC of astonishing capability. From the

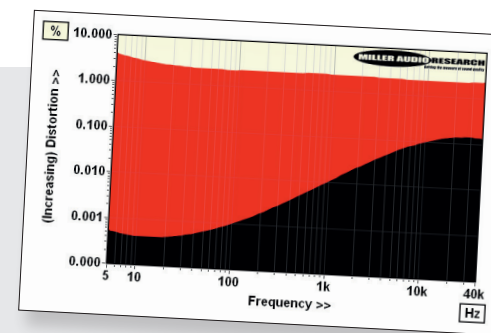


RIGHT: Independent (dual mono) linear PSUs [top] feed a J-FET preamp with 64-step volume control and MOSFET output stage [on heatsinks]. Note MM/MC phono stage [bottom left] and AKM AK4497-based DAC module [bottom right]

TUBES TO TASTE

As discussed, even without the DAC and phono stage options, the L2i-SE has a split personality. With the tubes switched out it's a J-FET/MOSFET integrated amp that offers plenty of power, low distortion and very low noise [see Lab Report, p53]. Switch the 300B tubes in-circuit, however, and while adding an extra 8.7dB of voltage gain (32.8dB from 24.1dB) into the preamp circuit, they also bring a wealth of, well, 'colour'. Even allowing for the increased gain, the A-wtd S/N falls from 96.5dB to 82.5dB (re. 0dBW) and while there's no significant change in response the increase in distortion is typically a thousand-fold! The Graph [inset] compares distortion vs. frequency at 10W/8ohm with the triodes in [red] and out [black] of the signal path.

Tube stages can be designed for both low noise and low distortion but VR's triode implementation is single-ended (necessarily Class A) and without compensatory feedback, so THD is very high. Remember – these tubes are in the preamp, so the distortion and noise are 'created' before the (music) signal hits the solid-state power amp. As a result, while distortion increases with power output, this is just a reflection of distortion increasing with the voltage output of the tube preamp. The ability of the power amp to 'drive' the speakers has not changed. In practice, THD is already at 1% by 1.5W, reaching 2% at 8W, 3% at 20W and 5% at 78W (all 1kHz/8ohm). PM





ABOVE: Seen here [and below] in its black livery, the tube cages are not just for protection or decoration – they are grounded onto the tube base inside, offering some screening from hum and noise

opening notes of 'Victoria', with acoustic and electric guitars and deliciously splashy drumming, I was totally hooked.

MASSIVE ATTACK

Inescapably evident, after a mere ten minutes with this amp via CD, were three exceptional qualities. The first, and most vivid, was speed, the attack of both the guitars and percussion reminding me of much bigger beasts, such as the D'Agostino Momentum Stereo amp [HFN Aug '12], which remains my solid-state reference. The L2i-SE doesn't match its sense of forcefulness, but neither does it lack power in any sense. Whether driving Wilson Sasha DAWs [HFN Mar '19] or ornery loads like LS3/5as, the crispness and clean transients were realistic, never sounding exaggerated nor too abrupt.

One word kept entering my head: 'sparkling'. If a system can sound as effervescent as a glass of Prosecco, this is it. And I don't say that just because Vinnie Rossi is of the Italian persuasion, but stop me if I

compare the depths of the rhythmic bass retrieval to a glass of Aldo Conterno Barolo.

Second was the openness, and here was one of the areas where LP proved audibly superior to the CD. Not a cause for fretting, for the impression of scale was almost identical, but the added hygiene of digital somehow altered the perception of space. I did play with the filters, preferring the

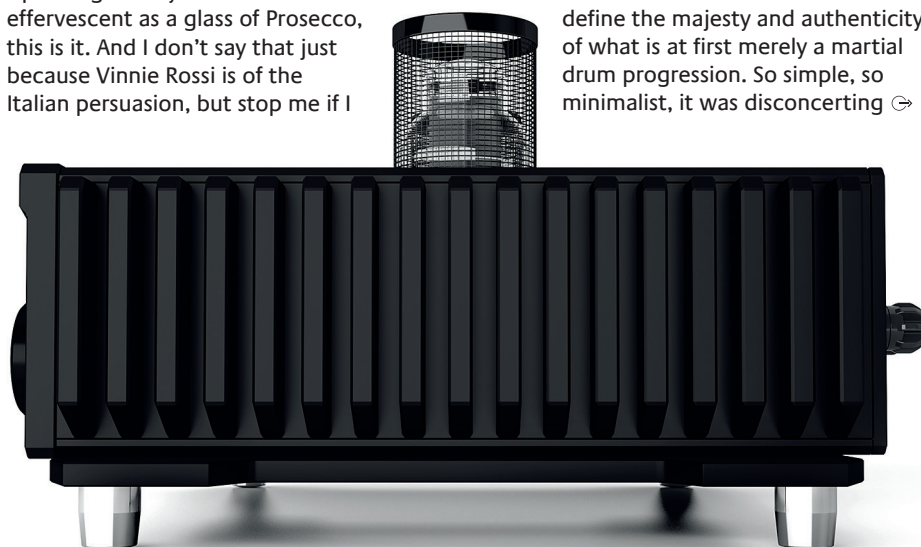
*Just a few bars
of drumming
stopped me dead
in my tracks'*

default 'filterless' state, despite appreciating the value of switching in the Minimal Phase digital filter. I certainly preferred coaxial S/PDIF, connected via BNC.

The third quality was an extremely

wide soundstage, obviously part of the openness, but I am talking 'Denon DL103' width. Both of these were revealed in the second track, when the opening drum segment for 'Yes Sir, No Sir' revealed itself to be of such a high standard via this remastering that it should be an audiophile demo staple, its 'air' stretching across

the room. I am almost at a loss to define the majesty and authenticity of what is at first merely a martial drum progression. So simple, so minimalist, it was disconcerting



VINNIE ROSSI

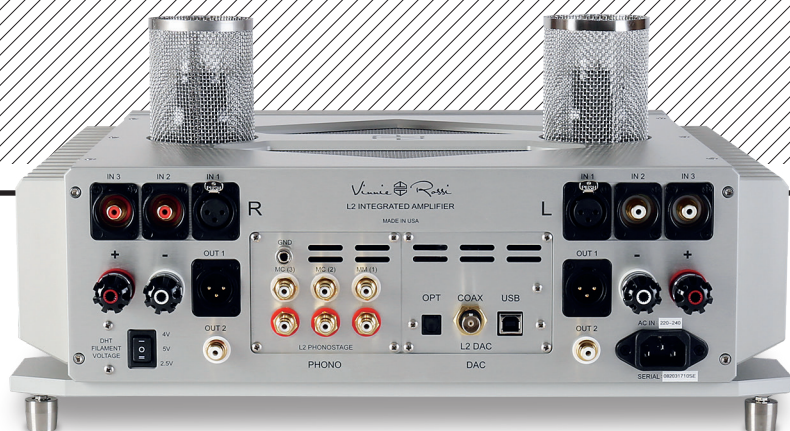
Editor PM caught up with Vinnie Rossi during 'lockdown' on both sides of the pond, intrigued to discover VR's earliest influences.

'I studied electrical engineering in the '90s while working as a test engineer for a major telecom giant', Vinnie began, 'but I was also an audio hobbyist and so, in 2004, I followed my passion and established Red Wine Audio where I focused on battery-powered components. However, in 2014 I introduced a modular integrated called LIO that had an ultracapacitor supply, and the move away from battery PSUs prompted a change in brand name'.

And direct-heated triodes – where did these spring from? 'I used 8 and 9-pin indirectly heated triodes in my lineage designs before seeking the "holy grail" of valves – the 4-pin directly heated triode (DHT)', says Vinnie. 'Once I began listening to them, I was quickly put under their magic spell. The L2i-SE's DHT preamp is convertible and accommodates numerous 4-pin DHTs including the 300B, 2A3, 45, PX4, 5V811, 71A, T-100, 101-D and 205-D – all via the filament voltage selection switch on the rear panel.'

A quick glance at the L2i-SE might suggest it's a 300B SET amplifier, but these tubes are not driving speakers, they are in the preamp stage. So why the high distortion? 'My preferred topology features no driver tubes, no feedback, no output transformers, and just 6 to 9dB of gain, depending on the tube used. It sounds simple, but designs like this are rare, and very challenging to implement with low levels of noise.'





ABOVE: Three line inputs (inc. one balanced XLR) are joined by single-ended (RCA) and balanced (XLR) preamp outputs with 4mm WBT Nextgen speaker outlets. The MM/MC phono and optical/coaxial/USB-B digital modules are optional extras

that a few bars of drumming could stop me dead in my tracks. Turning to a well-recorded-and-remastered live experience, Jimi Hendrix's *Songs For Groovy Children* [Sony Legacy 19075982772] provided a real, as opposed to studio-created, space and the L2i-SE again proved adept at transporting the listener to the musical event. But another area of excellence emerged – conveying the textures of Hendrix's guitar playing, ranging from fluidity to screech to staccato in a single break. 'Foxey Lady' on CD3 left me stunned. But it was time for tubes.

EAR CANDY

Again referring to PM's elucidation, the triodes here are not performing as they might in a standard hybrid amp, but perhaps more like a valve preamp-plus-solid-state-power amp. Yet however optional their role, added gain aside, their presence is undeniable. As the triodes operate in single-ended, Class-A mode with no feedback, so one might anticipate a whiff of classic SET romance,

especially with Rossi stating that the harmonics 'will certainly be 2nd order, 4th order, etc'.

Repeating The Kinks tracks with the triodes switched into the circuitry, I was hit with additional revelations. I am no bass fetishist,

LEFT: VR's weighty remote offers control over volume, mute and balance, input selection, display mode, MM/MC loading, DAC filter and (absolute) phase



but the bass guitar on 'Drivin' enjoyed added body and texture... and that was via CD. Switching to LP, it was even more palpable, with added atmosphere.

I was starting to suffer that feeling of being overwhelmed by a surfeit of delights, a kid in a candy store. Exposed was a newfound liquidity to Dave Davies' lead guitar on 'Mr Churchill Says', even more body to the bass playing throughout the album – I had to keep telling myself that, as with the Musical Fidelity X10D, 'this is added artifice. It is a layer of coloration, of increased distortion'. I didn't care.

Then came the barrage of sound effects: Kazoo. Harpsichord. Trashy drumming. Tooting horns. These are what made 'She's Bought A Hat Like Princess Marina's' even more of a 'music hall' facsimile than The Beatles' 'Honey Pie'. It leapt from the speakers. Suddenly, I realised something so telling that I was embarrassed for not grasping it earlier – of course I would fall for the L2i-SE. Vinnie Rossi and I both use Falcon Acoustics' LS3/5as [HFN Jan '19]. As Stevie Wonder sang, 'I was made to love her'. In this case, 'her' is the Vinnie Rossi L2i-SE. ☺

HI-FI NEWS VERDICT

An upside to being a downsizing pensioner: I'm not buying any more gear. But if I needed a new amp, I'd be splashing out on a Vinnie Rossi L2i-SE because I simply adore it. The build, ergonomics and features leave nothing to be desired, and it was a joy to use the entire time it was in my system. I even loved just staring at it! But forget all that. Ultimately, this is about sound. And it was 'Bellissima'.

Sound Quality: 88%

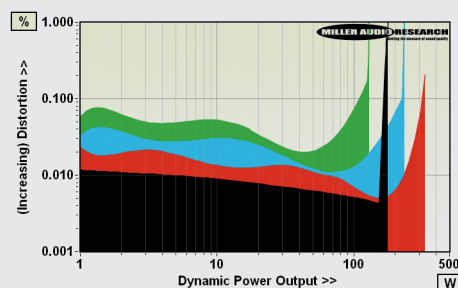


LAB REPORT

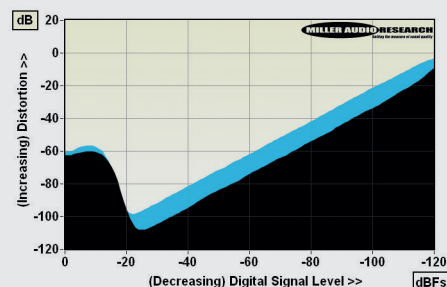
VINNIE ROSSI L2i-SE

Tested without the 300Bs in-circuit [see boxout, p49 for details of the directly-heated tube mode], the L2i-SE put in a sterling performance. Power output is comfortably higher than its 100W/8ohm rated specification at 2x130W/8ohm and 2x210W/4ohm and there's sufficient in reserve to accommodate 180W, 333W and 234W into 8, 4 and 2ohm loads, respectively, under dynamic conditions [see Graph 1, below]. Power is limited to 128W/1ohm (or 11.3A). Distortion trends downwards with increasing output from ~0.01%/1W to 0.009%/10W and 0.0055% at the rated 100W (all re. 1kHz/8ohm) but increases at higher frequency from 0.1%/10kHz to 0.2%/20kHz (all re. 10W/8ohm) [see black trace, Graph, p49]. Gain is low at +24.1dB, but ideally suited for use with 2V line output sources, and the S/N is fabulously wide at 96.5dB. The response shows a subsonic roll-off of -0.1dB/20Hz and -6dB/2Hz while extending out to -0.1dB/20kHz and -1.0dB/100kHz.

Measured via its balanced preamp, VR's AKM AK4497-based DAC stage offers a maximum 4.6V output, and 108dB S/N ratio, from a low 25ohm source impedance. An acceptable ~125psec jitter rejection is achieved (all sample rates) while distortion falls to a minimum of 0.00035%/1kHz and 0.00055%/20kHz over the top 30dB of its dynamic range [see Graph 2], albeit peaking at 0.1-0.15% over the top 10dB. The default NOS filter offers responses of -5.0dB/20kHz, -5.4dB/45kHz and -6.9dB/90kHz with 48kHz, 96kHz and 192kHz files, respectively, trading a very limited alias rejection for zero time distortion. The minimum phase filter offers a superior 70dB image suppression and flatter -1.8dB/20kHz, -2.7dB/45kHz and -4.1dB/90kHz responses. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 11.3A



ABOVE: Distortion versus 24-bit digital signal level over a 120dB range at 1kHz (black) and 20kHz (blue)

HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	130W / 210W
Dynamic power (<1% THD, 8/4/2/1ohm)	180W / 333W / 234W / 128W
Output impedance (20Hz–20kHz)	0.01–0.019ohm (25ohm, pre)
Freq. resp. (20Hz–20kHz/100kHz)	+0.0dB to -0.1dB/-1.05dB
Digital jitter (48kHz/96kHz)	125psec / 125psec
A-wtd S/N ratio (re. 0dBW/0dBFS)	96.5dB (Analogue) / 108.0dB (Dig)
Distortion (20Hz–20kHz; 10W/-3dBFS)	0.0004–0.15% / 0.105–0.11%
Power consumption (idle/rated o/p)	88W / 460W
Dimensions (WHD) / Weight	438x222x368mm / 23kg