

Aurorasound Vida

CHRIS BRYANT EXAMINES AN INTERESTING SPECIALIST PHONO STAGE FROM JAPAN

Based in Yokohama, Japan, Aurorasound produces a small range of digitally oriented components alongside this interesting £2,700 *Vida* phono stage, which accommodates both moving-coil (low output, MC) and moving magnet (higher output, MM) cartridges. The designer, Mr Shinobu Karaki, has a long history in the electronics industry, having worked for Texas Instruments in Japan for 28 years, plays guitar and is a hi-fi aficionado.

The *Vida* has an old-fashioned appearance, with a dark wooden hardwood sleeve reminiscent of 1960s hi-fi gear. This is easily removed to reveal a modern, well engineered case in natural aluminium. Front panel controls are limited to a large mute button top left, opposite a colourful badge and two small 'on' indicator LEDs. A row of five toggle switches control a cartridge degaussing circuit, a switchable subsonic filter, stereo/mono operation, MC/MM selection, and high/low MC impedance setting. The back panel has the power supply input, pairs of high quality phono sockets for output and separate MM and MC inputs, plus two ground terminals.

The power supply is in a separate two-piece case of extruded natural aluminium, with flat end

plates held by Allen bolts. The feet are just self-stick polymer types, which is a slight let down. The front has a simple on/off switch and the back an IEC mains socket plus DC output on a three-pole female screw-lock socket. Inside, alongside a mains input filter, separate boards mount the 25VA encapsulated transformer and the reservoir/regulator, linked together with a Schottky diode bridge rectifier. Six 1000uF Elna Silmic audio capacitors provide the reservoirs and are followed by a mainly discrete low noise transistor regulator. This supply feeds the amplifier *via* an 0.8m umbilical in a woven polyester jacket.

The amplifier proper has solid state amplification devices, but uses an LCR (inductor, capacitor, resistor) type RIAA passive equalisation stage. I particularly liked the Thrax *Orpheus* valve phono pre-amplifier which also used this equalisation configuration; the *Vida's* use of solid-state gain stages make such an approach considerably cheaper. Two Lundahl inductors per channel are used, and these are expensive components (which is one of the main reasons why this type of circuit is rarely used). The other essential requirement for accurate RIAA equalisation is accurate inductor tolerance, which also adds to the cost.

Internal build doesn't closely follow normal audiophile practice, as the input and output connectors are wired through screw-block connectors. Double-sided PCBs are used, and all visible components are through-hole. The input gain stage is built round an op-amp fitted with a 'mini hedgehog' heatsink. This is followed by the passive filter stage, further amplification, and a discrete transistor output stage. There are no capacitors in the signal path so the unit is DC coupled from input to output. Carefully chosen parts include Nichicon Gold electrolytic and selected film capacitors. The front panel switch array is mounted on a separate remote board, linked back to local relay switching and muting.

Lab Report

Noise is low, measuring 73dB CCIR and 'A weighted' on the MC input, and 80dB 'A weighted' on MM. The frequency response essentially flat through the midband and treble with a 0.4dB loss by 20kHz and a very slight (an inconsequential

RIAA EQUALISATION

The RIAA equalisation stage needs to produce 19.6dB of bass boost and 19.6dB of treble cut with reference to 1kHz in order to produce a flat response. Among several ways of engineering an accurate RIAA equalisation circuit, the most common uses just resistors and capacitors in the feedback loop of a high-gain amplification stage.

Audiophile wisdom suggests that the sound of such an amplifier used thus over such a wide frequency-dependent gain range will suffer from subjectively varying performance at different frequencies, thus adding unwanted coloration, and I'm not going to argue with that.

Using a passive equalisation circuit requires the amplifier to have still higher gain, to compensate for the losses of the passive circuit, which means it's more susceptible to input noise. However, the performance of modern electronics allows the passive solution and so it seems to be gaining in popularity.

Using inductors allows the circuit to have constant impedance independent of frequency and therefore be easier to drive, which is obviously a good thing. Also there is no requirement for series resistors in the signal path, which allows greater efficiency and lower losses.

Noise, particularly hum, can be a problem with inductors, so costly mu-metal screening is employed, but even so it's better to keep mains transformers and their associated fields as far away as is practically possible, hence the *Vida's* use of a separate power supply unit.

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0.2dB) bass rise below 100 Hz (see graph). The infrasonic filter rolls off very gently below 100Hz, with a -3dB point below 10Hz.

Input sensitivities were exactly to spec, the MC input requiring 812uV and the MM 5.88mV for 0.5V output. Overload margin were good and consistent, measuring 30dB for MM and 25dB for MC, and distortion at all audio frequencies was below -80dB. Output impedance was slightly higher than expected at 1kohms, but it could produce a healthy +28dB above 0.5V nominal.

Sound Quality

I used the usual selection of cartridges to exercise the *Vida*, including a Rega *Exact* (MM), Ortofon *Rondo Blue* (MC), and Koetsu *Urushi Vermillion* (MC). Direct comparisons were made with Naim *Superline* and Vacuum State *JLTi* phono amplifiers.

Irrespective of cartridge model or type, the sound was always lively and bouncy with lots of detail, particularly in the midrange. Violins are sweet, especially in their lower ranges, though some recordings could sound a little sharp higher up. Vocals are handled with considerable competence, combining excellent articulation with fine nuance and micro-dynamics. The treble is detailed and smooth with good perspectives. Bass is very well balanced with good drive and weight, though it doesn't seem able to resolve bass lines with the same power and precision as the very best available. Switching in the subsonic filter, the bass has obviously less weight, and I could detect no advantages, so its use could be restricted to warped records.

It maintains good control over fine detail on complex material, but does have a tendency towards upper mid hardness when pushed. It sounds lighter, leaner and less dynamically competent than some of its peers, and music doesn't flow quite as well as it does with the Naim *Superline*, for example, but it nevertheless manages to communicate a fair degree of rhythm and timing information.

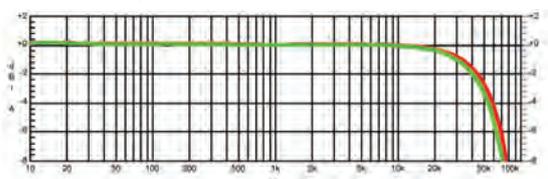
Good definition ensures that the stage width and depth are excellent and the soundstage takes on a fine three-dimensional quality with tight imaging and focus. Piano is handled well, with good overall balance and excellent tonality, though when playing some of my favourite vinyl I sometimes found the music a trifle uninvolved, with a hint of congestion and a mild loss of full expression. Ultimately, it doesn't convey emotional content quite well enough really to match the state of the art.



Conclusions

The *Vida* is technically very interesting with its DC coupling and inductor RIAA stage. The high quality build promises a long and reliable life and the casework is solid and neatly styled. On balance it measures well and has the transparency and presence to place it among the truly desirable group of currently available phono stages. It deserves to be partnered with a top quality moving-coil cartridge, and when so partnered will give many hours of listening enjoyment. Indeed, it may be hard to find another that's as attractive at this price, although those for whom rhythm and timing are of prime importance might want to look elsewhere. A few more costly units may perform better overall, but all in all the *Vida* is competitively priced and therefore deserves recommendation.

Aurorasound Vida RIAA 'stereo' frequency response right (red) and left (green)



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PHONO STAGE TEST RESULTS

Make	Aurorasound		Date 24/07/13
Model	Vida Phono Amplifier		Ser. No.
Distortion, THD inc noise	20Hz	1kHz	20kHz
At IHF 2.0V out			
Disc mm	-82 dB	-82 dB	-80 dB
Disc mc	-82 dB	-82 dB	-80 dB
Frequency response (ref: RIAA)			
Disc mm	0.5 dB	0 dB	-0.45 dB
Disc mc	0.5 dB	0 dB	-0.4 dB
Overall disc deviation 20Hz-20kHz		-0.45 dB	
S/N ratio Disc mm		-80 dB	
S/N ratio Disc mc		-73 dB	
Overload margin mc	25 dB	25 dB	25 dB
Output impedance (SE)		1050 Ohms	
Input Data	Socket	Sensitivity	Loading
Disc mm	phono	5.88 mV	47k ohms pf
Disc mc (low output setting)	phono	0.81 mV	- ohms nf
DC offset	Left 0 mV	Right 0 mV	
Size (WxHxD)	260 mm	100 mm	250 mm
Price	£2,700.00		

(20ohms source used)