

PrimaLuna EVO 100 Tube Ph.

Dutch tube aficionado, PrimaLuna, has offered an optional solid-state phono module with its amps for years, but now comes its first standalone, all-tube MM/MC preamp
 Review: Ken Kessler Lab: Paul Miller

With vinyl sales now surpassing CD [see p103], the revival is back with such force that the flood of phono stages and decks will surely continue unabated. More than that, it's enough for PrimaLuna to show its confidence in analogue to bring out its first EVO phono amp, the EVO 100 Tube Phono Preamplifier at £3398.

It's clear this unit is aimed at seasoned vinyl users, smack in the price range of 'second or third upgrade' where one expects a full complement of features and facilities, even from a genuinely 'all-tube' design hosting no fewer than ten valves. Around the back are just two sets of RCAs, one for input and one for output, plus a 3-pin IEC mains socket, fuse and earthing post. On the lefthand side is a rocker for power on/off, while on the right is one for selecting two levels of MM capacitance: 47pF or 100pF. Pure simplicity...

MAKING GAINS

On the front panel, a rotary provides five wisely chosen MC loads of 50, 100, 200, 500ohm and 1kohm. I realise that in a perfect world there would be infinitely variable impedance selection, but you'd be hard-pressed to find cartridges this cannot match. Expanding this, though, is a knob on the right choosing low, medium or high gain. The MM section is specified at 40dB, while the MC settings up this to 52dB, 56dB, and 60dB [see PM's Lab Report, p55]. Between the rotaries are soft-touch buttons selecting MC or MM cartridges and mute. The EVO 100 Phono has a proprietary 'SoftStart' warm-up stage with a time of around one minute, ensuring no nasty thumps through the system.

Physically, this 12kg unit is imposing for a phono stage, closer in presence to models like the 19in rack-mount types, including EAR/Yoshino's 912 or Audio

RIGHT: Under the EVO 100 reveals high-quality ceramic tube bases, point-to-point wiring, Takman resistors [flesh-coloured], Nichicon [brown] and DuRoch caps [white], and MC stage with relay-switched gain/loading [top right]

Research's full-width phono amps [HFN Dec '16]. It's made from heavy-gauge steel, which is fully vented so it never seems to run hot despite the valve complement of two 5AR4s for power supply rectification, two EL34s for power supply stabilisation, and four 12AX7s for the MM section, all contained under the curved glass-and-metal cage. A brace of 6922s for the MC stage is hidden away in the back, accessible via a small panel [see p55]. This is good news for enthusiasts; I am certain PrimaLuna

fitted decent glassware, but there will be hobbyists who can't resist tampering. Every one of the chosen types is common, so knock yourself out with, say, NOS Brimars or Mullards or whatever tickles your fancy.

PrimaLuna's look is now familiar, with a narrow but deep footprint, and the chassis boasts five coats of hand-rubbed, polished paint and a brushed fascia in black(ish) or silver. Inside, it's all point-to-point wiring, and the rotaries have a fabulous feel



'The notes slid from the speakers, fluid and seamless'

and scroll, landing on each setting with a 'click'. Also to please the fastidious are ceramic valve bases, Nichicon and DuRoch capacitors and gold-plated sockets.

Fortunately, I didn't have to test the PTP (Power Transformer Protection) circuit, which reacts if the power transformer overheats due to environmental circumstances, overloading or other issue. For peace of mind for nervous types, an internal thermal switch breaks the primary. After it's cooled, and if nothing is amiss, the EVO 100 Tube Phono preamp will 'repower' and function properly.

ROOM FOR ONE MORE?

One line in PrimaLuna's pitch bothered me, however, given that this is not a basic, minimalist nor economy-priced model. It states that, 'The starting point in designing this model was to keep the controls and features as specific as possible - no special features for only a select number of users'.



LEFT: The EVO chassis has rotaries for MC gain and loading (MM has fixed gain/loading). The main RIAA stage features a pair of 12AX7 tubes per channel [front row] with EL34 pentodes and 5AR4 rectifier tubes in the PSU [back row]

LPs roamed the earth. From the get-go, I was awash with the kind of lushness which, on the most basic level, has been the distinguishing character trait which separates analogue from digital. Irrespective of the albums I played, including One-Steps with digital stages, the experience was 'vintage' - but in a good way.

Let's get one thing clear from the outset. With the exception of (London) Decca cartridges, which are out there in their own space, the EVO 100 Tube Phono excels with moving-coils, as these are more simpatico with the overall nature of the unit. That said, if you find it too warm, moving-magnets from Ortofon and others add a touch of coolness or even restraint.

Having ascertained that the Ortofon MMs - three different colours of 2M - were

sounding of their best and even benefitting from the very tubes that they corralled, I moved onto MCs, including an aged Tsurugi (which sired Lyra), the EAT Jo N°8 [HFN Dec '19], and the reborn Kiseki [HFN Jul '18]. It was here that I

began to appreciate the phono stage's two-pronged approach of matching gain and impedance. To my delight, none of the settings were best at the manufacturers' recommended values, the EVO 100 reinforcing my belief that you need to set your cartridges by ear.

LONG LIVE THE KING!

It started on a personal note, because one of the first singles I ever owned was given to me by my sister, Elvis Presley's 'Can't Help Falling In Love' from *Blue Hawaii*. Of late, I had been revelling in the recent 2x45rpm LP from Mobile Fidelity [MFSL2-504], which had already revealed itself to be a must-own if you're a fan of the King. And if you love early RCA, you're gonna be delighted with the sound. ☺

This compels me to voice two observations, even if it causes PrimaLuna founder Herman van den Dungen to commission a voodoo doll of me to pierce with needles.

The first is that, considering its price, complexity and size, installing two sets of inputs should not have troubled PrimaLuna one iota. Many heavy users of LPs own two decks, while turntables fitted with two arms are an even better, space-saving solution for those with multiple cartridges.

As for the second, it's the fitting of a volume control and variable output. This would have turned the EVO 100

into a perfect, dedicated control unit for someone who only uses vinyl. I have a sub-£1000 Pro-Ject phono stage with two sets of inputs and outputs, while EAR-Yoshino's PhonoBox [HFN Mar '19], under £2000, has an output level control. It can be done...

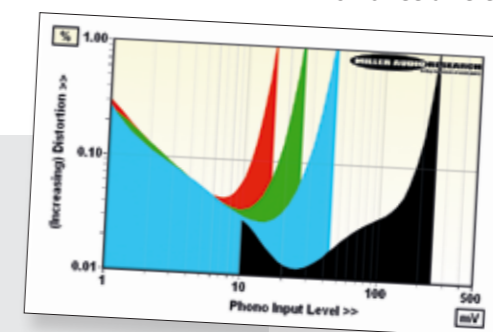
T-REX APPEAL

Enough of my grumbling because the sound is - like the DeVore O/93 speakers [HFN Mar '23] - a delightful taste of the time when dinosaurs and

MAKING HEADROOM

Most cartridge brands specify their pick-ups' output with reference to a 1kHz/5cm/sec groove where figures of 3-6mV for MMs and 0.2-0.8mV for MCs are typical. In practice, groove velocities some +18dB higher may be encountered on the 'fiercest' of discs - the longstanding Ortofon 2Ms [HFN Oct '08, Mar '11 and Jun '21] will deliver peak outputs up to 50mV here - so phono stages must be able to accommodate these inputs without clipping further into the RIAA circuit. Because tube preamps offer the possibility of high-voltage gain stages it's tempting for designers to opt for a 'purist' passive RIAA eq network rather than a wholly or partially active RIAA where the equalisation is folded into a tube or transistor feedback stage. But with passive RIAA soaking up a lot of gain these preamps often have limited headroom/input overload margins, as we saw with ModWright's PH 9.0 [HFN Feb '22] and the Zesto Andros Deluxe II [HFN Sep '21].

Instead, PrimaLuna is playing it very safe and very 'compatible' in the EVO 100 Tube Phono where its active RIAA confers very generous input overload margins. For example, the MM input will tolerate up to 250mV before clipping [black trace, inset Graph] - a massive +34dB of headroom over the 5mV output of our hypothetical MM. By contrast the PH 9.0 offers just 14mV of 'breathing room' before distortion hits 1% (a mere +9dB headroom). The EVO 100 Tube Phono is equally generous/tolerant of high MC outputs, offering +38.7dB [blue trace], +34.3dB [green] and +30.1dB [red, all re. 0.5mV MC] with its 'Low', 'Medium' and 'High' gain settings, respectively. This means it'll even accommodate the nominal ~2mV/5cm/sec output of a 'high output' MC, traversing maximum +18dB groove peaks, into its 'High' gain input without clipping. PM



LAB REPORT

PRIMALUNA EVO 100 TUBE PHONO



ABOVE: The EVO 100 offers one set of RCA inputs and outputs, the former switched between MM and MC via the front panel [p53]. Two 6922 double-triodes form the MC headamp, on a 'floating' PCB, seen here inside the case with the rear plate removed

While that track is both my favourite on the album and the standout, as there's a bit too much 'novelty' on the rest of it, I was not prepared for the added richness to the vocals. The faultless realism, even with lesser systems, was upped by an even greater lack of artifice, especially an absence of sibilance.

As readers know I seem to judge everything by vocals, but it was something else entirely which cemented my admiration for the EVO 100. Pedal steel on a country album, or Hawaiian guitar as heard throughout, are like-sounding instruments which are unmatched for gauging what can only be described as 'liquidity' – a clarity which exposes unwanted edges or grain. Via the EVO 100 Phono, the notes slithered out of the loudspeakers, as fluid and seamless as I have ever heard at the price.

PRESSING ON

As ever, an audiophile pressing bestows an advantage on a system which 99.9% of pressings – normal releases, that is – do not share. So I dug out two terrible transfers, plus a vintage RCA to see if the warmth of *Blue Hawaii* was shared with Arthur Fiedler and the Boston Pops' *Jalousie* [RCA Living Stereo LSC-2661] from 1963. Admittedly, this orchestra playing Latin-flavoured material, such as 'La Sorella' and 'Zacatecas', was as far removed from the *Blue Hawaii* soundtrack, but with it came another revelation courtesy of PrimaLuna's phono stage.

I could swear there was a familial resemblance to the overall sound, across the pieces, including the scale of the portrayal. Okay, so orchestra-vs-studio creation is an apples/oranges scenario, but it was

there and says as much about MoFi's skills with 60-year-old recordings as it does PrimaLuna's general prowess with soundstage and air.

FOR MY NEXT TRICK

It required the other extreme – two mediocre-sounding compilations – to find the EVO 100 also possessed that near-magical 'valve skill' of balancing detail, transparency and accuracy. *Off The Record With The Move* [Sierra FEDD1005] does that brilliant band no favours, while the hugely collectible *The Most Collection Vol 1* [Music For Pleasure MFP50015], with a dozen Mickey Most masterpieces from The Yardbirds, Jeff Beck, Rod Stewart, The Animals and others, reminded me why MFP stood for 'Music For Pain'.

No, PrimaLuna's EVO 100 Tube Phono did not elevate either to the level of their original pressings. Instead, it exposed the gap between them. But the overall gentility of this phono amp? It rendered them listenable which, in this instance, is high praise indeed! ☺

HI-FI NEWS VERDICT

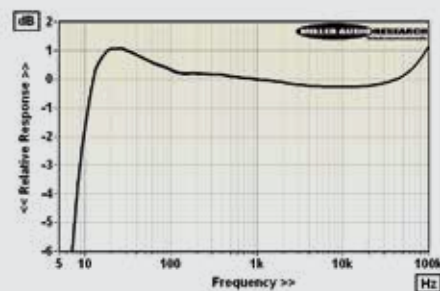
PrimaLuna has, again, bridged the gap between mid-level and high-end with a superb, and – despite my two reservations – versatile phono stage which will be adored by those who prefer all-valve components. Not hybrid, not solid-state, but all-tube and with so much warmth and air that its sound can only be described as 'cossetting'. Fans of the brand – and I still use a Mk I Prologue Two – are gonna love this.

Sound Quality: 87%

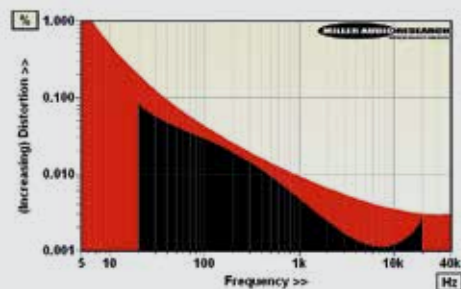


More than a few 'tube' phono stages will still employ, for example, a low-noise J-FET MC input/gain stage, so all-tube phono stages that offer a decent gain range, low noise and healthy input overload margins [see boxout, p53] are rare. PrimaLuna's EVO 100 Tube Phono belongs in that latter category, even exceeding the brand's own specification in several key areas. Gain is indicated at 40dB (MM) and 60dB/56dB/52dB for the High/Medium/Low MC settings, and while the former +40dB/MM spec. is correct, the MC options are, in practice, closer to +63.9dB, +59.8dB and +55.5dB, respectively. So the EVO 100 has sufficient gain to accommodate low-ish output MCs (ideally no lower than 300µV types) matched with a huge headroom of 250mV (MM) and 16mV (MC, High), 26mV (MC, Medium) and 43mV (MC, Low) to buffer it against the very highest output pick-ups in the most demanding of playback roles.

Noise is below the vinyl threshold and so the A-wtd S/N ratios of 79.1dB (MM) and 63.2-64.7dB (MC Low to MC High) are adequate if not up with the best solid-state designs. The RIAA-corrected response is also subtly 'shaped' [see Graph 1] to offer a +1dB boost around 20Hz while also offering a steep attenuation of warp frequencies. Distortion decreases with increasing input/output level until 2V output above which THD increases again from 0.015% to 0.02%/4V, 0.04%/10V and 1% at the maximum (and massive) 25.1V output. It's probably no coincidence that PrimaLuna specifies its best distortion at 2V output but, unusually, the lowest THD is at a high 10kHz frequency (0.001%) as illustrated by the THD vs. frequency traces [see Graph 2]. Again, these figures are not vanishingly low but are still lower than the levels of distortion typically encountered with even the finest MM/MC pick-ups tested in *HFN*. PM



ABOVE: RIAA-corrected frequency response from 5Hz-100kHz re. 0dBV (MM gain setting)



ABOVE: Distortion vs. frequency with MM gain setting (black, 0dBV, 20Hz-20kHz; red, -6dBV, 5Hz-40kHz)

HI-FI NEWS SPECIFICATIONS

Input loading (MM/MC)	47kohm/100pF-1nF / 50ohm-1kohm
Input sensitivity (re. 0dBV)	10mV / 1.67mV / 1.02mV / 640µV
Input overload (re. 1% THD)	250mV / 43mV / 26mV / 16mV
Max. output (re. 1% THD) / Imp.	25.1V / 160-380ohm
A-wtd S/N ratio (re. 0dBV)	79.1dB / 63.2-64.7dB (MM/MC)
Freq. resp. (20Hz-20kHz/100kHz)	+1.1dB to -0.28dB / +1.1dB
Distortion (20Hz-20kHz, re. 0dBV)	0.0011-0.085%
Power consumption	85W
Dimensions (WHD) / Weight	280x190x405mm / 12.7kg