

Luna Listening

PrimaLuna have released a new Evolution range of valve amplifiers. Noel Keywood checks out the EVO 300 integrated.

Listening to the new EVO 300 valve amplifier from PrimaLuna, a light went on in my head. A classic EL34 amplifier – I remembered the sound. This is an output valve (tube) with a reputation – especially in the Far East – being known for its delicacy, transparency and general sense of insight. What PrimaLuna have done here is extract the best from the EL34 by placing it in a

modern electronic environment, surrounded by audiophile components.

Well, that's what I heard with our review sample, with EL34 power output valves as standard, price £3798. Also compatible are a long list of power valves including KT88, KT120 and even the KT150 valve. I didn't try other tubes, staying with what Dutch PrimaLuna are happy to fit and claim on their website as one of the best power valves going.

The first thing that struck us at Hi-Fi World was the EVO 300's weight, quoted by the company in Imperial measure for the US market: 68.2lbs. That's 31kg and it is a two-person lift unless you spend a lot of time in the gym, so any wall shelf or stand will need to be sturdy. Moving this amplifier was not a casual decision; once in place it remains. All the same, dimensionally the EVO 300 fits a conventional 19in equipment



rack (stand), measuring 15.2in (38.6cm) wide so there's some side clearance. It is 8.1in (21cm) high and 15.9in (41cm) deep, again suitable for a 19in deep rack.

As PrimaLuna point out there is no digital inside, nor a phono stage; this is a standard pattern valve amplifier, but one with high quality parts and remote control. The latter is facilitated by use of sealed small-signal relays with a long life to switch inputs; you can see them in banks against the rear input sockets. This is the best method, one we used in World Audio Design amplifiers long ago, employing Panasonic inert gas filled audio relays quoted at 3 million operations; ordinary mechanical switches decay with time.

Another point that struck a chord was the use of a low-ish HT (420V PrimaLuna say) to preserve valve life. I remember our designer, Andy Grove, refusing to use enough HT to hit a 40 Watt target spec. because, he said, it would shorten valve life. Oh the frustration! What happens is the valve runs hotter, expands and contracts more, the electrodes warp over time, touch and there's a bang! This catastrophic short can destroy the output transformer primary and the cathode circuits. Manufacturers should always fit primary fuses to avoid this, but many do not. A side issue is stripping the anode and cathode of emissivity, whereupon the valve sounds dull and lifeless. Power valves should be changed after 3000 hrs or so of use in any case, which will be years for most people.

So what PrimaLuna say about restricting power output of a valve is very true. The quoted power of the EVO 300 is 42 Watts in Ultralinear mode and 24 Watts in Triode mode, our sample meeting those figures under test. Replacement cost is just £80 for quad matched pairs – small change as power tubes go – EL34s are not expensive. KT88s and KT150s come in at more but still do not break the bank (unlike 300Bs).

Triode mode? Yes, this now-common option with valve amps is available on the EVO 300's remote control: press a button to hear the difference between Ultra-Linear and Triode modes, the former lighting a front panel LED red, the latter green. What does that say? Ultra-linear gives more power but is subtly less liquid and relaxed sounding than triode mode, so it is flagged up red. PrimaLuna allot green to



A complex internal layout with hard wired white ceramic valve bases, a central green circuit board and – at left – gold plated input sockets switched by relays. At top right is the Alps volume control, motorised for remote control operation.

Triode mode because it is gentler and better teases out the essence of classic valve sound. I'm agnostic; both presentations have merit but I do end up with Triode. The 24 Watt power figure may look unacceptable but with sensitive modern loudspeakers (floorstanders) it is enough to go neighbour-annoyingly loud. Remote control not only switches the input relays, but also activates an Alps motorised volume control: watch the volume control knob move as if by ghostly intervention. It's a high quality solution popular with valve amplifiers.

The front panel is a machined alloy billet that gives a sturdy front user interface. At left is the volume control and right a rotary input selector that actuates the relays. Also here is a 1/4in (6.3mm) stereo headphone socket. The power switch is a small rocker style unit just behind the fascia, on the left side panel, with a fuse next to it. On the right side panel lie a loudspeaker/headphone switch and a bias switch that made little difference measurement showed, but I left it in high bias for the best result.

The rear panel carries five phono-socket Line inputs and a Home Theatre bypass, but no balanced XLR inputs. There is also a Tape output, but no source/monitor switch. Large, sturdy gold plated

loudspeaker sockets accept bare wire connection, spade terminals or 4mm banana plugs. As is common, the output is purposed for an 8 Ohm load but there is a 4 Ohm tap as well.

Inside, hard wiring and circuit boards are used, plus high quality Takman resistors in a mixture of old and new. The volume control is an Alps Blue Velvet motorised type and DuRoch tinfoil capacitors are used. An adaptive auto-bias system copes with any valve type used and makes manual bias unnecessary. If a valve goes out of limits a red warning indicator lights to identify it.

Our sample had a turntable phono amplifier housing underneath but it is a future option.

SOUND QUALITY

For listening the PrimaLuna EVO 300 was hooked up to our Martin Logan ESL-X hybrid electrostatic loudspeakers through Chord Company Signature XL cables. CD was spun by our Oppo BDP-205D Universal player, feeding a Chord Electronics M Scaler digital filter and Dave DAC. I also used a MacBook Pro running from battery, feeding in hi-res digital. Our sample lacked the phono stage board so we could not assess performance with LP.

From outset – and using Triode – I heard a lovely amplifier here. In true EL34 tradition the EVO 300 has

Solidly built remote control with input selection, volume and Ultra-linear/Triode switching.



a wonderful sense of liquid lucidity, as I can only describe it. The EL34 is a fast sounding valve with plentiful treble of ornate nature – and this quality the PrimaLuna delivered well. It is far from warm or cosy sounding, being quite specific up top. Both qualities came together with Nils Lofgren's Keith Don't Go where his rapid finger work on close miked resonating guitar strings soared out in the room. I use this track quite a lot to get a handle on high frequency performance and the EVO 300 did an inarguably wonderful job in capturing both the dynamic vivacity of the recording – as well as the atmospheric nature of the live venue. Yet additionally there was the beautifully liquid nature valves provide, giving Lofgren's guitar both the speed and timbral richness I hear from my son's acoustic guitar – and that I fail to pick up from transistor amplifiers. A riveting result that straight away spoke loud: EL34s in full glory!

The Henry Mancini orchestra playing the Pink Panther theme occupied a voluminous sound stage in front of me with immersive sense of depth. Easy going yet subtly strong, the plucked acoustic bass strode along with casual authority. I was in Triode mode so switched to UL (Ultralinear) and there was a little more dynamic contrast – but also less of the svelte sweetness that Triode delivers – so I inevitably switched back. But I am a bit honed to Triode, since I run World Audio Design 300B amplifiers at home and an Icon Audio



At front sit six 12AU7 preamplifier valves, small-signal double triodes.



The large, bluff looking top casework covers very heavy mains and output transformers, making the EVO 300 a two-person lift. Below is the optional phono stage.

Stereo 30SE single-ended amplifier switched to Triode working in the office. The EVO 300 was right up there with them: it's sound grabbed me fast!

CONCLUSION

PrimaLuna's EVO 300 is a finely developed valve amplifier that comes

with EL34 power output valves as standard. Delivering 40 Watts in Ultra-Linear mode, it has strong bass and a powerful sound, plus the superb lucidity valves are known for. It got a big thumbs up from all in the office. A great sounding amplifier, one that will keep you listening – well worth an audition.

MEASURED PERFORMANCE

The PrimaLuna EVO 300 delivered 50 Watts into 8 Ohms (3% thd) in Ultra-linear mode and 25 Watts in Triode mode. Output impedance measured 3 Ohms, making damping factor 2.7 – low by transistor amplifier standards but acoustic and magnetic damping in the loudspeaker also come into play to affect final outcome – as always.

Frequency response in Ultra-linear mode exhibited a +3dB bass peak at 6Hz but this reduced to +1dB in Triode mode, due to change in feedback conditions. Over the perceivable audio band down to 20Hz the amplifier measured flat, but whichever mode is chosen the EVO 300 will appear to have strong low bass, especially with LP.

Distortion in the midband measured a low 0.1% at 1 Watt. At high (10kHz) and low (40Hz) frequencies just 0.2% – low figures. Close to full output (-1dB) distortion rose to around 1%, typical for a valve amplifier; this is distortion on musical peaks. The massive output transformers handle low frequencies well.

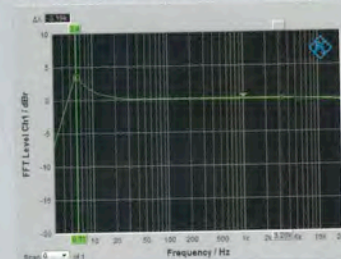
Noise measured a low -96dB, hum being all but absent.

The EVO 300 measured as expected from a nominally 40 Watt, well designed valve amplifier. It has

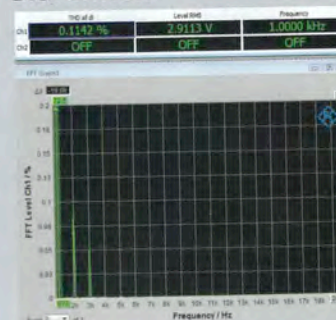
low distortion, adequate bandwidth and enough power to go loud. **NK**

Power (8 Ohms)	50 Watts
Frequency response (-1dB)	5Hz-52kHz
Separation	68dB
Noise (IEC A wtd)	-96dB
Distortion (10kHz, 1W, 4Ω)	0.2%
Sensitivity	0.3V
Damping factor	2.7

FREQUENCY RESPONSE



DISTORTION



PRIMALUNA EVO 300 £3798



OUTSTANDING - amongst the best

VERDICT

Great valve sound from a classically configured 40 Watt amplifier. Engaging.

FOR

- build quality
- automatic biasing
- valve warning LEDs

AGAINST

- very heavy
- no XLR input

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