

Mix'n'match

PrimaLuna mix valves with transistors in their new EVO 300 Hybrid and make a nice match thinks Noel Keywood.



If you want the lovely smooth sound of a valve amplifier but would like that magical 100 Watt power figure for a bit of AC/DC every now and then, a hybrid might be the answer. Not a new idea, but a good one that ticks a lot of boxes, one that valve amplifier manufacturer PrimaLuna have embraced with

need not happen. We have heard some lovely ones, notably from Vincent of Germany who have gained everyone's vote for a great sound. That isn't a valve sound, nor a transistor sound – but a hybrid sound! In a nutshell, tidy, powerful but full bodied. Would the EVO 300 Hybrid match up I wondered?

Rather than using any old transistors to deliver 100 Watts, PrimaLuna use a special type called a MOSFET. These devices have always been said to mimic valves in their electrical characteristics, and PrimaLuna evoke this similarity to justify their use as output devices. However, modern power MOSFETs are highly developed devices in whatever role they are used, so make a good choice in any case.

By now you'll have gathered that the EVO 300 Hybrid is a powerful hybrid amplifier – but it is not much else. There are five Line level inputs through phono sockets (unbalanced) and an optional Phono stage (moving magnet) for LP, something ours lacked even though the casework

a large 500VA transformer for the power amplifier, plus two separate transformers for the preamplifier they say, which may well be high voltage for the valves and low voltage for all else. I speculate because PrimaLuna use solid-state control and monitoring circuitry in their all-valve amps and likely do so here. There is for example a motorised volume control – likely Alps Blue – with associated remote control electronics, plus relay switching of the inputs and these all need a low voltage supply.

The remote control is a chunky alloy affair with a battery cover attached by four small cross-head screws, hidden beneath rubbered O-ring bump stops. It controls volume, input selection and has a Mute function too. There are unused buttons as this is a general remote for all PrimaLuna products, so TR/UL (Triode/Ultralinear) doesn't apply here.

As PrimaLuna note, they use valves extensively in this design, not just as unity-gain buffers. There are two 12AU7 (double triode) preamplifiers, one for each channel,

plus four 12AU7 phase-splitters/buffers to feed the push-pull Class A/B power amplifier. This uses paired JFETs from Linear Systems they say, plus custom power devices in push-pull pairs, clamped to heatsinks at either side of the rear cover. There is a long start-up delay of one minute and current draw from the mains is 0.4A (90W), there being no auto power-off function after a period of non use.

The EVO 300 Hybrid is solidly built and well finished, if functional in styling: it's not going to win any prizes here. The six 12AU7s have no under-lighting, McIntosh style, and the faint glow of their heaters is not obvious. Pepping things up a little PrimaLuna use red LEDs inside the rear power amplifier housing to give a cosy red glow if you look in from above, through the ventilation slots. Not visible from the front though, which is a shame. Dimensions were 468mm wide, 578mm deep and 316mm high.

SOUND QUALITY

The EVO 300 Hybrid was connected to Martin Logan ESL-X hybrid electrostatic loudspeakers via Chord Company Signature



EVO 300 Hybrid Integrated Amplifier

their new EVO 300 Hybrid (£6198) I am reviewing here.

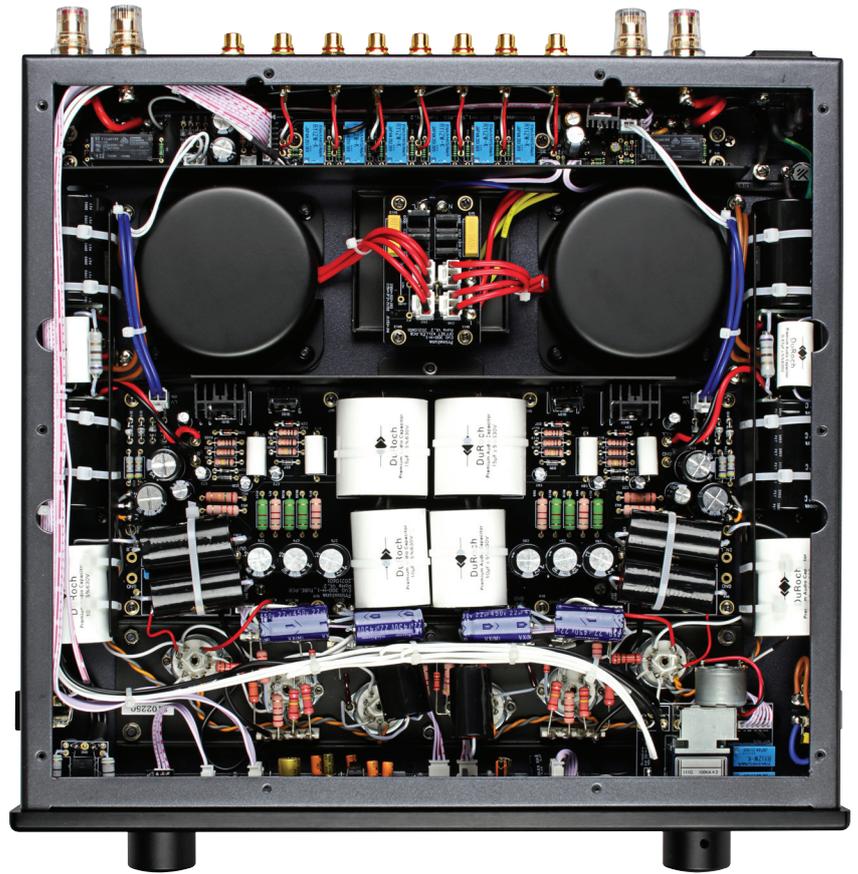
Hybrids combine a transistor power amplifier with valve preamplifier, meaning you get a bit of both. They're a compromise that can fall between two stools, pleasing no one. Transistor power amplifiers can easily wreck the potential of a decent valve preamplifier, but done well that

is there. Absent are digital inputs, balanced inputs, Bluetooth or anything else. However, there is a Home Theatre input direct to the power amplifier, bypassing the volume control, as well as a fixed-level Tape output from the preamp, before the volume control. The front panel carries a full size 1/4in (6.3mm) headphone jack and the loudspeakers can be switched off for late night listening.

In underlying form this is a fairly ambitious design, explaining both cost and weight of 25kgs (55lbs) – a two person lift. There

Reference screened cables. Sources were our Oppo UDP-205D player, valued for its top quality ESS ES9038 Pro DAC that gets the best from CD. I also used hi-res from a MacBook Pro connected to the Oppo's USB input, using the Audirvana+ software player to read hi-res PCM and DSD files.

This is an amplifier with a characterful sound that was easy enough to sort out. As you would hope from a well developed MOSFET amplifier with big linear power supply there was superb dynamic contrast making for a meaty sound. I found it added muscle to whatever was connected, livening up a pair of Focal K2 906 loudspeakers under review, for example. With well lit, detailed treble in typical MOSFET fashion the EVO 300 Hybrid came across as having an airy, open wideband delivery that added sparkle to highs: this is not a warm sound and was quite different to our



The inputs are selected by relays (top) and the two mains transformers for preamplifier are screened toroidals. There are specialised (white) capacitors and a motorised Alps volume control (bottom right).



At right a full sized 1/4in (6.3mm) headphone jack with rocker switch behind to silence the 'speakers'.

Creek, that came across as softer and less forceful.

The big plus point however was that of timbral resolution. Those valves added in a richness that you just don't get from solid-state amplifiers, especially MOSFETs that can come across as sterile and soul-less. This worked wonders for orchestral works and especially

"With bass heavy tracks, like Giorgio by Moroder from Daft Punk (24/96), this amplifier had both grip and heft"

strings, the Trondheim Soloists located in a big space behind Marianne Thorsen, their massed strings sounding delightfully well lit and instruments convincingly differentiated playing Mozart violin concertos (2L Norway, 24/192). Marianne Thorsen's violin was vibrant centre stage, well in front spatially and with a richer timbre than I am used to, giving it a sense of body. Bright transistor amplifiers don't manage this well; they have speed and clarity on their side but also mechanistic sterility. And that is what the EVO 300 Hybrid avoided.

With bass heavy tracks, like Giorgio by Moroder from Daft Punk (24/96), this amplifier had both grip and heft, as it did with Fleetwood Mac's Dreams (24/96)



A rank of 12AU7 double triode small signal valves handle preamplification (2) and phase splitting/buffering (4).



A 12AU7 double triode; six valves/twelve triodes in all are used. Typical life time is 10,000 hours and they are inexpensive.

where John McVie's bass line similarly made its presence well known in the room. It's this low frequency heft that gives the amplifier its muscular sound. Bearing in mind valve amplifiers have big bass, if obviously softer bass than transistor amplifiers, and you get a satisfying amalgam here that's the best of both.

Drawbacks? Some older material with questionable treble quality, notably those Fleetwood Mac re-issue tracks in 24/96 hi-res digital could get challenging up top through the XStat electrostatic panels. It's impossible to know how well they were converted from the original analogue tapes to digital – my ears tell me through a yesteryear ADC that added audible digital distortion. Here

the EVO 300 Hybrid was more revealing and challenging than our Creek or Icon Audio (valve) amplifiers: it threw out the problems in the recording. When reproducing clean modern recordings however, its well lit treble was a bonus.

Better, I suspect its strenuous approach to reproduction is what most people would identify as "hi-fi" and indeed I was a bit taken aback at how it energised our electro-



static loudspeakers in amenable fashion. Big MOSFET amps can be too challenging for me, but this one had civility. I started to wonder whether it was a symbiotic match for electrostatics, where normally I prefer valve amplifiers. That would make it a reference amplifier then.

CONCLUSION

Stand back and PrimaLuna's EVO 300 Hybrid amplifier is a peculiar proposition. Expensive, with few facilities and of lack-lustre appearance it's not going to be a

star attraction in any show room. But it is a truly specialised design: using valves as phase splitters is nuts, yet works well here it seems. Add in some serious linear power supplies and what you get is an amplifier with a sound that is both unique and impressive. Big, powerful, super clean – fast as well. This is arguably one of the best amplifiers a non-valve person could hear, and might even worry valve heads – as it did me! Well worth auditioning if you are in the market for a top amplifier.



At rear a line of solid, gold plated phono input sockets, one pair of speaker sockets and – beneath – casework for an optional MM phono stage. Above lies the power amplifier with its 500VA mains transformer.

MEASURED PERFORMANCE

Having an FET (transistor) output stage, the PrimaLuna EVO 300 Hybrid delivered 112 Watts into 8 Ohms, rising to 182 Watts into 4 Ohms. Output impedance was very low at 0.07Ω, giving a high damping factor of 109, suggesting well controlled bass.

Frequency response measured flat from 13Hz to 48kHz (-1dB) and remained unchanged at all volume control positions – always good to see.

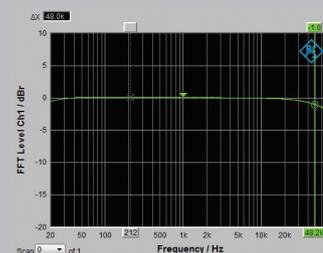
Even though distortion rises to 0.2% at 10kHz (1W) this comprised second harmonic only, much like that expected from a valve amplifier. Generally, distortion hovered around 0.1% and was always second harmonic in structure, which is innocuous.

Input sensitivity was on the low side at 400mV in for full output (30V), explaining the amplifier's low noise figure of -103dB. NK

Power (8 Ohms) 112 Watts
Frequency response (-1dB) 13Hz-48kHz
Separation 68dB
Noise (IEC A wtd) -103dB

Distortion (10kHz, 1W, 4Ω) 0.2%
Sensitivity 0.4V
Damping factor 109

FREQUENCY RESPONSE



DISTORTION



PRIMALUNA EVO 300 HYBRID £6198



OUTSTANDING - amongst the best.

VERDICT

Powerful, fast yet timbrally rich, a lovely sound.

FOR

- muscular sound
- spacious sound stage
- strong yet fine treble

AGAINST

- few facilities
- no balanced inputs
- dull appearance

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