



Physical dynamics
3D feeling

PrimaLunas hybrid – the best of both worlds

Many have tried to combine tube sound with transistor power. But once a genuine tube brand took on the task, the result was **a synergy unlike any other**. Text Mats Meyer-Lie Photos PrimaLuna/H&M Measurement H&M

The motivation to develop hybrid amplifiers, i.e. amplifiers with both tubes and transistors, is the desire to combine the often more musical sound of the tubes with the high power strength and current capability of the transistors. With transistors at the output, there is also no need for the output transformers that would otherwise be required to match a tube amplifier to the low impedance and high current requirements of loudspeakers.

By having tubes in the input stage, you not only benefit from their fine sound but also their linearity even without feedback, as well as their low distortion and not the least the tubes' very large overdrive reserve. Mosfet transistors have also been the most common choice, as their electrical characteristics are best suited to the tubes in the preamp section.

The first to come out with hybrid amplifiers was, to our knowledge, the American loudspeaker specialist Infinity and their HCA model from 1978. It was a 51-pound beast of 150 watts in class A (800W at idle!) with triodes on the input and 12 power transistors on the output. Hybrid amplifiers were very exotic and unusual for a long time, but the real lock-openers were probably Luxman, who came out with a whole range of integrated tube hybrids in the late 1980s and early 90s



The input stage is on the bottom side with dual power supplies and transformers. Components are consistent with very high quality and at the forefront are the directly soldered tubes.

Because this amp is built to give the input stage free play and to get background noise and interference down to an absolute minimum to squeeze the absolute best out of the triode tubes. That's why PrimaLuna has also used the circuitry from its award-winning super-preamp EVO 400 Preamp, a 60,000-Kronos device developed by the ex-Chief Engineer at Goldmund! It's therefore a very sophisticated, fully mono-input stage filled with custom-made components. The dual mono stage has separate, tightly regulated power supplies with separate transformers and special AC filtering to take out any DC residue that often interferes with the AC and, for example, creates hum in the transformers.

The circuits use three dual triodes (12AU7) per channel: one dual triode in the input stage and two in the driver stage. For the best sound, the preamplifier is not built on circuit boards but directly soldered with cables, a so-called hardwiring.

The power amplifier itself is developed by Dutch Floyd Design and Jan de Groot with over 25 years of experience in Mosfet amplifiers and hybrids. It was also he who came up with the very linear and fast output transistors from Exicon (Lateral Mosfet). The power section also has a fully dual mono power supply with separate toroids, but stacked under a common shield and a capacitor bank of 60,000 microfarads per channel.

The power stage itself is built a little differently, with a whole bunch of cascaded JFETs per channel driving two pairs of MOSFETs on the output. And it's these components, along with the low-noise input stage and low-noise power supply, that the company says are the secret to the sound.

Today's range consists of four integrated tube amplifiers from 40 up to 70 watts with EL34 tubes, four tube preamps, and four tube power amplifiers (again 40 to 70 watts with EL34s), all with almost identical styling.

There is also an unusual D/A converter with tubes in the mains and analog parts, but where also the control clock itself is built with a miniature tube. The tube is specially designed as a high-frequency oscillator and is said to have the absolute lowest noise on the market.

With such a rigid focus on tubes, many in the industry raised eyebrows when the company recently released the EVO 300 Hybrid - a 100-watt integrated tube/transistor hybrid. The reason is said to have been years of insistent nagging from some distributors, but also an increasing demand for high-power amplifiers, and that not everyone is prepared to have pure tube designs.

The reason the model has only now arrived is that they didn't just want to come up with another hybrid, but come up with a thoroughly worked-out circuit solution. A decisive reason has also been a somewhat special type of highly linear power transistors, which could do justice to the input stage.

Since then, we have seen several expensive and uncompromising designs, such as the Canadian Tenor or the Italian Absolare. Yes, even McIntosh has flirted with hybrids, but most common today are all the countless Asian budget amps that try to seduce with tube sound and transistor power for a bargain. Because, as I said, the main advantage over pure tube amplifiers is that you avoid the cost of expensive and also more or less sound-limiting output transformers.

Among the latest additions is PrimaLuna, a Dutch/American firm that quickly after its launch in 2003 gained a reputation for making unusually meticulous, yet very affordable tube amplifiers. The designs were very ambitious right from the start, with a former designer from the legendary Jadis (!) helping out.



A clean remote that is well-stuffed. Note two Sub Out outputs with a stereo/mono switch. At the bottom center, you can see the separate, fully shielded phono stage.

The amplifier has an input for using the output stage only but also dual subwoofer outputs. To maintain the sound character between the bass and the speakers, it has been decided to let the bass outputs be fed by the power stage via transformers, and not in the conventional way where you take the sub-signal from the line stage. An unusual solution, then, which PrimaLuna, like subwoofer manufacturer REL, believes not only provides better sound integrity but also greater dynamics.

Transformer coupling is also used for the headphone output, which is also driven by the power stage, which is a surprise too. No fiddling around here either.

In the basic version, you get five pairs of relay-controlled AUX/line inputs, but vinyl lovers can add a small separate gramophone stage for MM pickups, and then AUX 2 becomes the gramophone input. But it's no ordinary plug-in card; it's mounted in its shielded box, which cleverly sits at the rear of the underside of the amp chassis itself. A clever solution providing extra protection for the low and extra sensitive signal levels of an RIAA stage.

Last but not least, this amp is a solid construction where nothing is left to chance. Just take the hefty remote control!

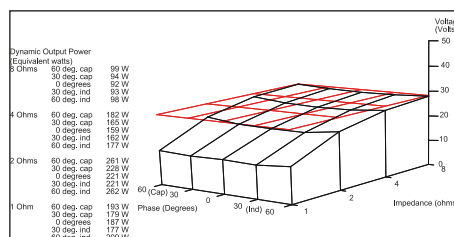
Sure, it costs some serious money, but it's also one of the most carefully built amps we've come across in its price range. And with a component quality that's far beyond the ordinary.

But finally, there was the sound, and the first thing you notice is that you can't start listening until about a minute after you've turned on the amplifier. The reason is that the tubes need time to warm up and stabilize before the red light on the front panel turns green and the signal is switched on.

This is one of those products that you notice almost immediately is something special when it starts playing. It's like there's an insidious tranquillity to the sound that's just waiting to burst forth. Because if there's one thing this PrimaLuna amp can do, it's suddenly cut out of nowhere with a raw kick in the gut that almost makes you lose your breath. Okay, the first time it happened accidentally because the input sensitivity is unusually high, so if you have speakers with normal sensitivity, just turning the volume knob to 10 o'clock is enough to make the room explode.

This speedy attack was a clear and consistent character trait, but also something that could easily have made the music a bit too goofy and aggressive. But not here, and in PrimaLuna's hands the music instead took on a natural liveliness and delightfully springy elasticity in a way that more than once brought to mind how transformerless tube end-stages like AtmaSphere can sound (see review in upcoming H&M issue 11/2022).

Sure, Atma-Sphere had even more of a sensual shimmer to its sound, but the similarities were definitely there. The difference lay instead in the



The EVO 300 is somewhat over-specified (due to too short measurement period), and doesn't reach the cube ceiling at any impedance, but the cubic appearance is showing only good effects at all impedances, though it drops slightly towards the 1 ohm load. Couldn't measure current.

power and firmer grip of the PrimaLuna's bass. Well, anyone who has opinions that Mosfet amplifiers often have a bit of rounded and soft bass, without the raw power at the bottom as in bipolar designs will have a few things to think about when they hear the PrimaLuna.

Sure, the amp felt slimmer at the base than, say, our Burmester power amp, but the control and raw optics at the bottom had a completely distinct physical power. But the bass power and lively joy of playing would be nothing without the way this hybrid brought open and airy space to the sound.

Yes, widescreen stereo was sort of just the name of the game as PrimaLuna painted a wide and shimmering soundscape, with a clearly chiseled sense of perspective. The carefully crafted, dual mono mains definitely played a crucial role in this, allowing the music to stand in stark contrast to a pitch-black, pin-drop background.

Three-dimensionality is, of course, also a characteristic associated with triodes, but the feeling was actually also repeated when we drove the amplifier's final stage separately, with Hegel as the first stage.

Yes, the combination of clear 3D feel, and vital dynamics, together with stability and clear grip at the bottom made it hard to tear yourself away from this amp. Anyone who has instinctively thought that tube hybrids rarely manage to evoke that synergy of magical tube sound and solid transistor power they were hoping for, will change their mind with the colorful PrimaLuna. **H&M**

Kringutrustning
 Digitalsignal Primare NP5 MK2/Musical
 Fidelity M6X DAC
 Försteg Hegel P30
 Slutsteg Burmester 956 Mk.2
 Högtalare Heco Bella Donna, Acoustic Energy
 AE320, B&W PM1
 Kablage Jorma Ultimate, Nordost Heimdall 2

PrimaLuna EVO 300 Hybrid **VOPPKLASS!**

Funktion Integrerad rörhybrid
 Pris 85.000 kr
 Angiven effekt 2x100W/8 ohm
 Analog in 5 par RCA + Amp in/HT Passthrough
 Analog ut Tape + 1 par subwoofer
 Vinylingång Tillbehör
 Hörlursutgång Ja, 6,3 mm
 Fjärr Ja
 Högtalar kontakter 1 uppsättning
 Mått (BxHxD) 39x21x47 cm
 Vikt 25 kg
 Info saxx.nu, primaluna.nl