



# PrimaLuna EVO 300 HYBRID Hybrid Sounds

A general recipe for an amplifier hybrid remains relatively simple: a tube pre-amp plus transistorized power amplifier. PrimaLuna is a specialist in tube technology, so you can consider the preamp stage topic being solved. There will be no problems further on because just as Denmark is a country of loudspeakers, The Netherlands is a country of amplifiers. You could drive "a few" kilometers to my friends from the well-known Hypex company and buy reliable class D amplifiers and power supplies, but

PrimaLuna did not. PrimaLuna did not take the easy way out.

The Dutch Durob Audio company (a distributor of audio equipment, which also sells PrimaLuna devices) was involved in the work, whose part of which is the Floyd Design brand. Initially, this department dealt with servicing and modifying equipment and later designing and manufacturing transistor amplifiers. The project is headed by Jan de Groot, who was earlier involved in the Sphinx company, also known in Poland

two decades ago. He has also worked for Luxman, Thorens, AirTight, B&W... Therefore, Floyd Design rested on the task of preparing a complete power amplifier (including power supplies), which was even marked with a large logo on the front panel. It can be concluded that the EVO 300 Hybrid is a joint work of two companies. However, it is represented ultimately by PrimaLuna - PrimaLuna took care of the whole thing, which is perfectly visible in the design and manufacturing of the cabinet.

The EVO 300 Hybrid looks very similar to the tube amplifiers from the EVO series (especially the EVO 300), including the low part of the chassis, on which usually the tubes, the tube cover, and the transformers are mounted. The cover of the tube section is made of metal, with rounded side brackets and horizontal rods - shutters. The whole is completed with side glass windows, thanks to which the large and heavy amplifier becomes visually lighter. Typically, the PrimaLuna tube amplifiers have transformer covers behind the tubes covering the output transformers. It is here that the EVO 300 Hybrid looks completely different. There are two vast blocks of heat sinks (from the outside, you can see their ribs) covered with a solid, perforated metal cover.

**The presence of heatsinks is related to the transistor power amplifiers working in class AB.**

Such a system also requires an efficient power supply, in this case, based on a classic linear power supply with a toroidal transformer. PrimaLuna did not take the easy way by connecting the tubes to a switched-mode module. Besides, the latter's advantages would not be fully utilized anyway - the tube preamplifier alone imposes a significant part, and the ultimate device could not

be as compact as most class D amplifiers. Apart from that, or maybe most importantly to be honest, Class D is still censored among audiophiles. For tube lovers, it is probably not an option at all - figuratively and literally. So if a hybrid has to be successful, also in business, it cannot be too extravagant. Also feature-wise.

There is not much going on at the front: to handle the essential functions of an audiophile integrator, two knobs are enough. The volume control (you can feel the traditional, based on the analog circuit potentiometer) and the source selection. Without the slightest traces of network or even digital attractions.

On the side panel, you find a mechanical switch to select whether the signal is to flow to the speaker units or the 6.3mm headphone output. An identical switch on the other side is the power switch. Such a solution is characteristic for PrimaLuna.

The rear panel is an analog Eldorado with five line inputs, or even six, including one for a power amplifier (useful for Home Theater mode after connecting the main output channels from an AV processor).

There is a Tape output and two dedicated subwoofer outputs dedicated to subwoofers, although the signal on these is not filtered. The pair can operate in two ways (which can be selected with a small button switch) – mono and

stereo. In the latter case, it becomes a "regular" preamplifier output.

An interesting detail is the metal box screwed to the bottom with an additional pair of RCA sockets and a grounding pin. The markings leave no doubt - this is a phono input. I unscrew the box and look inside to find out again (typical for PrimaLuna) that there are no electronics in the basic version of the amplifier but only a connector ready to plug in the optional module with a phono preamplifier. Many manufacturers (among others, Accuphase, NAD, Primare) used the idea of additional expansion cards. In the case of the EVO 300 Hybrid (or PrimaLuna amplifiers in general), it would be an excellent opportunity to offer phono extension and digital, as this is encouraged by how the board is mounted - outside the cabinet, even in an external can, which improves shielding. However, PrimaLuna has not decided on such a move. For now ...?

On the first initial graphics, the terminals did not look not very impressive, but in the finished product, they look outstanding, although they are not expensive. The speaker outputs are single units (and very good). Admittedly, they will not accept "bare" cables because the pins have no holes, but hardly anyone would want to connect cables that way.

Each EVO 300 Hybrid comes with a remote control RCU - big and heavy, only part of the buttons is related to the amplifier, the rest are for the CD PLAYER... of which PrimaLuna does not have not a single one in the current offer.



The EVO 300 Hybrid accepts (and outputs) only analog signals, but there can be quite a lot.



### LABORATORIUM

## PRIMALUNA EVO 300 HYBRID

Despite being a solid-state amplifier, the EVO 300 Hybrid does not have the ambition to crush all amplifiers in this price range. Its goal is to provide power "security" for typical conditions. Working with standard loudspeakers in common rooms, listening to (any) music at home and for everyday enjoyment. Not for showing off and breaking records of maximum SPL.

The manufacturer guarantees a solid 100 W at 8 ohms and 150 W at 4 Ω. But we can hope for more because he adds that a typical EVO 300 Hybrid will deliver up to 115 W/170 W. Our unit even exceeded those values. At 8 ohms, it delivered 119 watts (with both one channel and two channels, driven at the same time). With 4 ohm - 182 W with one channel and 2 x 164 W with two channels. We should not think that we were fortunate - usually, manufacturers underestimate the power, and probably such results are within reach of most units.

The factory specification is comprehensive and reliable. We learn it tells us about 105 dB dynamics, and in the measurements, we get one decibel more. A good result, thanks also to a decent noise figure of 85 dB. For a tube design, this result is even outstanding. On the frequency characteristics (fig. 1), we can see drops on both the upper and lower edge of the measured range but outside the acoustic band. At 10 Hz, the reduction is -2 dB, and on the other "side," we read -3 dB at 77 kHz (for 8 Ω) and 71 kHz (for 4 Ω). The company reports the bandwidth reaching 80 kHz, so the discrepancy is not so large, and the result is entirely satisfactory.

The distortion spectrum (fig. 2) is dominated by the second harmonic dominates in the distortion spectrum because it is a characteristic of tube operation. Still, its level is not too high (-73 dB, which will reassure everyone). The third harmonic is visible at -84 dB and the next ones below -90 dB.

Figure 3. shows the increase of THD+N as a function of power. The shape of the curve is more typical for tube amplifiers, while the absolute level of distortion represents the behavior of transistor amplifiers. Again, these are two pieces of good news. Distortion is generally low, and as with increasing power in a "natural" way, it slowly increases rather than decreases. The transition into overshoot is no more sudden, as in transistor amplifiers, and it happens at high power.

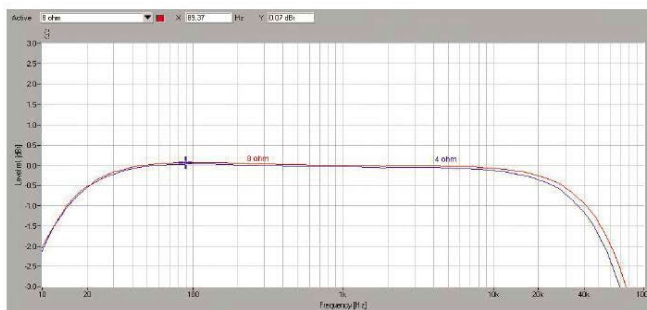


Figure 1: Frequency response

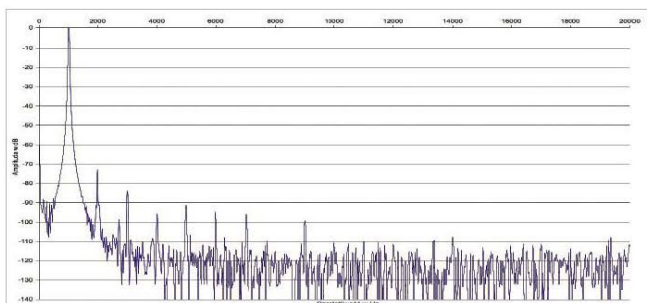


Figure 2: Harmonic distortion

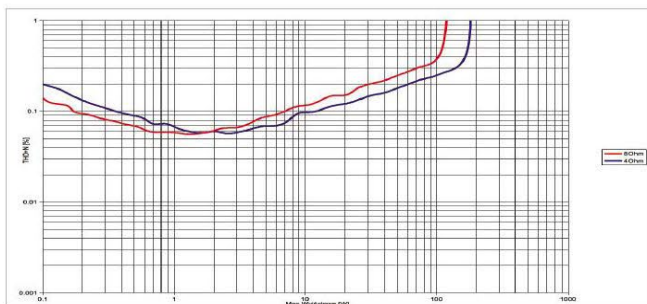


Figure 3: THD +N / power

**Rated power (1% THD+N, 1 kHz) [W]**

[Ω]	1K	2K
8	119	119
4	182	164

**Sensitivity (at maximum power) [V]**

0,42

**Ratio signal/noise (A-weighted filter, related to 1W) [dB]**

85

**Dynamics [dB]**

106

**Damping Factor (relative to 4 Ω)**

130



The mono/stereo switch is an unusual addition to the subwoofer output, which is, in fact, the unfiltered output from the preamp.



There is a small box for an optional phono preamplifier in the lower part.



The RCA sockets are of high quality, solidly screwed into the rear panel.



The entire layout is executed on two levels. After unscrewing the lower plate, we have access to the preamplifier. Near the rear panel, there is a board with relays. The signal is routed to the front panel, where is the volume control (Alps potentiometer). The wires are neatly bundled together (also to the side panel), but the signal path becomes rather lengthy.

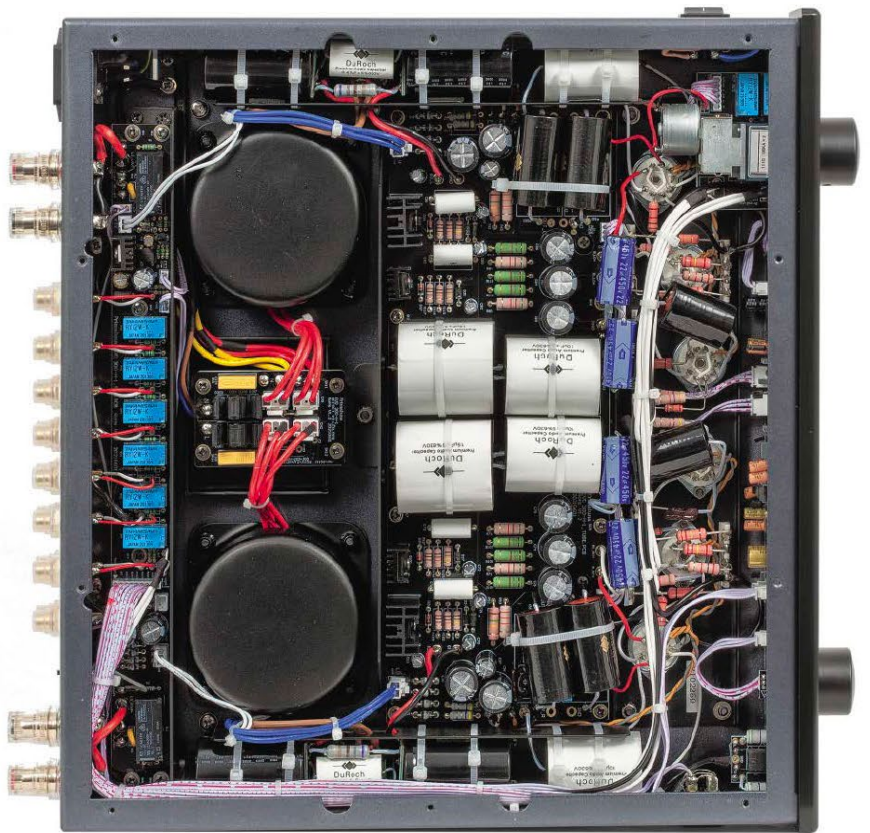
There are also two large transformers at the back, each closed in a shielding box. It looks like a dual-mono design, but this part of the power supply is intended only for the preamplifier. The control logic board is on the rear of the front panel, and tube sockets are next, using point-to-point mounting. You will notice high-quality passive components. Plastic tie wraps are used for the larger capacitors (the caps lay down horizontally).

THE 12AU7 tube, also known as ECC82, is a double triode; this manufacturer's choice gives the choice of versions with different parameters and sound, apart from the manufacturer selection. The tubes themselves are similar to those in the EVO 300 integrated amplifier - a total of six 12AU7 tubes, each bearing the PrimaLuna company logo. So there will be no service problems, and individual "tuning" will be easy.

Two of the six 12AU7 tubes work as cathode followers, two are used in the control stage, and the last pair is used in the voltage amplification.

Let's move to the upper part of the enclosure, where semiconductors reign supreme. Designed by The Floyd Design power amplifier system begins with an independent (only for the power amplifier) power supply - it is a linear system with a single (shielded) toroidal transformer. Large power amplifier boards are independent and screwed to the rear surface heat sinks. The transistors used are JFET transistors (supplied by Linear Integrated Systems) and MOSFETs.

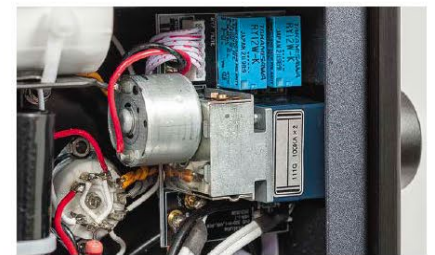
PrimaLuna uses in all their designs power supplies with additional AC Offset Killer filtering circuits, cleaning the 230V line voltage. This system also works the other way around, ensuring that the amplifier does not "litter" the area.



Underneath the bottom plate mainly houses the preamplifier and its power supplies.



In the preamplifier section, there are two transformers.



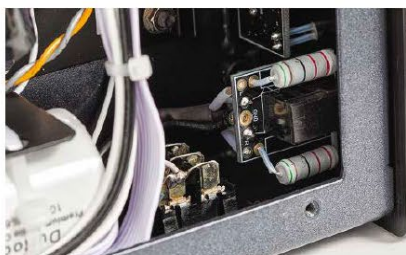
The volume control is classic - with an ALPS potentiometer.



The input selection relays are just behind the RCA input sockets at the rear panel. The signals flow via long cables to the front panel.



The connections are point-to-point wired in the area around the tubes. The remaining circuits are on printed circuit boards.



The headphone output connects directly to the terminals, so it was necessary to use voltage dividers (hence the presence of high power resistors).



You will see many high-quality passive components throughout the system, such as DuRoch capacitors.



### THE SOUND

The overall concept of a hybrid amplifier is relatively straightforward, both in terms of goals and means. We want to combine the best of both worlds – tube and transistor. The best, as long as at the beginning, we agree to consider the arguments of both tube lovers and transistor supporters. The distinction between “lovers” and “supporters” is not accidental. Due to a particular polarization of opinion, not everyone will agree with it, but at least a large group:

**The tubes provide a pleasant sound signature, and transistors offer high power and the ability to increase power at low impedances.**

The advantage of a transistor power amplifier is its low impedance output impedance and, therefore, having a high damping factor. But with such details, we are entering a dangerous area of controversy, or maybe we are on it from the very beginning. A low damping factor (typical for tube amplifiers) is, among other effects, deterioration of response impulse, so less “control” of the bass, which manifests itself as softening the bass ... And maybe someone may



The remote control is a solid metal design, which probably survived earlier times, making it future-proof for existing PrimaLuna CD Player owners ...

like this, just as the coloration introduced by harmonic distortion. Therefore, it is difficult to determine what parameters and sound an ideal amplifier should have if not everyone agrees that it should have low distortion! And the ideal amplifier should be like that for everyone. But again, many people will agree that the bass is dynamic, “transistorized,” and the midrange and treble at least a little tube-like, colorful and vivid. Or maybe warm and mellow...? Even when it comes to how tubes sound, there is no complete agreement because they sound very different, just like transistors. So any result will satisfy some and not others. And each one will be unique. But it doesn’t have to be extreme. The sound of the EVO 300 Hybrid is neither universally perfect nor of average performance. But it does combine so many threads into an exciting composition and, in every way, efficient “machine” that the group dissatisfied with the achieved effects will not be significant.

The functioning of the lamps is not so evident and dominant that they determine the character of the sound “for better or for worse,” but their good attitude is enough. To write down what in the sound of the EVO 300 Hybrid is the nicest, the tubes should take the credits. While what is the strongest - and what is the strongest - to the account of the transistors.

In other words, everybody will find something for themselves if they look for it. And who does not want to associate anything forcefully to combine theory with practice, will hear an engaging and friendly sound, tonally balanced and dynamically developed, clean, and organized. It is smooth and accurate without spilling over and without conflicts. It was relaxed, lively, and without nervousness.

The implied tube-like timbre is delicate, and the bass is “transistorized” as it should be. And it is indeed dynamic, selective, and with more differentiation in the abundance of the various low frequencies, with some tones sounding longer rather than rendering them all the same, letting them line up for a consistent result, which serves above all the rhythmic. Contours are not required because they are not always apparent in the instruments’ sounds. We come closer to naturalness through differentiation and penetration, correct proportions and saturation, and not by “sketching.”



The preamp is tube-based, with six tubes at work.



The side parts of the cover are thick metal sections with glass “windows” mounted in them.



The dual 12AU7 triodes are PrimaLuna marked.

The foot strokes have extraordinary power, speed, and juiciness, but a lot will depend on the speakers. Such a dose of softness is entirely appropriate and contrary to schematic thinking. It may result not from weaker control but low distortion (of a different kind than harmonic distortion). This property appears through the entire frequency range. It is the key to an exceptional elegance of vocals at times, but it can also withdraw or instead be covered by more vital, even harsher sounds.

The EVO 300 Hybrid does not create such actions and does not promote them but does not discriminate either. It does not play schematically and mechanically, maybe not 100% neutral either, but it is flexible, with a sense and ability to enter into different atmospheres.

The EVO 300 Hybrid does not charm and does not stray far from neutrality, does not try to get off the leash of objective quality criteria, and shape a world all its own. The midrange density doesn't become muddy but stays rather strengthening and naturalizing. It also does not lack the vividness of its higher sub-range. The vocals are stretched out in both directions, closed with slightly sweet sibilants, and smooth and clean. In contact with the listener, the amplifier is not particularly intimate and emotional, and it does not effectively and tangibly push itself to the forefront.

The space is free, transparent but not expansive. Smoothly developed, acoustically coherent, with overlapping timbres, but without crowding, oversaturating, and exaggerating the speakers. There is breath and reverb, audible even when other sounds pile up. The EVO 300 Hybrid handles these situations perfectly, and it retains its smoothness, clarity, and spatiality even at higher levels. And maybe it is in this area we can best hear the advantages of combining tubes and transistors.

Low power tube amplifiers can play beautifully, but they will not play loud and clear with regular speakers. On the other hand, transistor amplifiers will sound clean but passionless, both quietly and loud. I allowed myself to use stereotypes that do not apply to all amplifiers, or maybe they do not even apply to most. Anyway ... they do NOT apply to the EVO 300 Hybrid.

The dynamic sound spectrum, in which all the "output" qualities are retained, is appropriate for the transistors. And its quality cleverly, and thus subtly, refers to the tubes.

**The exotic design has made it possible to achieve a non-exotic sound because it is universal and musically "correct."**

## PRIMALUNA EVO 300 HYBRID

### PRICE

36 000 PLN  
[www.audiofast.pl](http://www.audiofast.pl)

### DISTRIBUTOR

Audiofast

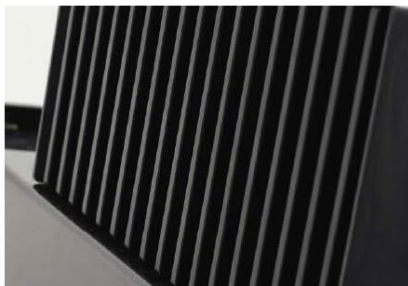
**PERFORMANCE.** A tube preamplifier, class AB power amplifiers, co-designed with an external company, Floyd Design. The first PrimaLuna Hybrid amplifier is exquisitely crafted in a typical cabinet for a tube amplifier. High-quality passive components.

**FUNCTIONALITY.** Modest, with only analog and only line inputs. The Phono preamplifier is only available as an optional module. Good that there is a remote control.

**PARAMETERS.** Low noise level (-85 dB), moderate distortion, broad high output power (2 x 119 W/8 ohm, 2 x 164 W/4 ohm).

**SOUND.** A combination of smoothness with a large soundstage, dynamics with a dose of softness, coherence, diversity, and transparency. Dense and selective bass, treble with breath, clear space with natural acoustics. It gives a lot of music and the correct truth about the recordings without exaggerated intimacy and sweetness.

The Floyd Design company has created a transistor power amplifier design. Therefore, in the rear part of the housing, wherein PrimaLuna tube amplifiers loud-speaker transformers, this time there are heat sinks.



You find the power switch on the left side of the panel.



A similar switch on the other side serves as the output selector (speaker/headphone).



A light in the center of the front panel indicates not only that the appliance is ready (green), but it also shows the pre-start-up (warm-up) mode (red).

