

## PRIMALUNA EVO 100 TUBE DAC



# The Exceptional *electronic temptation*

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➔ For the first time, we got acquainted with the product of the Dutch company PrimaLuna through the test of the EVO 300 Hybrid integrated amplifier. It was indelibly etched in my listening memory with its sophisticated technological design, beautiful design, and most importantly, excellent sound quality, which somewhat defied the rules for this type of equipment. Despite the hybrid technology pushed to its limits, on which another company could easily have built its complete product portfolio, the PrimaLuna is a lone unique model. PrimaLuna's entire product focus is based exclusively on tube technology, which applies to integrated amplifiers and power end stages. From the importer of PrimaLuna products to Slovakia, we got the opportunity to get acquainted with their "fully tube" alternative, even in the form of a whole audio lineup, where the main protagonist was the EVO 400 preamplifier, EVO 400 power stages, and EVO 100 Tube DAC. Since it is beyond the space of this article to present all the devices in detail, including their design philosophy and the technology

used, I will take the liberty of describing them in a more concise form and concentrate on the main thing, the sound quality..

A uniform appearance at first glance characterizes all PrimaLuna components. This is not only practical in terms of design identification of the brand's products but also in terms of rationalizing their production. Their topology is also more or less typical for all instruments - a front aluminium silver or black anodized panel with a minimum of control elements. The defining element in front of the top panel is a distinctive ribbed structure under which the tubes are located. Behind the tube section is a massive enclosure that hides the components of the device's power supply and power section - transformers and filter capacitors.

The EVO 400 preamplifier is equipped with three pieces of 12AU7 tubes per channel, resulting in lower distortion and greater transmitted bandwidth. This, combined with a heavily oversized power supply using

encapsulated toroidal transformers in a dual-mono concept, allows for excellent tonal balance across the entire musical spectrum. Only the finest components are used in the entire construction. The signal path is executed by a point-to-point system for interconnection by direct wiring without printed circuit boards. The volume control is pure analog, using the legendary Alps Blue Velvet potentiometer. The input switching is solved to the highest possible degree - via relays directly on the input RCA connectors.

The EVO 400's power amplifiers allow for use in two modes with a simple switch - as a classic stereo amplifier, or there's the option of using the unit as a power monoblock (with the appropriate power-per-channel boost, of course), which was the case here. At the same time, the EVO 400 allows switching between two power modes - ultralinear and triode. In monoblock mode, the amplifier can deliver power in the range of 140 to 188 W, depending on the type of tubes used. The Adaptive AutoBias circuit and the manual Bias switch set

optimal parameters for most of the available power tubes, such as KT88, KT90, KT120, KT150, or EL 34. By possibly swapping tubes for another type supported by the amplifier, you can fine-tune the resulting sonic character. Working in close conjunction with the tubes are the patented SoftStart leads, which soften their hard starts and protect them from thermal shock.

digital synchronization system based on electron tubes, called SuperTubeClock, to reduce jitter and digital noise. The converter operates with a sampling rate of 16-24 bit/44.1 kHz-192 kHz, depending on the digital input.

The Dynaudio Confidence 30 Loudspeakers were used in the setup, while the ARCAM HDA

Using tubes in preamplifiers, converters, CD players, and now even streamers is no problem. These devices are not demanding in terms of the required power, and the tubes can handle the power they need. However, the situation is dramatically different in amplifiers. In the hi-fi field, in my opinion, there is no more difficult challenge for a designer than to design and tune a full tube power

## PRIMALUNA EVO 400 TUBE PREAMPLIFIER



spectacular sound quality  
technical processing  
design



nothing



At first glance, the EVO 100 Tube DAC differs from preamplifiers and monoblocks by its slightly smaller dimensions; otherwise, the visual design and overall concept are identical. Also, as with the amplifiers, a dual mono design is used with separate power supplies for each channel via toroidal transformers in conjunction with AC and DC Offset Killer circuits (reducing noise and mechanical vibration of the transformers). You can also find the affinity with the amplifiers in the weight of this smaller device - 13 kg. Since the EVO 100 Tube DAC is a component whose primary task is digital signal processing, PrimaLuna approached this challenge with the utmost responsibility, as evidenced by several innovations or original patent solutions. The most significant is using the circuitry of a unique

ST60 streamer was used to download music from the network. The alternative to the streamer was the ARCAM HDA CDS 50 CD player, but it was used only as a drive. The D/A conversion was taken care of by the earlier mentioned PrimaLuna converter. The cabling used was also given due emphasis. The analog signal cables were Ansz Signalz C2, the speaker cables were Ansz Speakz C2, the digital interconnection was from XLO Reference class, and the network cables were not forgotten either, also from XLO Reference. All components were already warmed up (this is an essential process in tube equipment) and heated up to the optimum operating temperature, so there was nothing to prevent us from focusing on the essentials - the sound quality. Before the test itself, a short digression.

stage, and you can count the companies that have these devices on offer on the fingers of one hand. There are many reasons for this, but it is essential that, along with the expected unquestionable reproduction quality, the unit is somehow compatible with a wide range of more power-hungry loudspeakers, and not just a select few - those that the amplifier can handle. Dynaudio loudspeakers are known to be more demanding in terms of the necessary power and speed of response due to their lower sensitivity, which made me more interested to see how the amplifiers would cope with them.

For me, neutrality, tonality, or - in other words - naturalness is the absolute basic rule by which I judge any audio device. When



I read or hear in the description of a hi-fi component terms such as rock character, musical expression, or suitable for acoustic genres, I pay close attention, as I expect the senses to be deceived. It is relatively complex for a reviewer to describe what he hears in a way that is understandable and concise. For components that impress with sub-aspects, the task is more straightforward - dynamism, detail, airiness. But how to describe a component, in our case an entire assembly, which at first hearing impresses only because it sounds completely normal? When its reproduction is rarely balanced, when nothing stands out on the first but also the tenth hearing, and you don't even feel that something is missing? It isn't easy, but I'll try. The classical and acoustic music was presented with complete ease, both dynamic and rhythmic, and in the form of natural timbres. The space was correct. With good quality recordings, the orchestra's layout was elastic and accurately readable in its depth. One could perceive its pitch gradations without problems. Dynamic entrances and alternations were handled with vigor, fortissimos, and dramatic finales were delivered firmly, without a hint of blurring or breathlessness in the performance part of the ensemble. This was confirmed by

the XLO Test Disk, the works by Weinberger and Janáček, as well as the recordings of Reference Recordings of Maurice Ravel's Boléro or Herbert von Karajan's Adagio for Strings and Orchestra. The more chamber acoustic genres such as jazz, swing, or blues carried similar associations; they were more present and perceptually more vital. In some audio tests, once a basic opinion has been formed,

it is common to move on to alternating musical media and genres after playing one song - "let's try this one more, or put that one over there." With the featured line-up, the effect was precisely the opposite. Gradually, I found myself tending to let the music carriers play to the end, savoring the overall dramatic concept, the coherence, and the balance of the piece. So the genre switching



was only done on a more complex level but mainly based on the requirement of a change in musical style. Electronic Kraftwerk, rock Supertramp, soulful Sade, folk Bob Dylan or multi-instrumental Emiel Scholsberg left me no doubt who was playing the leading role in the listening room. Yes, it was the performers mentioned above and no one else! Of course, in perfect collaboration with our audio line-up. Again, I digress a bit. My feelings and impressions when I met the PrimaLuna EVO 300 Hybrid integrated amplifier had one basic theme, and it carried through the whole text of the review - atmosphere, transfer of mood. I was curious to see if our "all-tube" alternative would work in a similar vein. Already after the first notes of the first track, I breathed a sigh of relief: "It's there. The magic is not lost!" Thus, out of the coherent, balanced, and complex whole, called "PrimaLuna's musical expression," the element that I consider the most important, the display of emotion, has risen above all others. And that is, after all, what we listen to music for!

In my opinion, the presented line-up is one of the best I have had the opportunity to hear so far, even from an absolute point of view. A very rare synergy and harmony of individual components into a solid and compact whole have been achieved here. The assembly has wholly disappeared in space, which should be the primary task of every audio engineer, and only a tremendous musical experience remains. There was no need for tinkering, technical exploration, rewiring, and subliminal alchemy. Because I could start, as they say, with a "well-prepared" set-up, I also owe a big "Thank You" to the owner of the listening studio who prepared the set-up. With his years of experience, approach, personal commitment, and passion for hi-fi, he showed how all should do it in this beautiful industry of ours.

In conclusion, however, I have to point out one anomaly. This concerns the music demos where the stream, but digital overall, was used as the signal source. All the time I was listening, I had a strange feeling in my subconscious that something was not right, that something was not right. "It sounds strange, different and untypical, too normal for digital, ordinary and exceedingly natural." After a short investigation, I discovered the "culprit." It was the EVO 100 Tube DAC. Its subsequent brief backward comparison with present streamers, CD players, and their built-in converters, revealed quite ruthlessly how much "musical truth" can be hidden between ones and zeros if the path to them is



## PRIMALUNA EVO 400 TUBE PREAMPLIFIER

**Frequency range:** 12 Hz - 75 kHz +/- 3 dB

**THD:** < 0.5% @ 2V

**Signal-to-noise ratio:** 93 dB

**Input impedance:** 220 kΩ

**Input sensitivity:** 650 mV (for rated output at maximum volume setting)

**Power consumption:** 61 W

**Inputs:** 3 pairs stereo RCA, 2 pairs stereo XLR, 1 pair stereo HT RCA

**Dimensions (h x w x d):** 205 x 405 x 385 mm

**Weight:** 24 kg

**Price:** 5 425 €

## PRIMALUNA EVO 400 POWERAMP/MONO- BLOCK

**Frequency range:**  
+/- 1 dB: 9 Hz - 60 kHz/8 - 70 kHz +/- 3 dB

**THD distortion with AAB:**

0.1% stereo/0.17% mono

**Signal to noise ratio:** 95 dB

**Input impedance:** 100 kΩ

**Input sensitivity:** 1 100 mV

**Inputs:**

1 pair RCA/1 pair XLR, 1x RCA mono, 1x XLR Mono

**Supplied tubes:** 6 x 12AU7 and 8 x EL34

**Dimensions (h x w x d):** 205 x 405 x 385 mm

**Weight:** 31 kg

**Price:** 5 425 €

adequately prepared and treated. The difference was so dramatically abysmal in several cases that I must end this somewhat unusual review with an immodest personal wish. I want to become more thoroughly acquainted with this converter on a more long-term basis, and I advocate its separate introduction in a future issue of our journal. I think it is definitely worth it! ✖

## PRIMALUNA EVO 100 TUBE DAC

**XLR input:** audio format PCM,

16 bit - 24 bit/44.1 kHz - 192 kHz

**Input impedance:** 110 Ω

**RCA input:** PCM audio format,

16 bit - 24 bit/44.1 kHz - 192 kHz

**Input impedance:** 75 Ω

**Optical input:** PCM audio format,

16 bit - 24 bit/44.1 kHz - 176.4 kHz

**Upsampling:** 24 bit/192 kHz, Burr Brown SRC4192

**Analog output:** RCA connector

**Output level:** 2.2 V +/- 2 dB (47 kΩ)

**Frequency range:**

20 - 40 kHz (±0.5 dB, Fs = 192 kHz)

**THD+N Signal to Noise Ratio:** ≥ 90 dB (20 - 20 kHz)

**Channel Separation:** > 80 dB

**Output impedance:** 2.7 kΩ

**Dimensions (h x w x d):** 190 x 280 x 378 mm

**Weight:** 13 kg

**Price:** 3 475 €

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