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PRIMALUNA EVO 400

PRIMALUNA EVO 400 INTEGRATED

High-end tubes for beginners and advanced users



Sometime during August 2019, at the brink of the new hi-fi-season, my attention was drawn to a press release announcing that More Music, a well-known Dutch importer and distributor of high-end equipment and accessories, was appointed to do the Benelux distribution for PrimaLuna. Being the lucky owner of a PrimaLuna amplifier myself, this seemed like a perfect moment to put this great Dutch brand back in the spotlight. I found out that none of the Dutch hi-fi magazines had covered the integrated top model of the new PrimaLuna series yet, so I quickly made an appointment. That's how it came to pass that on Saint Nicholas Eve I temporarily swapped my amplifier for the PrimaLuna EVO 400 Integrated. The big question was: would this become a familiar affair or was I in for a bit of a 'surprise'?

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Some history and evolution first
PrimaLuna was founded in 2000 by Herman van den Dungen of Durob Audio, intending to build reliable and affordable tube amplifiers. Herman gathered a team of the best European designers, and he also consulted his American friend Kevin Deal, who was already a well-known “tube guru” at the time. The team formulated an ambitious design vision. The new amplifiers would not only have to be affordable and very reliable, but they also had to contain circuits that would relieve their users from all the “minor nuisances of owning tube gear”. Tube amps with the reliability, the ease of use and the longevity of solid-state amplifiers, so to speak. And they also had to have great sound, obviously. Good luck pulling that off! Production was going to take place in China. Not only because of the costs but also because the technical knowledge and the production facilities for building tube amplifiers were already there, in ample supply. To ensure consistent quality, Herman decided to purchase all key components himself and do thorough sampling before shipping them to China for assembly. Furthermore, he pays regular visits to

the factory to make sure everything takes place like it’s supposed to. And the most crucial parts of the amplifiers - the output transformers - are being manufactured in-house to this day.

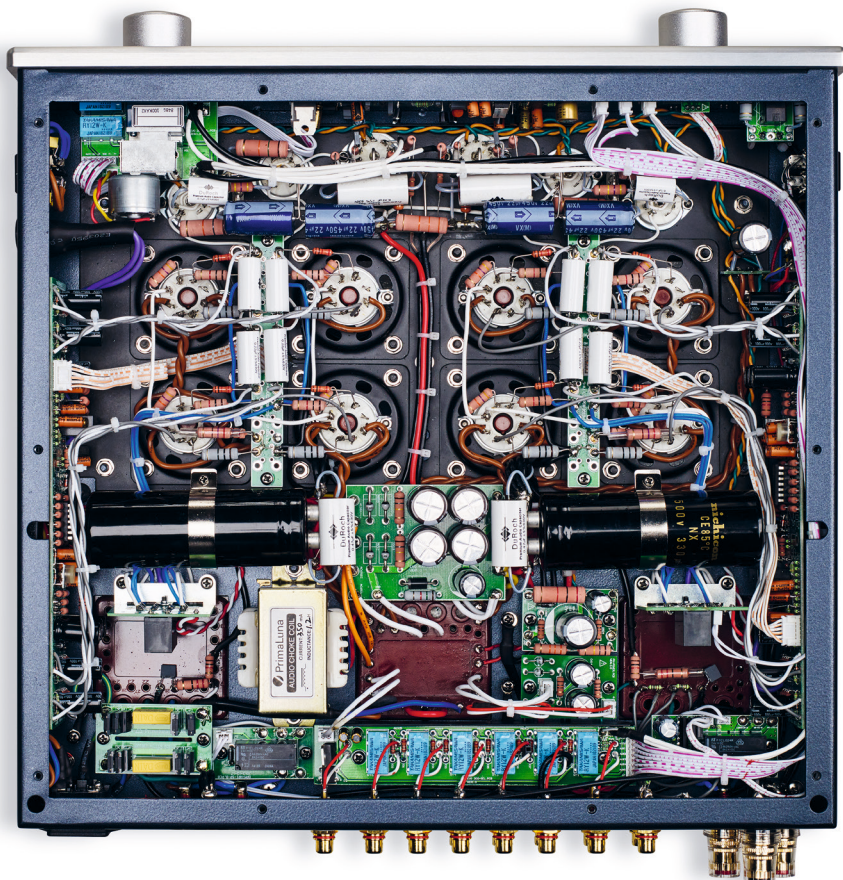
Like a bomb

It’s no exaggeration to say that the very affordable ProLogue One and ProLogue Two, the first integrated tube amps that were marketed by PrimaLuna back in 2003, struck like a bomb. New models, updates and upgrades followed, broadening the existing range. PrimaLuna always takes its time, so it wasn’t before the beginning of 2019 that a third and genuinely new generation of products was launched. They named it the EvoLution Series - in short: EVO - to reflect the progress that had been made, but also to remind everyone that the previous generation was outstanding to begin with. The new EVO series consists of thirteen models: twelve amplifiers and DA-converter. The 400 Integrated that is featured in this review is the current top model of integrated amplifiers by PrimaLuna, and successor to the immensely popular DiaLogue Premium HP from the previous series.

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Technology: Tubes for the masses

PrimaLuna amps have always offered everything that makes the life of a tube-enthusiast easy and enjoyable. All models provide a “soft-start” circuit that extends tube-life, they all have output stage protection that, among other things, prevents the transformers from breaking in case of tube failure, and all models have a ‘bad tube’ indicator next to each tube; an LED that lights up when that tube is broken or not functioning correctly. But the most significant asset is an in-house development of PrimaLuna, called Adaptive Autobias. To this day, this patented technology is only used by PrimaLuna. Adaptive Autobias is a circuit that monitors the tubes from outside the signal path. It uses a microprocessor to check the bias setting of a tube dozens of times per second. Each tube is monitored individually, so it always works within its optimal operating range, permanently relieving its owner from the regular and tedious chore of manual bias setup. Additional benefits of Adaptive Autobias are that distortion is reduced by 40-50%, and it facilitates a much wider choice of power tubes that can be used when the owner wants to re-tube the output stage. Besides the stock EL34, you can also choose 6550, KT88, KT90, 6L6GC, KT66, 7581, EL37 and other equivalents with an octal tube base. And last but not least: no tube matching required! When a tube breaks the Adaptive Autobias instantly switches the amplifier into “safe mode”. All you have to do is switch off the amp, let it cool down for a couple of minutes, exchange the broken tube, power up and on you go. The tubes in a PrimaLuna amp carry the brand’s distinctive logo, but it’s no secret that they are sourced from the Chinese manufacturer Shuguang. Shuguang is the largest tube manufacturer in the world, and they offer products in several



quality grades. PrimaLuna pays extra for 'the cream of the crop', and even then, they measure and hand-select each tube they put into their amplifiers. The EVO 400 has six 12AU7 mini triodes; two for the gain section and four as drivers for the eight EL34 power tubes. With four EL34s per channel, the PrimaLuna EVO 400 dissipates a moderate 2 x 70 watts in UltraLinear mode, and 2 x 38 watts in Triode mode. The tubes are running as cool as possible, which means longer tube life. You can switch between ultralinear and triode from your listening chair, using the luxurious metal remote control that comes with the amplifier.

PrimaLuna EVO 400 - a closer look

The EVO 400 weighs no less than 68 lb. It is very well packed, and even the pre-installed power tubes are individually protected by a sturdy foamed plastic collar. In the box, you will find two white cotton gloves with antislip palms and fingers that feel nice and secure when you are lifting the amp. The EVO 400 Integrated looks a lot like the DiaLogue Premium HP Integrated, but there are some essential external and internal differences. Starting with the thick aluminium front panel that now has a slightly softer and more rounded design. The source selector no longer mentions specific devices like CD and Tuner; the EVO 400 has five Aux inputs and an HT bypass that bridges the preamp section, turning the EVO 400 Integrated into a power amp that can drive the front loudspeakers in a home cinema setup. There are two switches on the right side of the amplifier. One is used to redirect the output of the power amp to the headphone connector, via a voltage divider that powers the signal down to 'headphone level, and the other toggles between the default bias settings of either the EL34 or KT88 family of power tubes. Using the 'wrong' setting by accident is entirely harmless by the way.

THE EVO 400 INTEGRATED LOOKS A LOT LIKE THE DIALOGUE PREMIUM HP INTEGRATED, BUT THERE ARE SOME ESSENTIAL EXTERNAL AND INTERNAL DIFFERENCES



On the left side, next to the on/off switch, is the fuse-holder for the Adaptive Autobias board. With the previous series, you had to unscrew the bottom plate of the amp to replace this fuse (which was hardly ever necessary, but still ...). Some of the most notable changes are on the back of the EVO 400. The 0, 4Ω and 8Ω loudspeaker taps are placed in a V-shape now, which is more convenient when you have loudspeaker cables with short 'legs'. On the HP Integrated, you need to spread them quite widely when you want to use the 8Ω tap. Another remarkable change is that all EVO preamps and integrated amps now have a small metal box that is mounted to the bottom of the amplifier. It's the housing for the optional MM phono board, placed outside the amp for better shielding. Also new is the stereo subwoofer output that replaces the mono subwoofer output of the DiaLogue Premium series. This stereo output - marked 'SUB OUT' - is effectively a preamp output but it can be

switched to mono if you still need that for your subwoofer. To top things off PrimaLuna has also added a Tape Out. The new features on the outside are mostly functional. The inside, however, is where the sound quality is determined, and some exciting changes have been made there as well. Starting with the most significant one, the EVO series is graced with new output transformers that have even higher bandwidth than the ones in the ProLogue and DiaLogue series. The frequency response will be slightly extended on both sides of the spectrum because of that, giving you a little more detail, spaciousness and bass. It may not look like much, but those are no small features in the musical experience. The power supply has been upgraded too, resulting in an even lower noise floor. And the Adaptive Autobias board has been optimised as well, lowering distortion even further. That will be most noticeable when you are listening to higher volume levels. The final significant improvement



is the application of new - custom manufactured - Swiss tin-foil capacitors in the preamp stage.

Listening

The PrimaLuna EVO 400 was placed on the top shelf of my Creaktiv HiFi rack. The digital front-end consisted of a Bluesound Node2 (wired over Ethernet and controlled by Roon) digitally connected to NAD M51 DA-converter. Analogue music came courtesy of my restored Thorens TD 125 with Jelco arm and Holistic Audio HA-103C cartridge through an Audio Creative Phonodude tubed phono stage. All cabling and power products by AudioQuest. Even though I don't believe in very long break-in times, it was nice to know that this EVO 400 had been used on several hi-fi shows for quite a few hours. So after switching it on it only took about 15 minutes to get it sounding just right. The first thing I noticed was a lot of power in the low frequencies. That is one of PrimaLuna's strong-suits anyway (those output transformers, remember?) but the EVO 400 convincingly lived up to that reputation.

I have a personal reference playlist with familiar tracks that I use for every review, but I don't usually mention any of those because I'd rather promote *new* good sounding music. Our industry has more than enough 'audiophile evergreens' as it is, but for once, I will make a small exception. One of the tracks I use for testing the impact of the lowest frequencies is *With Angels*, from the album *Avenger* by Hecq. It's

brutal dubstep with bass notes going down into the abyss regularly. Not only did the EVO 400 succeed in reminding me of some persistent mechanical resonances in my room, but it also made my wife come in and ask me to turn it down a little. I will be the first to admit that a powerful solid-state amplifier may produce tighter and even lower bass, but that is something you have to consider anyway before making the switch to full range tube amplification. However, the old-wives tale that tubes have no low end 'slam' definitely doesn't apply to PrimaLuna amplifiers.

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The impression of more energy in the lower frequencies lasted throughout the entire review period, and the good thing was that it didn't make the bass fat or one-dimensional. Nice basslines, like those ingenious finger breakers by Geddy Lee on *YYZ* - a song from the album *Moving Pictures* by Rush - or the irresistible groove of Ralphe Armstrong on *Mirage*, from the album *Enigmatic Ocean* by Jean-Luc Ponty, were easy to follow, with lots of tonal colour and texture. We all know that tubes are great for vocals, so here is another peek into my list of reference recordings. The somewhat husky voice and the very charming lisp of Shirley Horn always give me goosebumps. And her slick but delicious rendition

of *The Man You Were* from the album *Loving You* really touched me. There is no doubt that the creaminess of EL34 tubes played a role in that. Not coloured but extremely colourful, that is how I like to characterise this tube. It's not everyone's taste, but I love it. For spaciousness, I always listen to *Springtime Coming Soon* by The Nits from their album *Omsk*. This is one of their songs where drummer/percussionist Rob Kloet plays a starring role, with lots of found sounds spread very tangibly across a wide and deep room: a pencil scratching on a notebook, metal ticks - like a small hammer on a mini anvil - very deep in the soundstage, a couple of woodblocks, knuckles banging on a door impatiently...and the EVO 400 paints that picture in a profound, dynamic and genuinely sublime way. After a week of intensive listening, the conclusion was inevitable: the PrimaLuna EVO 400 offers an extremely high level of amplification. Music always sounded colourful, engaging, detailed and lively, transparent, full of texture and very coherent. No 'woolly' tube sound whatsoever, not for a single moment, so that's another tube cliché off the table.

MUSIC ALWAYS SOUNDED COLOURFUL, ENGAGING, DETAILED AND LIVELY, TRANSPARENT, FULL OF TEXTURE AND VERY COHERENT. NO 'WOOLLY' TUBE SOUND WHATSOEVER, NOT FOR A SINGLE MOMENT, SO THAT'S ANOTHER TUBE CLICHÉ OFF THE TABLE



To round things off here's a short impression of the headphones output. The EVO 400 is an integrated amplifier that's supposed to be the heart of a high-end hi-fi set. A lot of competing brands consider a headphones output - if it's there, to begin with - less than half an afterthought, so they use a two-dollar opamp to drive it. Not so with PrimaLuna. Every integrated EVO amplifier is equipped with a 6.3 mm headphone output that receives its signal straight from the power tubes via a switchable voltage divider. This will

give you a compelling and incredibly rich-sounding headphone experience. My AudioQuest NightHawk Classic is not hard to drive, numerous headphone amplifier reviews have confirmed that. But I can say without hesitation that I've never heard it sound as good as it did on this headphone output. Warm, transparent, colourful, dynamic ... you come up with an audiophile checkbox, and the PrimaLuna will tick it.

Versus the DiaLogue Premium HP Integrated

The powerful PrimaLuna DiaLogue Premium HP Integrated was - by some distance - the most popular model of the previous series and that's easy to explain. Think of what I just told you about the EVO 400. Take out the new functionality but keep the sound quality and you have the perfect description of the HP. A relatively compact all-rounder that can stand up to (much) more expensive competitors and will drive almost any loudspeaker. What's not to like?

Nevertheless, I knew in advance that many people would be interested in a direct comparison between the HP and the EVO 400. The best way to find out if there are differences - or even improvements - is to listen to my HP with the stock tubes first, and then perform a full transplant of all the HP's tubes to the EVO 400 because the tubes determine much of the sound quality. Transplanting the tubes I know would enable me to single out the influence of the EVO 400's technical upgrades on the overall performance. There's no need to give you an extensive description of the experience; I can simply confirm that the EVO 400 sounds even better than the HP. There's a bit more bass, which is ever so slightly tighter and more in-depth, but when you listen to monitors or small floor-standers that will hardly make a difference. The EVO 400 also sounds a little more dynamic and refined, with a more significant and more tangible sound stage. Again, not a huge difference, but the EVO 400 wins - by a nose - on sound quality, and it also offers more functionality.



Concluding

The PrimaLuna EVO 400 Integrated surpasses its predecessor, the DiaLogue Premium HP Integrated, thereby inheriting the throne of the best integrated tube amplifier in the world. At least, that's what I think it may well be. A dangerous proposition, I realise that, but given its ease of use, its innovative technology, its wide range of applications and its sound quality, it can hardly be any other way.

THE PRIMALUNA EVO 400 INTEGRATED SURPASSES ITS PREDECESSOR, THE DIALOGUE PREMIUM HP INTEGRATED, THEREBY INHERITING THE THRONE OF THE BEST INTEGRATED TUBE AMPLIFIER IN THE WORLD

Should HP Integrated owners go and rush to the store to buy an EVO 400? Of course not! The HP was and still is an incredibly good sounding and extremely well-built amplifier that - save for a fresh set of tubes every once in a while - should last you a lifetime. So just keep it and enjoy your music. But for discerning music lovers who are looking for their first tube amp - or planning a

return to tubes - there is no way around the EVO 400 Integrated. They would be hard-pressed to find a better bang for their buck, so the EVO 400 Integrated should be at the top of their list. And yes, it costs a couple of hundred bucks more than its predecessor. But have you also noticed that PrimaLuna's prices have been very stable over the last decade or so? No annual 10-20% 'inflation correction', like many other brands. However, that doesn't mean that costs have not gone up. In fact, they have. When I look at it like that it seems to me that PrimaLuna has gone to great lengths to keep even the new price tag as sane and realistic as possible. Something that makes me proud to be Dutch.

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Max Delissen

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