Perpetuum Ebner PE 4040

Legends never die, as the folk saying goes. At least in the analogue sector this wisdom didn't hold true so far. Because one of the most legendary German turntable brands, which was founded back in 1911 and celebrated anthemic successes in the 1960s, slipped out of the scene focus already in the early 1970s: Perpetu¬um Ebner, briefly PE.

The reason why the brand name vanished unsung from the hi-fi stores was a friendly-hostile, yes indeed a fraternal takeover: at the same place, in the little Black Forest town of St. Georgen, the Dual GmbH was based too. Both firms had originally emerged from the same "Gebrueder Steidinger" precision engineering works and a subsequent fraternal strife. Since 1920 they had a fierce competition, especially in the field of phonographs. In 1973, when more and more Japanese competitors were conquering the market, the two of them got together again, but soon after Dual clearly dominated the common enterprise. Design and production know-how by PE had been adopted into quite some Dual success stories of the 1970s which, however, was invisible to the eye, yet the established brandname PE quickly disappeared from the market.

And it would certainly have fallen into oblivion in the hi-fi scene if it weren't for a bustling collectors and vintage fans community who baby and refurbish the former top-of-the-range models like the fully automated friction wheel type 2020 (see the lead feature on page 8) and love to play back music on them. Thanks to Ebay, forums and Co. at least some of the spare parts are also still available.

Phoenix out of nowhere

The fact that the name Perpetuum Ebner later lived on – Dual and the associated common production sites went bankrupt in 1982 –, was known to only a handful of hi-fi enthusiasts: the ancient factories still exist in St. Georgen and are now marketed by the PE foundation and, among other purposes, also used as a technology and start-up centre.

Wolfgang Epting, analogue fan and St. Georgener with heart and soul, thus got the idea to reactivate the brand. And some other Dual and PE veterans also turned up who supported the project. The PE 4040, the flagship which is now ready for series production, shows some serious audiophile technology and blows off concerns that someone would just be using a formerly big name here.

Of course, some things have changed since 1968 when the most legendary PE models were developed. The former friction wheel drive gave way to a belt, and today's purists are hardly interested any more in a complex fully automatic operation.

However, the basic design remained similar: a subchassis resting on three large springs, firmly connecting platter and arm and decoupled from the rest (including the motor). Whereas other subchassis designs, derogatively called "wobblers" by friends of non-suspended high-mass drives, rely on a lightweight construction and soft springs, the PE-4040 chassis and the platter are heavy and locked very tightly to suppress both post-operation subsonic ringing and airborne microphonics. Intentionally the centre of gravity lies far off the platter axis, and the springs must be tensioned differently (possible from below, yet hardly necessary after the factory setup), thereby scattering purposefully the resonance frequen¬cies.

Damping all over: a wide belt provides the force transmission between motor (front left) and subplatter. Special feature: not only are the platter bearing and the arm base spring-suspended via the internal subchassis, but there are extra sorbothane dampers between outer chassis and motor plate and once again at the glued-in motor. The black plates are used to take up the six transport lock screws.

The heavy main platter of turned and anodised aluminium is generously dampened on the inside against vibrations and resonances: a layer of special foam soothes the surface, another layer of bitumen gives the damming sufficient mass and inertia.

Another decoupling mechanism can be found between outer casing and drive. The motor – a custom model from ebmpapst who is equally based in St. Georgen – the speed of which is sensor-controlled and kept at reference value in an iterative-electronical way, is glued to the motor retaining plate from below using extra sor¬bothane dampers. This plate is in turn decoupled from the main chassis by means of screws and additional dampers.

As to anti-resonance measures, there is yet more to come: the platter bearing is made of a polished steel pin whose flat tip rotates on a steel ball. However, the heavy 3 kg (6.6 lbs) of the two platter components do not weigh fully on the ball; two repelling ma¬gnet rings save the bearing from high friction. This requires sure instincts when assembling the belt, for without the weight of its main companion the subplatter will stick out too high.

Inspired by the past

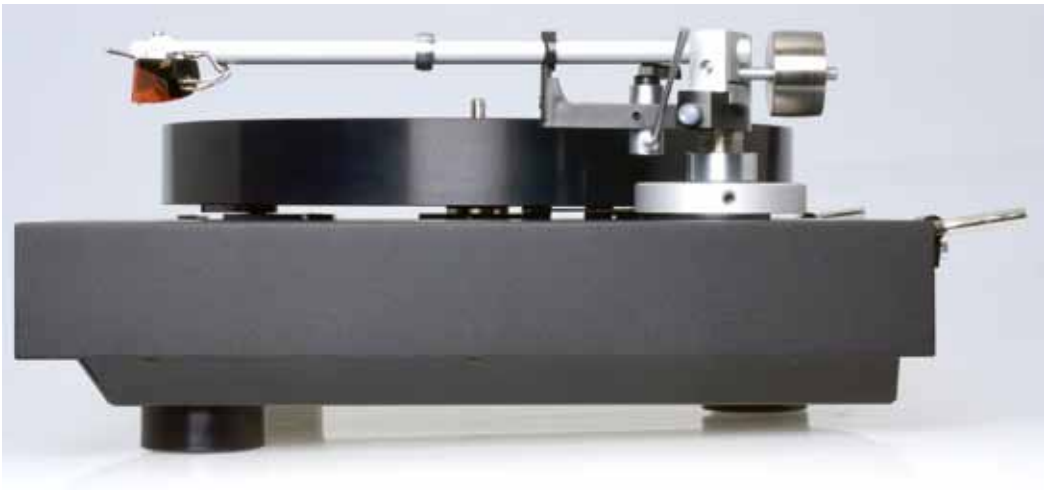
The offset righthand section of the arm base shows a PE-typical design. But other than e.g. the classic Linn LP 12 this has no function; the entire subchassis mechanics is hidden inside, and there are no mecha¬nical connections with the outer chassis.

Instead the offset part is all the more emphasised visually. Exclusively for stereoplay held in the colour combination of walnut and black, each finished flat: already in the possession of the editorial team is a historic PE 2020 in this colour scheme, awaiting its restauration (see turntable history, page 26). ►

As standard the 4040 comes with a TP92 supplied by Thorens, which fits so harmoniously into the base both visually and mechanically as if the arm had never been designed for any other player. It is loaded with a not too costly Ortofon 2M Bronze.

In the listening room the combo reproduced Inga Rumpf's "A Man's World" with such a harmonic wholeness as one can possibly wish for LP playback: with a marvellously realistic spatial imaging, rock-solid tonality and homogeneous musical enthusiasm. Clichés that subchassis cannot play tight and accurate in the bass were swiftly swept away by the PE: Camille Saint-Saëns' Organ Symphony (conductor: Jean Martinon) sounded full-bodied, yet never squishy, and with Dire Straits' "Love Over Gold" even the profes¬sorial thoroughness of the adjoining combo of Thorens 907 plus Benz ACE, though revealing greater definition, could not measure up with the boisterous verve of the PE/Ortofon combo.

Quality-wise the Perpetuum Ebner has the potential for appreciably more upmarket pickups. On the Audio Technica OC9, for instance, it also displayed its sophisticated fortes. That way it lets returners and vinyl pros alike dream of the good old LP era. How nice that some dreams really become true. ***Malte Ruhnke*** ■



Barely visible from the side: owing to the subchassis, the platter bearing and arm base hover slightly above the surface of the PE chassis. Yet clearly recognisable from the side: the high-built 3 kg (6.6 lbs) aluminium platter and the upmarket TP92 tonearm from Thorens.

The heavy aluminium subchassis is lavishly dampened. The three conical springs are fitted with guide bolts against nutation and tensioned unevenly, as they are not centrically loaded. Above centre the platter bearing, the screw serves to fine-tune the weight uptake between ball and magnet.

stereoplay Highlight

Perpetuum Ebner 4040

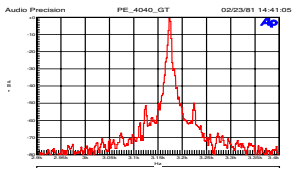
4000 EUR (manufacturer information)

Distribution: WE Audio Systems
Phone: +49 (0) 7724 / 916 7750
www.weaudiosystems.de
Agencies abroad see internet

Dimensions: W: 47 x H: 17,5 x D: 34 cm [18.5 x 6.9 x 13.4 in.]
Weight: 15 kg

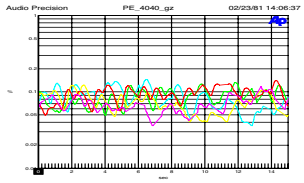
Measured data

Synchronous spectrum



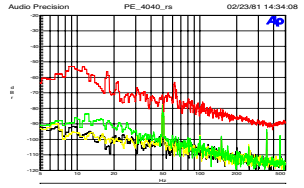
Very narrow peak, only minimal sidebands +/-100 Hz

Wow and fluter vs. time



Good synchronisation over time, neither outliers nor regularities

Rumble spectrum



Very low rumble, well dampened residual resonances

Synchronisation, weighted	±0,11%
Set rotation speed	+0,73 %
Rumble, weighted record/coupler	73/– dB
Tonearm weight class	medium light
Power consumption standby/operation	–/11 W

Evaluation

Sound 55

0 10 20 30 40 50 60 70

Measured data 8

Field test 8

Value 9

Very high-quality and technically well-engineered subchassis player which stands out for its verve, spatial stability and tight bass. Easy handling and nevertheless expandable.

stereoplay test rating

Sound
Top class 55 points

Overall verdict
Very good 80 points

Price/performance superb