Fly me to Polaris

What's it like to make your own watch from scratch? Our guest columnist Steve Huyton sought the help of independent watchmaker Frank Heydrich to find out.

Words by Steve Huyton

Above
The Polaris

JUST OVER A YEAR AGO, I had the great fortune to meet Frank Heydrich. Without getting too sycophantic, he is one of the nicest watchmakers in the world of horology. It is fair to say that we had an instant rapport, and over the last 12 months, the relationship has gone from strength to strength. Even though Frank currently works and resides in Phoenix, Arizona, he still has a deep connection with his place of birth, Kuala Kangsar, and his Sitiawan roots.

Frank by trade is a renowned and well-respected jet engineer. It was his technical and problem-solving skills that ultimately led to him repairing his friends' mechanical timepieces. Subsequently, this passion evolved and he now produces his own range of distinctive watches. What makes his timepieces so special is that they are all unique 1/1 pieces and have exquisite meteorite dials. As I have tested one of his watches, I can personally validate the enormous level of craftsmanship involved.

In one of my many discussions with Frank, I expressed an interest in producing my own watch. A clock devised by legendary American architect and industrial designer George Nelson inspired the original concept. His extraordinary vision led to the creation of some of the 20th century's most iconic furniture. With my initial idea, I wanted to incorporate some of his creative touches without plagiarising his design. It is fair to say that when I submitted the original sketch to Frank, it was in a very raw and two-dimensional form. It is also pertinent to mention that developing a bespoke prototype watch can be a very expensive and laborious process. Without the kind intervention of Frank Heydrich, this project would never have got off the ground.

Initially, the design of the watch (now called the Polaris) had a case diameter in excess of 50mm. As all of Frank's own watches measured between 42mm and 44mm, this was unchartered territory for him. Previously, Frank bought generic cases and customised them in-house. However, the supply chain had run dry, which meant he would have to manufacturer his own cases from now on. Unfazed by this monumental task, he booked time on a CNC (computer numerical control) machine to learn an entirely new skill. Fortunately for me, the first experimental case would be that of the Polaris.

The name Polaris is derived from the brightest star (also known as the Northern Pole Star) in the Ursa Minor constellation, which is 434 light years from earth. I have always been captivated by astronomy and wanted the watch to have a space-like aesthetic. While the spheres on the George Nelson clock were constructed from plastic, Frank and I decided that semi-precious stones would give the watch a more classy appearance. It also would create the illusion that the markers were planets rotating in orbit.

Over the next few months, we had to source an adequate-sized sapphire crystal lens and decide on an ideal mechanical movement. Early on, we both thought a suitable candidate would be the Unitas ETA 6497, due to its size and reliability. This calibre comprises 17 jewels and oscillates at a frequency of 18,000 vibrations per hour. After doing a bit of research, the finest example available (in our opinion) was the Art Deco skeletonised version. Essentially, this would work perfectly with the three-dimensional façade.

Now that most of the components had been sourced, Frank began methodically designing the watch on Autodesk Inventor 2015 Professional engineering software. This stage required an enormous amount of skill to ensure optimum precision. As every element about this watch is bespoke (including hands, chapter ring, crown), it made the overall process even more complicated. The final dimensions of the Polaris measure a staggering 52mm x 22mm (excluding the crown). These proportions might not suit the faint-hearted, but were essential to the integrity of the original design.

For extra finishing touch, we worked with two German designers (*maddog-straps.com* and *fine-watchbuckles.com*) to create a high-tech matte carbon-fibre buckle.

Above
The Polaris caseback; Frank Heydrich, the watchmaker.