

# The birth of C. Plath GmbH



Dr. Maximilian Wächtler (1900-1988)

With the Wirtschaftswunder in full swing and the demand for radio navigation devices running high, the early 1950s were a promising time for C. Plath KG. It started producing radio direction finding (RDF) devices in 1949. By 1954 this arm of the business was strong enough to start working alone as C. Plath GmbH. Dr. Maximilian Wächtler had been researching in this area since 1929, having received his first patent (PS 687 375) in 1935. He had then been held by the Allies to help gather information about RDF technology in Germany. After his release in 1948 he began to publish articles on RDF in academic and trade publications. With this wide-ranging experience in the field his knowledge was extremely comprehensive.

From 1950 on, Dr. M. Wächter was PLATH's man for radio navigation, and a department was founded in the compass building at Stubbenhuk 25 with him. Academics with doctoral degrees were a novelty for the company's staff. The mechanics named Wächtler the "pope of RDF with his cardinals", while managing director Johannes Boysen showed particular skill in successfully integrating the new area of the business into the company. Just like Wächtler, he, too, had recognised the importance of electronics and communication intelligence for the future of navigation to PLATH. It is a strategy which PLATH has been pursuing for the last 50 years. Dr. Wächtler had taken over the leadership of the PLATH electronics department in 1950, working from a derelict lift on the company site. He oversaw the development of two highly successful products which suited the demands of the time perfectly: a goniometer add-on and a RDF (radio direction finding) receiver set with a visual display.

The importance of rotating frames and goniometers grew suddenly once the seafaring nations made RDF part of the legally required equipment on board ships for them to determine their own position. With most ships already fitted with a radio receiver, the goniometer direction finding attachment was developed to be bolted onto existing equipment. Customers wanted more, however, and so the next step was to develop an independent goniometer receiver, the GPE 52, which was on sale through to 1970.

On the basis of this commercial success, research and development efforts were put into taking the goniometer from a "aural minimum DF" to a "visual maximum DF". Based on the suggestions published by the British academic R.A. Watson-Watt in 1926, the basics for the new generation of visual direction finders were created. The new technology that came with them allowed for short transmissions to be detected and located at a higher level of sensitivity. In contrast to minimal DF, it was now possible to detect and scan at the same time. Furthermore, the first checks showed a solution for problems with the receiving of transmissions: the separation for DF purposes of two or three transmitters interfering with one another in neighbouring frequency areas was solved. Maximilian Wächtler developed a patent for determining the side from which the transmission was coming on a visual RDF display.

**PLATH innovates**

Released in 1950, the GPV 50 (Goniometer Peilvorsatz, engl.: goniometer DF adapter) could be bolted on to the Hagenuk radios so common on fishing vessels, allowing ship owners to increase their navigational capability at little extra cost. Fishermen especially also used the GPV 50 to intercept radio transmissions from other boats and find out where they would be fishing. More than 450 units were sold.

Whilst developing the GPV 50, Dr. Wächtler had been testing a visual RDF device on-board ships that would prove to be a worldwide first. The prototype – produced with a vertical cathode ray tube – is today displayed at the Deutsche Museum in Munich. The series model was a runaway success being popular not just with the merchant navy but with the armed forces as well. The German border force, set up in 1951, was equipped with the PLATH visual device. The entire German navy, too, patrolling the coast from 1956, was equipped with PLATH models.

**Germany rebuilds**

The key to PLATH's success was having the right product at the right time. From the end of the Second World War until 1949 Allied restrictions had kept the German economy burning on a low flame. Shipbuilding, PLATH's core market, was subject to particularly severe regulations. The speed of the change after 1949 had taken many by surprise. Escalating tensions between East and West led the Atlantic Allies to start rehabilitating the areas of Germany under their control far more speedily than previously planned. They created a new country, the Federal Republic of Germany, and gave it a new currency, the German mark.



PLATH visual direction finder from the 1950s.

**1958:** The SFP 500, which comes with a range of add-on drives for various applications and frequencies, goes on sale.



Restrictions on the shipyards were lifted in 1949, too, and PLATH had the GPV 50 ready just in time for the upswing in commercial shipping that followed. Then, as West Germany began to rearm as a member of NATO in the second half of the 1950s, C. Plath GmbH was on hand to supply the newly founded army and navy with RDF systems. In this sense, PLATH was similar to other German manufacturers of the Wirtschaftswunder years such as Volkswagen or Siemens. It profited from the surprising improvement in the general economic climate due to its innovative products – often developed on a shoestring budget under difficult conditions. The ability of Dr. Maximilian Wächtler to carry out this development was crucial to PLATH's success.

#### **Dr. Wächtler's vision**

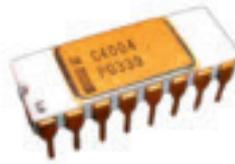
Dr. Maximilian Wächtler was the driving force behind all this innovation at this time. Despite the importance of Dr. Wächtler and his innovative products to the company, he was not actually employed by PLATH. The agreement with Boysen in 1950 had been that he would receive 8 per cent of total turnover, and when Boysen tried to reduce his commission three years later Dr. Wächtler refused and asked him to finance a new company for RDF technology instead.

Boysen agreed on the condition that Dr. Wächtler finds another investor. So Dr. Wächtler talked with Willy Kunze, the managing director of the Atlas Elektronik underwater navigation works. Kunze had no problems selling the idea to the actual owners at that time, the Stinnes Concern, who wanted to expand from core activities in sonar and had recently begun investigating in radar. This was a decisive step towards the future, securing the help of a partner with high capital reserves and experience in production. On this basis, Dr. Maximilian Wächtler was able to follow his vision of an independent company.

#### **Plath GmbH: the new company**

With Atlas' participation secure, the new C. Plath GmbH was set up in April 1954 (backdated to 1 January of that year), with C. Plath KG and Atlas Werke holding 45 per cent of the shares each and Dr. Wächtler controlling the remaining 10 per cent. Rather than purchasing shares by investing money, Dr. Wächtler's contribution was his intellectual property. Instead of drawing a salary as such, he was contracted by the new company as a consultant until the end of 1959. The first managing directors of C. Plath GmbH were Joachim Pietzner, a fellow naval officer of Wächtler, and Fritz Dietz from Atlas Elektronik. 14 experienced members of PLATH RDF had been transferred to the new company, headquartered at the PLATH site on Stubbenhuk

1969: Intel develops the 4004 processor, the first chip to integrate both control and calculation functions on one small piece of silicon.



25 in Hamburg. The model of starting up smaller companies in potentially fast-growing areas has been a part of PLATH strategy ever since and will continue to be so in the future.

**A winning formula for research and production**

Under Dr. Wächtler, C. Plath GmbH would carry out research and development, with one-off and short-series production staying in-house and larger series orders being sent to the Atlas Elektronik site in Bremen. From the beginning, the goal was to develop the best products for the market. PLATH's biggest advantage was, after all, the high quality standard of its products. With the questions about the company set-up resolved, Dr. Wächtler and his team were able to concentrate on new products – and not a moment too soon. New opportunities were opening up in aviation for which Plath products were redesigned to operate in the VHF (very high frequency) range.



The SFP 2000 at a trade fair.



In 1956, PLATH left its "compass house" at Stubbenhuk in Hamburg.

At this point in time, several development projects were started for ground-level use scenarios. As well as mobile shortwave equipment, antennas were also developed for long-distance use. This led to the first and, as yet, only U-shaped Adcock antenna being set up without antenna guying for its masts. This antenna could be run for long periods of time with no maintenance and no on-site personnel.

This kind of major goal was formulated on the understanding that at least 12 per cent of yearly turnover was spent on research and development. The German postal service, too, was looking to purchase RDF products. It needed to measure radio frequencies and to operate its coastal stations which received nautical communications – e.g. from ships in distress. The newly founded C. Plath GmbH was able to supply suitable equipment and the German postal service became a key customer for the young company. A range of tests even proved that PLATH products were, in terms of quality, the very best. Meanwhile, PLATH innovations like the dual channel RDF became international industry standard, leading to business contacts and often long-term collaborations all around Europe.

In 1956, PLATH was so successful that the site at Stubbenhuk 25 was fast becoming too small. It moved to new premises at Hopfenmarkt 33. An important criterion for moving to Hopfenmarkt was that, just like at Stubbenhuk, there was direct access to the city's waterways. This allowed PLATH employees to visit nearby customers by boat. Just six years after the move, the new headquarters suffered like so much of Hamburg from the great flood of 1962. By this stage, however, PLATH was more than able to stand up to the organisational and financial difficulties resulting from this catastrophe.

With good sales and high growth, Dr. Wächtler and his team started to look to the next stage of innovation. From the very beginning, Dr. Wächtler had been very clear that PLATH could only be successful if it developed the best products. 1958 saw the first universal SFP 500 units (Sichtfunkpeiler, engl.: visual radio direction finder) which would for years become standard on merchant and navy ships all over the world. By using a set of interchangeable slide-in modules "LNG" und "K1-K4" the device could be switched between different frequencies.

This direction finder was also the first to be installed in land vehicles with a mobile "camouflage roof-top antenna." There was even a "weather DF receiver set" developed for tall buildings as a way of increasing accident protection during high-level construction and increasing the accuracy of weather forecasts.

This allowed it to cover a broad wave range. But progress in the field was continuous, and through the 1960s Dr. Wächtler and his team would come up with all-in-one prototypes that would make switching superfluous.