
THE INSTRUMENT

The Mark 11 was first produced in Schaffhausen as a navigation watch for the Royal Air Force in 1948. Not only did it set standards in terms of its technical functionality; its puristic instrument design also inspired the design of all modern IWC Pilot's Watches.

The history of the Mark 11 is inextricably linked with the history of aviation. Or, to be more precise, with the history of navigation. Nowadays, we can determine our location on Earth accurate to the metre using any mobile phone. With modern satellite navigation, this is even possible in the wilderness, at sea or in the darkest night. This wasn't always the case. For the crews of ships and, subsequently, aircraft, determining their exact position represented a tremendous challenge for many years.

In the 1930s and 1940s, commercial pilots navigated primarily using beacons or flight by VFR. The military relied on a "dead reckoning" process. The distance covered was calculated based on the flight speed and flight time. This, in combination with the course flown according to a compass, enabled the theoretical position to be determined. Since it was not possible to measure the exact flight speed, however, and side winds would cause the aircraft to fly off course, this "dead reckoning" only resulted at best in a rough estimation of the actual position.

After the Second World War, the Royal Air Force (RAF) worked intensively on the development of new navigation systems – for example on the basis of beacons or radar. At that time, however, the "radio beacons" only had a range of around 300 miles, and a ground radar could not transmit useful data across the sea. These and other teething problems with electronic systems forced pilots to continue to use tried and tested astronomical navigation.

This procedure, used in shipping, is used to determine the longitude and latitude according to celestial bodies such as the sun, the moon or certain fixed stars. This requires a sextant and a chronometer – an extremely precise clock. These nautical instruments are not, however, suitable for use in the cockpits of aircraft, where completely different conditions and space requirements prevail. While a sextant suitable for flight was developed relatively early on, the search for an airworthy watch proved more difficult.

The early navigation watches used by the RAF were in fact quite accurate. However, their leaky cases made from aluminium or chrome-plated brass could not withstand either the salty North Sea air or the hot and humid Asian climate. The radar screens used for the target approach presented a further problem. They generate strong magnetic fields and therefore interfere with the rate of the watches in the cockpit. All of these challenges prompted the RAF to develop a completely new navigation watch.

The result was the Mark 11, developed by the engineers at IWC in 1948. The "navigator's wrist watch Mk. 11 – Stores Ref. 6B/346" featured the extremely precise calibre 89 with stopwatch. Its second greatest feature was the highly effective magnetic field protection. Since the antimagnetic material commonly used at that time was susceptible to wear, the IWC engineers built a cage out of soft iron, with which the dial formed the upper part. The front glass of the watches featured special protection to ensure it stayed in place even if the pressure dropped suddenly inside the cockpit. Finally, the high-contrast dial with luminous material made it easy to read the time even at night or in poor visibility conditions.

The Mark 11 not only set standards in terms of the technology used but also in terms of its visual appearance. During its term of service, the design of the navigation watch was continuously refined. On its introduction in 1949, the numbers from "1" to "12" were still written out. The small rectangles at "3", "6", "9" and "12" o'clock were already made from luminous material. In 1952, the number "12" was replaced by the characteristic triangle with a dot on either side. This is now one of the most important visual features of the IWC Pilot's Watches.

For around 15 years, the RAF only provided their best navigators with a Mark 11. From the 1960s, pilots in the British air force were also given the privilege of wearing this timepiece on their wrists. The value the RAF places on these navigation watches is also underlined by the fact that no-one other than the Royal Greenwich Observatory is permitted to service them. The watches are thoroughly serviced every twelve months and precisely adapted to the individual movement patterns of their wearers. No other watch in the history of the RAF has been more intensively maintained.

Even with the subsequent introduction of a system of interference-free beacons, the Mark 11 remained an important "reserve navigation system" in the event of technical problems. Up until its withdrawal from service in 1981, the watch was also used by other Commonwealth countries such as South Africa, Australia and New Zealand. The icon from Schaffhausen also made its way into civil aviation, namely the airline BOAC (British Overseas Airways Corporation). Right up until the early 1970s, pilots flying across the Indian Ocean to Australia calculated their position using a sextant and a Mark 11.

This watch is also featured in another story: New Zealander Sir Edmund Hillary was not only the first person to conquer Mount Everest; in 1958 he also led the third team to reach the South Pole by land. To determine his position during this expedition, the navigator from the New Zealand air force relied on his watch: A Mark 11 from IWC Schaffhausen.

IWC SCHAFFHAUSEN

With a clear focus on technology and development, the Swiss watch manufacturer IWC Schaffhausen has been producing timepieces of lasting value since 1868. The company has gained an international reputation based on a passion for innovative solutions and technical ingenuity. One of the world's leading brands in the luxury watch segment, IWC crafts masterpieces of Haute Horlogerie at their finest, combining supreme precision with exclusive design. As an ecologically and socially responsible company, IWC is committed to sustainable production, supports institutions around the globe in their work with children and young people, and maintains partnerships with organisations dedicated to environmental protection.

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