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Phantom Pharewell

The Luftwaffe phases out its F-4F



Outside the United States, the German Air Force (Luftwaffe) was one of the largest operators of the US-built McDonnell Douglas F-4 Phantom II. The Luftwaffe had a total of 10 F-4Es, 88 RF-4Es and 175 F-4Fs in active service in West Germany during the Cold War and the Phantom built up a great reputation over 40 years of active duty. Over the years the Luftwaffe had four operational Fighter Wings (*Jagdgeschwader* or JG), which flew the F-4F. These units were JG-71 at Wittmund, JG-72 at Rheine-Hopsten, JG-73 at Laage and JG-74 at Neuburg. JG-72 and JG-73 were originally fighter-bomber units (*Jagdbombengeschwader* or JBG) that operated as JBG-35 and JBG-36 respectively. Since the introduction of the F-4F Phantom in 1973, the aircraft's front-line service finally came to an end this year. To commemorate the service of the Phantom II, the Luftwaffe organised a "Phantom Pharewell" event at the German airbase of Wittmund on 28-29 June 2013.

The Background

The McDonnell Douglas F-4 Phantom II was originally developed for the US Navy. The development of the aircraft was direct result of the Korean War when it became apparent the F-86 Sabre was no match for the follow on MiG-17. The prototype Phantom made its first flight in 1958 and soon proved to be far ahead of its time. The Phantom was a breakthrough in design, being able to reach a top speed of Mach 2.2, which was exceptional. In 1963, the first F-4 Phantoms were delivered to the United States Navy. The aircraft quickly demonstrated its superior capabilities, prompting the USAF and the US Marines to also order the aircraft. The USAF would go on to become the largest operator of the type.

Compared to contemporary combat aircraft, the Phantom was a big and heavy fighter, but was powered by a pair of extremely powerful GE J79 turbojets that endowed it with very favourable combat characteristics. High performance and formidable weapon-carrying capacity (9 hardpoints) saw the F-4 achieve great fame during the Vietnam War. The Phantom was originally not equipped with an internal gun but this changed when the needs for this weapon became painfully visible early during the Vietnam War, and the Phantom was quickly modified – first with gun pods and from the F-4E onward, with an internal 20mm cannon. The Phantom was dominant over the older MiG-17 and MiG-19s over Vietnam and also outmatched the newly introduced Soviet MiG-21. After the Vietnam War, the Phantom remained an important aircraft with the USAF through the 1970s and 1980s, after which it was phased out of frontline combat service in favour of the F-15 and F-16.

Phantoms, after 40 years of Service



In US Navy service, the Phantom was eventually replaced by the F-14 Tomcat and later also by the F/A-18 Hornet. However, the F-4 remained in use with the USAF as a reconnaissance aircraft and a SEAD (Suppression of Enemy Air Defence - 'Wild Weasel') variant, eventually being permanently phased out in 1996. Besides the USA, countries such as Australia, Egypt, Germany, Greece, Iran, Israel, Japan, South Korea, Spain, Turkey and the UK operated the F-4 Phantom.

The Phantom in Germany

The West German Luftwaffe was only 16 years old when the Phantom entered service in 1971, but despite its young age, the Luftwaffe was a formidable air force with a large fleet of F-104G Starfighters and Aeritalia G.91Rs. In 1968, a contract was signed for the purchase of 88 RF-4Es, this being the first variant of the Phantom to enter service with the Luftwaffe. The Germans would soon build the Phantoms in their own factories in the complex of Messerschmitt-Bölkow-Blohm. The first RF-4E was flown from St. Louis, Missouri to Bremgarten in Germany in 1971. The first units to be equipped with the RF-4E were Reconnaissance Wing (*Aufklärungsgeschwader* – AG) AG-51 at Bremgarten and AG-52 at Leck. The aircraft were delivered at the rate of eight per month and both units were up to full strength within two years. The German RF-4E was equivalent to the USAF RF-4C, but with improved engines. The RF-4E was equipped with four cameras in the nose section of the aircraft and could be used for reconnaissance missions by day and night. The RF-4E was also equipped with an IRRS (Infrared Recognition System) and SLAR (Side-Looking Airborne Radar). These modules were installed along the side of the fuselage. The RF-4E had a system to develop film in flight and the aircraft was able to drop cartridges with developed photos in flight. Over time the RF-4E fleet was upgraded with increasingly sophisticated reconnaissance and surveillance payloads. For a short period, the RF-4Es were also updated with bombing capability, but this was removed on grounds of cost in 1988.

With the changed strategic scenario in Europe, the Luftwaffe finally retired the RF-4E in 1994 with 20 aircraft sold to Greece and 32 to Turkey, and the remaining aircraft scrapped. AG-51 was re-equipped with the Panavia Tornado, while AG-52 was disbanded.

In addition to the RF-4E units, the Luftwaffe had also planned to equip two air defence units and two fighter-bomber units with the Phantom. Initially intending to co-develop a single seat version of the F-4 with the USAF during the TFX programme, rising costs instead led to the procurement of a modified version of the



The first 8 F-4Fs were stationed at George AFB for the training of Luftwaffe pilots. In 1976, these aircraft were replaced by 10 F-4E Phantoms which took over training tasks while the F-4Fs were flown to Germany and made operational. Training of Luftwaffe F-4F crews was based entirely in the USA. Student pilots initially trained at Sheppard AFB on the T-37 Tweet and T-38 Talon during a 13-month basic programme. They then moved to the German training wing at George AFB where they converted to the F-4E. After this training, the pilots were assigned to operational units in Germany.

In the early 1980s, the F-4F fleet began to be comprehensively modernised under

F-4E. The result was the F-4F, developed as an air defence variant of the F-4E, with one of the seven internal fuel tanks removed to reduce weight. The F-4F was equipped with the AIM-7 Sparrow and AIM-9 Sidewinder as primary munitions, and was also able to carry various air-to-ground stores like Mk.82 gravity bombs, BL755 cluster bombs and also later AGM-65 Maverick missiles. The aircraft featured leading edge slats for better manoeuvrability at the expense of a small reduction in top speed. The F-4F had a very high thrust weight ratio, giving it excellent climb performance – essential for an interceptor. The first German F-4F made its maiden flight on 18 March 1973.





the 'Improved Combat Efficiency' (ICE) programme. The modernisation programme added in-flight refueling, AIM-120 AMRAAM compatibility and the new APG-65 radar along with a host of minor upgrades to many of the aircraft's systems. Initially limited to 70 aircraft, drastic capability shortfalls in the Luftwaffe due to delays in the Eurofighter programme prompted the German government to extend the ICE upgrade to all 110 F-4Fs in service. The F-4F ICE was therefore the backbone of German air defence through the 1990s, in service with four fighter wings, these being JG-71, JG-72, JG-73 and JG-74. As the Eurofighter began to enter service in the early 2000s, the F-4F wings gradually phased out their Phantoms and transitioned to their new aircraft, the last unit to do so being JG-71, in June this year.

Phantom Pharewell Ceremony

The F-4F Phantom Pharewell ceremony was held on 28 and 29 June 2013. The Luftwaffe organised a special "spotters day" for photographers at the North German airbase of Wittmund on Friday, 28 June, while Saturday featured the public ceremony. The Phantom is an 'all-time favorite aircraft' for many people within the European air enthusiast community, with the popular aircraft's cult status originating in the 1980s and 1990s. Luftwaffe pilots and ground crew who worked with Phantoms share this enthusiasm and the *Pharewell* ceremony showed the pride they took in their work with this legendary aircraft. It was clear that the departure of the Phantom was an emotional occasion for both Luftwaffe members and aviation enthusiasts.

For the *Phantom Pharewell*, aircraft from other units in Germany and a few invited from abroad made their way to Wittmund. Several Luftwaffe Tornados

from different units along with one RAF Tornado were present, as well as helicopters such as a CH-53G Stallion and a Bölkow Bo-105. The Luftwaffe had painted four Phantoms in a special colour scheme especially for the *Phantom Pharewell* event. The first Phantom (serial "38+33") was painted in the green and grey camouflage colour scheme used in the 1970s and early 1980s. The second (serial "38+10") was painted in the blue-grey and brown colour scheme dating to the late 1980s and the early 1990s. The third aircraft (serial '37+15') was from the Bundeswehr Technical and Airworthiness Center for Aircraft and was painted in the farewell scheme of WTD-61, which is based at Manching-Ingolstadt. The last Phantom (serial '37+01') was resplendent in a stunning blue and gold scheme. Aircraft 37-01 carried the text 'First In Last Out' on the fuselage as this Phantom was the first F-4F delivered to the Luftwaffe in 1973! F-4F Phantoms in regular greypaint were also parked in front of their shelters during the day and were extensively photographed.

The official farewell ceremony took place on 29 June. During this ceremony, the four coloured Phantoms were to take-off and perform a display but unfortunately

during startup of aircraft 38+33 something went wrong and the pilot had to fly a grey-coloured ICE Phantom instead. The four aircraft then taxied past the 130,000-strong crowd of people from all over the world who had gathered at Wittmund to see the Luftwaffe *Phantom Pharewell* ceremony. After a spectacular take-off the aircraft made a few passes over the airbase along the crowd, trailing their signature black clouds of smoke. Then two Phantoms left the formation to make place for a pair of Eurofighters and the mixed formation of two F-4Fs and two Eurofighters thundered overhead. Following the display, the two Eurofighters of JBG-31 landed at Wittmund, and the aircraft were welcomed as replacements for the F-4F Phantom. A detachment of JBG-31 will be stationed at Wittmund initially with 10 Eurofighters, and eventually growing to 20.

The last Phantom 37+01 remained airborne to make a few wild low approaches before its final touchdown and the pilots were greeted as heroes after this last flight. Everybody said goodbye with a tear and a smile to a fighter which was a legend in the history of aviation.

Text and photos from Joris van Boven's 'Sentry Aviation News' and Alex van Noye's 'Runway28'

