

NAVAL STARFIGHTERS PROWLING THE BALTIC

West German Navy Starfighters often encountered – and were sometimes fired on – by Warsaw Pact forces in the Baltic Sea.

Doug Gordon examines the type's long service with this air arm.



The Lockheed F-104G Starfighter performed the tactical roles of fighter-bomber, interceptor and reconnaissance with the Bundesmarine (West German Navy).

The first unit to receive the type was Marinefliegergeschwader 1 (MFG 1 – Naval Air Wing 1) at Jagel Air Base (AB) to equip its one staffel (squadron). It had been flying the Hawker Sea Hawk Mk 100 and Mk 101 in the fighter and reconnaissance roles, so the new aircraft was a significant step up in capability.

The unit began conversion in 1963, the first F-104G arriving at Jagel on September

10. The process was not completed until May 1965 and the last Sea Hawk left the base on June 30, with the unit declared to NATO as combat-ready on the Starfighter on July 1. The Sea Hawks transferred to sister unit MFG 2, which also flew the Fairey Gannet in the anti-submarine role.

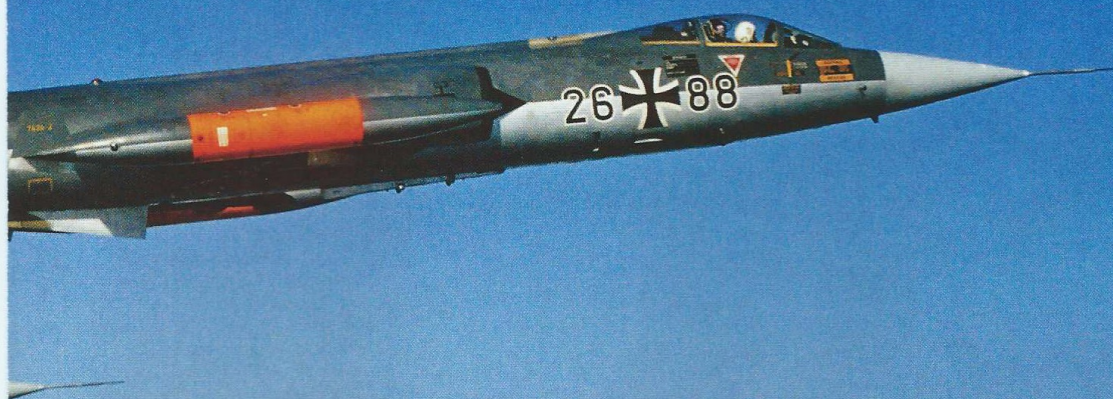
In readiness for the switch to the Starfighter, MFG 1 moved to Eggebek in 1964 and received its first aircraft in March 1965 – an RF-104G.

Initially the wing only took on the reconnaissance variant to equip its sole squadron but in April 1967 a second

squadron was formed and began to take delivery of F-104Gs. Both wings also received two-seat TF-104Gs to assist with pilot training. In total, the Marineflieger received 168 Starfighters.

The Sea Hawks were later put in storage and 28 were sold to the Indian Navy. In common with their Luftwaffe colleagues, Marineflieger F-104 pilots were trained at Luke AFB in Arizona with the 69th Tactical Fighter Training Squadron (TFTS).

The Luftwaffe and Marineflieger F-104s had a high accident rate in the early years of operation. There were many causes for



Main photo: In the foreground is an F-104G; the second aircraft is an RF-104G – both are from MFG 2. Dr Stefan Petersen

Above: A Marineflieger F-104G with AS-34 Kormoran anti-ship missiles in the foreground, and Sidewinder air-to-air missiles immediately in front of the aircraft, which are flanked by two 1,000lb bombs with four 500-pounders behind. The aircraft is carrying four LAU-3A rocket pods, each with 19 2.75in rockets. via Ingomar 'Ringo' Suhr

this and these generally revolved around deficiencies in training, both of pilots and maintenance personnel; as well as in the support infrastructure. Pilot training was inadequate in that it failed to acknowledge the very steep learning curve required in graduating from a relatively sedate subsonic aircraft, such as the Sea Hawk, to a supersonic, sophisticated, highly agile and temperamental mount like the Starfighter. Many of the early accidents were caused by human error. This was also a downside from training in the cloudless sunny skies of Arizona and flying operationally in the

murk, wet and generally drab climate of Northern Europe. Another problem for the maintenance staff was that some of the manuals were only written in English. In 1966 a new commander came to the Luftwaffe, Generalleutnant Johannes Steinhoff, and his first act was to ground all Starfighters and launch an investigation into the high accident rate. As a result of this he implemented a new training regime for pilots and maintenance personnel. He also looked closely at the survival of pilots involved in crashes and from this, the ejection seats in all German F-104s were changed from the

Lockheed C-2 to the zero-zero Martin-Baker Mk GQ7A. The new and closely monitored training and maintenance regime certainly helped to reduce the accident rate and brought it more in line with other European operators of the type.

Following his training at Luke AFB, Korvettenkapitän (Lieutenant Commander) Ingomar 'Ringo' Suhr joined MFG 2 in 1969. He shared some of his experiences in flying the F-104G: "By the time I was in the lucky situation to pilot the F-104 most of the problems had been solved and only very few developed from then on. ▶

An AS-34 Kormoran anti-ship missile being fired by an MFG 2 F-104G, via Ingomar Suhr



Above: An MFG 1 F-104G at the 1978 Tiger Meet at Kleine Brogel AB in Belgium, carrying two AIM-9 Sidewinders and underwing auxiliary fuel tanks. Frank Klaasen

Left: The addition of an RS 710 infrared camera, here being installed in the lower camera bay, dramatically increased the RF-104G's reconnaissance capability. MFG 2 Archive

"The F-104 was a super flying machine. Nevertheless, it required some time flying it to get enough experience to become really familiar with its operational spectrum and its idiosyncrasies. The Starfighter was prone to uncontrollability when manoeuvring in high angle-of-attack situations – during dogfights for example, or when recovering from gun or rocket attacks on the shooting range. This was the so-called 'pitchup' effect, caused by the T-tail being exposed to the vortices off the wings."

THE MISSION

Assigned to NATO's Allied Forces Baltic Approaches Command (BALTOP), MFG 1 and MFG 2 were primarily tasked to defend the Baltic approaches against attack by the Warsaw Pact, notably Soviet, Polish and East German naval and amphibious forces.

They would also support operations to safeguard NATO's northern flank against the Soviet Northern fleet and took part in exercises and operations in the southern and northern North Sea and Norway – and were occasionally tasked by Commander-in-Chief East Atlantic (CINCEASTLANT).

As well as its M61A1 five-barrel Gatling gun, the F-104G could carry two AIM-9B Sidewinders (for self-defence) on a fuselage centre station. Its anti-shiping armament initially consisted of the AS-30 missile – replaced in 1978 by the German-designed

AS-34 Kormoran. One could be carried under each wing and another under the fuselage.

On underwing hardpoints the jet could carry either four LAU-3A rocket pods, each carrying 19 2.75in rockets; or two 1,000lb (454kg) bombs; or four 500lb (227kg) bombs.

"I saw muzzle flare on the ship closest to me and heard my buddy yelling: 'They've opened fire!'"

The RF-104G, used by MFG 2 in a dual role for reconnaissance and as a fighter-bomber, could carry the same external armament as the F-104G but the internal M61A1 gun was removed to make room for the recce suite. It featured three Delft TA-7M cameras in a trimetrogon arrangement (one pointing down and two pointing sideways) in the lower forward fuselage.

In 1978 a modification programme significantly upgraded the RF-104G's capability. This allowed a high-resolution long-range KS-87B camera to be fitted in the upper camera bay taking shots through an oval window on the port side of the fuselage just forward of the engine intake.

In addition, an RS 710 infrared camera was placed in the lower bay along with a low-altitude KRB 710. The upgrade gave the RF-104G an all-weather and night capability.

Training sorties and exercises were many and varied, but always dedicated to the squadrons' maritime role. Armament practice made use of the ranges at Sylt island in northern Germany and Vlieland and Terschelling islands in the Netherlands, but the most significant weaponry training took place when the units deployed to Decimomannu on Sardinia in the Mediterranean.

The detachments usually lasted for a week. Lieutenant Clive Morrell, a Royal Navy pilot on exchange with MFG 1 from March 1976 to May 1977, recalled his time at 'Deci': "The range sorties in Sardinia were interesting and varied. We would always fly with mixed weapons, a typical load being two retarded 500lb bombs, two freefall bombs, four 2.75in rockets and 100 rounds of 20mm ammunition, all to be fired in a 20-minute range slot. This resulted in infinite possibilities for switchery errors!"

"We also flew a number of sorties carrying out live air-to-air firing. This would involve firing the 20mm cannon at a dart towed 500 yards behind another F-104. The six-barrelled 20mm cannon had a very rapid rate of fire and a very tight spread, so only a slight miss meant they all missed!"

"Finally, we would fire, once a year, the AS-20 guided missile, which was the practice round for the AS-30. This was a very similar missile to the Bullpup we used to carry on the Buccaneer."

Clive's experience of the F-104 left him with generally positive memories, but with some reservations about its performance: "The F-104 was a great aircraft to fly, very stable fast and low with very few unexpected quirks. It was, however, quite heavy in both pitch and roll."

Regular reconnaissance missions operated with the RF-104Gs of MFG 2 and the F-104Gs of MFG 1, the latter tasked for visual recce only as its aircraft carried no cameras.

As well as flying over the sea, routine training missions were flown over land. 'Ringo' Suhr explained: "Flying at 8,000ft along the East German coast, if the weather was perfectly clear, we took pictures of the TV Tower in Berlin and our photo interpretation staff were able to enlarge the pictures in such a way as to be able to discern silhouettes of people sitting in the rotating cafe on top of the tower."

Regular exercises and exchanges proved a valuable part of the training routine and were often held in the Norwegian Sea and the North Atlantic to respond to a possible

Soviet attack on Norway or Iceland, two countries that were considered particularly vulnerable.

'Bulls Eye', a biennial gunnery competition held at various NATO bases in Northern Europe, involved teams from Norway, the Netherlands, Denmark and West Germany.

'Big Click', a reconnaissance competition, began in 1965 and saw RF-104Gs take part. In 1976 it was renamed 'Best Focus', and in 1985 Bulls Eye and Best Focus merged to become the Tactical Fighter Meet (TFM).

Both MFG 1 and MFG 2 regularly took part in another wide-ranging exercise popular with the pilots, as 'Ringo' Suhr explained: "The most important and most efficient... was, in my opinion, the so-called Tactical Fighter Weaponry [TFW] which was conducted as an invitational, international ►

VIKINGS DISPLAY TEAM

In 1979, four pilots from MFG 2, Kapitänleutnants Ingomar 'Ringo' Suhr, Lothar Martin, Juergen Tank and Karsten Wichert, put together a flight demonstration programme for a Starfighter duo.

It performed its first show at the Greenham Common International Air Tattoo on June 11, 1979. Suhr explained: "The inspiration for doing this came from watching the Belgian Air Force team 'The Slivers' [a two-ship unit] in 1975 during an airshow at RAF Lakenheath in the UK.

"I had the opportunity and honour of talking to Major Steve Nuyts, leader of The Slivers, and learned a lot about displaying the F-104. The Slivers were the best display team with the F-104."

However, on August 3, 1979 there was a fatal crash of an MFG 1 F-104 during a solo display (unrelated to the Vikings) at an airshow at RNAS Yeovilton, Somerset. Following this all German aerobatic demonstrations with the Starfighter were suspended by the German authorities. After this was lifted, MFG 2 developed a routine which it called a 'tactical display' of operational manoeuvres mainly, though not exclusively, flown in the horizontal and parallel with the crowd line. In 1983, the Marineflieger F-104 pair tactical display was named the 'Vikings'.

The team was in high demand all over Europe, so much so that in 1985 more pilots were drafted in and, in effect, two Vikings teams began operating at the same time at airshows across the continent.

The Starfighters used for the demonstrations were standard F-104Gs. They flew 'clean' with no tip-tanks or other stores and retained the standard Marineflieger camouflage scheme.

Kapitän zur See (Captain) Axel Ostermann led the team in 1985 and 1986 as Kapitänleutnant. His arrival coincided with MFG 2's conversion to



The Vikings usually flew aircraft in the standard Marineflieger scheme, but for a period in September 1986 they were painted in the colours of the Schleswig-Holstein region – where both Marineflieger F-104 bases were located – just prior to the team's disbandment. Stefan Goossens

the Panavia Tornado, which meant a reduction in the unit's operational commitments with the Starfighter, enabling more time to be spent on the demonstration team.

In 1985 the Vikings performed at 15 airshows, ten of which were in the UK. The following year the team flew 23 performances, including six in the UK.

On August 11 that year the Vikings were invited to attend an airshow at NAS Moffett Field at the southern tip of the San Francisco Bay to mark the 75th anniversary of naval aviation. Four Starfighters were sent – accompanied on their trip by a Breguet Atlantic from MFG 3 – and gave two demonstrations to appreciative audiences, returning to West Germany on August 21.

Between September 7 and 27, 1986 the Vikings performed with Starfighters wearing the blue, white and red colours of the Schleswig-Holstein region, where both Marineflieger F-104 bases were located. The team flew its final display at an airshow at Neuburg AB, West Germany, on September 27 after which it disbanded.

Axel Ostermann said: "When, after our last appearance, we opened our brake 'chutes in Neuburg, the German Navy was able to look back with pride on eight years of accident-free, professional and successful air displays by the Vikings."

The Marineflieger flew the two-seat TF-104G for pilot training. Dr Stefan Petersen





The Starfighter was a significant step up from the Sea Hawk for MFG 1 and 2. Axel Ostermann

exercise out of the Danish air base at Aalborg.

"It comprised all aspects of air warfare: air-to-air combat, air-to-ground attacks on coastal targets, simulated mass attacks on naval combat groups and flying with and against units of other NATO countries."

The German naval Starfighter units undertook exchanges with other NATO units in Italy, Turkey, France, Greece, Belgium and the Netherlands. British units also exchanged with the Starfighters – for example, 809 Naval Air Squadron (NAS) at RNAS Lossiemouth, Moray (and, later, RAF



An RF-104G photo of the Soviet carrier Kiev taken with the low-altitude KRb 710 camera. Two Starfighters can be seen flying alongside the vessel. via Ingomar Suhr

Honington, Suffolk) exchanged with both MFG 1 and MFG 2.

The British unit flew the Hawker Siddeley Buccaneer and had a similar mission. When the Buccaneers transferred to the RAF, close ties were retained with both Starfighter wings.

CLOSE ENCOUNTERS

Given the nature of the MFGs' mission, in the course of their operations they inevitably came into contact with Warsaw Pact forces. Recce sorties over the Baltic Sea to the east of Bornholm Island, called 'Eastern Express', would often bring the aircraft into contact with 'enemy' forces.

Fregattenkapitän (Commander) Josef O Rammer, who flew such missions in RF-104Gs with MFG 2, said: "One time, on a two-ship Eastern Express reconnaissance mission east of the Danish island of Bornholm, quite close to the Lithuanian Border but still in international waters, we found a force of approximately 15 Warsaw Pact ships in what we called Formation 1 (trail formation).

"So we positioned ourselves to shoot pictures with the side oblique camera. I started the photo pass, paralleling the force about 500 yards away at 100ft.

"When I was looking through the camera sight, which was mounted on the left canopy rail, I saw muzzle flare on the ship closest to me and heard my buddy yelling: 'They've opened fire!'

"Due to luck and Communist engineering quality, they didn't hit us. Unarmed as we were, there was not much to do, except to get away as fast and low as possible."

Lt Cdr Suhr recalled a similar incident when he was flying an RF-104G: "Once we overflew a Frog type heavily armed landing vessel and took close-up pictures from about 100ft altitude, almost overflying the ship.

"I felt strong vibrations when passing abeam the vessel and, sure enough, on developing the low-level camera film you could see that the Frog's starboard rear 30mm gun was firing. It's lucky we were not shot out of the air."

On another occasion, 'Ringo' was flying as part of a two-ship reconnaissance mission east of Bornholm Island at 200ft: "We sighted a Soviet Navy Blinder [Tupolev Tu-22] coming head-on at 6,000ft," he said.

"We pulled up in a tight Immelmann so as to arrive on the left and right of the Blinder's cockpit. To perform an Immelmann manoeuvre in the F-104 you needed 3,000ft in radius so we ended up in a perfect position and altitude.

"What happened next was the Blinder pulled his power back and deployed his speedbrakes and so decelerated immensely. We were pretty surprised but managed to decelerate with the big bomber.

"However, without large wings like the Blinder, we soon came into a slow speed region which became dangerous. We had to throttle our 'birds' up to normal flying speed and in less than 20 seconds the Blinder was sitting behind us. I'm sure the Soviet pilots had a good laugh at us."

The many exercises the Starfighters took part in were invariably shadowed by Warsaw Pact intelligence aircraft and surface vessels. On a mission off the coast of Norway during an exercise, Fregattenkapitän Rammer had an encounter with the Soviet Air Force.

"Our task was to find a convoy and simulate a low-level Kormoran attack with six F-104 Starfighters. As we got closer we received a call by the convoy's air safety ship indicating there was an unknown airplane in the area circling over the convoy.

"As this was not typical behaviour for a civilian airplane, and there was a solid cloud deck at about 800ft, we climbed into the clear at about 2,000ft. And sure enough, the unknown aircraft was a Bear [Tupolev Tu-95] with a big red star on the tail.

"None of us had ever seen one of those in real life. That 'plane was really huge! So we got closer and joined the Bear's right and left wingtip with a three-ship on each side in close formation. We flew a perfect seven-ship formation – what a pity there was no other aircraft to take a picture."

Marinefliegergeschwader 1 flew its last flight with the F-104 on October 28, 1981, while MFG 2 stood down on the Starfighter on September 11, 1986.

In the hands of the Marineflieger pilots, the F-104, proved a highly efficient and reliable multi-role aircraft which served the Bundesmarine well for 23 years during the Cold War. **IAN**