

Rolf Stünkel

MACH 2

*Flying the
F-104 Starfighter*

For

*Curtis, Julian, Jean, Sidney,
Joanna, Jill and Ava*

Rolf Stünkel

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Flying the F-104 Starfighter

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Contents

Prologue

A Technical Note

Acknowledgements

Into the Cockpit, in a Roundabout Way

Voluntary Enlistment

On the Frigate

The Gateway Drug to Flying

Aptitude Tests

Pilot Screening

Jets for Beginners

Lone Star State Texas

In the “Tweet”

Training According to Schedule

Wings

Flying the T-38

The G-Force and its Pitfalls

Supersonic Pilot

Jaunts and Advanced Training

Finally Finished

Flying the Starfighter

In Arizona

F-104G Background

The German Starfighter Procurement Project

A Ride on the Jet Blast

Check and Solo Flight

The F-104G Training Program

Weapons Training

Under the Hood
Strange Sensations
Speed is the Stuff of Life
Mach 2 Run
Final Spurt and Graduation
Sea Survival and Departure

Back Home in Germany

Frisian Winter
Arresting Gear
A Bad Day
Cross-Country

Flying for the Navy

What's the Use of Naval Aviation?
In the Squadron
On-the-Job Training: the LCR Program
Low Altitude Flight
Navigation and Other Perils
Silently on Our Way
Self-Protection on Low-Level Flights
Naval Aviation Weapons Training
Air-to-Air Gunnery

The Everyday Life of a Pilot

Fast and Slow
Squadron duty
The Flying Suit
Dream Job: Pilot
Pilot Careers
VIP Dispersal
"Bathing" in Nordholz
Passenger flights

Training Over Land and Sea

Diverse Operations
The ABC of Tactical Flying
NATO Base “Deci”
Cross-Country

Cold War Over the Baltic

Political Thaw?
The Sea of Peace
Encounters with Eastern Forces
Reconnaissance

A Potential Enemy: the MiG-21

The Flying Kalashnikov
The Career of a Tough Bird
Differing Approaches
Combat Missions of Starfighters and MiG-21s
MiG-21 in East Germany
Impressions of a German MiG-21 Pilot
The Daily Life of an East German Fighter Pilot

The Starfighter and Flight Safety

Crash in the Kattegat
The Human Factor
Man and Machine
Technical Problems, From a Naval Aviator’s Point of View
No Thrust, no Fun
Aircraft Limits
Lucky Crash

Farewell, Starfighter

Flight to Iceland

A New Era

German Reunification
An Aeronautical Contribution to German Reunification

Back in Time

Texas

In Arizona

A visit to Kiel

What Became of My Aircraft?

That's all, folks!

Appendix

Starfighter Versions

F-104G, Federal German Navy

Picture Credits

The Author

Kick the tire

Light the fire

First one off is lead

Briefing on guard.

Prologue



NO MILITARY aircraft of the postwar period has ever polarized us like the Lockheed Starfighter. From the mid-1950s, the svelte jet with the stubby wings showed unimaginable aircraft performance. Ten years later in Germany, it won notoriety as the “widow maker”. Training measures, technical improvements and a temporary flight ban changed all that. Even though the F-104 G was capable of twice the speed of sound - approximately 2400km/hr - it was mostly flown at less than Mach 1. That was tactically more astute and used less fuel. Among pilots of combat jets, “Mach 2” is rather a codeword, uniting them like a small pin on the blazer lapel.

Mach 2 – Flying the F-104 Starfighter is a personal flashback on one of the darkest Cold War chapters: the late 1970s and early 1980s, when Germany was divided. Today, the Iron Curtain is history, and old animosities have been dismantled; it might seem idle to talk about decommissioned jets. The political impact of West German

naval aviation in those years may be debatable, too. Beyond politics and technology, however, fond memories of flying and community will last a lifetime.

Military pilots celebrate and swear like soccer professionals. What an asset to belong to such a team! In preparation for this book, I telephoned, emailed and met up with pilots of old, with the same instant effect every time: in my mind, I was straight back in the narrow Starfighter cockpit or at the squadron bar, surrounded by endearing, awkward customers and fun-loving jokers, great chums and overconfident top-gun hopefuls. Thanks to all of you who supported my “return flight” with such friendship.

Check six!

A Technical Note

MANY READERS will be familiar with Germany and the history of its armed forces. This book is dealing with cold war days, when the Federal Republic of Germany (West) and the German Democratic Republic (East) still existed. Therefore, you will find some outdated or seldomly used terms and abbreviations, such as GDR, German Democratic Republic (DDR, *Deutsche Demokratische Republik*), or NVA (*Nationale Volksarmee*) for the National People's Army of East Germany, JG for *Jagdgeschwader*, a fighter wing in East Germany, or MFG for *Marinefliegergeschwader*, a naval air wing in West Germany. All these will be explained by footnotes.

Let me also mention the difference in military ranks. The lowest officer grade in the German Navy, for instance, is *Leutnant zur See*, equal to Sublieutenant in the Royal Navy or Ensign in the U.S. Navy. For better understanding, most German ranks in this book have been replaced by their U.S. equivalents.

Finally, I have been using U.S. units of measurement and specifications, just because the F-104 is an American plane. Meter/kilometer values are mentioned here and there, e.g., in conjunction with East Germany, due to the aviation metric system formerly used there.





NATO map of divided Germany.

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Standing on the wing of a Piaggio P149, in the spring of 1976 (from left): Axel Grossmann, the author, Michael Dominiak †.

Into the Cockpit, in a Roundabout Way

Voluntary Enlistment

A YEAR before my high school exams in the spring of 1971, my father entered a competition offered by the Navy on my behalf. Such recruitment campaigns were not unusual, and with luck you could spend a few interesting days on a ship or a naval base. I guess dad must have made a lucky choice of crosses - I won a visit to MFG 5¹ in Kiel. I boarded the train happily from my hometown Wilhelmshaven to the Baltic sea coast. A friendly officer with three golden stripes on his uniform sleeves picked me up from the station and took me to the naval air base, where other young men were already gathered. For two days, we were treated like VIP's, enjoyed lectures on air-sea rescue and good food. In the evenings at the bowling alley, we bombarded the young officers with questions. A large Albatross sea plane took us over the island of Heligoland, and each of us was hauled up on the rope of a Sikorsky helicopter.

What a wonderful air base, I thought to myself on my way home. With my "A" Levels, I realized I would soon have to make the choice between compulsory military service, civilian service or something 'special'. I had been interested in the Navy for a long time, even though I was also inclined towards the merchant marine. My best marks at school were in languages and music, and these subjects offered a multitude of interesting prospects.

I came across an attractive offer from the Navy. Young officer cadets could join the training ships *Gorch Fock* and *Deutschland* if they committed for four years. After only 21 months, the rank of ensign² could be achieved. Within four years, I would have the

rights to a severance payment towards a civil degree course or vocational training. With such options, ordinary military service seemed like compulsory labor.

The whole thing had one snag: whoever completed military service voluntarily in the 70's had to worry about his status among others of a similar age. "Serving" was no longer the 'in' thing since the student riots of the late 1960's. With a mixture of defiance and curiosity, I decided to take a look at the strange, huge armed forces for a while, as a soldier on a short contract with a return ticket to civilian life.

The Federal German Navy of the 70's was a respectable, small armada with an impressive portfolio. There were frigates and destroyers, supply ships, fast patrol boats, minesweepers, submarines, special purpose vehicles, schools, administration offices, medical and music services, transport units and a great deal more. What amazed me most was the fact that with approximately 50,000 soldiers, the smallest service of the German Federal Armed Forces operated around 200 aircraft, as many as a medium-sized airline. Petty officers and enlisted men had innumerable career paths and a choice of disciplines. One of these branches was No. 76, *Decksdienst* (deck service). The soldiers wore a patch with an anchor on their uniform - no rope, key, lightning flash, tooth wheel, harp or torpedo like the other branches. Just a plain anchor, nothing else. "Nothing in the anchor, nothing in your head", was the tough but hearty saying.

A few months before my school exams, I passed the entrance interviews at the Officers' Application Test Center in Cologne. Still in July 1972, at just 18, I began basic training at *Marine-Ausbildungsbataillon 3* (Navy training battalion) in Glückstadt, on the river Elbe. It was a hot summer. We carried out extensive naval ground combat exercises on a nearby training ground, cursing the sweet smell of the nearby knacker's yard. After three months, replenished with cutter rowing, marching, pistol and gun practice,

our group of cadets was ordered to sea duty to the sail training vessel *Gorch Fock* in Kiel. I had to overcome my fear, setting sails more than 40 Meters up on the mast in heavy seas and cold winds. After two weeks, I stopped being as sick as a dog and began to enjoy the view from the elevated yardarm. It was just as well, as we ventured into a hurricane in the East Atlantic on the journey from Cadiz to Ireland. Under storm sails, *Gorch Fock* drifted through the foamy seas while the ship's doctor, to everyone's amazement, removed a soldier's appendix. Since then, I know why compasses and operating tables on ships are gimbal-mounted.

After this first voyage, our officers' training at the *Marineschule* (naval college) in Flensburg-Mürwik began. Naval officers had been educated there since the time of the Kaiser.



Sail training ship *Gorch Fock* - there isn't a single alumnus who does not rave about his experiences on the three-masted barque.

We swotted navigation, seamanship and electrical engineering, obtained our sailing and motor boat licenses and enjoyed the summer on the fjord. One day, in the portico of this revered building, a recreation of the *Marienburg* in East Prussia, I came across two suspiciously young-looking lieutenants. They were standing in front of the admiral's office, talking animatedly and looked somewhat different from our trainers of the same rank. One had strangely long sideburns, the other kept his hands nonchalantly in his pockets. Both wore wings on their uniforms, a small metal one and a larger embroidered one. *Starfighter pilots*, I thought in awe. *These Lieutenants must lead an exciting life.*

After nine months of school, we went on board the training ship *Deutschland* for another autumn trip. *Deutschland*, hull-no. A 59, was a 5,000-ton destroyer type vessel with some 450 crew members. This time we were heading for Taranto and Izmir, still sleeping in hammocks at night. We knew the first officer from our time on board *Gorch Fock*, a friendly rough diamond with bushy eyebrows and the fitting name *Wind*. After the trip, more training courses followed at the telecommunications, detection, supply and non-commissioned officers' schools in various north German locations. We swotted secret crypto decoding methods and enemy radar frequencies, learned how to put out fires in decommissioned ships, marched around in the ice and snow and allowed ourselves to be fogged up in tear gas, wearing protective NBC³ masks. The navy kept its word. After exactly 21 months, we were promoted to ensign. I was only 20 years old and proudly took my family out to dinner in a noble 1930s restaurant on the harbor promenade of Wilhelmshaven.

On the Frigate

MY FIRST mission as an ensign led me on board the Frigate F223 *Karlsruhe*, a sleek 2,000-ton ship with moorage in my hometown Wilhelmshaven. Originating from the late 1950's, she was equipped with a fair amount of firepower; four diesels and two gas turbines allowed a top speed of 29 knots. Among the officers of the 212-man crew, I was by far the youngest. My job as communications officer embraced the ship's entire teletype, fax and radio operation, as well as watchkeeping on the bridge and in the operations room deep within the ship, sharing shifts with other officers. As the XO's secretary, I had to type the appraisals of all the junior officers. Occasionally, I also witnessed interrogations when a fight or, in more seldom cases, a small theft occurred among the enlisted soldiers.



Frigate F223 *Karlsruhe*.

Communications officer was a typical starting position. With my education, I could also have been a detection officer or a second officer of the watch on a mine-sweeper, a fast patrol boat or supply ship. Luckily, I had ended up on a frigate, as requested. We were constantly in the North Sea or the Baltic, carrying out gunnery and emergency training and set off for longer surveillance trips. The better I got to know the *Karlsruhe*, the more it filled me with a certain pride to be part of the crew.

Among the older officers, there were tough, hard-drinking chaps. Some had made it to lieutenant from petty officer, others had sailed on large merchant ships. Undeterred by heavy seas, they smoked like chimneys in the narrow operations center, played cards in the mess in their watch-free hours, drank beer and seemed to sleep rarely. For a young guy like me, the constant lack of rest due and the irregular night watchkeeping were very strenuous. Whenever I laid down for a short break on the bunk, there was guaranteed to be an emergency drill, some combat exercise or emergency maneuver, robbing me of even more sleep. In the winter, it was freezing cold on the open bridge; after four hours of watch, I crawled into my bunk, wet and chilled to the bone, only to get up a little while later for the day shift. When I was really fed up, I consoled myself with the fact that I was stationed in my home town.

Occasionally, a German naval aircraft would thunder over us. *You will be home in half an hour*, I thought to myself, *and we are messing about here for another two weeks!* I didn't imagine that my seafaring days would soon end abruptly.

The Gateway Drug to Flying

IN THE summer, I was suffering from heartache; the girl of my dreams had rejected me, it was just unbearable. My navy buddies Mike and Baloo, one serving on a destroyer, the other on a fast patrol boat, decided to console me and booked a cheap sky diving course on the North Sea island of Texel, in the Netherlands.

To be on the safe side, I hadn't told my parents. The promise of an aerial adventure definitely improved my mood, and on the island, we got straight down to business. The sun-tanned instructors at *Para Center Texel/Spa* got us in the mood for our new hobby with humor and drill. Our kit consisted of round red and white parachutes that had seen better days; here and there, their nylon surfaces had been patched with adhesive tape. Once up in the air, we soon found out the hard way that the round caps had a glide ratio of 1: thud. Upon every touchdown, the grass felt like concrete.

All jumps were performed in the same manner. I climbed out of the Cessna 172 where the co-pilot's door had been removed, setting my outside foot onto the wheel, the other on the landing gear strut's foot step. I held onto the wing strut with both hands and looked over to the instructor; he cowered on the empty spot of the removed copilot's seat like a South American taxi thief. On his command "ready-go", I pushed myself backwards, fell a few meters down the safety line - in these automatic jumps, you only pulled the handle in an emergency - and was dangling under the parachute shortly afterwards. It was great fun! It felt as if the "flight" lasted forever although it was only minutes. The dunes eventually took shape, and it was time to assume the practiced landing position: legs together, knees slightly bent, elbows together. We had been indoctrinated not to look down just before impact, to avoid the reflexive spreading of

the legs; the parachute's high sink rate regularly caused a hefty landing kick. We did our best to land as smoothly as we could. After touchdown, the North Sea wind dragged the parachute over the field; so we released our harness and wrapped the parachute bundle as quickly as possible.

After the eighth hop training was finished, and we were awarded the Dutch A-License. I felt like a real sky diver now, almost like Superman. But there was someone I admired even more than myself: the Cessna pilot who had taken us up into the skies. How nonchalantly he sat behind the yoke with his cool sheepskin-collar jacket and dark aviator glasses!

Our high school German teacher Mr. Hengelbrock, had often exhorted us: "he who has never dreamed, will get nowhere." Shouldn't I fly, too? A short inquiry gave me the answer that Lufthansa weren't looking for pilots. I still had to serve in the Navy for two more years anyway and was, therefore, unavailable. I looked through some German Armed Forces brochures and noticed a photograph of a smart grey-white propeller-driven aircraft; it was the reconnaissance plane *Breguet Atlantic* that had often hummed over the *Karlsruhe*. When it was overhead, we could see the observer squatting behind the large front window. With its twelve-man crew, the *Atlantic* went on missions inland and overseas; most of the time, it spent endless hours of reconnaissance along Warsaw Pact coastlines - that sounded a bit like secret service action and fun. Navy propeller aircraft students were trained at Lufthansa's Bremen flying school, just like all military transport and Lufthansa airline pilots. That was not something to be sniffed at! I decided to become a military pilot and sent in my application while still on board the *Karlsruhe*. Even if they never accepted me, at least I wanted to give it a try.

Aptitude Tests

IT DIDN'T take long for me to be summoned to the air force aeromedical center in Fürstenfeldbruck near Munich, commonly referred to as *Fürsty*, for flight aptitude testing. I was questioned by psychologists, put into a simulator and given math questions while I had to fly curves and reach a certain flight altitude to a stopwatch. In a huge pressure chamber, our group of test subjects had to take off our oxygen masks at 10km simulated altitude and wait until we were nearing unconsciousness. In this way, we could test our individual deficiency symptoms: euphoria or passivity, blue fingertips, itching of the joints or simply nothing. After a short time without oxygen, we all had tunnel vision and were talking nonsense; the whooshing noise in our ears was growing ever louder. Just before we were all ready to collapse from hypoxia, our instructor ordered us to put the masks back on. Within seconds everything was colorful and pretty again, just like in a Hollywood movie. How fresh and delicious the oxygen tasted!

Moments later, the silence was disrupted by a loud bang and hiss, and the pressure chamber was instantly fogged up. A loss of pressure! Our lung contents and all, absolutely all bodily gases were emitted immediately.

Military pilots have to repeat such chamber exercises several times in the course of their career. Students occasionally panic; this may lead to the termination of their jet pilot training. It happened to two of my contenders, but both were given the opportunity to begin transport pilot training; they made it into the cockpit of a commercial aircraft later.

What makes a real fighter pilot, I asked myself? Physical fitness, fast cars, hard drinking, girls? Can he have fillings in his teeth? Some people actually believe that the fillings could come loose due to the acceleration or pressure changes in the cockpit, getting stuck in the windpipe and cause death by dental prosthesis, *exitus aspiratione*. That is, of course, really absurd. As everybody knows, most young people, including pilots, already have a mouth full of spare parts. "Fillings are no problem, as long as the teeth are fixed," the flight surgeon said. "But remember, even small cavities with trapped air inside can cause sharp pain during descent."

In aviation movies, fighter pilots seldom put on their oxygen masks. It makes sense - how else would you recognize the actors? In real life, however, pilots wear a helmet and a mask from start-up to shutdown. You can switch to 100% oxygen anytime. "Would that enhance the pilot's physical fitness, for example after a hard night at the bar?" I asked the doc, thinking of the pop singer Michael Jackson who was said to rest under an oxygen mask. The surgeon laughed. "100% ventilation may actually help before night missions," he said. "It improves night vision a bit."

A few weeks after my aptitude tests, the results fluttered onto the ship. I had passed with an A, meaning I was suitable for jets. That was more than I had hoped for; now I had to decide in which direction I wanted to go. Pilots in the German military had to serve for at least 12, possibly 15 years, no matter what they flew. I decided to go for the *Breguet* and Lufthansa training. If I failed, I could leave the Navy to study music or become a teacher.

Six months after signing my application, our ship's executive officer called me into his tiny cabin, my orders for the flying school in his hand. "You want to leave us?" he growled in a fatherly fashion. "Yes, sir," I answered as pithily as I could, aware that a lot of budding students failed the training and had to go back to their old jobs. The XO had a good sense of humor. He told me of his own

ambitious plans as a young man, allures of becoming an admiral in his head. Something seemed to have gone wrong, but he never told me what.

Many years later, I happened to see him on television and understood what he had meant. The broadcast dealt with an East German political refugee, picked up from the cruise ship *Völkerfreundschaft* in the Baltic sea by a West German Navy ship during an undercover night operation. My executive officer, then commander of a small anti-submarine vessel and in charge of the operation, had inadvertently rammed and damaged the side of the ocean liner when it was turning.⁴ In the German navy, collisions were generally not a “career killer”, and an old joke said, “he who hasn't hit a pier with a destroyer square-on will not make admiral.” In this case, however, the saying didn't work. The ramming of an East German civilian ship by an imperialist class enemy was politically too explosive, and the young commander never made admiral. He was a good boss, however, a great XO and a friendly soul. After a good career, he passed away too early. May he rest in peace.

There was still some time left until the beginning of my flight training. One day, I was watchkeeping in the Baltic, when a former Starfighter pilot came up on the bridge. He was grounded⁵ for health reasons and had joined the *Karlsruhe* as a visitor for a few days. He raved about Arizona, the Grand Canyon and everything he found so amazing about flying the supersonic Starfighter: speed and flight pay, fast promotions and an early retirement at 41. Along with the pension entitlement, he said, came the option of free job training or studies at the government's cost. Such privileges were only enjoyed by jet pilots, due to early wear and tear.

The guy sounded very convincing! At 21, I didn't worry much about retirement, but everything else sounded sexy. Flying

Starfighters, how exciting that had to be! After the training, career officer status beckoned, with a retirement age of 41.

I reconsidered my career plans. Wasn't I suitable for jet flying after all? They could do nothing worse than laugh at me. I resolutely wrote a new telex message, asking to be transferred from Bremen to Texas. I wanted to fly jets!



The post-war German Luftwaffe's first jet, September 9, 1956, in Fürstenfeldbruck. From left: 1st Lt. Ravella, LtGen. Kammhuber, Defense Minister Blank and two officers in front of a brand-new T-33 trainer.

Pilot Screening

MY ENTIRE flying experience consisted of a few airline trips as a tourist and some ridiculous parachute hops. Without even having built a model airplane, I had applied to be a navy pilot! That seemed quite daring to me.

A navy brochure explained the training program. Prospective fighter pilots regularly went through screening after their officers training and, if successful, were sent to Texas for the USAF Undergraduate Pilot Training (UPT). Turning the brochure pages, I read about two German Navy F-104-squadrons, dubbed *hammer of the fleet* and known for their effective cooperation with other NATO aircraft and ships.

To be a navy F 104-jock... the prospect of flying at next to zero altitude over the sea in a Starfighter cockpit seemed like a distant dream, much more exciting than anything else in our armed forces. Senior naval officers alleged that navy F-104 pilots had more fun than those in the air force. If that was true, one thing could be the reason: the Warsaw Pact was just minutes away from our coastline and the two naval air bases. I envisioned our crews on their missions, thundering around on the doorstep of potential enemies, encountering Russian destroyers, all sorts of Eastern jets and bombers while carrying out exercises. That had to be a truly diversified job!

I had huge respect for the training. Even exceptionally gifted test pilots had not become hot-shots over night. What would a raw recruit like me have to learn? All candidates had to undergo pilot screening in Fürstenfeldbruck. On a cold January morning in the year of 1976, straight off the frigate *Karlsruhe*, I traveled to Bavaria in

my rusty BMW. The air base, built in 1936, was the work of German architect Ernst Sagebiel. He was the creator of Berlin buildings such as Tempelhof airport, Hermann Göring's Air Ministry (today's Ministry of Finance) and a lot of Luftwaffe bases all over Germany. Our accommodation was located in the legendary, interminably long *Kilometer Building*.

Immediately upon arrival, our academic training began. Some school subjects were taught in English. Mr. M. A. Din, a retired Pakistani Air Force flight lieutenant, taught *principles of flight*, i.e., aerodynamics for pedestrians. His methods were just as effective as they were simple: important things were learned by heart and tested like a chant.

"Is flying a piece of cheesecake, Mr.....?" Din would ask a student at the beginning of the lesson. "No, Mister Din," was the expected answer. "It is highly intricate and complex." Sentences such as these immortalized good Mr. Din and helped us to digest even the driest study material. By and by, I began to understand aviation and became curious about the practical part of our screening.



Piaggio P-149 D.

After a few weeks, we were pushing camouflaged low-wing aircraft out of the Zulu hangar, in the north of the Fürstenfeldbruck air base. The tiny *Piaggio P149 D* planes, affectionately called “Pidgees”, were sprightly four-seater aircraft with retractable landing gear, variable pitch propellers and a strong, but thirsty Lycoming six-cylinder engine. The cockpit was full of clock-type round instruments; we had to indicate each one blindfolded to our instructor.

Then came the big moment of the first flight. A grey-bearded air force second lieutenant named Nostrini took me up for a few circuits, north of the base. “We even get paid for doing this!” he exclaimed good-humoredly as we came in for landing. I was impressed - if I passed the screening, I hoped to be taught by motivated people like him.