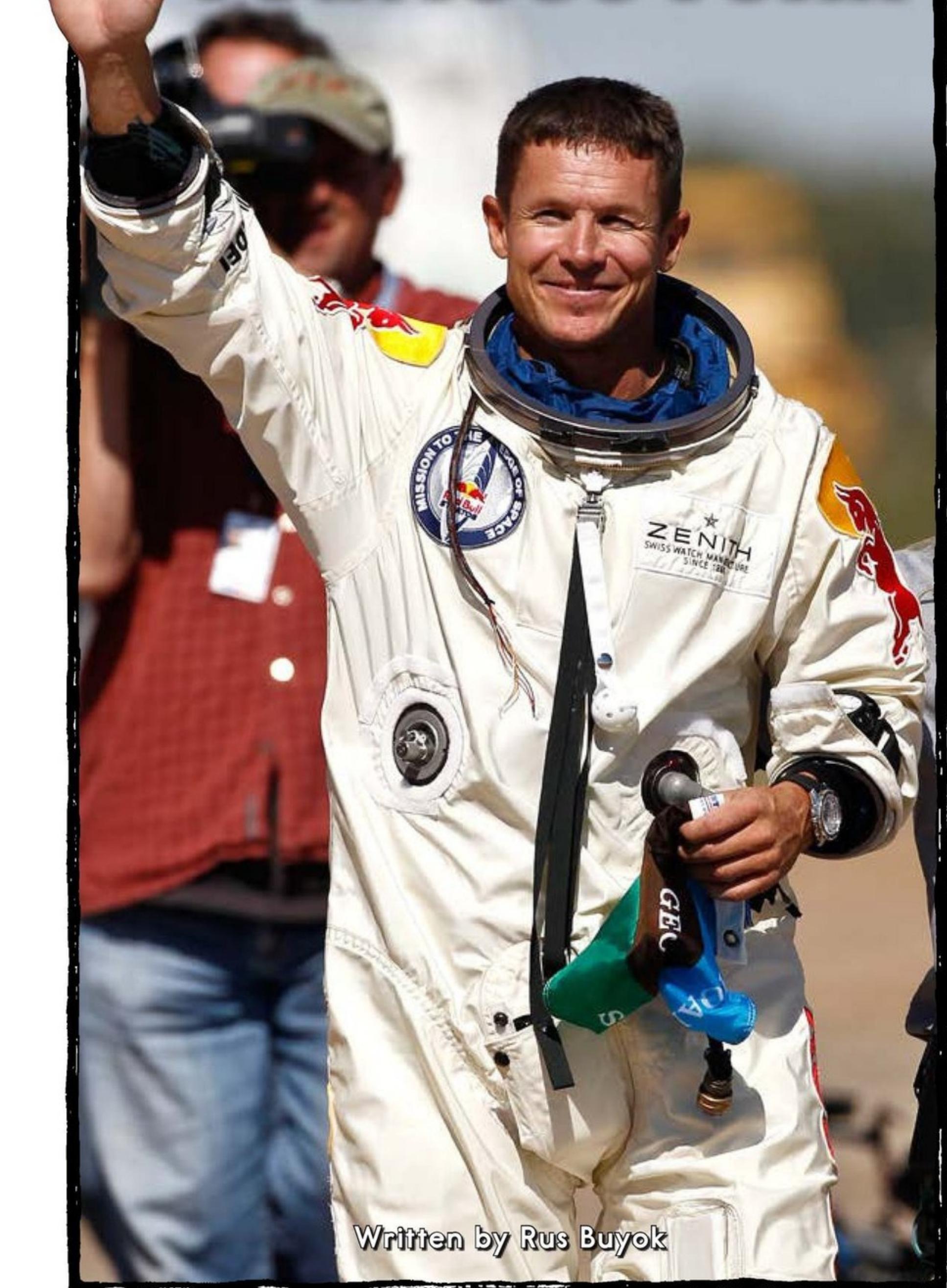


LEVELED Book • W

Fearless Felix



Written by Rus Buyok

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Felix prepares to break records.



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Felix begins his descent.



The Jump Seen Around the World

Millions of people watch live on the Internet and their televisions as a pair of white boots push out beyond the round door of the **capsule**. The curve of Earth hangs majestically in the background as the legs of the suit appear, followed by a body and a helmet. Felix Baumgartner sits on the edge as he disconnects the oxygen tube and the helmet strap. He pulls himself forward to stand on the exterior step of the capsule. The camera angle is looking down now, over his helmet, at the expanse of Earth beneath him.

The people watching hold their breath as he inches forward, gives a small salute—and steps off into space. In only four seconds, this man in the white **pressurized** suit is little more than a white dot in the distance.

Felix has jumped into the record books once again.

Who Is Felix?

Born in 1969 in Salzburg, Austria, Felix has always loved being high in the air. When he started **skydiving** as a teenager, Felix felt he had found his calling. He joined the Austrian military and spent the next five years as part of their skydiving demonstration and competition team. The **discipline** and work ethic instilled in him by the military would prove invaluable to his future career.

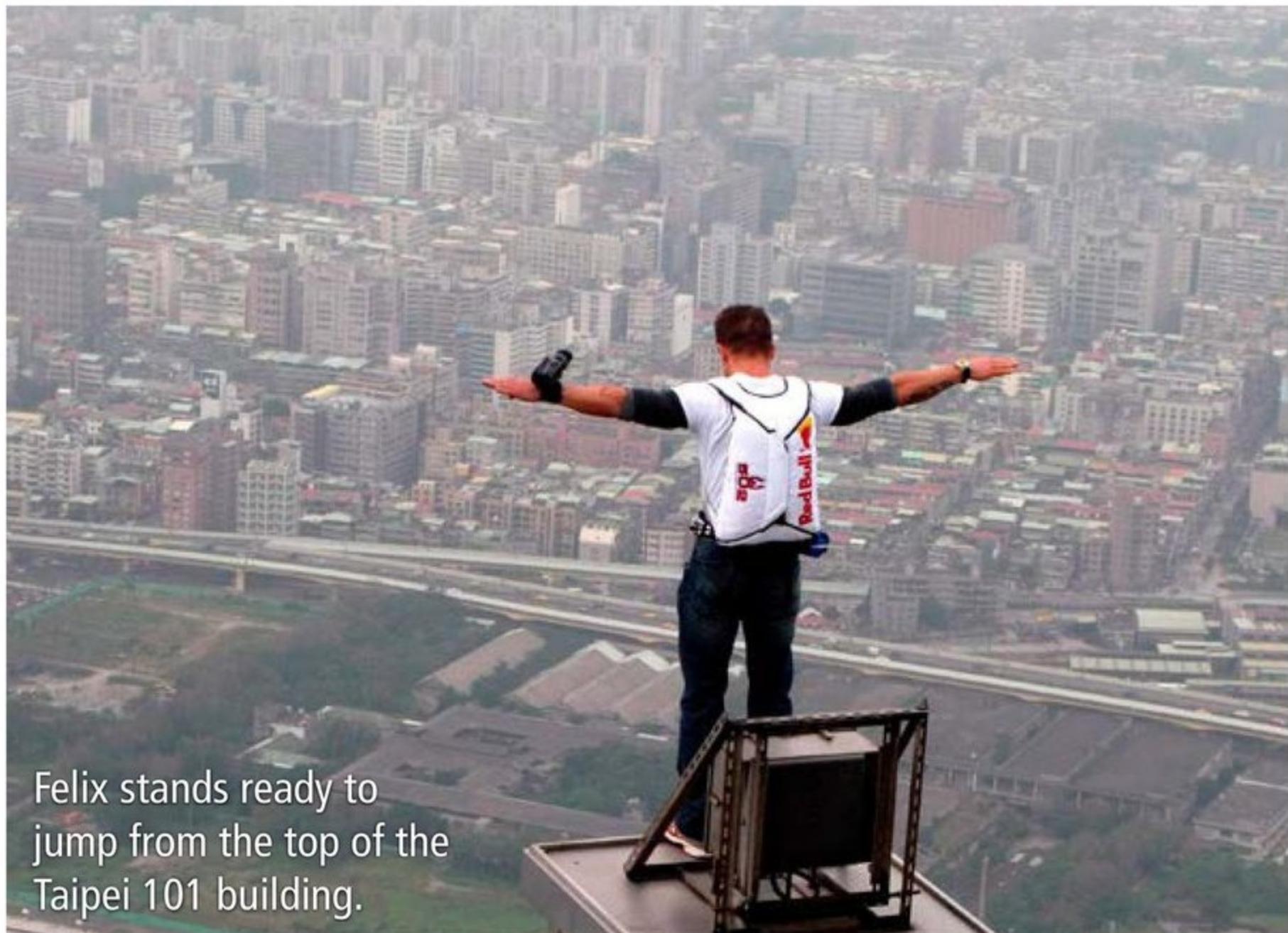


Felix at the World Stunt Awards in 2005

In his twenties, Felix began training to become a **BASE jumper**. This dangerous sport involves jumping off a cliff or high structure, such as a building or bridge, and parachuting to the ground. His time as a skydiver paid off because in 1999, Felix set his first world record.

Do You Know?

BASE stands for *Building, Antenna, Span (bridges), and Earth (cliffs)*.



Felix stands ready to jump from the top of the Taipei 101 building.

First World Record

At the time, the Petronas Towers in Kuala Lumpur, Malaysia, were the tallest buildings in the world. The authorities wouldn't allow Felix to jump off the Towers, so he disguised himself as a businessman and snuck in with a parachute hidden in a briefcase. Climbing out on a long boom used by window washers, he jumped 1,479 feet (451 m) to the ground.

Felix's record stood until 2007, when he broke it by jumping off Taiwan's Taipei 101 building, which was then the tallest building in the world. Once again slipping past security, he found his way to the top and jumped 1,670 feet (509 m) to the ground—a world record that stood until 2010.

More Records

Felix set another record in 1999 for the lowest BASE jump. During low jumps, timing is everything because fractions of a second can make the difference between **deploying** a parachute and hitting the ground. In the early-morning hours, Felix climbed a rope over the right arm of the Christ the Redeemer statue overlooking Rio de Janeiro, Brazil, and jumped off the hand, falling 95 feet (29 m)—a record that still stands.



Felix had to deploy his parachute immediately after jumping from the statue's hand.

In 2003, Felix jumped out of an airplane over Dover, England, wearing a 6-foot (1.8 m) carbon-fiber wing. He became the first man to fly across the English Channel without power and outside of a vehicle, landing near Calais, France, about 14 minutes later.

Legal Matters

Along with being extremely dangerous, BASE jumping is often illegal. Many times jumpers do not, or cannot, get permission from authorities, which means they can be arrested and charged with a crime. Felix Baumgartner has faced numerous charges for his jumps. He has paid fines and spent time in jail, including six days in jail for jumping from the Bridge of the Americas in Panama.



Felix jumps 623 feet (190 m)
into Mamet Cave
in Croatia.

Felix has continued to push the limits over the years. He jumped off the tallest bridge in the world and leaped into pitch-black caves. Between skydiving and BASE jumping, he has taken part in over 2,500 jumps.

Felix has said that he doesn't think of himself as a thrill seeker. For him, it's about planning each jump and thinking through every scenario with his team to make sure they achieve their goal and no one is hurt.



Felix shakes hands with his friend and mentor, Joe Kittinger, at a press conference in 2010.

The Stratos Project

Felix began working on his biggest jump ever in 2005. He and his sponsor set out to further scientific research and break the records for speed, **altitude**, and duration of **free fall** that Joe Kittinger set in 1960 as part of the U.S. Air Force Project Excelsior. Joe jumped out of a capsule attached to a high-altitude balloon and fell 102,800 feet (31,333 m) in a pressurized suit. His free fall lasted 4 minutes and 36 seconds, and he reached speeds of over 600 miles (965 km) per hour before pulling his main parachute.

Felix felt he could go higher and fall faster and longer than Joe—but it wouldn’t be easy. It would take seven years and a team of over one hundred people. Each piece of equipment had to be carefully designed, and each step planned to the last detail.

The Suit

It takes **specialized** equipment for a person to survive at high altitudes. At the peak of Mount Everest, which is 29,029 feet (8,848 m) high, people need oxygen tanks and extremely warm clothing to survive.

Felix planned to jump from over 120,000 feet (36,576 m)—more than four times the height of Mount Everest. At that altitude, it is extremely cold, and there is almost no air, which means no air pressure. Without protection, the liquid in Felix's body would turn to gas, killing him almost instantly. Engineers designed Felix's suit and helmet to keep his body at a constant temperature and pressure. The suit also has a variety of built-in **sensors** that gathered data during his jump for scientists and engineers to study later.

As Felix spent more time preparing for his big jump, the enclosed space of the suit began to terrify him. He had developed **claustrophobia**, which caused him to suffer panic attacks. He couldn't breathe and felt as though he might pass out. Felix's fears threatened to jeopardize the entire project—but he refused to let that happen. He worked closely with doctors and learned ways to cope with his claustrophobia.

Balloon and Capsule

Felix's team used thin plastic sheets to construct a balloon so massive that if the plastic sheets were laid flat, they would cover almost forty football fields. Once filled with helium, the balloon is thin and over fifty-five stories tall. As the balloon rises, the outside air pressure decreases, causing the helium to expand until the balloon appears full.



Inflating the balloon

The balloon lifts the 2,900-pound (1,315 kg) capsule, which keeps Felix comfortable and safe on his ascent. The capsule has four main parts: the pressure sphere, cage, shell, and base and crush pads. Each part performs a special function to protect Felix from the deadly high-altitude environment and the possibility of a crash.



Test Jumps

On March 15, 2012, after seven years of work, countless tests, and a number of delays, Felix and his team were ready for their first manned test jump. Felix boarded the capsule in the desert outside Roswell, New Mexico, and rode into the atmosphere for 1 hour and 40 minutes, reaching an altitude of 71,615 feet (21,828 m). His free fall, which lasted 3 minutes and 40 seconds, reached a speed of 365 miles (587 km) per hour. The first test jump was a complete success.

The second test jump took place on July 25, 2012. The capsule reached an altitude of 97,146 feet (29,610 m) before Felix jumped. He spent 3 minutes and 38 seconds in free fall, reaching a speed of 537 miles (864 km) per hour. While the jump was successful overall, the capsule was damaged during its landing and had to be repaired.

The First Thousand

The first 1,000 feet (305 m) of the ascent is known as the “Death Zone” because if the balloon or capsule malfunctions, Felix would not have enough time to open his parachute before hitting the ground.



The Big Jump

October 14, 2012, is a day many people will remember. Felix boarded the capsule and headed into the sky one last time. He rose 128,100 feet (39,045 m)—breaking Joe Kittinger’s record by 25,300 feet (7,711 m)—before opening the door as the world watched. After performing the final safety checks and disconnecting from the capsule, Felix stood up, saluted, and jumped.

His speed increased until he was falling at an incredible 834 miles (1,343 km) per hour—more than 70 miles per hour (113 kph) faster than the **speed of sound**—faster than anyone had ever traveled outside of a vehicle.

Speed Records

Land animal: 70 mph (112 kph) – Cheetah

Bird: 200 mph (320 kph) – Peregrine Falcon

Water vehicle: 317 mph (511 kph) – *Spirit of Australia*

Rail vehicle: 635 mph (1,017 kph) – *Sonic Wind No. 1*

Land vehicle: 763 mph (1,228 kph) – *ThrustSCC*

Free fall: 834 mph (1,343 kph) – Felix Baumgartner





Members of Felix's team watch his jump from the control room.

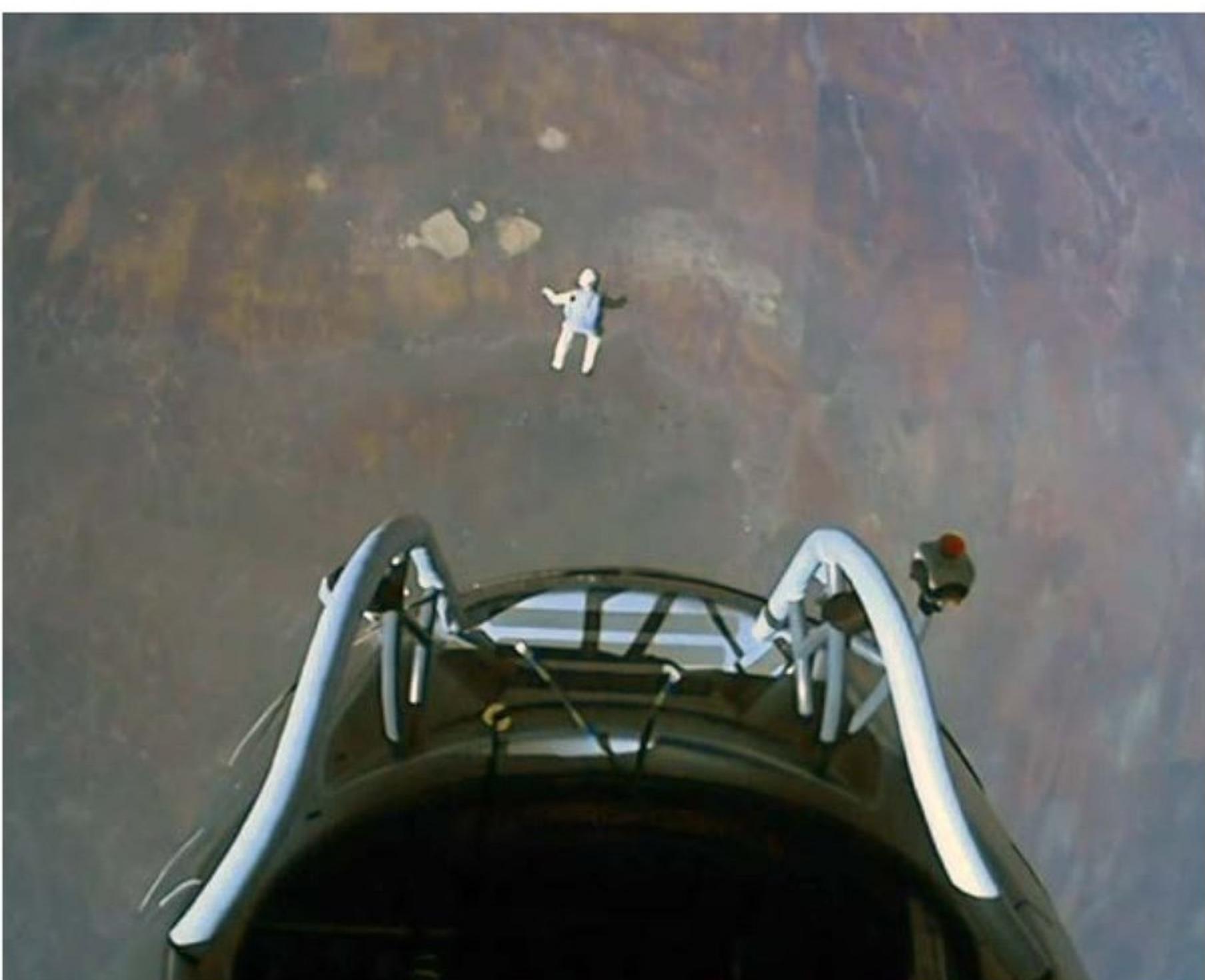
Near the end of his 4 minutes and 22 seconds in free fall (14 seconds less than Joe Kittinger), Felix began to spin dangerously. If he could not bring himself under control, the spinning would force the blood away from the center of his body—a potentially fatal problem. Felix managed to straighten himself out and deploy his parachute. Felix's team, including Joe Kittinger, cheered.

Do You Know?

On October 24, 2014, Alan Eustace broke one of Felix's records by jumping from 135,890 feet (41,419 m) above Earth. How much higher was Alan than Felix?

The entire jump took less than ten minutes, but it shattered two world records. Those ten minutes also provided scientists and engineers with huge amounts of data that they can now use to make high-altitude and space travel safer for astronauts, space tourists, and others.

While Felix is proud of these achievements, the experience humbled him. Before those ten minutes began, before the records were broken, Felix stood on the edge of the capsule and said, “I know the whole world is watching now, and I wish the world could see what I see. Sometimes you have to go up really high to understand how small you are.”



Glossary

altitude (<i>n.</i>)	height above a surface (p. 9)
BASE jumper (<i>n.</i>)	a person who jumps from cliffs or structures, such as buildings or bridges, and parachutes to the ground (p. 5)
capsule (<i>n.</i>)	the detachable compartment on a high-altitude balloon that holds people and their instruments (p. 4)
claustrophobia (<i>n.</i>)	the intense fear of closed or small spaces (p. 10)
deploying (<i>v.</i>)	moving, expanding, or putting into a certain place for a reason (p. 7)
discipline (<i>n.</i>)	the ability to continue working toward a difficult goal (p. 5)
free fall (<i>n.</i>)	a fall in which nothing slows someone or something down; the part of a parachute jump before the parachute opens (p. 9)
pressurized (<i>adj.</i>)	having an internal pressure greater than that of the surrounding atmosphere (p. 4)
sensors (<i>n.</i>)	a device that senses and reacts to a signal or a change in conditions (p. 10)
skydiving (<i>n.</i>)	a sport in which a person jumps out of an aircraft in flight and uses a parachute to descend to the ground (p. 5)
specialized (<i>adj.</i>)	created, designed, and made to perform a certain task (p. 10)
speed of sound (<i>n.</i>)	the rate of speed at which a sound wave travels; about 750 miles (1,200 km) per hour at sea level (p. 13)

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Back Cover: Felix prepares to jump during his first manned test.

Title Page: Felix spent months training for his biggest jump.

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