PHOTO: GETTY IMAGES

THE KING OF THE SKIES

HE WAS THE ORIGINAL ACTION MAN — A MASTER OF THE AIR, AND THE PERFECT GENTLEMAN ON THE GROUND. NOW, AS CHRIS WRIGHT REPORTS, JOE KITTINGER IS STILL ACTING AS GUARDIAN ANGEL TO A NEW GENERATION OF ACTION HEROES

When the Austrian skydiver Felix Baumgartner captured the world's imagination by jumping out of a balloon capsule 39 kilometres above the Earth's surface in October 2012, he broke a record that had stood for 52 years. And as he slid his boots tentatively towards a modest step outside the capsule and prepared to lean out into the hostile void, the curve of the Earth clear in the background, he heard a reassuring voice from his capsule communicator on the ground. "Our guardian angel will take care of you," the voice said. It belonged to the man who had set that record back in 1960, and had spent much of the previous 20 years trying to help others to break it. Joe Kittinger.

What was it about 1960? This was the year that Don Walsh and Jacques Piccard sank 11 kilometres to the bottom of the Mariana Trench in *Trieste*, a steel ball held together with glue. It was a year before Yuri Gagarin became the first human in space, the beginning of a decade that would see men walking on the moon.

And in this environment, powered by the twin engines of exploration and Cold War politics — in this era in which anything could be done if you tried hard enough and should be attempted anyway just to see what happened — Joe Kittinger put himself in an open gondola beneath a cavernous helium balloon, drifted more than 31 kilometres into the sky — so high, in fact, that one can't really talk of a sky, more a stratosphere — and stepped off the side with a parachute.

The will and the ability to do such a thing is one of the interesting things about Kittinger. The rest of his life, which would include a year as a prisoner of war in the notorious Hanoi Hilton in Vietnam, a solo transatlantic balloon flight and a post-retirement career as a skywriting stunt pilot, is another. But perhaps what's most remarkable of all is the idea that, having made your mark in history, you then spend decades trying to subjugate it to somebody else's achievement, urging them to do better.

BORN AVIATOR

Today, Joe Kittinger lives in the pleasant Orlando suburb of Altamonte Springs, in a house surrounded by immaculate green lawns not far from one of the countless lakes that dot central Florida, in the United States. A mighty Stars and Stripes flag hangs from a pole by the front door. He's not at all far from where he grew up on the St Johns River, and that's not such a surprise, partly because of the agreeable Florida weather, but more because his childhood here made him the man he became.

It's a long time ago now, he's 85 years old, but he hasn't forgotten what childhood gave him. "I was very fortunate," he says, settling into a deep sofa. "My father loved to fish and hunt. We had a houseboat out on the river and I spent a great deal of time out on the water. Just a wonderful upbringing. And it gave me a feeling of self-confidence, that I could take care of myself in any environment, that I wasn't afraid of nature or of living out on the land."

The slow-moving waterways of his youth sound idyllic, a childhood of stews and steel guitars and the sounds of clinking beer bottles from a riverside juke joint, together with a sense of unsupervised bravado that kids just wouldn't be allowed to be exposed to today. He would navigate the hidden channels at night in a duck boat, ferrying beer to fisherman or shining spotlights to attract and catch alligators, revelling in the joy of local knowledge, of secret ways and places, that so appeal to a child.

But it would be the air, not the water, that would prove to be his calling. "Right off the bat as a young boy I wanted to be an aviator," he says. "I had no Plan B. There was only Plan A." He was not old enough for World War II combat, but joined the recently established US Air Force in 1949. He was

fortunate to get a role at all: after the war, he says, 90 percent of the people who had been in the air corps were discharged, so there was very little demand for new pilots. He remembers, "I was lucky. I was there at the right place at the right time."

That could be the story of his life right there, because the pivotal moments of his life have been defined by being in the right place, and then grabbing an opportunity before it passed by. He spent time in Germany, Italy, Libya and Denmark, becoming a skilled test pilot along the way, but the assignment that would change his life came when he was sent back to the US in 1953 and joined the Fighter Test Section at Holloman Air Force Base in Alamogordo, New Mexico. Here, he heard about a place called the Aerospace Medical Laboratory and in particular its colourful colonel and medical doctor, Dr John Paul Stapp, whom Kittinger would later describe as "not only one of the smartest, but quite possibly the bravest man in the United States Air Force". One day Stapp called for a volunteer for a project on zero gravity, and Kittinger put up his hand. Only after being accepted did he realise that absolutely nobody else in the room had raised their hand.

He grins. "Many a time they would ask for volunteers and I'd put my hand up and look around and I was the only one," he says. "I just was always looking for a different challenge, something new, and I made a career out of volunteering for special assignments."

Stapp was considered something of a maverick mad genius, and was, Kittinger says, an early evangelist for the idea of space travel. Stapp's focus was how humans would be able to perform in a weightless, zero-gravity environment. Early tests were simple: putting a plane into a huge parabolic arc, the top of which would allow up to 20 seconds of effective weightlessness. Kittinger, as a pilot, would monitor this using a golf ball tied to a piece of string hung from the plane's rear view mirror: when it floated, he would know they had achieved zero gravity.

Then, Stapp announced a plan to send a sled down a track powered by nine rockets, at the end of which it would go from roughly Mach 1 (340 metres per second) to a full stop in about a second. He asked Kittinger to provide aerial photographic documentation, which meant being at the start line at exactly 350 miles per hour (560 kilometres per hour) when Stapp hit the switch. It took Kittinger weeks of practice to get the timing right, but only on the day of the run did he become aware that Stapp intended to be on the sled at the time.

The logic of doing so was to determine whether pilot bailout at supersonic speed was survivable. There was, he recalls, "an honest difference of opinion among the

CAPTURED BY AN AUTOMATIC CAMERA IN THE GONDOLA, THIS IMAGE IMMORTALISES THE SIGHT OF KITTINGER JUST AFTER HE LET HIMSELF FALL FROM THE EXCELSIOR GONDOLA **LEFT:** PRIOR TO TAKING OFF ON THE MANHIGH FLIGHT ON JUNE 2, 1957, KITTINGER, CLAD IN A HELMET AND PRESSURE SUIT, CHECKS THE EQUIPMENT INSIDE THE CAPSULE-LIKE GONDOLA

PHOTOS: USAF/GETTY IMAGES (MAIN); CORBIS (FAR LEFT)

medical staff of Holloman about whether it would kill him or not."

Stapp survived 41 negative *g*'s (41 times standard gravity, in the opposite direction); the Air Force had previously insisted that 18*g*'s was the limit of human tolerance. When Kittinger saw Stapp, all the blood vessels in his eyes had burst, but he was otherwise in reasonable condition. Stapp gained enormous respect from Kittinger as a man who wouldn't ask anyone to do something he wasn't willing to do himself.

OUT TO THE EDGE

Stapp's next project was called Manhigh, and this time Kittinger would be the pilot. The idea was simple: to raise a normal human being above 99 percent of the Earth's atmosphere in order to create an environment that largely represented space, and then leave him up there for a day to see what it did to the body.

Although the project officer and brain behind the system was a man called

KITTINGER ENJOYED THE EXCEPTIONAL RARITY OF A VIEW THAT NOBODY ELSE HAD EVER HAD THE LEISURE TO APPRECIATE

Dr David Simons, Kittinger was assigned to take the capsule up first on a test run. In preparation, he first had to become a rated parachutist and a licensed balloon pilot, both of which captivated him. He tested out pioneering pressure suits — "it felt as if I was wearing an octopus" — and the capsule was developed with a mixture of cutting-edge technology and simple intuition, using a 13.6-kilogram chunk of dry ice as a cooling system under the biggest balloon ever made, manufactured by a crew of young women who worked in stockinged feet and had to have fingernail checks each morning in case they punctured it. An early test flight was loaded with guinea pigs in little frame helmets.

The first flight, on June 2, 1957, looked like it was doomed. First, the VHF radio failed; he could hear his ground crew but they couldn't hear him. He resorted to Morse code: NO SWEAT. At 40,000 feet (12.2 kilometres), he noticed half his oxygen had already gone, far more than should have been the case. He didn't abort, and headed up, hitting a jet stream, which knocked the capsule over almost 90 degrees.

The balloon survived. At 96,000 feet (over 29 kilometres), Kittinger enjoyed the exceptional rarity of a view that nobody else had ever had the leisure to appreciate, "that no living creature had ever enjoyed." He later wrote, "A handful of rocket-plane pilots had arced up this high, but only for an instant." He could still see blue sky in a band along the horizon, but if he let his eyes drift up, the blue darkened to indigo and "an almost indescribable black. It was the darkest thing I'd ever seen. Blacker than ink." Yet the sun was shining. "I was able to sit there, run my eyes along the horizon, and see the curvature of the Earth. It occurred to me that I was the first man to leave Earth's atmosphere for any significant duration." He realised "that I was in a very different realm. Space. I had become the first astronaut."

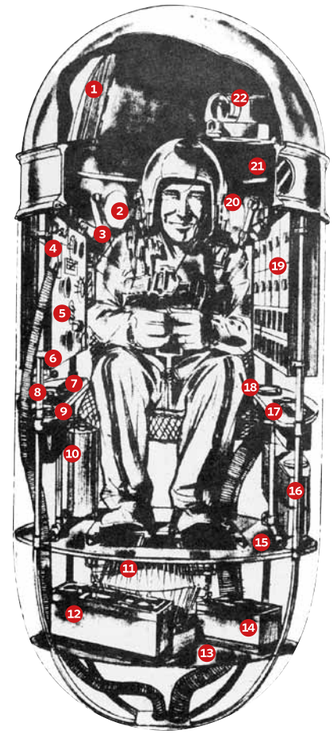
That's not a claim you'll find backed up in any textbook; received wisdom has it that Yuri Gagarin would become the first man in space four years later, when his Vostok 1 flight took him to a peak altitude of 327 kilometres, more than 10 times as high as Kittinger that day. Today, convention has it that space begins at an altitude of 100 kilometres above sea level, known as the Kármán line, while NASA and several other US agencies award astronaut wings at an altitude of 50 miles (80 kilometres).

Are they wrong, I ask? Should you be recognised as the first in space? "I should be," he says. "But NASA were very profound in their publicity and their media, and they didn't want to recognise anything anybody else had done." They weren't about to recognise Kittinger being there. "They wanted people to think everything to do with the space programme originated with NASA. And that's not so."

PHOTOS: USAF (MAIN, BOTTOM)

ABOVE: AFTER MANHIGH, KITTINGER (*RIGHT*) ALMOST DIED WHEN THE F-100 SUPER SABRE PLANE (SIMILAR TO THE ONE PICTURED) HE WAS FLYING CRASHED AND HE WAS FORCED TO EJECT. FORTUNATELY, HE SURVIVED, BUT THE INCIDENT WAS IN HIS THOUGHTS WHEN STAPP CALLED TO INVITE HIM TO WORK ON EXCELSIOR

A PEEK INSIDE THE MANHIGH GONDOLA



1. PHOTO PANEL
2. FIRE EXTINGUISHER
3. LIGHT
4. CHEMICALLY TREATED AIR
5. OXYGEN CONTROL PANEL
6. EMERGENCY OXYGEN CONTROL
7. SPOT PHOTOMETER BATTERY PACK
8. VHF RADIO
9. TELEGRAPH KEY
10. EMERGENCY OXYGEN SUPPLY BOTTLE
11. OXYGEN CONVERTER
12. 12-VOLT EMERGENCY BATTERY
13. FLOOR
14. 24-VOLT COMMUNICATIONS BATTERY
15. FLOOR
16. DRINKING WATER SUPPLY
17. RADIO HF RECEIVER
18. COLD AIR SUPPLY
19. ELECTRICAL CONTROL PANEL
20. ADJUSTABLE LIGHT
21. THERMOSTAT
22. CAMERA

TO ACHIEVE THE PROJECTS' AIMS, KITTINGER AND HIS TEAM MEMBERS FIRST HAD TO FIGURE OUT HOW TO GET HIM SAFELY TO THE RIGHT ALTITUDE. THE SOLUTION? BALLOONS
RIGHT: KITTINGER DURING THE THIRD EXCELSIOR ASCENT. HE CARRIED WITH HIM OXYGEN BOTTLES, MEASURING INSTRUMENTS, AND THE PARACHUTE SYSTEM HIS TEAM HAD INVENTED
BELOW RIGHT: EVEN WITH PHOTOGRAPHIC EVIDENCE, IT'S RATHER DIFFICULT TO GRASP THE SHEER SCALE OF THE ALTITUDE FROM WHICH KITTINGER JUMPED

PHOTOS (CLOCKWISE FROM MAIN): CORBIS; USAF **SIDEBAR:** LIBRARY OF CONGRESS (ALBERT BERRY)

With the test flight complete, two months later a modified craft would take Simons up for 32 hours to a peak of 101,500 feet (30.9 kilometres), though by then, Kittinger had been kicked from the project after irritating Simons on the first flight by ignoring his frantic requests to bring his gondola back down and messaging, "Come up and get me." This didn't matter to Kittinger; there were other adventures out there.

EVEN HIGHER

Three months after his Manhigh flight, Kittinger was flying an F-100 Super Sabre from Holloman and suffered a series of catastrophic failures, forcing him to eject, although far too low. By fluke, he didn't die, the parachute inflating and swinging just once before he hit the ground. He had the moment very much in mind a month later when Stapp called and asked him to help work on an emergency escape system in Ohio. Having just had his life saved by such a system, Kittinger thought it was fate, and accepted the new challenge.

The essence of the project was designing an ejection and parachute system that would keep an aviator properly aligned falling from very high altitude or at very high speed — no matter how badly they were spinning and even if they were unconscious. They would test it from balloons — in an open gondola, "making the trip to the edge of space in an open basket," he wrote — with a target altitude of 100,000 feet (30.5 kilometres). The project was code-named Excelsior, which has its roots in a Latin word meaning "ever higher".

The first test flight, on November 15, 1959, was almost a disaster. The faceplate fogged up for much of the ascent so he could not see his instruments, and the helmet appeared to be trying to work itself free. If it had, and the pressure seal had broken, Kittinger would have died almost instantly. Next, by the time his faceplate cleared enough to read the instruments, he had already passed his planned jump altitude. Then — in hindsight, this is darkly funny — he prepared to jump and found his backside was wedged in his styrofoam seat. It took him so long to pull himself free that he had passed 76,000 feet (23 kilometres) by the time he was ready to jump, almost five kilometres higher than intended.

He jumped, and even though everything about this experience was new — no atmosphere, so no wind and no sensation of speed — he could tell something was wrong. His stabilisation 'chute had not deployed properly and he was spinning out of control, eventually about 120 times a minute. He passed out.

The next thing he knew, he was underneath his reserve 'chute about 3,000 feet (900 metres) above the desert floor. It would take some time to work out what had happened: in wiggling his way out of the seat he had accidentally activated a jump timer, which in turn meant that his stabilisation 'chute had deployed much earlier than it was meant to, and curled around his neck. He had fallen unconscious by the time his main 'chute deployed, and when it did, it got wrapped around the first one, and neither would work. A third 'chute had been designed to deploy if the jumper did not override it, and since Kittinger was unconscious, it deployed, tangling with the other 'chutes. But a genius on Kittinger's team called Francis Beaupre had somehow foreseen exactly this possibility and designed the 'chutes with different-weighted lines so that if the parachute was fouled, some lines would snap and the reserve 'chute would be freed to open properly. It did, and this saved Kittinger's life.

THIS IS A CLASSIC TEST PILOT MENTALITY: WHEN SOMETHING GOES WRONG, EVEN ALMOST FATALLY WRONG, IT'S STILL WORTHWHILE BECAUSE YOU LEARN FROM IT

"I'm only here," he says today, "because Francis Beaupre anticipated everything." But even in this near-death experience he could see a silver lining. "Even though we hadn't intended it, Excelsior had proved exactly why we needed a stabilisation 'chute system." It is a classic test pilot mentality: that when something goes wrong, even almost fatally wrong, it's still worthwhile because you learn from it.

DCM has interviewed several people like Kittinger over the years — US Navy submersible pioneer Don Walsh, legendary test pilot Chuck Yeager, numerous astronauts — and one thing they have in common is that they hate to be described as daredevils. Instead, they take enormous pride in the rigorous due diligence they conduct, and the scrupulous testing of their equipment.

"Absolutely," he says when I put this to him. "I did not want to give the impression I was a daredevil, because I wasn't. Everything I did, I had confidence I was going to live through it or I wouldn't have done it. I love life," he emphasises.

"It takes three things to do a project like that: it takes confidence in your equipment, confidence in your team, and confidence in yourself. And that's a common denominator for any new exciting adventure or experiment. Walsh had it. Yeager had it. Armstrong had it. They went prepared, mentally and physically, or they wouldn't have done it," he asserts.

"We used to do a test, then go and have a beer and talk about 'what if'," he says. "What if this happens? What if? And in one of those what if sessions, Beaupre came up with this emergency parachute system that saved my life. Everything that could go wrong, did go wrong, but I was saved, because we anticipated it."

A month later, from the wonderfully named New Mexico town of Truth or Consequences, they tried again, flawlessly. It was time for the big day: the 100,000-foot (30.5-kilometre) jump.

READY TO FLY

On August 16, 1960, Kittinger climbed into the gondola on the bed of a truck

WHAT GOES UP, MUST COME DOWN

Parachutes, pitfalls and balloons throughout history

1785 — A TRAGIC FIRST

THE IRISH TOWN OF TULLAMORE SAW WHAT SOME CALL THE FIRST AIR DISASTER IN HISTORY. THE TOWN SHIELD DEPICTS **A PHOENIX RISING FROM THE ASHES** — IN MEMORY OF THE DAY A BALLOON CRASH BURNED DOWN AN ESTIMATED 100 HOUSES

1797 — GUTSY GARNERIN

THE WORLD'S **FIRST RECORDED SUCCESSFUL PARACHUTIST** WAS ANDRE-JACQUES GARNERIN, WHOSE BASKET CLIMBED ALMOST 1,000 METRES ABOVE PARIS, FRANCE. HE THEN PLUMMETED TO EARTH WITH A SEVEN-METRE SILK PARACHUTE BILLOWING ABOVE HIM. HE SURVIVED THE HISTORIC ATTEMPT AND SEVERAL OTHERS

1912 — PLANE SAILING

US ARMY CAPTAIN ALBERT BERRY *(PICTURED RIGHT)* BECAME THE FIRST PERSON TO SUCCESSFULLY SAY *SAYONARA* (GOODBYE) TO AN AIRPLANE AND LAND SAFELY ON THE GROUND UNDER PARACHUTE POWER. HE PLUMMETED 450 METRES FROM A BIPLANE OVER MISSOURI, IN THE UNITED STATES

1912 — AU REVOIR, EIFFEL TOWER

WHEN **FRANZ REICHELT** JUMPED OFF A PLATFORM OF THE PARISIAN LANDMARK CLAD IN WHAT LOOKED LIKE A PICNIC BLANKET, HE WAS CONVINCED HIS PRIMITIVE PARACHUTE WOULD DEPOSIT HIM GENTLY ON THE GROUND. UNFORTUNATELY, VIDEO FOOTAGE OF THE ENDEAVOUR, WHICH CAN BE SEEN ON YOUTUBE, PROVED HIM WRONG — IN A FATAL WAY

from which the balloon would launch. On the base of the gondola, somebody had attached a cheeky sign: THIS IS THE HIGHEST STEP IN THE WORLD.

Kittinger's flight should actually never have taken off; their US Air Force meteorologist had detected a changing weather pattern and was on his way to the launch site to ground the flight when Kittinger left the ground. And, once the balloon did get aloft, there was another problem: one of the gloves on his pressure suit had not inflated.

But he did not abort, and I can't help but put this to him in the face of what he has just said about not being a daredevil. You made a conscious decision to press on, I say, yet you risked permanent damage to your hand? "There was a risk," he acknowledges. "Because no one had ever gone up as high or in an altitude chamber with pressures down to what I was going to be looking at with an unprotected hand or foot. I had no idea if I was going to survive with that hand unpressurised."

But he made a choice. He knew if he radioed the ground, they would abort the flight; he also knew that the higher-ups would be unlikely to approve another flight. Also, beneath the pressure suit glove he was wearing a tight silk glove, and he reasoned that these two gloves in combination would limit how much his hand could possibly swell. "If it had been completely exposed to the environment, that would not be very good because blood boils," he says, matter-of-factly. And so, though he could no longer use his hand at all, he made his choice. "I really felt it was important that I do the job and I took a calculated risk that I would survive with my hand unpressurised."

By 7am he had reached the balloon's equilibrium: 102,800 feet (31.3 kilometres). While there, in order to get as close as possible to the planned landing target, he was required to drift for 11 minutes, which meant, at last, he could enjoy the view.

"Those 11 minutes," he says, "were the only time I had in the whole flight that I could look out and enjoy the environment and watch it. Eleven minutes just sitting there with the panorama right in front of me, because the door was open."

He looked to the horizon and saw not the edge of planet Earth but the transition from the stratosphere to the familiar robin's egg blue of the troposphere. He could see the sun, brighter than it had ever appeared, against the ebony backdrop of deep space. "Nothing is familiar where I am. Nothing seems real."

"AS YOU SIT HERE, YOU REALISE MAN WILL NEVER CONQUER SPACE. **HE WILL LEARN TO LIVE WITH IT, BUT NEVER CONQUER IT"**

For years afterwards, people will ask if he was scared. He will tell them: no, it was the quickest way down.

"I suddenly had a powerful and unfamiliar sense of my own remoteness from everything I cherished in life," he wrote afterwards. Ninety-nine percent of the atmosphere was below him. Stapp had once told him to think of it as being enveloped in cyanide: "swimming in an invisible poison that would kill you in seconds".

His ground crew urged him to say something for posterity. He looked for words and found only one appropriate: hostile. So he said, "Looking out over a very beautiful, beautiful world. A hostile sky. As you sit here, you realise man will never conquer space. He will learn to live with it, but never conquer it."

He was 80,000 feet (24 kilometres) above the clouds below, and the New Mexico desert floor was another 20,000 (six kilometres) under that. He could see cities in the distance, and it occurred to him that from that high, what he was seeing was a map. He worked his way through his checklist without his useless right hand, unplugged the various monitoring systems connected to his suit and helmet, stood up — this time without getting wedged in his seat — and turned on the cameras. Putting his toes over the edge, he said, "Lord, take care of me now."

He stepped off the platform.

If you watch the video of his jump, his height above the Earth is apparent but is also meaningless, incalculable. You can see his justification in believing himself to be an astronaut, to have visited space. Because the void he jumped into doesn't look like a sky, but a nothing, an emptiness. There is audio enabled, but nothing to hear: no wind to offer roaring resistance, nothing to indicate speed. There was a camera on his helmet too, and as he spins, different views come in and out of shot: distant clouds, the curve of the Earth, the infinite blackness of space, the blinding starburst of the sun.

Accelerating fast, gaining 35 kilometres per hour of speed each second, he rolled and looked up at the brilliant white balloon. He was in free fall for 16 seconds before a five-foot (1.5-metre) stabilisation 'chute opened, allowing him to arrest the spinning to give him control, but scarcely slowing his pace: at 90,000 feet (27 kilometres) he was moving at more than 965 kilometres per hour. But he could feel nothing, no ripple of fabric or tension on the pressure suit, no visual reference. He says he felt like he was just spinning in space, not falling.

Then, a problem. He couldn't breathe. His throat tightened as if constricted. He imagined fingers digging into his windpipe. He became light-headed. But then, within a minute, the pressure released.

Seventy thousand feet. Sixty thousand. It was minus 70 degrees Celsius. Fifty thousand feet. And here, at the inexact boundary of the stratosphere and troposphere, he finally began to feel density in the atmosphere, and to get some sense of resistance and speed. On the video, the roar of air rushing past him is deafening, frightening, but to Kittinger it meant reassurance. "The sensation was wonderfully welcome." He could feel himself slowing, to 400 kilometres per hour.

At 20,000 feet he hit the clouds. He pulled up his knees reflexively as if to brace for impact, though what he experienced

MAIN PHOTO: GETTY IMAGES. **SIDEBAR:** RED BULL MEDIA HOUSE (THE REDEEMER); GOTHMEISTER IMAGING (IGGY POP)

KITTINGER BEING HELPED OUT OF HIS PRESSURISED SUIT AFTER MAKING THE 31-KILOMETRE JUMP FROM EXCELSIOR III OVER NEW MEXICO, IN THE UNITED STATES, ON AUGUST 16, 1960

LIFE-SAVING GAS MIXTURE

NASA might have learned more from Manhigh. Kittinger and his team carried out pioneering work on a multi-gas cabin atmosphere mixing helium with oxygen, whereas NASA, in the Apollo capsules, insisted on highly flammable pure oxygen. Kittinger recalls recommending that NASA use Manhigh's research, but that it refused; the pure oxygen environment was one of the contributors to the Apollo 1 launch pad fire that killed three astronauts, two of them his friends.

WHAT GOES UP, MUST COME DOWN

PARACHUTES AND TULIPS

MARKET GARDEN WAS THE LARGEST AIRBORNE OPERATION IN MILITARY HISTORY. IT SOUGHT TO END WORLD WAR II BY CHRISTMAS OF THAT YEAR. NEARLY 35,000 ALLIED TROOPS DROPPED FROM THE SKY OVER HOLLAND, ACCOMPANIED BY 1,545 TROOP CARRIERS, 478 GLIDERS AND 1,130 FIGHTER AIRCRAFT — IN DAYLIGHT. UNFORTUNATELY, THE OBJECTIVE TO CROSS THE RHINE RIVER INTO GERMANY WAS NOT ACHIEVED

1944

ROCK ON

ALTHOUGH NOT HIGH-ALTITUDE, ROCKER **IGGY POP** IS CREDITED WITH POPULARISING THE STAGE DIVE. SINCE THE PUNK ROCK FRONTMAN FOR THE STOOGES BEGAN LEAPING INTO CROWDS, THE MOVE HAS BECOME AN ICONIC SYMBOL OF ABANDONED MUSICAL FREEDOM-SEEKING

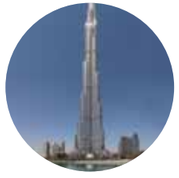
CIRCA 1968

JUMPING FROM THE REDEEMER

BEFORE HE CONQUERED LOW-ALTITUDE SPACE, FELIX BAUMGARTNER ACHIEVED THE **LOWEST EVER BASE JUMP,** LEAPING FROM A HEIGHT OF JUST 29 METRES, FROM THE CHRIST THE REDEEMER STATUE IN RIO DE JANEIRO, BRAZIL. WITH VERY LITTLE TIME FOR HIS PARACHUTE TO OPEN, THE STAKES WERE SKY-HIGH

1999

SCRAPING THE SKY



AS DAWN BROKE IN DUBAI, NOT ONE BUT **TWO MEN LEAPT OFF THE TALLEST MAN-MADE STRUCTURE ON EARTH, THE BURJ KHALIFA.** THEY BOTH MADE IT TO THE GROUND SAFELY. HAVING SURVIVED THEIR ILLEGAL ENDEAVOUR, ONE OF THEM DECIDED TO TRY IT AGAIN SOME DAYS LATER, AND WAS CAPTURED AND DETAINED IN DUBAI FOR THREE MONTHS

2008

instead was darkness. Then, at 17,000 feet (five kilometres), after four minutes and 36 seconds of free fall, the main 'chute opened. He was through the cloud, into the light, and heading home. On the tape, he shouts, "Ahhhh, boy! Lord, thank you for protecting me during that long fall."

He hit the ground hard, 13 minutes and 45 seconds after leaving the gondola. His crew landed nearby in a helicopter. There is footage of them tending to him, Kittinger grinning with what look like swollen eyes while a doctor examines his hand; in the next shot, he's bare-chested and lighting a cigarette. His hand, after some early alarm, was back to normal within hours.

Talking about it today, Kittinger isn't particularly poetic about the jump itself, having been speaking about it for 50 years, but he does have strong feelings about its

"EVERY EJECTION SYSTEM IN THE WORLD USES A SMALL DROGUE 'CHUTE FOR STABILISATION. **WHAT WE DEVELOPED IN 1959 AND 1960 IS STILL SAVING LIVES"**

legacy, and in particular in justifying it as a scientific achievement rather than just a record-breaking stunt.

"The work we did on Excelsior was directed towards escape from high altitude, and we developed a small five-foot (1.5-metre) diameter drogue 'chute that we used to get down. That system is still being used today," he says. "Every ejection system in the world uses a small drogue 'chute for stabilisation. What we developed in 1959 and 1960 is still saving lives."

KEPT CAPTIVE

With Excelsior, the defining event of Kittinger's biography was written. But the rest of his life has been vividly active too. After Excelsior, he was involved in a project to put a telescope up in a balloon in order to get through the haze of the atmosphere — a forerunner of the Hubble space telescope.

Then he turned to combat, serving in Vietnam. He conducted three tours of duty, the last of them in command of the famed 555th Tactical Fighter Squadron — the so-called Triple Nickel, tasked with shooting down MiG fighter jets. Kittinger did shoot one down, but then his luck ran out. On May 11, 1972, 17 days before the end of the third and final tour of duty, and on his 483rd combat mission, his plane was hit by a missile and

PHOTOS: USAF

ABOVE: EVEN AS A YOUNG MAN PREPPING FOR HIS FIRST PARACHUTE JUMP, KITTINGER WAS ALWAYS SEEKING UNUSUAL CHALLENGES. HIS RECOLLECTION OF HOW HE MET STAPP IS A CLEAR TESTIMONY
FAR RIGHT: KITTINGER BEING WELCOMED HOME AFTER A YEAR AS A PRISONER OF WAR IN THE NOTORIOUS HANOI HILTON
RIGHT: YOU WOULDN'T THINK THAT A RETIRED US AIR FORCE PILOT WOULD TURN TO SKYWRITING, BUT KITTINGER (*PICTURED RIGHT*) SEEMED TO ENJOY IT

he ejected at more than Mach 1. He survived the wrenching torsion of ejection; the man in the back seat, William "Tiny" Reich, did not, though Kittinger would not learn this for some time. Landing in a rice field 48 kilometres outside Hanoi, he was captured and taken to the notorious Hòa Lò, the Hanoi Hilton, where he would spend almost a year.

Kittinger was tortured in captivity, and as the most senior officer in his part of the camp, was made the commander of his colleagues, the Americans believing very strongly in preserving a military structure during incarceration. "I had never desired any command position less," he wrote later, "but I kept this feeling to myself. It was an awesome responsibility, and it weighed on me from the first moment." Today, he tells *DCM,* "It was a very difficult year, and the happiest day of my life was the day I was released as a prisoner of war."

But there was a bright side. "While I was in solitary confinement, I planned how to fly around the world solo in a balloon," he says. "I designed the capsule, the balloon, the communications, the team; that's how I kept my mind engaged."

When he got out, it would take many years to move this ambition along, but in 1984 he set off on an attempt to become the first man to fly solo across the Atlantic in a balloon. Today, he paints this as a method of gaining attention and sponsorship for a round-the-world flight, a mere stepping stone, but it was still an exceptionally daring mission. His flight plan, required by the Canadian authorities who would be in charge of any rescue mission that might be required, looked like this:

Point of Departure: Caribou, Maine
Destination: Unknown
Route of flight: Unknown
Duration of flight: Unknown
Altitude: Unknown
Fuel on board: Zero

Characteristically, the trip wasn't all smooth; his stove caught fire on the first full day and had to be thrown overboard, and the gondola was rattled by Concorde's sonic boom leading Kittinger to believe his balloon had exploded. It was constantly freezing, touching minus 28 degrees Celsius at one point, and he broke his foot falling out of the gondola upon landing. But he made it, all the way from Maine in the United States to Italy after four days aloft. He never gave up on the idea of a solo round-the-world flight — the last great ballooning prize — but his friend Steve Fossett beat him to it. "All I could do," Kittinger says, "was salute him."

Along the way, other curious ventures came and went. After leaving the Air Force he worked in the private sector for a while but got bored, and so took a far less well-paid job as a skywriter and banner-tower for Rosie O'Grady's Flying Circus in Florida. Skywriting is "trickier than it looks," he says, and "Rosie O'Grady's" turns out to be a particularly challenging thing to write. I imagine the apostrophes would be the tough bit, but he says that the real challenge is a perfectly rounded "O".

He frequently entered, and sometimes won, an annual gas balloon race known as the Gordon Bennett Cup. And, with his second wife Sherry, he spent several years doing something called barnstorming. This is a tradition of flying from town to town in old biplanes and offering people flights. They bought a plane, named it Stanley, and barnstormed their way across the United States, Sherry acting as the roustabout, collecting money and loading passengers in and out of the aircraft. Kittinger clearly had found his soulmate, and appreciated it. "I had a blast. I always had a blast if I was flying." All told, they would fly about 10,000 people.

NOT SLOWING DOWN

He has not visibly calmed. In his 80th year, having been given a hunting permit to control Florida's alligator population, he and a friend caught and wrestled a 3.6-metre alligator from the St Johns River. "I was back where I'd started," he quips.

But one other thing happened along the way. Every year from 1960, somebody would contact Kittinger saying they intended to break his record. "Most of these people," he says, "were just glory seekers or daredevils, but there have been a few serious projects."

Some he was not keen to be associated with, and they ended in disaster. The skydiver and adventurer Nicholas Piantanida was one example. "That guy called me and it was very obvious he was a wise-ass," Kittinger recalls. "He calls me and says, 'I'm Nick Piantanida, I'm going to break your record'. I said, well, good luck. He said, 'No, you don't understand. I want you to help me.'"

Kittinger, busy with other things, did not have time to help, and in any case could see problems. "I said, 'What do you know about pressure suits?' He said, 'Nothing, but if you can wear one, I can wear one.' What do you know about how hostile it is? He said, 'I don't care, if you did it, I can do it.'"

Piantanida then leaned on his union, who in turn leaned on a senator, who leaned on a general, who called Kittinger ordering him to get involved in the project; Kittinger advised him the Air Force should stay away, which it eventually did. Piantanida went on to fly a manned balloon to 123,500 feet (37.6 kilometres), a record, in February 1966, but three months later he tried to do the same thing and then jump, only for his face mask to depressurise. Piantanida landed in a coma, and died four months later.

"The poor guy had a crappy team and a crappy attitude. He was a smart-ass, and he ended up dying and leaving a wife and three kids," Kittinger says. "It was a tragedy, a horrible tragedy. But he represented the types of people that tried to get me involved,

ALIENS, HISTORY AND DOOMED AIRCRAFT

SORRY, SMITHSONIAN
If you're wondering what happened to the gondola from Excelsior, it came down and was requested by the Smithsonian for its museum. The team cleaned and painted the gondola, and put it on a C-123 aircraft — which crashed. The gondola survived that, and was patched up again. It was then put in a warehouse awaiting transport to Washington — except that the building burned down. "I guess we'd exhausted all the gondola's good luck on the project," Kittinger says wryly. "The Smithsonian never received its exhibit."

MANHIGH AND ROSWELL
As with all testing, there were mishaps on the Manhigh preparations, and on one routine balloon training flight from Holloman the gondola flipped upon landing, with the lip ending up on the head of a colleague, Dan Fulgham. He was wearing a helmet, which saved him, but all the blood vessels in his scalp ruptured and his head swelled up like a basketball. "It was grotesque. You could barely see his nose." This would have been bad enough at the best of times, but it happened near Roswell, New Mexico, the US town that will forever be connected with the supposed crash-landing of an alien spacecraft in 1947. Kittinger reckons that the sight of Fulgham with his alien-sized head, along with the wreckage of a high-altitude balloon, got wrapped up in the legend of the 1947 incident and grew from there over the years.

and he demonstrated what happens if you don't have the right team, the right approach and the right safety."

He was, though, willing to help others who appeared to have the right approach. In the early 1990s he worked for almost a year with Charles "Nish" Bruce, a high-altitude military parachutist who had been the first special forces soldier to parachute into the South Atlantic at the start of the Falklands War. Bruce was on a project backed by philanthropist Loel Guinness to jump from 130,000 feet (39.6 kilometres). Doubts about Bruce's persistent failure to take a physical led Guinness to axe the project, and Kittinger agreed. "I always felt very uncomfortable with Nish, because he wouldn't take a physical and he smoked so bad," he says. "But it could have been done, and I would have worked on it." It turned out later that there were bigger problems than the smoking; Bruce suffered bouts of

> "THEY WERE INTERESTED IN THE SAFETY OF THE JUMPER. THAT WAS PARAMOUNT: **I WAS NOT GOING TO BE ASSOCIATED WITH ANYTHING THAT WAS GOING TO GET SOMEONE KILLED"**

mental illness in the years after the project was abandoned, and in 2002 jumped out of a Cessna 1.5 kilometres above Oxfordshire in England — without a parachute.

These tragedies might have convinced Kittinger that it was better not to put anyone into harm's way by assisting them with a record attempt; after all, the fact that the record stood for 52 years shows just how difficult it was to break. "If it was easy, it would have been broken a long time ago," he says. But a couple of years after Kittinger had pulled the plug on the barnstorming and settled into proper retirement, he heard of someone new: Felix Baumgartner.

Kittinger was introduced to the project when he was contacted by David Clark, president of a company of the same name that makes pressure suits, and invited to attend a briefing on a new Red Bull-sponsored project called Stratos. The idea was to take a man higher than ever before and have him jump, not only beating Kittinger's record but also putting a man through the speed of sound in free fall.

Kittinger had been cynical of most ideas like this in the past. "Ninety-nine percent of them had not had any idea of the hostile environment that they were going to," he says. They didn't share the discipline of

DOWN-TO-EARTH ADVICE
Thanks to improvements in technology, when Baumgartner made his record jump in October 2012, his team was watching events unfold live, as they happened. Speaking to *The Daily Telegraph*, Kittinger said, "It was déjà vu for me. I knew exactly what Felix was thinking and, through the magic of a video camera, I was looking right at him." And encouragement aside, Kittinger shared some supremely practical advice too, such as: "Be sure to duck your head real low as you go out the door."

TOP: KITTINGER GUIDED THE PROJECT AND BAUMGARTNER (*PICTURED LEFT*) ACTUALLY TOOK THE MOMENTOUS STEP. ALSO KEY TO THE JUMP WERE RED BULL'S TECHNICAL DIRECTOR ART THOMPSON AND MEDICAL DIRECTOR JON CLARK (*ABOVE, PICTURED LEFT AND RIGHT, RESPECTIVELY*)

PHOTOS: RED BULL MEDIA HOUSE (MAIN AND FAR RIGHT); USAF (MANHIGH GONDOLA)

the military test pilot: small incremental steps, learning from every one. But when he heard Red Bull technical project director Art Thompson speak, he was impressed. "It was obvious to me they were interested in the safety of the jumper. That was paramount: I was not going to be associated with anything that was going to get somebody killed."

Red Bull asked if he was interested in joining, and Kittinger set a number of conditions, each of which he expected to be a deal-breaker. First, he said there had to be three jumps. Then he said there had to be two balloons at every jump, "because if the balloon gets destroyed, I don't want to have 200 people waiting six months to build another one." And the third concerned Baumgartner. "Felix was a BASE-jumper. I said my third condition is Felix can no longer do BASE jumps." They agreed to all three.

After that, Kittinger immersed himself in Stratos. "I worked on all aspects of the mission, because I had knowledge of it," he says. "No one on the team had ever made a stratospheric balloon flight, or had ever seen one." He helped make decisions on the balloons and techniques that were used, and was very busy for five years. "I designed the life support systems, the balloons; I worked on the parachutes, the pressure suits." He brought the sense of test-pilot methodical rigour from his old days. "I had a book on Felix's project with every contingency that could happen. It was close to eight centimetres thick." It was titled "*What If*".

SHARED GLORIES

But why devote so much time and effort to erasing your own mark in history? "The reason was because we were going to make a contribution," he explains. It was to help prove the next generation of pressure suits, to make measurements of physiology that had never been attempted, and of course to set a record. "It gave me an opportunity to really get involved in an interesting project," he says, adding, "And records are made to be broken. I was amazed it took 52 years."

There were many challenges along the way. "Almost everything Felix had done was a one-man show. That was a disadvantage, because you have to work as a team," he notes. One big problem came when Baumgartner developed a fear of his pressure suit, and despite having jumped in it 50 times, suddenly abandoned the project days before a decompression chamber test. "This was devastating," Kittinger recalls, "because we had worked for two and a half years. He said he couldn't do it, and he got in the airplane and went home. There went the whole programme."

They got past that, finding someone else to test the capsule and in the meantime getting performance psychologists to help Baumgartner to get over his fears. Another challenge came when the final jump was about to take place: a dust storm blew up and destroyed the balloon. Kittinger, of course, had insisted on there being a second balloon, and his prescience saved the day.

He is blunt about the role Baumgartner played. "Felix never made a decision on the whole thing," he says. "Firstly, he wasn't an engineer. Second, he wasn't a pilot. Third, he had never been on a team, and fourth, he spent most of his time in Austria anyway." The team would make decisions and expect Baumgartner to accept them, which he did.

Still, Baumgartner had the biggest job to do: jump. And jump he did, Kittinger in his ear the whole time, reassuring, cajoling, directing. "The happiest moment of all was when he landed on the ground and was safe," says Kittinger. "We were just so elated, because we had accomplished what we had set out to do."

If Kittinger sounds dismissive of Baumgartner's role, that is not the case; he is enormously complimentary, and says Baumgartner had requested Kittinger be the capsule communicator because they were comfortable with each other. But it seems clear what appealed to Kittinger: although he says he loved "helping a young man achieve his dream", it also seems to be about being at the heart of a project, making decisions, making things happen, and doing it successfully. Mission accomplished.

It is interesting, though, just how much pride it clearly gives him. At one point we ask which of the three major achievements of his life as we see it — Manhigh, the Excelsior jump, and the transatlantic balloon crossing — he is most proud of. He puts his jump at number one, but at number two, instead chooses helping Baumgartner. "It allowed me to be an engineer and go back and do what I'd done 52 years before." And maybe that's the real answer: Baumgartner helped him complete the circle — conquering the skies again. ●