

# BAIL OUT!

## Plan for the unexpected

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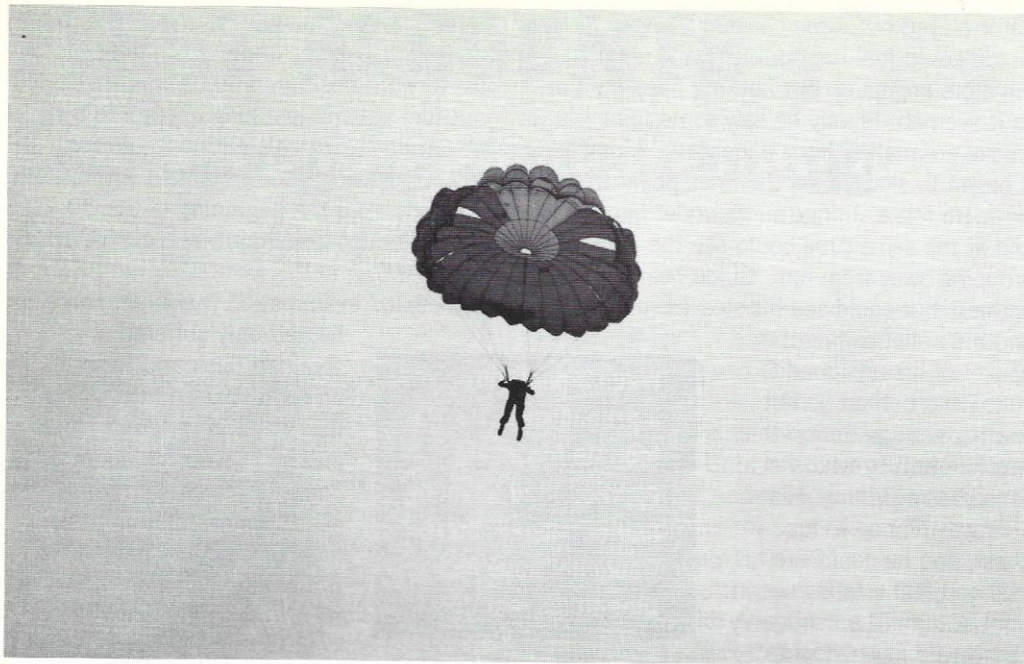
**A minimum  
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**I**t was a typical day for a weekend warrior; Guido had just completed his “day job” and was driving to the base. The weather was perfect, scattered clouds with about 10 miles visibility. He was still thinking of the day’s work when he gave an unconscious salute to the guard at the front gate. Like most other Wednesday evenings, the mission that night was a low-level flight to the bombing range. Guido was number three in a flight of four, with his best friend AJ as the flight lead. During the preflight briefing, AJ, being eager to get to the meat of the mission, sped through the required briefing items, which included the minimum bail-out altitude of 2,000 feet. It didn’t matter; Guido was still thinking about

problems at his day job.

In today’s military, navigation is easy with a GPS and an INS (inertial navigation system). The hard part is to not hit each other or, of course, the ground. Low-level navigation is a rush. Flying at 100 to 500 feet AGL at 480 knots feels the same as being in an Indy race car. The ground out to 1,000 feet in front of the fighter is a blur, as are any fellow aviators, such as buzzards or one particular 9-pound red-tailed hawk.

The thermals were typical for an early summer evening, and the soaring hawk was eyeing his prey. A mouse, currently under thick brush, was about to emerge when the hawk’s senses perceived the faint G-band radiation being transmitted from the F-16’s



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APG-68 radar. The hawk instinctively dove from its 500-foot orbit. The mouse was never aware that its life was spared by the 500-knot impact of the hawk against the leading edge of the GE F-110 engine.

Guido vaguely saw the blur in front of him, but he did hear the thump and smell the rancid bile as it circulated through the air-conditioning. He mostly sensed the deceleration as the F-16 lost power. Damn, this can't be happening to me, he thought. The radio call was next. "Knock it off (KIO), Vader 23's losing power." The rest of the flight responded in turn to KIO and started to circle the stricken Viper. Guido zoomed the aircraft to trade air-speed for altitude: 500

knots gave him 3,800 feet. He was so pre-occupied on this day that even now he was just becoming fully involved in his predicament. To Guido the whole affair seemed surreal, but this is typical when one is presented with a severely stressful situation such as the imminent destruction of a \$32 million aircraft. The official term is temporal distortion; it's when the mind perceives a slowdown in time.

Guido concentrated mostly on trying to restart the fighter's engine. Four times he went through the critical action procedure for an engine restart. It took that many times

because in his stress he fumbled the steps and got them out of sequence. On the fifth time, he called it out on the radio just in case he had screwed it up again. AJ replied that he was correct. Guido stared at the rpm gauge. It still read zero, a seized engine.

There was no chance it was going to restart, yet he couldn't believe that he was about to lose an aircraft. In 19 years of flying, he had never "bent any metal." He'd had a perfect

career until now, and his thoughts dwelled on the subject. As the aircraft progressed to its inevitable demise, it fortunately passed onto the 300-square-mile bombing range, sparing any civilian losses.

The F-16 descended to 500 feet AGL as Guido relayed his engine

instrument readings over the radio. He happened to read aloud the altimeter, "1,100 feet." Something in his mind did the math and fired off a warning to the central cranium. He looked up and got the ground rush that usually prompts a pilot to action. Oh my God, he thought, I'm low. The rest of the pilots realized it at the same time and simultaneously transmitted for Guido to eject. He never heard the desperate radio calls, for he had already started the sequence.

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tiator played out, time seemed to stop. Guido could feel the double snaps of both initiators engaging, but nothing happened or so it seemed. Finally he saw some faint smoke emanating from under the canopy as it began to slowly rise, then disappear from view. He felt a strange surge under his butt and at the same time could see the aircraft dropping away from him. Guido heard nothing, but could see his sleeves rustling and his wallet exiting the pocket of his unzipped G-suit. From behind he felt another strange thump that was followed by what he sensed as a ruffling. His chin was pinned to his chest, and he could see his legs and feet rotating out in front of him. Then suddenly he heard a loud "floump" and felt a pain in his back and groin.

Reality rushed back to real time. Jets passed him on both sides with a deafening roar. He was swinging down now and could see his former mount between his feet. It was just contacting the tops of some trees 150 feet below. The F-16 looked odd without a canopy, and he realized that eight-tenths of a second ago he was in that cockpit. Now it was cutting some major lumber. Later, investigators would marvel at how a perfect cutout of an F-16 could be imaged when looking back along the aircraft's flight path through the woods. He felt sad knowing the end was near, and his Viper met it on the side of the next up-sloping hill.

At that point, the aircraft ceased to exist as a single unit. From the front and progressing to the rear, little pieces of aircraft sprayed out in a fan in front of a fast-developing fireball. What caught Guido's attention, and everyone else's, was the boiling

red fireball now rising up to meet him. The second swing in the chute put him at his most forward position, and he was enveloped in jet-fuel plasma just long enough to test the Nomex flight suit's resistance to such an event. One swing later he landed with a thud 100 yards from the beginning of the 30- by 200-foot crater carved out by the 28,000 pound F-16.

A hospital examination that night revealed he had only suffered a sprained back and flash burns on some exposed skin. The next day I interviewed Guido, and he related the above account of his ordeal. When asked his overall impression of what he could have done differently, he said, "If you're here to fly, be totally here.

When I drove onto the airport

I was thinking of work. During the preflight briefing, as the minimum bail-out altitude was stated, my mind was elsewhere. It never occurred to me that this flight would be anything other than normal."

But abnormal it was. When the F-16 engine ground itself to a halt, there was still ample time and altitude to complete a restart and, if unsuccessful, maneuver the aircraft into a position for ejection. When a pilot perceives a ground rush, it's way too late for a safe ejection. Had anything malfunctioned, there would not have been time to correct it.

Do we as sport aerobatic pilots plan our flights? If not, we should. The purpose of a preflight briefing is to create a plan. This should especially include the unexpected. A minimum bail-out altitude is just that—a minimum. Always, the decision to egress the aircraft must be made before one leaves the ground.

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