

## Chapter 1: Hitting the Numbers

They crouch on the edge of the tarmac, a pair of great war birds anxious to spring. These aircraft have no beauty, even in a brittle metallic sense. Their slab sides and stiff angles suggest no purpose other than brutal assault. They were created only to kill.

The engineers who designed the F4 Phantom II had no interest in pointless aesthetics. Their task was to build the best fighter jet in the world. The result wasn't pretty, but it was effective. No aircraft of its day was faster or more powerful. By the time the last of them left service to slowly decay in the Arizona desert, thousands had seen service with the Air Force, Navy, and Marine Corps.

Forget the rest. Focus only on these two Phantoms. They sit in revetments just off the runway at Aviano Air Base in northern Italy. It is four thirty local time—1630 hours, military—on a chilly Saturday afternoon in November. The year is 1965. An intermittent misty rain falls from a dark, pregnant sky. Nevertheless, two pilots sit in each aircraft—on hair-trigger alert, ready to react to aggression from Warsaw Pact forces in southern Europe. At midnight they will be replaced by four more. The alert is perpetual. It won't cease until the Cold War ends, or heats to a flash fire.

Focus further. Look at the men in the aircraft on the right: young, handsome in their flight suits, lounging in their cockpit seats. The Phantom II has two pilots, one in front (the primary), and another behind him (jokingly referred to as the “guy in back,” or GIB). The primary pilot of this Phantom is First Lieutenant Randall Simms III. Just turned twenty-five, Randy has lived an almost perfect life. His wealthy family has made sure of it. The best schools, the best clothes, all has been provided. In return, he's worked hard at academics and sports, and has stayed out of serious trouble. As a young man, his even features and easy smile continue to make him popular. Dad pulled a few strings to get him into the Air National Guard after college, shielding him from any chance of setting foot in a Vietnamese rice paddy. Some would call Randy Simms lucky.

Randy's Air National Guard wing is part of a “rotational” readiness program, which sends squadrons overseas to train with regular Air Force support units. This doubles his luck since it has allowed him to see Italy on Uncle Sam's dime. The training isn't bad either. Flying over breathlessly beautiful Mediterranean scenery to bombing and gunnery practice is not a bad way to develop and sharpen combat skills. The canals of Venice are just a short train ride away. The food is great, the wine is cheap, and the bars are filled with pretty women. If it weren't for alert duty, this assignment would almost be a vacation.

The whole idea of sitting in an airplane for eight hours waiting for the world to end makes little sense to Randy. His understanding of international affairs is limited, mostly due to lack of interest. Nothing terrible is going to happen today, or any other day, he knows. Nobody could possibly be so stupid. This alert exercise is simply a waste of time—like inspections, and parades, and most of the other things the lifer military does. He decides to have a smoke, but even this small pleasure is denied him. His GIB, Jack Lander, has left the cockpit already. He'll have to wait. Bored and restless, his eyes turn to what looks to be the face of a combination lock,

set just below the center of his instrument panel. To pass the time, he begins to spin its dial, just as he and many others have done before.

Focus on that innocuous dial—white numbers etched into black Bakelite, centered with a brushed metal knob. The dial rotates with well-oiled ease, clicking busily as it moves the numbers on its face. It is part of a Permissive Action Link, also known as a PAL device. Three years ago, these devices didn't exist. After mounting requests from an increasingly nervous Congress, President John F. Kennedy mandated their installation before his untimely death. National Security Action Memorandum 160, signed by him in 1962, requires PAL devices on all nuclear bombs, warheads, mines, depth charges, and artillery shells positioned in Europe: bombs like the B43 mounted below the centerline of the Phantom where Randy sits.

There's much more to the PAL than the small dial in Randy's cockpit. Sealed within the casing of the thermonuclear bomb hanging a few feet below his seat is a complex weapon-initiating device, designed by Sandia Labs and powered by a small plutonium heat source of its own. Once activated, it will begin opening circuits to arm the bomb—actions that are essentially irreversible. Randy may be aware of all of this. Like the rest of his squadron's pilots, he has been briefed on the PAL and what it does. Still, spinning the dial hardly seems risky, even though he and the others have been warned against it. The odds against randomly finding the correct four-digit code are impossibly high (more than one hundred thousand to one at that time). Even so, the young pilot feels a small, vicarious thrill every time he twirls the PAL's dial.

The thud of boots and the sound of rustling fabric announces Jack Lander's return to the cockpit. "Man, I thought you'd never get back," Randy says without looking behind him.

"Sorry, man," Lander replies. "Had to hit the head something fierce."

"Too much vino," Randy says with a laugh. "Look, I'm going down to have a smoke." He stands, preparing to climb from the plane.

"Whoa, amigo," Lander says, pointing forward. "What's that blinking on your panel?"

Randy looks down and inspects his instrument panel. Sure enough, a small light is now pulsing with an intermittent amber glow. The light sits above and slightly left of the dial he has been spinning. The word ARMED is etched below it.

The young airman frowns. What could be wrong? "Better get the techs," he says, and clambers down the scaffold beside the plane to find a member of the support crew.

He returns quickly, followed by a gruff maintenance sergeant. They mount the scaffold and stand beside the cockpit. Randy points to the blinking amber light. "Huh," says the old noncom as he leans into the plane. "Pardon my language, sir, but you guys ain't been dicking around with the switches, have you?" He asks in a deep, rumbling drawl.

"No, Sarge," both men pipe, almost in unison. "I guess I could have hit something climbing out of the cockpit," Randy adds.

"Electrics is funny," the sergeant says, talking mostly to himself. He has been maintaining military aircraft for more than two decades. "These beasts are as much computer as airplane. Sometimes things turn on all by themselves."

The sergeant makes a decision. “Get out and stand away from the plane, gentlemen,” he tells the fliers. “I’ll turn off the cockpit circuits and restart them. That should resolve any transient current problems.”

The two pilots hurry down the scaffold and walk to the smoking area beside a nearby maintenance shack. Randy reaches into his flight suit for a cigarette and offers one to Jack as well. His GIB is visibly disturbed. “Jesus, Randy,” he whispers. “Did you see where that light was?”

Randy shakes his head in firm denial. “Look,” he says, “if that old sergeant wasn’t upset, then I’m not either. It’s like he said, just some transient current going through the panel. Maybe a bad fuse. Hell, it could be a million things.”

“But the dial ...”

Randy cuts him off. “Everybody spins that dial,” he whispers harshly. “Everybody! Do you know the odds? You’ve got more chance of winning the fucking Italian lottery than ...”

Their discussion is interrupted by the angry, gravel-crunching sound of approaching boots. The old sergeant reappears, flanked by a captain. Four armed men wearing white helmets and Air Police brassards follow behind. The group stops in front of Randy and Jack.

“Lieutenant Simms,” the captain barks, “you are detained.” He turns to the AP closest to him. “Escort this officer to the detention area. Lieutenant Lander, you are not detained, but you will remain in this area until further notice.”

“What is the charge, sir?” Randy asks as the APs surround him.

“Hell, we won’t know till it’s all over,” the captain replies, shaking his head. “For now, let’s call it misuse of government property. That should work.”

“Can’t you figure it out, son?” The sergeant says softly. “You hit the numbers. The bomb is armed. We got a NAICAP on our hands.”

Some would call Randy Simms lucky. This afternoon his luck has twisted savagely from good to very, very bad.

## Chapter 2: Acronyms

The military loves acronyms. NAICAP—Nuclear Accident (or) Incident Control Action Protocol—is a good example. The strung-together words barely hint at the mountain of activities that begin to occur immediately when a nuclear incident is reported, circa 1965.

First and foremost, all nonessential people must be evacuated from the danger zone, and the area must be fully secured. In a practical sense, this is impossible at Aviano. The base is surrounded by farms and villages. In 1965, telephone service is spotty at best in rural northern Italy. Cell phones are three decades in the future. Those desiring a private phone must pay all expenses to set up a land line, including the cost of the telephone pole itself. When the base has an alert, helicopters with loudspeakers must be flown around the Po Valley, shouting the news to service members living away from the facility.

A full evacuation would mean door-to-door announcements, delivered to every house along the myriad winding roads and paths of the valley. It would also require reporting the problem to the Italian Army, which maintains a tank training facility immediately beside the air base. It's rumored that the Italians are there to make sure no combat missions are flown from Aviano without their consent. Indeed, a quartet of AMX tanks is positioned to face the base's runway right now. No, evacuation won't happen—at least not right away.

Other activities are taking place. Word has been flashed via ultra-secure troposphere scatter radio to U.S. Air Forces Europe Headquarters (USAFE) at Ramstein Air Base in Germany: NAICAP is in effect. From there, the message will be relayed to the Pentagon, and to DASA—the Defense Atomic Support Agency, the part of the Atomic Energy Commission that deals with military matters (the Department of Energy won't be established for twelve more years). DASA will immediately forward the news to Sandia Labs, in the shadow of mountains at the edge of Albuquerque, New Mexico. A NEST (Nuclear Emergency Support Team) will be formed there and transported to Aviano as rapidly as possible.

Meanwhile, NATO strike forces must realign. The removal of the Aviano aircraft from operational status has left a gap in western Europe's defenses which must not persist. Planes from Spangdahlem Air Base in southwestern Germany are brought online to replace them temporarily. Some of these may be West German Luftwaffe F-104's, armed with U.S. nuclear weapons under U.S. supervision.

Other shifts take place. Mace cruise missiles at several clandestine European sites get target changes. Mediterranean submarine patrol vectors are subtly altered. Electronic recon planes based in Germany and Turkey are directed to "snoop" the edges of the East German and Soviet airspace, looking for any unusual military activity. The evolving incident at Aviano causes hundreds of soldiers, airmen, and sailors at locations across Europe to work through the night.

A breach in nuclear command-and-control security must be corrected. A war code has been compromised. As a result, the war codes for all U.S. nuclear weapons in Europe must be changed. In 1965, the codes are kept in sealed wafers, called "biscuits" or "cookies," issued to flight crews of aircraft carrying nuclear weapons. The biscuits are hard plastic with clear inserts.

They are color-coded—red for actual war codes, black for practice use. Upon receiving an EAM (Emergency Action Message), a pilot will break open his biscuit and extract the code, which is printed on a card within. If that code matches what he's received in his EAM, he must use it to activate his PAL device and perform his stated war mission. When not in use, the biscuits are kept in high security safes. Only those with top secret clearances are even allowed to touch them. Now, until all the codes can be reworked, and all the biscuits redistributed, control of NATO's nuclear deterrent is in jeopardy.

On the supposition that Simms or Lander (or both) might be enemy agents, the FBI is notified. An immediate investigation of each man is launched. Randy's family is interviewed in Rye, New York, as are Jack's parents in nearby Mamaroneck. By noon the next day, every teacher, sports coach, girlfriend, or other social contact these young men have ever had will have been identified, located, contacted, and interviewed by polite men in dark suits. Some will be marked for further surveillance. All will be puzzled.

At Aviano, the officers in Randy's unit, from squadron leader down, are assembled and interviewed by OSI (Office of Special Intelligence) security agents. All of both men's personal property is impounded and searched, methodically and thoroughly. Their quarters are "swept" to discover any hidden electronic equipment. Detailed notes are compiled about where the men have spent their off-duty time, which bars and restaurants they frequent, and any locals either of them keep company with. Aviano's current mayor is a Communist. Although the Italian flavor of communism is as different from the Soviet variety as light pasta is from borscht, the concept of conspiracy can't be overlooked. Nothing can be overlooked.

Finally, a tarp must be raised to conceal all activity around the Phantom II from prying eyes above. Since 1961, Zenit photo-reconnaissance satellites have regularly passed over Aviano. Though the Soviets try to mask their purpose by calling them "Kosmos" and blandly describing them as "scientific," the military are not deceived. By the time they are finally phased out in 1966, Zenit satellites will have become the most ubiquitous objects put in orbit by man.

Once all the steps that can be taken are underway, the most important work can begin: the attempt to defuse the nuclear bomb on Aviano's flight line.

### **Chapter 3: Three Visitors**

The detained alert pilot sits by himself in a windowless grey room in the Base Provost Marshal's building. The room contains a cot, but he is too upset to rest. Instead, Randy remains seated at the metal table nearby, finishing his last cigarette. He has no idea where Jack might be, but guesses his GIB is somewhere close by. Randy has already been interviewed by the captain who detained him (mostly to fill out paperwork), and by his squadron leader, Major Tanner. Neither would say anything about what's going to happen to him. He asked the major if he could call his dad.

"There's no way," Tanner replied.

"Please ..."

“Randy, it can’t be done. Not right now. It doesn’t matter anyway. He can’t help you. Not with this. I can’t help you either. You’re in big trouble. Giant trouble. You are going to have to ride this one out on your own.” He shook his head sadly.

A long, uncomfortable silence followed. “It’s not fair,” Randy finally murmured.

“You can’t think like that,” Tanner cautioned. “It won’t help you.”

“We all did it. You know that sir. We all spun that damn dial,” Randy continued, his voice rising, tears forming in his eyes. “It could have been any of us. Anybody. Even you.”

Tanner sighed and looked away. Randy’s father is both a friend and an important customer for his insurance agency, back in Westchester. “Yeah,” he said quietly, “Even me.” He rose and left the room. Since then, Randy has remained sitting at the metal table—alone with his thoughts.

Now, those thoughts tumble through Randy’s mind like small animals caught in a cage. He clings to one belief. He’s sure his dad will help him get through this awful situation, just like he did with the DUI several years back, or with that trouble at the frat party when he was in college. Once he’s past this shit storm, he decides, he’ll get out of the Air Force. He’ll go to work for his father, just as both had planned. He pushes the fear about what might happen otherwise out of his mind—but it keeps returning.

Randy’s father is wealthy and powerful. “Rockin’ Randall” (“Rock on over to Randall, roll out in your new drive!”) owns seven new car dealerships, more than a dozen used car lots, and a string of tire stores as well. His businesses dot upstate New York and neighboring Connecticut. They employ almost a thousand people. He plays golf with the governor on a regular basis. Most of New York’s congressional delegation owe him favors. Randy is sure his dad can make all this mess go away.

In the hush of the dim grey room, Randy imagines how it will be. He’ll start as a salesman, of course. Soon after that, when he’s shown what he can do, he’ll be given a dealership to run—maybe the Dodge store in Newburgh. That would be his choice. He smiles. Sure. He’ll get a little place of his own, not too close to home ...

Muttering in the hallway shatters his reverie. Harsh neon light invades the room as its door swings open again. Randy has never seen the man who enters before. He wears a dark blue work uniform with the silver oak leaf of a lieutenant colonel on his collar. He is about Randy’s height, trim, sallow complexion, intelligent brown eyes. His short, greying hair betrays his age: forty-something, a lifer for sure. The man seats himself at the table, facing him. The name plate on his breast pocket says CASSINO. Randy stiffens in his chair.

“Lieutenant, do you know who I am?” The voice is low and even. There’s an accent. New York City?

“No, sir.”

“I run munitions at this base. I’m in charge of the bomb you just activated. It’s my job to turn it off. Do you understand?” As he asks his questions, the man stares intently at Randy, as if trying to catch the young airman’s thoughts before they’re spoken.

“Yes, sir. Colonel, could I have a cigarette? I’m out and ...”

“Ask the guard when I go,” the man interrupts. “I’ve only got a few questions. Did you handle the bomb itself in any way today? Did you kick it, or step on it?”

“No, sir. I ...”

“Just listen. You spun the PAL dial, right? How often? How long?”

There’s no reason to deny it now. “I don’t know. Maybe a few dozen times. I was waiting for my GIB to get back. Maybe five, ten minutes.”

“OK. How long before you noticed the flashing light? Think hard. This is important.”

“It couldn’t have been long—a few seconds, no more. Jack saw it before I did. It went off while I was getting out of the cockpit to go for a smoke.”

The man rises at once and rushes from the room. Randy blinks, surprised at how fast the old lifer moved. The awful gravity of his situation has finally begun to sink in. Suddenly, he’s very scared. He buries his head in his hands and moans.

## Chapter 4: The Bomb

The men find Cassino at the base golf course. Despite the weather, he and his son are hitting practice shots at the driving range. The searchers pull up in a dark blue Air Force four-door truck. The driver keeps the vehicle running while the lieutenant beside him slides quickly from his seat and runs toward the pair, leaving his door open.

“Colonel Cassino,” the lieutenant says breathlessly, saluting. “Sir, you’ll have to come with me. There’s been an incident on the flight line. One of the alert planes. I’ll brief you further as we drive.”

“See that my son gets home,” the base’s chief of munitions tells the young officer. He faces his youngest son, who has recently turned seventeen. “Make sure your sisters are home,” Cassino tells him, holding his shoulder. “Tell your mother to keep everyone in the house.”

He looks directly into his son’s eyes. “Do you understand me?” He says with great intensity, then turns and hurries to the truck.

As Cassino settles into his seat, the truck begins to move. The lieutenant turns to speak to him. “It’s one of the alert planes, sir,” he says. “The pilot hit the PAL code. By accident, we think.”

“Biscuit broken?”

“No sir.”

“Are we sure the bomb is armed?”

“Yes sir, there’s no mistake. We’ve already reported the NAICAP to Ramstein.”

“OK. Make sure all the plane’s power is turned off. Get me to the flight line, but first I need to see the pilot.” Cassino says nothing more. Deep in thought, he tries to remember all his knowledge about the weapon under the alert plane—a bomb which could be ready to detonate.

Lieutenant Colonel Dan Cassino knows the B43 thermonuclear bomb well. His resume as a nuclear warrior is both extensive and spotless. If a person were to be hand-picked to address the situation in Aviano, Cassino would be a prime candidate for the job. As the truck hurries him to the flight line, he concentrates, trying to focus his experience to develop a strategy for disarming the bomb.

The B43 has been in production since 1959. Almost two thousand are operational by 1965. It is used by virtually every nuclear-capable aircraft in the U.S. Air Force and Navy inventories. Its appearance is much like any other bomb: a tapered cylinder a foot and a half in diameter and roughly thirteen feet long, with four sleek fins at its rear. It weighs about a ton and its “dial-a-yield” settings can be altered to deliver explosive power ranging from seventy kilotons (seventy thousand tons) to a full megaton (one million tons) of TNT—more than enough to destroy a Bulgarian armored column, or to close the Brenner Pass. This particular bomb is set to deliver a seven-hundred-fifty kiloton blast, which will devastate the Po Valley if Cassino and his team cannot disarm it.

Like all thermonuclear weapons, the B43 is actually two bombs, not one. The first bomb—the primary—is called Tsetse, after the small but deadly African fly. Tsetse has replaced the less reliable Python primary used in the past. It is a nickel-plated egg under ten pounds in



weight, composed mostly of plutonium and uranium, liberally salted with tritium. When this egg is imploded by the precisely timed shaped charges around it, the resulting ten-kiloton explosion is large enough, by itself, to flatten the Aviano flight line. Small nuclear bombs like the Tsetse are used by themselves in artillery shells and anti-aircraft missiles in 1965. A similar warhead tips the Davy Crockett infantry weapon, infamous for having a blast radius uncomfortably close to its two-thousand-yard range.

The second bomb, which sits behind the Tsetse, is a rod of additional fissile material surrounded by a polystyrene-wrapped cylinder filled with lithium deuteride. The whole assembly is sheathed in radiation-reflective plutonium. When the Tsetse explodes, the rod fissions as well—triggered by radiation the primary’s chain reaction generates. The rod acts as a “sparkplug,” super-heating the polystyrene around it to a hellish foam while instantaneously compressing the deuterium in the cylinder to imitate conditions at the center of a star. The resulting fusion unleashes gigantic explosive power.

There’s far more to the anatomy of a B43 than what is explained here. Krytrons, neutron generators, tritium reservoirs, beryllium reflector/tampers; all these and more contribute to the terrible outcome. Thermonuclear bombs are complex, ingenious devices in 1965. Coaxing more explosive efficiency out of each bomb built has become the dedicated goal of an army of engineers, scientists, and technicians, working at locations all around the nation.

If this bomb detonates, a new sun will rise from the crater that had been Aviano Air Base. The surrounding hills and mountains will reflect its destructive effects back toward the initial event, multiplying the devastation even further. Hard radiation generated by the blast will wither and kill any life that survived the shock and heat of the explosion. Because this will be a ground burst, thousands of tons of dirt and disintegrated structures, plants, and people will be thrown into the atmosphere. The heaviest particles will fall to earth quickly. The lighter particles, caught by wind, will drift toward Venice, Austria, and the Bavarian forests beyond—suspended in a giant pyro-cumulus cloud. This cloud, glowing with lethality, is rich with isotopes of cesium and strontium that need decades or even centuries to decay to bearable levels of radioactivity. In short, the Po Valley around Aviano will become an uninhabitable scar on the face of the Earth. Lingering effects from fallout will pollute and damage life for hundreds of miles around. Cancer rates for Italy, central Europe, and the rest of the planet will increase measurably. Cassino knows this must not be allowed to happen.

As he sits in the truck, he mentally inventories possible defusing strategies. Little can be done to physically disarm the Tsetse primary, he knows. It is a “sealed pit” device—the nuclear “pit” and its surrounding shaped charges all inaccessibly lodged in their casing. Still, if the bomb’s fuse was not completely activated it can be removed, its mechanism reset or disassembled, and the bomb will be safe. If.

The fusion bomb behind the primary can be disarmed in several ways, Cassino knows. Steel beads can be poured into the assembly, interfering with the fission-fusion reaction, causing it to fizzle instead of reacting completely, though deadly radiation will still be generated. In the proper environment, the whole assembly can be disassembled and rendered harmless. That will

work, if the bomb can be safely removed from the aircraft and transported back to a munitions bunker, shielded from the world around it. If.

His mind races. Everything depends on the fuse. If it has not been fully activated, if the power was turned off in time, much can be done. If activation has advanced beyond a certain point, if specific circuits have already been triggered, choices diminish rapidly. Too many ifs, not enough certainty. The most important job Cassino's team has right now is to trade ifs for certainty, certainty they must act upon—quickly.

## Chapter 5: Two-man Rule

As Cassino reaches the flight line, he walks from the truck to meet his team. Before interviewing the pilot, he instructed the Air Police to locate and transport two men to the flight line: Jonas Brown and Andy Gray. They are an odd pair. Brown is a very tall, very thin lieutenant with thick, prematurely grey hair, penetrating blue eyes, and a wickedly dry sense of humor. Gray is a short, stocky senior staff sergeant with more than fifteen years in the Air Force. His wry sense of the absurd is (in part) the product of his experience as an African-American in military service. Wags who know them both have developed a saying: “Gray is brown and wry, and Brown is grey and dry.” Yet, irrespective of the differences between them, these two men may be the best nuclear munitions team in Europe in 1965.

By now, a cordon of Air Police has surrounded an enormous canvas tent that now juts from the revetment, shielding the Phantom, its bomb, and any activity around them from view. No one without proper security clearance and a need to be there is allowed through its perimeter. At no time is any person allowed through alone. Those who approach the bomb must do so in teams of two, both of whom must have roughly equal knowledge of its design and assembly.

This “two-man rule” is the root of all nuclear weapons security procedures. Basically, the rule assumes that at least one of the people in any pair accessing a nuclear weapon is not a traitor. If one member proves by his actions to be an enemy agent his counterpart must immediately kill him, since both members of the dyad are required to be armed. The two-man rule is in force whenever nuclear weapons are inspected, assembled, maintained, fused, moved, or handled in any way. Cassino and his team approach the cordon. Gray and Brown will initially enter the perimeter, along with a cart of tools and diagnostic equipment they have brought with them. Their commander will remain outside, waiting for their report.

Another man is already there, in vehement argument with the sergeant in charge of the cordon’s security. “Let me in, dammit,” he growls.

Major Harry Reiss wants to enter the perimeter. He wants to see what’s going on behind the tarp. Even he is not sure exactly why. Perhaps to watch what is taking place—to know what he has not been told. Perhaps just to be able to say later on that he was there, at the center of the action.

Reiss oversees maintenance at Aviano, and he has the high security clearances that go with his job. Still, he has no proven need to know what is being done within the cordon. His name is not on the roster the sergeant in charge had been given listing people allowed through. He will not be let in.

“I’m giving you a direct order. Let me through.” Reiss continues. He is a small, wiry man, well known for his bad temper. “By God, I’ll see you busted all the way down,” he concludes.

The sergeant stands his ground. “I’m sorry, sir,” he says. “I can’t obey your order. Your name is not on the roster I’ve been given.”

“Who came up with this roster?”

“I did,” Cassino says, as he approaches with his team. “What’s the trouble, Harry?”

“Dan, I’m glad you’re here,” Reiss says, turning to meet him. “This idiot won’t let me through.”

“He can’t, Harry,” Cassino says calmly. “You’ve got no reason to be in there, no need to know what’s going on.” He turns to the sergeant. “Here’s the team. Please process them through,” he says.

As they tend to when he is angry, Harry’s eyes bulge from their sockets. “A word, please, sir,” he says harshly.

The two officers walk away from the cordon. Reiss turns to face Cassino, looking up at the taller man, hands on his hips. “This is my flight line,” he begins.

“Glad you brought that up, Major,” Cassino interjects. “We’ll need it evacuated. Completely. Except for the maintenance crew working the alert planes and the men in the tower. Right now. ASAP.”

“What the hell are you talking about, Colonel? You can’t tell me to evacuate the whole damn flight line. I’ve got lots of work going on. Important work! There’s two engines ...”

Cassino interrupts. “I just gave you an order, Major. Carry it out or call up Colonel Lisle. He’ll give you the same instructions. Do it quickly, though. We may not have a lot of time.”

“What the hell is going on?”

“I don’t intend to tell you, Harry. Not yet anyway. I can tell you it’s serious. Look, I can’t discuss this further.” Cassino turns and walks quickly back toward the security cordon. He can’t share his knowledge of the unfolding situation with anyone outside his team, having been ordered not to disclose it.

Harry walks away also, puzzled as before and now worried as well. He decides he will call Colonel Lisle, the Aviano base commander. He intends to tell him that evacuating the flight line was his idea, and that he’s already been hard at work on it. Maybe Lisle will tell him what is going on. Feeling a little better now, he hurries to his office on the other side of the runway.

Cassino stands outside the cordon, watching Gray and Brown examine the bomb—which still hangs from beneath the Phantom’s fuselage. Communications with the DASA NEST have been established. The NEST is already on its way to Aviano, crossing the Atlantic in a military passenger jet. Their ETA (expected time of arrival) at Aviano is still five to eight hours off, because they have to stop in Germany to refuel and get a new pilot. In the meantime, they advise against any attempt to unload or move the B43 until it has been determined whether the bomb is fully activated, or how far the arming sequence has progressed. If the bomb is fully armed, any movement might be enough to detonate the fuse and cause the explosion no one wants.

The men from Cassino’s team crouch beside the bomb, listening. Each has a stethoscope-like device, which they place on the bomb—about three feet from the tip of its nose.

“Hear that?” says Gray. “Something’s moving. Rotating, sounds like.”

“That’s the fuse, for sure,” Brown replies. “It’s cycling, looking for the programmed altitude. We need to tell the Colonel.”

As the men rise and walk back to the cordon’s perimeter, Cassino is reporting the situation to Colonel Lisle, who has just arrived.

“... may not be fully armed. Everything was turned off immediately when the sergeant saw the cockpit indicator flashing. If the arming cycle has not continued, we’re in good shape, sir.”

“If that’s the case, what’s your next step?” Lisle asks.

“If the bomb’s not armed, we will safely remove it from the plane, get it back to a secure area, and disassemble it. We won’t have to wait for the NEST to get here.” Cassino says. “No sweat, sir.” He looks behind him, at the men approaching. “We’ll know now,” He says, and walks toward them.

As they draw closer, Brown salutes. “What have you got, Jonas?” Cassino asks, returning his salute.

“There’s definitely something going on in there, Colonel,” Brown says. “Sounds like the fuse is cycling.”

“Sergeant Gray, do you concur?” Cassino asks.

“Yes sir, I do. The sound was unmistakable.”

“Ah, horseshit,” Cassino mutters. He turns to his team. “We need to know if the bomb is on internal power,” he says. “If it is, all bets are off. It’s completely armed. If it’s not, we can still remove and secure it.”

“How will we ...” Brown begins.

“Only one way, sir.” Gray says.

“Is all the airplane’s power off?” Cassino asks. “Are we sure?”

Both men nod.

“Then here’s what we’ll do,” Cassino continues. “Sergeant Gray, you come with me. We’re going to pull the umbilical cable that attaches the bomb to the airplane’s electrical power. If there’s no arc, that means the bomb is still using the airplane’s power, which has been turned off. So, it’s not fully armed and we can move it.”

“If it arcs?” Brown asks.

“If it arcs, that means the bomb is on internal power,” Gray explains. “That means the bomb is fully armed, ready to detonate.”

Cassino and Gray walk toward the cordon’s brightly lit perimeter. The sun is beginning to set. The men cast gigantic, impossibly long shadows on the tarmac.