When WW II ended, American engineers were able to talk with German engineers about the sweptwing concept that NACA’s Robert T. Jones promoted in 1945. They learned that the idea was conceived 10 years earlier by Adolf Buseman, and they were able to gather enough data to try the concept on the B-47, which had a 35-degree sweep (photo by Chuck Baisden courtesy of Warren Thompson).

The XB-47 first flew on December 17, 1947, with test pilots Bob Robbins and Scott Osler at the controls. (Osler was the first pilot to lose his life in a B-47 in a freak accident with the canopy.) The few people watching that day had no idea that this $13 million project would prove to be the most significant multi-jet aircraft in history and would begin a dynasty of Boeing jet aircraft extending well into the next century.
FLYING THE B-47

With its 35-degree sweptwings and six podded jet engines, the radical XB-47 owed its configuration to American genius and the design data brought in from post-WW II Germany. Testing and development would not be easy, but the Air Force would buy 2,042 (some accounts say 2,032). It served the Air Force well as a bomber, a reconnaissance aircraft, a weather plane and a test bed, and it generated a host of stories about its quirks, hazards and accomplishments.

Only some who had flown piston-engine bombers could really appreciate the wonderful qualities of the B-47. It was a mixture of advanced new design and Boeing’s experience of many years of building bombers. It inspired the building of the B-52, of course, but perhaps more important, the success of the B-47 paved the way for both the KC-135 tanker and the Boeing 707 transport, with all its follow-on designs.

For pilots who had flown the Boeing B-29 or B-50, the “Stratojet” (as it was never called by the crews) was a wonderful aircraft to fly and, I was told, much nicer than the B-29. There were usually 10 in the crew—aircraft commander, pilot, radar observer, navigator/bomardier, flight engineer, radio operator and four gunners. The flight engineer was indispensable because he kept watch over the big Pratt & Whitney R-4360 engines. By using an engine analyzer to spot an ailing spark plug or failing valve, he could ask that an engine be shut down as a preventive measure. Three-engine flights were routine but usually called for precautionary landings. Takeoffs were shorter and more precise, and both the climb-out and the descent were relatively slow. Flight altitudes depended on the missions, which ranged from seven to 14 hours in length and usually included in-flight refueling, celestial navigation and practice radar and visual bomb runs. We generally operated at around 25,000 feet, although many missions were flown at higher altitudes.

I had just become adjusted to the B-50—and in fact, had just flown my first full flight as an aircraft commander—when the word came down that we were converting to B-47s. There was a mixture of joy and panic, and for the B-47 there had only been three-man crews: aircraft commander, pilot and radar observer. The radar observer also performed the navigator/bomardier functions. In the early days of the B-47, Gen. Curtis E. LeMay intended that every member of a B-47 crew be “triple-rated,” that is, should have the training and wear the wings of pilot, radar observer and navigator/bomardier.

When the B-47s began to stream into SAC as many as 1,700 were eventually in service at one time—this was no longer possible. The advent of the B-47 had a strange effect on the squadrons. LeMay had introduced the concept of the spot promotion into SAC for especially well-qualified crews. In the B-47, the radar observer would be the key to high performance, and there began an immediate jockeying among the senior aircraft commanders to get the best radar observers for their own new crews. This resulted in a lot of hurt feelings as former crew members were abandoned, and it led to at least one fistfight, and in short, it was like the first-round draft in the NFL.

For me personally, it was bad news: I was still about 100 hours short of the minimum flying time required to enter B-47 training. I watched in dismay as the crews were rapidly formed and reconciled myself to getting some sort of staff job while building flying time in the base flight aircraft, which had Lockheed T-33s, North American B-25s, Douglas C-47s and Beech C-45s. Those fine old days, you could be current in a number of aircraft, and the base Ops people were delighted to let you have one to fly on the weekend just to log flying time.

But being young and idealistic, I got ticked off and went into the little Quonset hut where the squadron commander had an office. Fortunately, the CO was away; he would have thrown me out on my ear. But I cornered the adjudant, pounded on the desk and demanded to be sent to Wichita for B-47 training, regardless of the flying-time requirements. Shringgling his shoulders, the adjudant cut orders for me to go to McConnell AFB to the 3520th Training Wing.

I was placed with a new crew. Maj. Harold M. “Bub” McCollum, aircraft commander and Capt. John Stormer, radar observer. They were WW II veterans and very nice guys, although both probably had reservations about having a low-time first lieutenant as a pilot on a plane as sophisticated as the B-47.

For me, it was love at first sight of the B-47. The ramp at McConnell was filled with what seemed like hundreds of those beautiful aircraft, and I could not believe my good fortune in being there to fly it. McConnell had an impressive operation, with three flight sessions every day and a continuous line of B-47s taking off and landing. The ramp would shake as scores of engines were run up, sending out dark, rolling clouds of oily JP-4 exhaust that would have made an environmentalist faint. It was a hot, dry summer in Kansas, and ramp temperatures often rose well above the 100-degree mark. You could burn your hand on aircraft metal as you were predlighting, and by the time you were ready to taxi out, your flight suit was soaked with sweat. The heat caused lots of problems, including long takeoff runs, but training continued until cockpit temperatures rose above 140 degrees.

FLYING THE B-47

Most of us learning to fly the B-47 had been given a little T-33 time to become familiar with jet aircraft, but nothing could really prepare us for the performance of the B-47. First, the small crew made life and discipline much easier, but it meant much more work. The entire day before a sortie was spent planning the mission so that all three crew members knew exactly what was required of each man. You reported three hours before takeoff, and although the aircraft preflight was much easier than that of the B-50, it still took about an hour and a half to complete. Inspecting the drogue and brake parachutes was sometimes a little difficult, as the B-47 trainers at McConnell were pretty beat up, and hatches and doors did not always work without a little “chock modification” to the install.

The bicycle-gear arrangement made taxing strange to us at first, but it quickly became second nature.

In the summer, the B-47 cockpit got intolerably hot, for after we closed the canopy, the sun’s heat quickly raised the already high temperature. Sweating so profusely that the oxygen mask slipped off your face, you taxiied out to perform the required pre-takeoff checks, which were vastly simpler than those of the B-50.

Operations at McConnell were typically at fairly light gross weights, for most missions ran only
FLYING THE B-47

The B-47s airspeed was increased, and this meant that the tanker would have to begin a descent to increase its own speed. In just such a descent, I once looked up to see a big puff of black oil as the KC-97 blew its number-one engine. The KC-97 seemed to accelerate in reverse as it whipped back overhead, unable to maintain airspeed because of the loss of a power. We dived under it, lucky to have avoided a catastrophic midair collision. The swift, swept-wing KC-135 was much more compatible for refueling in flight.

My aircraft commander was a conscientious guy who made sure I got my share of takeoffs and landings, along with in-flight refueling experience. There was plenty of flying time that included some 24-hour missions—long enough to spend in an ejection seat.

In SAC, every crew position was evaluated continuously during dreaded spot checks by instructors in the squadron, by members of the Wing Standardization Board and by visiting firemen from SAC headquarters. Because of this, your performance had to stay sharp; otherwise, you could be unceremoniously removed from a crew. It turned out that we were doing pretty well as a crew, and we were given Lead Crew status—a step toward the coveted Select Crew designation, which in turn led to the possibility of spot promotions.

Despite this, I have to say that my most memorable event at Castle was bonehead mistakes I made and was lucky to survive. The first one came on a united simulated combat mission, the entire wing was launched just as it was to descend. I hooked up the emergency oxygen walk-around equipment-filled aisle, opening my ejection seat. It turned out that we were doing pretty well as a crew, and we were given Lead Crew status—a step toward the coveted Select Crew designation, which in turn led to the possibility of spot promotions.

A decision was made that the Wing would retain its combat status through the transition and keep the B-47s in operation as the B-52s came on line. This gave me time for one more adventure. We were coming back from a long mission with the fuel “right on the money,” meaning that we had enough to make the high-speed penetration, land and then shoot a few touch-and-go’s, a couple of which would be mine. In a normal B-47 descent, about 50 miles out, the aircraft was slowed to 300 knots, and the landing gear was extended to provide some

safety to open the door to get to the passageway, so I hooked up the emergency oxygen walk-around bottle, which had a nominal 10-minute duration—just enough to get down and back, or so I thought. I got all the way to the point at which I could see that the bomb-bay doors were indeed up and locked, when all of a sudden, things went black. McCarty saw that my legs had stopped moving, so he made an emergency descent. I came to at about 10,000 feet, climbed back up into my seat, and we landed. Afterward, I had a private interview with Director of Operations Col. Pat Fleming, a 19-victory ace for the Navy during WW II. He had a reputation as a disciplinarian, and I expected him to tear into me over this.

The KC-97 seemed to accelerate in reverse as it whipped back overhead, unable to maintain airspeed because of the loss of a power. We dived under it, lucky to have avoided a catastrophic midair collision.
I prayed that the rest of the ejection sequence would not follow because if it did, the upper half of my body would be blown out of the cockpit, putting a crimp in my future plans.

As I started to step up and move forward to climb in, I heard a bang; the aircraft had depressurized. I realized at once that the D-ring on my parachute handle had caught the left ejection-seat handle and initiated the ejection process. I stopped and stared down at the seat, not knowing what was going on. I prayed that the rest of the ejection sequence would not follow because if it did, the upper half of my body would be blown out of the cockpit, putting a crimp in my future plans.

The next 10 seconds seemed to take about two hours, but I finally realized that the left-hand grip was all that had moved and that neither the seat nor my upper body was going anywhere. I put the safety pin in the ejection seat, strapped myself in, and we landed. This time, I only had to talk to the squadron CO.

Despite my two misadventures, I had learned to love the B-47 and wanted to keep flying it, but first, I took the opportunity to go back and pick up my degree at the University of California at Berkeley. Then I was sent to the 4925th Test Group (Nuclear) at Kirtland Air Force Base. It was a small outfit, with two B-47s, two B-52s and a handful of Century Series fighters. The other pilots were all veterans of WWII, and most of them were high-time B-47 instructor pilots from McConnell. They were superb professionals—the very finest pilots and the finest radar observers I had ever met. The missions included the live drop of nuclear weapons, which we did in Operation Dominic, the last series of live nuclear drops in history.

I was quickly checked out as an aircraft commander and began to enjoy the B-47 even more. It was hot at Kirtland during the summer, and the field’s altitude of 5,000 feet made heavy weight takeoffs seem impossibly long. You would sit with the throttles bent forward and watch the runway markers ease by, waiting for the end of the runway, all the while knowing that after a short overrun area, there was nothing but a big rough patch of rocks and a cliff. But the B-47 would gradually accelerate, the numbers would be just right and at the last moment, the gear would lift off and you would be flying.

Most of the missions at Kirtland were shorter than the typical SAC mission. They usually involved taking off and flying to a bombing range—White Sands, Tonopah, or the Salton Sea were used most often—and setting up a pattern. The bombing range would get its telemetry set up, we’d fly a practice run or two and then come in and drop whatever it was we were carrying—bomb, missile, or test vehicle.

When things went well with the telemetry, we had often finished our mission within an hour of arriving at the range. This meant we had to burn off some fuel before landing, so we often dropped down to about 10,000 feet and cruised through whichever mountain range was nearby to check out fishing spots and even watch herds of antelope run. Then we’d go back to practice some instrument approaches and shoot a few touch-and-go’s before calling it a day.

The more I flew the B-47, the better I liked it, and I eventually felt completely comfortable in it, no matter what the mission was. It was a time when new weapons and tactics were being introduced, and we were tasked to drop everything from spiked runway penetration bombs to simulated nuclear weapons to strange shapes that were picked up in midair by Fairchild C-119s using recovery gear. We had no way of knowing it at the time, but this was the technique used to recover capsules from the Discoverer (Corona) series of spy satellites.

Of all the missions, the most fun was the low-level work done in tests of the “pop-up” technique. The mission called for a low-level approach—55 feet or less—across the desert floor at 450 knots indicated. This posed a bit of a challenge because at 440 knots, your roll rate dropped to zero due to aileron reversal. The flexibility of the wing allowed a downward-deflected aileron to produce an upward force that caused a nose-down twist of the wing. Essentially, you had no ailerons at 450 knots; if anything went wrong, all you could do was chop the throttles and pull back on the control column to climb.

It didn’t help much that the handbook noted that the flutter limit for the B-47 was 440 knots indicated. But having said all that, there was nothing more exciting than to be cleared into the range, drop down to sagebrush level and send a 450-knot blast of wind through the sand until you began the pull-up. As speed bled off, the ailerons came back into play; then, you would level off, the radar observer would drop a simulated bomb, and it was time to do it again.

I checked out as an aircraft commander in the B-52 at Kirtland and enjoyed it very much, even though it flew like a truck compared with the B-47, which was being retired. The B-47 had a relatively short service career by today’s standards; SAC phased out its last two B-47s on February 11, 1966. A few soldiered on as weather planes or test beds for a few years after that.

For some reason, the B-47 never captured the public’s imagination and was quickly forgotten—except by the people who flew it, for it made an invaluable contribution to aviation and to the defense of our nation. Fortunately, you can still see just how beautiful the B-47 was in flight in the film “Strategic Air Command,” which, despite its silly love story, portrays SAC and the B-47 in their finest hours.