



One

# Desert Jet Turner

A Perspective on Youth, Fighter Aircraft,  
and Cold War

Earl Heron A&P

Jets continue to fly because of **human attention**. Mechanics behind the scenes sweat to make it happen and experience both the joy and tragedy of fighter operations firsthand. What is it really like for these “jet turners”?

**LEARN** more about the temperament of fighter aircraft, fighter pilots and fighter mechanics.

**FOLLOW** the transition from civilian, to aircraft-maintenance student, to Cold War participant.

**SEE** a fighter mechanic’s outlook on fighter-accident investigation and how well multimillion-dollar aircraft paid for with your tax dollars were cared for.

Many mechanics have had prolific careers in fighter or test operations and then faded away, their contributions undocumented. This book marks a new day. *One Desert Jet Turner* is a frank accounting of what goes on backstage in the world of fighter aircraft. We look forward to the books of other mechanics.

- How does a mechanic feel after he loses one of his aircraft in a crash? What is it like to work with the USAF Air Demonstration Squadron (Thunderbirds)? The answers are in *One Desert Jet Turner*.
- Turning jets was an attractive technical opportunity once. How will young people in search of themselves explore careers in jet fighter maintenance now that the Cold War is over?
- This well-indexed handbook of human and technical experience is the perfect companion volume to your library of aircraft literature.

**EARL HERON** enlisted in the U.S. Air Force in the spring of 1980. He served three years as an F-4 and F-16 mechanic at Nellis Air Force Base in Las Vegas, Nevada, before accumulating more than 900 flying hours as a flight engineer on the C-130 at Pope AFB, Fayetteville, North Carolina. After six years in the Air Force, he left the military (as a staff sergeant) to complete a bachelor’s degree in technology and management. He has earned the FAA Airframe & Powerplant (A&P) mechanic certificate.

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**Using the fighter aircraft as a central theme, the author describes settings, feelings and technology associated with providing this airborne weapon for use in Cold war.**

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and Cold War

Earl Heron, A&P



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To the countless patriots who focused their technical energies while serving our country. Hopefully this book will inspire a cascade of books that spotlight their experiences.

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U.S. Air Force Photo

The Boss marches towards his pair of crew chiefs while his wingmen continue marching before making their own right-face maneuvers as they arrive at their respective aircraft. When the Boss approaches to within one step of the crew chiefs, they will spring to attention and simultaneously salute. Scenes such as this one photographed during a 1980 T-38 launch sequence inspired the author to pursue a Thunderbird position. (Nellis AFB, NV)

(Pilots from foreground to background; Commander/Leader (#1) – the late Lt. Col. D. L. Smith, Left Wing (#2) - Capt. Jim Jiggins, Right Wing (#3) - Major Jim Latham, Slot (#4) - Captain Dale Cooke, Lead Solo (#5) – Captain R. D. Evans, and Second Solo (#6) – Captain Sonny Childers. Crew Chiefs from right to left; Crew Chief (#1) - SSgt. Fred Simone, Assistant Crew Chief (#1) – Sgt. Jim Hazzard.)

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→  
**Chapter 4**

***Next Quest: The Thunderbirds***

New York City, where I grew up, is the home of a lot of stuff—but not the home of the Thunderbirds. Despite the entertainment options available within this city, the Thunderbirds created a lot of excitement when they came to town. Now you're probably expecting a story that describes my decision to become a Thunderbird soon after watching the Team<sup>77</sup> perform at Coney Island. You know, if I had seen them, I probably would have. But I never had the pleasure.

I did watch “jet” movies on TV, however. Most of my young exposure to the world was gained through a combination of television and books. Even though New York City offers a wealth of cultural and entertainment opportunities, I seldom had the opportunity to take advantage of them.

In fact, if one of my neighbors hadn't taken me to Brooklyn to join a football team, I'm not sure I would have obtained any nonschool experience. Experience like this exposed me to another concept—working with other people. I'm sure it also helped me figure out what I wanted to become. This Brooklyn football experience was an important turning point in my life.

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<sup>77</sup> From this point forward, I'll capitalize “Team” as a substitute for spelling out “Thunderbirds.”

Another turning point was my experience as a Thunderbird candidate. Not long after arriving at Nellis, some other newcomers and I were given a tour of the Thunderbirds' facility. To introduce us to the Thunderbirds, we were shown a movie that was a collage of airshow footage and behind-the-scenes views of the Team sweating hard to make sure the show went on.

It was apparent that they were a focused, committed bunch. Their conviction and privilege to operate on the cutting edge of performance before millions of onlookers impressed me. I envied their position, and became hooked and determined to become a Thunderbird.

Senior Master Sergeant Dan Newton, the highest-ranking enlisted person in my first Nellis workplace, was an ex-Thunderbird. I could see from the respect that he commanded that Thunderbird experience did wonders for one's career. Unfortunately, there were several layers of management between him and me. To acquire the skills that would help me develop into Thunderbird material, I had to be satisfied with watching him from afar.

Watching from a distance gave me the wrong impression. I chose to display exceptional military bearing and to perform my duties in a manner as near to perfect as possible. I assumed people would notice these

qualities, which would someday help me qualify to become a Thunderbird.

But there was a lot more to being a Thunderbird than what I perceived in SMSgt. Newton. Unfortunately, I would only learn of these additional requirements after visiting the Team as a “no-patcher.” I’ll elaborate later.

### **To Thunderbird or Not to Thunderbird**

Even though I had earned “9” ratings on two prior Airman Performance Reports, I had a gut feeling my next wouldn’t be as good. I needed to move to another environment to refresh my attitude. One Friday, I decided to spend my lunch hour at the Thunderbird hangar to learn more about what it was like in the Thunderbird environment, and to ask about the application process. I walked into the hangar. No one was around. After about ten minutes, a major informed me that the staff was attending a ceremony, which would be over shortly.

A door opened and a bunch of blue-suiters started piling out of a room referred to as the Perch by Thunderbirds. When I walked into the Thunderbird hangar ten minutes earlier, I felt how a person from a conservative religion might feel when he ventured into the church of a cult for the first time—uncomfortable. As if the hangar wasn’t intimidating enough, being surrounded by these strangers made me feel even more awkward.

I blurted to one Team member who was about to walk past me, “Are you a crew chief?”

“Yes,” he responded.

I could see he thought my technique was less than smooth. I told him I was interested in talking to a crew chief about joining the Team. He invited me to follow him into another area, which was a combination tool and ready room.

The crew chief, Technical Sergeant Dwight Roberts, first counseled that I should have first introduced myself, and then asked for advice about joining the Team. I acknowledged that I was impolite. Then I asked him to describe his duties, and what it was like to be the crew chief on the number one aircraft. TSgt. Roberts’s commander/leader had died only a few months earlier in a flight incident.<sup>78</sup> He was flying back seat in Lieutenant Colonel D.L. Smith’s plane when a formation of birds passed in their flight path, shortly after takeoff. The engines lost sufficient power to maintain flight, forcing the pilot and crew chief to bail out. The crew chief’s ejection was successful, but the commander/leader was killed when his parachute failed to open.

Teamwork, the number one crew chief said, was a big part of the Team’s success. He added that the travel could be taxing on a family during the show season. As he continued, other Thunderbirds milled in and out of the ready room, picking up “ditty bags” and toolboxes. Even though I had been talking to a friendly Thunderbird for about fifteen minutes, I felt uncomfortable.

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<sup>78</sup> He was obviously a knowledgeable source of Thunderbird information and would have a unique perspective.

In a strange way, many Thunderbirds seemed defensive around non-Team members. I think their attitudes were the result of the fish-bowl environment they lived in, coupled with the intermittent ridicule they had to tolerate while walking in small groups on Nellis. Ridicule, I'm sure from people who were jealous of the status of the Thunderbirds. Jim Latham, the commander/leader I would later serve under, called the Thunderbirds' critics "lightweights who can't hack our program."

Crew chief Roberts escorted me outside to watch a practice show launch. The jets were ready. As the pilots streamed out to the flight line, TSgt. Roberts called out to Major Norman Lowry, the new commander/leader, and pointed to me,

"Boss! F-16 experience!"

Maj. Lowry responded with an understanding nod and said, "We need F-16 experience!"

The enlisted members of the launch crew then began walking up to the pilots who had just arrived on the flight line to begin a greeting ritual I'll never forget. Each enlisted member approached to within two feet of the pilot and rendered a rigid salute. The pair then shared a sideways low-five, followed by an informal, somewhat familiar handshake while saying something that seemed friendly or humorous. That greeting pair then separated, and the ritual was repeated with a new officer-enlisted couple.

I had always been disappointed that there was not more respect shown by pilots towards their

maintenance and support people. This fellowship I was witnessing addressed that shortcoming and was an aspect of the Team that had attracted me in the first place.

It was apparent during this short visit that this was a special fraternity. These men and women respected one another, worked hard, played hard, and "showed" hard. The Thunderbirds were an ethic. They were patriotism personified.

The greeting ritual over, the maintenance crews assumed positions at their respective aircraft, and the six pilots formed to march in formation to theirs. All necessary people and equipment were in position. The lightheartedness was over; the concentration was on; the show was about to begin.

I'm sincere when I say that a Thunderbird show launch is one of the most attention-holding ballets I've ever seen. I emphasize ballet, because as in classical ballet, every move seemed finely coordinated, using timing, eye contact, and other forms of nonverbal communication. If you've never been to a Thunderbird airshow, go. And be sure to watch maintenance launch the aircraft. I find it just as impressive as the aerial portion of the show—especially the first time I saw it. I was mesmerized. The launch that I performed in the "regular" Air Force paled in comparison.

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**Chapter 6**

### *Airborne Transition*

**M**y classmates and I were subjected to considerable pressure during the October through December Fixed-Wing Aircraft Performance course at Altus AFB in Oklahoma. I remember one night, about 12:30 a.m., I panicked while trying to solve some performance homework problems. I woke my wife Karen to share my fear, hoping her consciousness would give me strength.

“I don’t think I am catching on to a problem and it’s already late,” I said.

She gladly rose to give me some support. With her eyes still squinting, she came to the kitchen table where I had been working and said, “Okay, Earl, show me how to do it and then I’ll show you how to do it.”

Karen didn’t pause to rephrase that or anything. She just looked up at me with an expectancy that seemed to say, “Let’s go.”

Her statement elevated my sense of humor and boosted my confidence. Karen impressed me by jumping in with both feet. In contrast to my fears, her can-do attitude made me feel like a sissy who was giving up too easily. Within thirty minutes, I did figure out how to make that performance calculation. All I needed was encouragement and the right attitude. During most of the difficulties I’ve experienced in life, encouragement

and the right attitude were all I needed to overcome obstacles in my path.

The Fixed-Wing Aircraft Performance Course, sometimes called BFE (Basic Flight Engineer Course), was an intensive program. Students drew on their strengths and character to make it through. Mom had turned me on to reading, and her contribution had a significant impact on my future because on each weekly exam, reading comprehension comprised 20 percent of the score. Since the passing grade on these tests was 75 percent, getting these questions correct was critical.

A student could only flunk one exam. Flunking a second exam would result in elimination from the program. On one exam, I had a close call, needing to get all the reading comprehension questions correct to pass. Passing the course’s requirements in the top 50 percent of the class was one of the most important achievements in my Air Force career. It gave my ego essential reinforcement.

### **“Rpm, Fuel Flow, Ignition”**

Making the transition from crew chief to flight engineer was an important experience in my personal and professional life. The associated training expanded my bank of knowledge like no other experience has, or ever will.

Flying an aircraft and understanding how its various systems function from an aviator's perspective is so technical it's almost too technical. I had taken systems knowledge associated with my crew chief job seriously. But as a flight engineer, systems knowledge took on heightened value. After all, I'd soon be flying aboard the airplane—not just maintaining it in peak condition for another professional to fly.

There was also an attitudinal shift in this career field. I discovered that flight engineers had large egos and were well reinforced and compensated. They tended to treat their subordinates well because of their own positive experience. Environment wise, it was like progressing from the hospital-orderly staff to the physician-assistant staff. The caliber of people I was about to join was unlike any other I'd previously interacted with.

### **I Thought This Was a Book About Jet Turners?**

Even though this is a book about the experience of a fighter mechanic, I'm about to spend time talking about my transition from ground pounder to aviator. This transition made me a more rounded aviation professional and will communicate many things about being a mechanic that I might have overlooked if I hadn't become a flight engineer.

### **Realizing a Long-Term Goal**

My training as an American aviator continued in January at Little Rock AFB in Arkansas, where the C-130 Flight Engineer Course was offered. I

had already learned the science of land and water survival, escape and evasion, POW resistance, and aircraft performance. Now I would learn my duties in the C-130 cockpit. Dials, gauges, all kinds of buttons, and fast decisions—I would be the man.

In flight engineer training, you advance from room to room in a building dedicated to aircrew training. Within each room is an expert who relays the nuts and bolts necessary to join the aviation fraternity. Some of these experts had better material to work with than others. Some were simply better instructors than others.

Take the performance instructor, for example. Our BFE instructors could quote performance in their sleep. So when we progressed to C-130 flight engineer training, my classmates and I were expecting someone of similar caliber. But our C-130 FE performance instructor didn't have the ability to maintain the class' attention. He also didn't take us on a "tour" of the C-130 performance book. Such a tour would have highlighted what information would prove most useful and what was just taking up space.

Fortunately, that would be the only portion of the course that disappointed me. My classmates and I pressed on. The next stage of training was the partial-task trainer (PTT). The PTT was a mock-up of a flight deck. It had switches that moved and failure lights that had to be illuminated at the right time by our PTT instructor, Mr. Shinn. He impressed me. He was from the country—West Virginia, I think. Mr. Shinn had retired after serving many years as a C-130 flight engineer and was now a civilian flight

instructor. He didn't mess around. When he asked you a question, either you were on the bull's-eye or you were off. Almost didn't cut it.

He was also skeptical about pilots. After one or two of his "There I was" stories, I got the impression that dealing with the judgment and egos of pilots would be a challenging responsibility. After highlighting a page out of the service manual that described propeller malfunctions, Mr. Shinn shared the following story:

His crew had just finished the engine run-up checklist. This checklist was a test designed to make sure the engines were in good shape prior to entering the runway for takeoff. Mr. Shinn mentioned that he wasn't satisfied with the propellers' performance during the run-up. But the aircraft commander (AC) announced that in his judgment, the concern could wait until they returned from their mission. After it was clear that the AC was going to fly the plane despite his objections, Mr. Shinn calmly disconnected his oxygen mask, put his helmet back in his helmet bag, gathered up his checklists, and disconnected his headset. He walked down the crew stairs and was just about to open the crew door to disembark, when the loadmaster ran up and said, "Okay, engineer, the pilot said that he'll take it back to parking!"

Mr. Shinn summarized by saying that had the pilot not done that, he had every intention of getting off the aircraft. He obviously had balls—big balls. This was my first exposure to the dynamics of assertiveness in the cockpit. It was another important element of the aviation perspective I was building.

## Let the Video Games Begin

We then progressed to the building that contained the flight simulators. They made the PTTs we just graduated from seem primitive. The cockpit procedures trainers (CPTs) were set up identically to a C-130 cockpit. The gauges and flight controls in the CPT fed back to computers that made the simulation closer to reality. Being a flight engineer was a heavy responsibility. It wasn't a position that all candidates could successfully fill. I later realized that like most training, the C-130 flight engineer course also served as a screening/indoctrination process.

The last phase of simulator training was the WST or weapon-systems trainer. The WST surpassed the CPT experience by adding motion and visuals. Motion was a computerized hydraulic system that created sensations of aircraft motion for the students within the simulated flight deck. Visuals were computer-generated scenes that were coordinated with both the motion and the aircraft's instruments. The flight simulator combines all of these to make flying without leaving the ground as realistic as possible.

There was another important difference. In the WST, we were paired up with pilot students for the first time. Prior to this, the other flight engineer students and I would take turns pretending we were copilots and aircraft commanders. We discovered that real pilots, despite the fact that they were students like us, had a different perspective that we'd need to grow accustomed to.

The simulations reached the stage where they no longer felt like



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