



The AMA History Project Presents: Biography of SID GATES



Written by SG with JS (01/2015), Reformatted by JS (03/2015)

The following was written by Sid Gates, with Jack Steinhauser. Sid was inducted into the 2014 AMA Model Aviation Hall of Fame. All photos and images in this biography are courtesy of Sid Gates.

Sid Gates, Aeromodeling Pioneer

Recipient, 2014 Academy of Model Aeronautics Model Aviation Hall of Fame Award

A biography by Sid Gates, with Jack Steinhauser

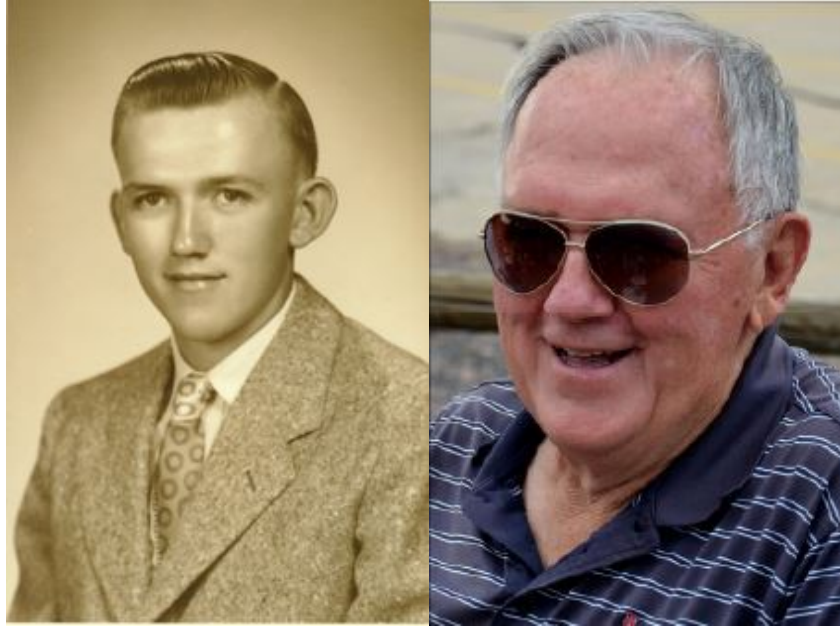
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Your initial impression of Sid Gates is of a tall, handsome man with a very polite manner, a smile on his face, and a twinkle in his eye. He is a good listener, and when he talks, he chooses his words carefully. When Sid talks, people listen. His thoughtful manner, erect bearing, deep knowledge and positive outlook make him a natural leader. Within our club, the Denver R/C Eagles Club, he is looked up to as the “Grand Old Man” of the club. Not only was he one of the initial founders of the club, but has been an active member over 55 years, frequently holding leadership positions, and always ready to help out as needed. The induction of Sid into the AMA Model Aviation Hall of Fame is a fitting way to honor this great pilot, modeler, father, husband, patriot, entrepreneur, and friend to all.

At eighty-two years of age, Sid projects radiant health and a sharpness of mind seldom found among men much younger. An active modeler, he has several projects in progress in the warren of workshops and office that he maintains in his comfortable suburban home in south Denver with his wife of 62 years, Shirley. Sid and Shirley are like royalty in our club, treated with respect and affection by all members, which they are only too happy to return.

The **AMA Model Aviation Hall of Fame award** recognizes aeromodelers whose contributions to model aviation over the years have been outstanding and have improved the sport/hobby and increased its prestige and stature. Induction into the AMA Model Aviation Hall of Fame occurs annually. Selection is based on the individual’s contributions to model aviation, which may include competition, design, experimentation, leadership, education, organization, writing, publishing, manufacturing, or other related activities. Emphasis is on the accumulated contributions in one or more of these categories over an extended period of time. The program is administered by the Academy of Model Aeronautics. The selection of inductees is determined by the Hall of Fame Selection Committee, which is composed of past presidents and a selector from each AMA district.



Early Days

Sid Gates was born at the height of the Great Depression in Newton, Kansas on June 21, 1932, to parents William Russell and Eva Margret (Hoberecht) Gates. One month after Sid was born [July 8, 1932], the Dow Jones Industrial Average would reach its lowest level of the Great Depression. One in four workers was unemployed in 1932; many unemployed families congregated in shanty towns called “Hooverilles”. Thousands of banks failed. Franklin Roosevelt was elected president in 1932, taking office the next year. It was a very uncertain and difficult time in U.S. history. Sid was one of four children born to Russell and Eva Margret in the years of the Great Depression. His two brothers, Keith and Neil, and sister, Nancy, are all living.

Sid remembers having an early interest in the hobby of model aeronautics. “When I was approximately 4 years old, I lived in San Diego, California. For my birthday, my father bought me a rubber-powered stick and tissue model. It was a fully assembled stick model covered in tissue, an ‘ARF’ model. It was my first recollection of an important toy.” He also remembers visiting an aircraft carrier in San Diego sometime in the 1930s. These early experiences ignited a passion for aviation that continues to burn brightly to the present day.

Sid recalls that the family moved to Wichita, Kansas before he started the first grade. A few blocks east of the family house was the Culver airplane plant. He could see airplanes flying nearly every day. He recalls that “on Sundays, a common outing was going to the airport and watching airplanes at the municipal airport. There were Boeing, Cessna, Beech, Stearman, and Mooney factories nearby.”

Sid’s family soon moved to a farm 60 miles northeast of Wichita, in the “Flint Hills” of Kansas. This move occurred in late 1941, just as World War II started. Sid got to see the build-up of the Army Air Force in those early days when it became apparent that hundreds of thousands of pilots would need to be trained for the conflict ahead. It was a common sight for Sid to see eight to ten

P-40s dog-fighting at altitude. Some days, Sid could see P-38s “rat-racing” around at tree-top level, usually one pair chasing another.

While watching the P-40s and P-38s fly overhead, Sid knew he wanted to fly like that if he ever got the chance. The nearest town was Cassoday, Kansas, population 100, which happened to be on the airway from Wichita to Kansas City. A flashing light serving as an airway beacon was located in a pasture about one mile south of Cassoday. One day, some Army trucks arrived at the airway beacon and started unloading equipment and tents. They mowed a strip of pasture for a runway, and shortly thereafter approximately twenty-five training planes landed. All the personnel lived in tents and the training lasted through the summer.

Sid recalls one of his earliest modeling experiences took place in those days: “When I was in the 5th grade, living on the farm near Cassoday, I built a Corsair stick and tissue model. I finished the structure but didn't know how to cover it, so I decided to wait ‘til we went to the hobby shop in Eldorado, Kansas. Since Eldorado was 18 miles away, we only went twice a year. So, when we were ready to go, I went to get my model stored away in a box and found out my dog had tried to sleep in my storage box. As a result, the model was crushed. That set my modeling career back a few years.”

Sid's father, Russell, had worked for the Santa Fe Railroad in Newton, Kansas and in California before he had a family. Like so many others, Russell was laid off when the Depression hit. He was hired back while the Gates family lived on the farm near Cassoday.

When Sid graduated from the eighth grade, his father found out he was going to be promoted and would move back to Newton in one year. Knowing this, Sid's parents sent him to Newton for his freshman year in high school. Sid lived that year with his grandparents.

The Navy built an auxiliary air field three miles east of Newton, and set up a training program for a four-engine bomber. This gave Sid another chance for airplane-watching. Sid recalls a life-changing event that occurred at this time, “Shortly after I started my freshman year, I saw my first gas-powered model airplane. Two doctors and a pair of brothers flew control line models nearly every weekend that year. I immediately knew I wanted to build models if I could ever afford them, but I dreamed that they would be remotely controlled, not on control lines.”

Sid's Education and Basketball Career

Sid moved to Newton, Kansas, to start his freshman year in high school. He lived with his grandparents until his family later moved back to Newton. High school was a period where Sid got to explore and develop his passion for athletic competition through basketball, his favorite sport. He turned out to be a superb athlete, of which he says, “I assume my talents are inherited; my father was good at sports.”

Near the end of his sophomore year, he was invited to participate in spring basketball practice. A friend, Dwight Eells, who had been on the team since eighth grade, had asked the basketball coach to give Sid a tryout in spring practice. By the time regular season started in Sid's junior

year, he was a starter for the varsity "B" team. By the middle of the 1948-1949 season, Sid was ranked as tenth man on the varsity "A" team of the Newton High School Railroaders.

Unfortunately for Sid, a senior who had quit at the end of his junior year came back out in the last half of the 1948-1949 season, and replaced Sid in that tenth spot. As only ten players were allowed to go to the state tournament at the end of the season, Sid missed playing in the state tournament as a junior. The Newton High School Railroaders went on to win the 1949 Kansas High School (Class AA) State Basketball Tournament without Sid.

Despite missing out on the glory of winning the State tournament, Sid had made his mark as a basketball player, and had a whirlwind senior year. "My senior year, I was a starter all year. The only time I sat on the bench the entire year was the finals of the state tourney; I got 4 fouls in the first 2 minutes of the game. We won 23 games and lost 4, the last loss was the finals of the state tournament."

"In high school, I played all three positions: guard, forward, and center, depending on the offense we were using at that time. My strength was rebounding and defense, but my highest scoring game, where I put 18 points on the board, came against Wellington High School. This earned us the Ark Valley League championship. We won the Hutchinson Invitational Tournament at Christmas, the Ark Valley League, the Newton regional, and second in the Kansas state tournament in March at Topeka, Kansas."

Sid's success at basketball reflected his basic skills as an athlete. He could have tackled several other sports and done well. Sid got a sense of these possibilities after basketball season had wound down. "After basketball season was over my senior year, Newton High School fielded a track team for the first time in many years. The track coach was mostly interested in the juniors so he could build for the next season. I had met a special girl who I wanted to spend time with, so I didn't press the issue with the track coach. The last week of school each year was when we held the Junior-Senior events. There was boxing, wrestling, tug-of-war across Sand Creek, volleyball, baseball, and track competitions. Since the seniors only had a couple of guys on the track team, I was recruited. I won the broad jump and high jump, and took second in the 100-yard dash."

Sid's success as an athlete also opened up the opportunity to go to college. "All three seniors on the starting basketball team were offered college scholarships. Two went to Kansas University. I had three offers and went to Wichita University. The scholarship provided books, tuition, training meal table for 5 months, and \$75.00 per month of spending money."

"At Wichita State, I was a starter for most of our games my freshman year. At that time, the NCAA did not permit freshman to play on the varsity team. Our freshman team entered the AAU regional in Wichita; we lost the championship game to a team made up of mostly Kansas University seniors who were allowed to play AAU basketball because their season was over at KU"

Attending college also opened up a future for Sid as a military pilot. “As a freshman at Wichita University, I knew I was going to serve in the military, and since I always wanted to fly, I enrolled in USAF ROTC.”

Can't You Hear the Whistle Blowing?

Sid's experiences as an athlete during his high school years had a profound impact on the course of his life and career. Later, he had a chance to capture some of the magic of this era in a video production, and assist with the publishing of a book.

“In 1999, I found out a classmate, Merle Block, had written a story about our Newton High School Class of 1950, and intended to present it at our 50th reunion the next year. I contacted Merle and he said he would like to produce it as a video, but didn't know where to get the production made. I volunteered to do the video editing, and we met in Newton, Kansas, a few months later. We worked on the video for two days, and then came to Denver and worked on it for another four days. The final cut was just over one hour. It was shown at our 50th reunion with about 75 alumni in attendance. Copies were available for purchase by class members, and the proceeds went to the class treasury.”

“While working on the class video, I found out another classmate, Curt Buller, was working on a book about our high school basketball history. Curt, his daughter, and her husband had produced a video about our basketball history. They had accumulated much more content than they could use in the video, so Curt felt he had to do a book. Curt had hired a lady to do the book layout in computer, but they were stalled when I heard about the project. I told Curt I would help him as soon as we finished the class reunion video.”

“Curt had purchased QuarkXPress, a publishing program, but he had never worked with a computer. I provided Curt with a PC, installed QuarkXPress, and taught him how to open the program and view the book pages. I planned to do the layout work in Denver, but felt Curt would have to be able to view my work at his home in Kansas. I became aware that another high school friend, Don Bafus, lived about 7 miles from Curt, and was computer literate. I recruited Don to help Curt when needed. Don was good with computer hardware, and we found out also very good with publishing programs. Don's help was invaluable in getting our book project ready for printing.”

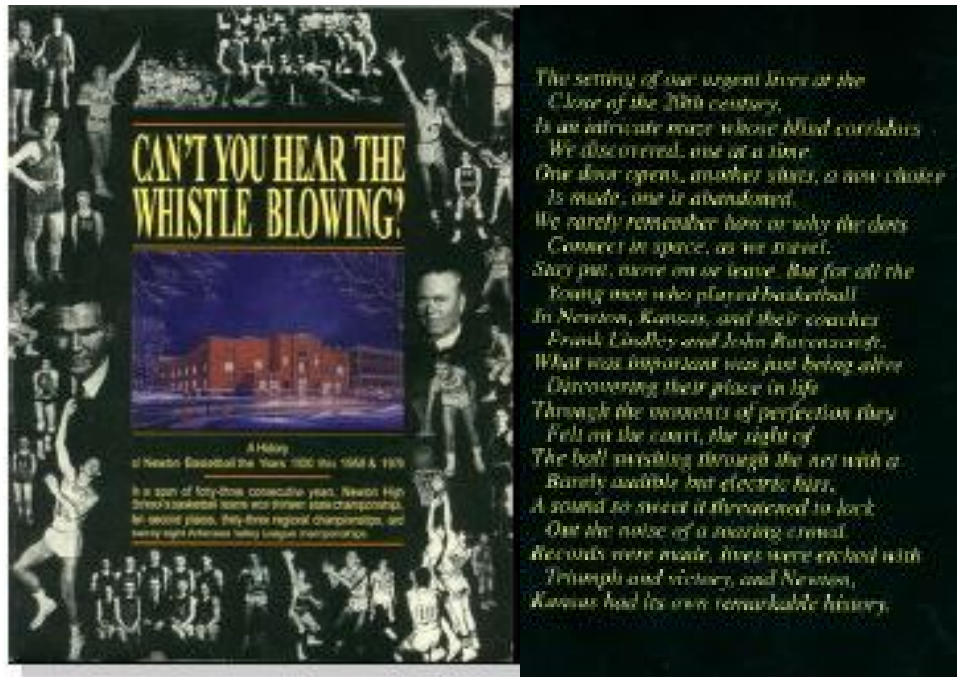
“The book, *Can't You Hear the Whistle Blowing?*, was finished and approximately 500 copies printed and sold. It covers Newton High School Basketball from 1900 thru 1958, plus 1979, in 547 pages. It now is out of print, but I still produce it as an electronic book in PDF format on CD.”



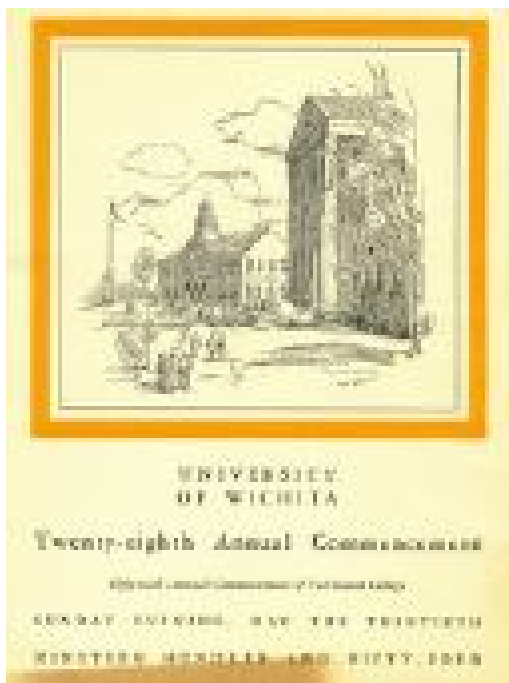
The Baptist church in Newton, Kansas where Sid and Shirley Gates were married.



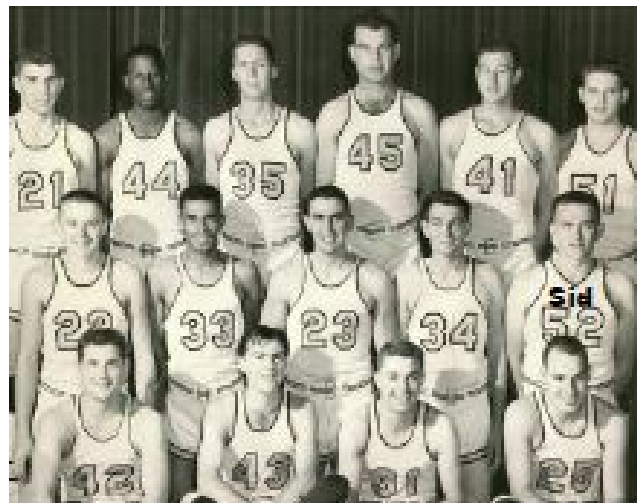
Newton High School in Newton, Kansas - "Home of the Railroaders."



Front and back cover of the book, Can't You Hear the Whistle Blowing?



1954: Sid's Commencement Program



1950s: Sid with the Varsity Squad at the University of Wichita.

That Special Girl

Sid and his wife Shirley have been married almost sixty-three years. Sid considers his decision to date Shirley, and later to marry her his “best decision ever!” The story of how they got together is worth repeating.

Every February, Newton High School had a Sadie Hawkins week where the girls asked the boys on a date. Sid smiles when he recalls that “Shirley's good friend, Loyette Polhans, wanted to ask my good friend, Dean Ortman, to the dance. They made a deal that if Shirley would ask me, Loyette would ask Dean, and we would double date. A few weeks later, Shirley gave me an ultimatum: quit dating another girl I had been seeing or else! I chose Shirley, my best decision ever.”

After high school, Shirley had planned to go to Kansas State University for a while, so she enrolled there and Sid started at Wichita University. That separation proved to be too much to bear. Sid recounts, “that lasted one semester... then she changed to Wichita second semester. We dated my entire sophomore year, and planned our wedding for the day after school ended that year.”

Sid and Shirley were married on May 31, 1952, in the Baptist church in Newton, Kansas before a gathering of family and friends. Their honeymoon lasted one day, Sunday, at their new apartment in Wichita. The next morning, Sid started a summer job at Boeing in cost accounting and Shirley went to work at her job at Beech Aircraft. Sid went on to earn his bachelor's degree in Business at Wichita University in 1954.

The chemistry between Sid and Shirley that began in their high school days clearly lasted a lifetime, and has had many beneficial impacts. Along the way, they raised two very successful children: Brian and Carol. Brian was born in Newton, Kansas on May 26, 1955, at a time when Sid was in pilot training in Malden, Missouri. At the time, Shirley was staying with her parents back in Newton, Kansas. On the weekend of July 4, 1955, mother and son joined Sid in Malden for a joyous reunion. Brian carries on his father's love for aviation as an accomplished RC pilot and a commercial airline pilot who has flown with American Airlines for 28 years.

Carol came along on June 6, 1959, and lives with her husband in Centennial, Colorado. She is responsible for accounting services at FORTRUST, a data center provider located in Denver.

Early Aeromodeling Experiences

Sid states that in grade school and high school, his three greatest passions were “airplanes, electronics, and basketball.” Through basketball, he earned a scholarship to play at Wichita University. This led to more exposure to control line, free flight, and radio control models that really marked the beginning of his serious involvement as an aeromodeler.

During his first two years at Wichita University, Sid roomed across the hall from fellow student, Sam Snyder. Sam was a very accomplished builder and flier of control line speed and scale models. Sam became Sid's first mentor in the aeromodeling hobby. Sam has had a prolific

history as an aeromodeler, and is still active today. During his sophomore year in college, Sid built control line models such as the Ring Master. Sid's first flight with the Ring Master turned out to be a learning experience.

“On my first flight, the model rolled a couple feet. I gave it up elevator, it came off the ground, immediately turned left, flew straight at me, and crashed. I didn't know about weighting the outside wing to counteract torque. After hearing from my flying buddies that this was the solution, I thought about it and decided, ‘why add weight? I will just fly the other direction and torque will keep the wires tight!’ That worked until I started flying combat with other guys, and I had to change my direction of flight.”

On Saturdays, Sid and other students who were modelers would gather on the WU campus and fly “Free for All” combat. This was truly a free-for-all; they would accept any airplane with any engine. To fly, you just fire up and jump into the circle at any time. As could be expected, Sid says, “There were lots of mid-air collisions.”

Sid started to design and build his own aircraft at that time: “During that year I designed and built my first scratch-built model, a flying saucer. It lasted a half lap of the 60-foot control line circle before crashing. The next year, 1953, I built my first RC model, a Trixter Beam. First attempts at flying this model resulted in stalls and crashes. It became obvious to me that I didn't know how to trim a model airplane, so I built a ‘cabin free flight’ and learned how to trim it out for free flight.”

The early days of Sid's career in aeromodeling also brought with it the gift of friendship. Some of Sid's great friends from these days include Lou Hurst of Wichita, Kansas, whom he describes as a “fierce competitor in control line combat, but would help you any way he could”; Albert Alexander, who “loaned me his Babcock transmitter when I couldn't afford one”; Bob Elliott of Wichita, who “taught me some aerodynamics, and helped source model supplies”; and Sam Snyder of Wichita, who “taught me many modeling skills, building and finishing.”



Sid and Shirley Gates, on their wedding day and today.



The Allure of Radio Control

Sid began experimenting with radio control while in college, demonstrating a combination of curiosity and problem-solving abilities that would serve him well throughout his life. “For a radio, I bought a Babcock receiver and borrowed a transmitter from a model friend, Albert Alexander, who was a couple years older and had a full-time job. I was scheduled to graduate in 1954 and would be going on active duty in the USAF, so I needed my own transmitter. I took his transmitter to the local radio amateur parts shop and asked the clerk to “sell me all the parts in this transmitter,” figuring I could just copy what I saw and have my own working transmitter. I built the transmitter in a couple of days, turned it on, but there was no radio signal out. To diagnose and solve this problem I needed some test equipment, so I ordered a Heath Vacuum Tube Volt Meter kit. It arrived and I built it that evening. The next night, I discovered a shorted tube socket in my scratch-built transmitter. I replaced the shorted socket, and now my radio worked.”

In those early days of radio-controlled models, Sid and his modeling buddies spent much of their energies working on single-channel models called “fly-a-ways”. These models were launched and flew until they ran out of fuel. Later, a second channel was added that regulated power. On a well-trimmed plane, an accomplished pilot could exercise a remarkable degree of control, even doing touch-n-go landings. Of course, there were lots of things that could go wrong, and many of the fly-a-ways lived up to their name by flying away from the launch site and ending up in farmers’ fields.

Sid has fond memories of his days with these early radio-controlled planes. “Fly-a-ways were the norm until the early 60s. When we lost a model in a wheat field, we could usually spot it from the air. Our local Cessna 172 owner spent a lot of time helping us find fly-a-ways. In corn fields, finding lost models was tougher, as a plane could fall between the rows and be invisible from the air. To find these planes, we had to develop a sophisticated ground search procedure. Two or more guys would separate just far enough so you could still see each other, then walk the field until the model was found. One time, I tried a divining rod normally used for “witching” water wells. We put some glow fuel on the rod to see if it would point the way to our lost plane, but this approach proved unsuccessful. When I got one fly-away back from some kids who found it, I found they had put the landing gear back on my model with 12 penny nails. One nail had penetrated the receiver case but missed the vital parts.”

Given the unpredictability of fly-a-way flights, the hobby naturally led to some interesting, sometimes humorous, stories. “One evening I wanted to do a quick demo flight, so I went to a cow pasture just outside of Newton. While I was flying, the herd of cows gathered right under my flight path watching the model. There was no place to land except on the cows. When I landed on a cow’s back, the herd scattered! Fortunately, the model was undamaged and survived to fly another day. My son, Brian, had a fly-a-way fly away from the original Denver RC Eagles Belleview field one day. We chased it south to County Line Road and it was still going strong. Three months later, a farmer from Castle Rock found it in his field and returned it to Tom Thumb Hobby Shop in Denver.”

The allure of using a transmitter to control a model aircraft in more sophisticated ways exerted a powerful pull on Sid. His curious mind just could not let this idea go, no matter how much frustration was involved in trying to develop a reliable radio control system. “While in pilot training, I occasionally had time to try to fly RC but with little success. When I was stationed at Rome, New York, I had the opportunity to attend the HOB0 Meet at Syracuse. There I saw Hal DeBolt flying with an eight-channel Bramco reed system, and Walt Good flying his Two Tone Pulse Width proportional system. I went home and immediately started building the Good TTPW system. This radio used Mighty Midget motors for servos. About every two hours of testing, I would wear out the motors and have to buy new ones. I never did get the confidence to put the radio in a model.”

It was during this time that Sid really started to explore his interest in the possibilities of more sophisticated radio control capabilities with his talents in building electronics. “Over the next 4 years, I built just about every model radio control circuit published. *Grid Leaks*, published bi-monthly by Ace Radio Control in Higginsville, Missouri, was the best source of circuit designs in those years. I would build a new radio and flew it ‘til something better was published. First was single-channel, then Marcy Tone six-channel, then Kraft ten-channel reed systems. I built some that didn't work, or became obsolete before I had time to fly them. I borrowed a Sampey 404 radio from Ed Sweeney, and built a copy of it. When tuning the IF strip, the receiver would go into oscillation; later I found out the factory-built receivers did the same, but they detuned them slightly for stable operation and sacrificed sensitivity (range).”

With his skills in electronics, Sid was able to make enough money as an electronics technician doing servo testing to afford the purchase of a state-of-the-art transmitter and receiver. “By 1965, commercial digital proportional radios were available. I was able to purchase a Bonner digital eight-channel radio by testing Royal Products' single-channel servos. I tested every single-channel servo Royal Products shipped for a fee of ten cents each. The Bonner eight-channel radio retailed for \$600.00. It took the testing of 6,000 servos to pay for the radio!”

History with Denver-area Radio Control Clubs

Sid has long been an active organizer and participant with RC clubs in the Denver area. When he moved to Denver in July 1960, a group of modeling enthusiasts would gather and fly RC airplanes just southwest of the intersection of East Hampden and Yosemite. This flying site was affectionately known as “The Hill”. Some of the pilots who were actively flying at that time included Karl Bruegeman, Lamar Steen, Bill Kessler, Phil Mosko, Pat Patton, Doane Watson, Sy Wilson, Ted Hoard, Bill Briggs, Ron Robertson, and Jim Zelney.

A medical doctor owned ten acres of land at that location. Phil Mosko, who owned Bonnie Brae Hobbies, had made arrangements with the doctor for use of this land as a flying field at no cost. Sid recalls that the formation of the Denver R/C Eagles club occurred as a result of wanting to preserve access to this informal flying facility.

“We decided a formal club was needed to provide for the ongoing maintenance of the field. The Denver R/C Eagles flying club was formed in 1961. I served as Treasurer, President, and Secretary in the 1960s and Treasurer again in 2005 and 2006.” Additional members who joined

the Club about the same time as Sid included Ron Murray, Dick Johnson, Bob Boyce, Bill Gasper, Bill Brunniga, Al Rasey, Swede Anderson, and Monty Peacher.

Sid has also been active with the Jefco Aeromod'lers, who manage the flying field at Chatfield State Park. Sid notes, "My contribution has been mostly as an adviser, however I did serve for two years as their Treasurer."

Favorite Memories of Model Flying

With all of his model flying experiences, Sid struggles a little to identify his favorite memories in the hobby. Some of these have occurred at AMA events, and others with favorite models.

One of the best things about being an AMA member for Sid is the opportunity to fly against some of the top pilots in the country at annual competitions.

Sid recalls going to the AMA Nats in 1963 at Los Alamitos, California: "This was the second time I got to see the top fliers in person that I had read about in the model magazines such as Phil Kraft, Bob Dunham, Ed Kazmirski, and Jerry Nelson. I have a short video on YouTube of the flying at this Nationals." [*Editor's note: This video is tagged as "SID'S RC MODELS 1952-1963."*]

At the Seventh World Aerobatic Championships, hosted by the AMA at Doylestown, Pennsylvania, in September 1971, Sid recalls that he and Shirley flew their Cherokee 180 from Denver to Pennsylvania, and were spectators for the entire week. "This was the first time I saw a model helicopter fly: a demo flight by Schluter from Germany. While at the Championships, I met Bob Young from Australia, and we have continued our friendship over the years. Bob manufactured Silvertone radios in Australia."

Other notable AMA events were the 1972 Nats in Olathe, Kansas, "the most impressive models were the 1:4-scale models entered," and the 1976 Nats in Chicago, Illinois. Of the 1976 Nats, Sid exclaimed: "My most vivid memory is a flier waiting to fly when an out of control racer came right at us, did an abrupt dive straight down, and hit the waiting flier, breaking his arm! I think this was the last Nationals competition sponsored by the U.S. Navy."

As far as favorite RC flying experiences, Sid laments that it is hard to pick one. Still, three of them stand out. In Rome, New York, back in 1957, Sid had his first successful RC flight where he got the fly-a-way model back on the same field he took off from. Success was followed by loss, as he "forgot to wind the escapement for the next flight, launched my model, and never saw it again." At the Denver R/C Eagles field in 1972, a test flight of a cross-country airplane led to a nice drive in the country. "We took off from runway at old Cherry Creek Bellevue location, got in Grover Lowery's VW Micro Bus, and went for a five-mile cross country jaunt following the flight." In Denton, Texas in June 2005, Sid recalls getting checked out for his turbine waiver. "I flew a series of five flights on my turbine-powered Boomerang, with the 5th flight being my check flight for my turbine waiver."



1960: Phil Mosko launching a model at Hilltop.



The Trixler Beam



1960: Dick Johnson flying at the Denver R/C Eagles field.



2001: Sam Snyder gracing the cover of the February/March issue of Radio Control Jet International.



1952: The F-94C made the cover of the November issue of Model Airplane News. Three years later, Sid was flying the real thing!

Military Flying Experiences

From 1950-1954, while at Wichita University, Sid was enrolled in the U.S. Air Force ROTC. Sid hoped to fulfill his childhood dream of becoming a military pilot as an Air Force officer, and was especially encouraged by the six weeks he spent at the USAF Summer Camp in 1953, held at Goodfellow AFB at San Angelo, Texas.

Following his college graduation, Sid participated in a USAF "Pre Flight" program lasting six weeks that began in March 1955. At this program, he completed a Combat & Confidence course, then trained recruits for the last two weeks.

Sid was accepted to the USAF pilot training program and began his primary pilot training in May of 1955, in Malden, Missouri. This program consisted of 20 hours of flight training in a PA-18 (Piper Super Cub) and 120 hours in a T-6. Each day the pilot trainees had six hours of ground school and six hours of flight training.

On May 17, 1955, Sid accomplished his first training flight with the military in a PA-18 Cub, flying out of Malden, Missouri. Sid's first instructor, Tom Spencer, interviewed his four students the first day and then picked Sid for the first training flight. None of the students had any prior flight training. Sid smiles when he recollects that "my instructor picked me to go first of his four students.

"We completed the pre-flight, and got in the airplane. He said "start it." I did. He said "taxi to the runway." I did. He said "take off." I hesitated a moment then gave it full power. The Cub went straight for a short distance, then torque turned us about 30 degrees to the left. I kept expecting him to do something, but didn't feel him on the control, so when I reached lift off speed and gave it a little up elevator; we began flying. We were on a grass runway, which was a mowed strip in a large pasture.

"When I lifted off, I was still heading at a 30 degree angle off the runway across the pasture. Very embarrassing." As it turns out, Sid's instructor thought his first flight was much better than Sid did. At Sid's graduation party six months later, Tom stated to Sid, "I still can't believe you did not have any prior flight training"!

Sid responded "I had not had any flight training, but had flown model airplanes for a few years."

Looking back, Sid says, "I still wonder why he picked me first. I always thought his goal was fly the one he thought would solo first so he had more time to spend with the other three students."

Another memorable flight experience that Sid had was his first solo flight in the PA-18 out of Malden, Missouri. This flight occurred on June 1, 1955 after six hours of dual instruction, including 19 landings. Sid thought, "I don't feel ready, what (the heck) am I doing up here alone?"

Next came USAF Basic Pilot Training, which was held in Greenville, Mississippi from December 1955 to May 1956. This phase of training consisted of 40 hours in a T-28A, followed

by 120 hours in a T-33. Ground school continued with four hours of academics each day. On July 8, 1955, Sid accomplished his first solo in a T-6 after a training time of 11 hours, including 48 landings. Six months later, he flew his first solo in a T-28 out of Greenville, Mississippi on December 5, 1955. That training consisted of five hours dual, of which one hour was acrobatics, with 17 landings. Greenville, Mississippi was the site of his first solo in a T-33 jet on February 7, 1956. Sid and his fellow cadets received their pilot wings at the end of this program, and were now qualified Air Force pilots.

With a fresh pair of wings on his uniform, Sid entered USAF Advanced Training held at Valdosta, Georgia from June to September of 1956. The first phase of this training involved 50 hours of instrument training in the T-33.

Along with the normal instrument training, the pilots in training had to penetrate a thunderstorm, presumably to convince them not to do that in the future. Sid remembers that “a couple of planes were reserved for these flights because they got so beat up from the hail.” Mostly, they just learned how to land a plane on instruments.

“We flew instrument approaches under the ‘hood’ until touch down. The ground control approach operators would give us steering corrections to touch down; meanwhile, we controlled our rate of descent with the vertical speed indicator after we went below field minimums, which were 200 feet.”



1956: At Malden with the T-6 training squadron.



Sid's last flight in a T-6.

While flying T-33s, Sid got his first taste what it might be like to be involved in future air combat, at least on the receiving end of things. "We flew target ship flights for those in the classes ahead of us who were already flying the F-94C."



1956: Sid Gates training in a T-33 at Greenville Air Force Base.

After 50 hours in the T-33s, it was time to step up to the front-line aircraft of the day, the Lockheed F-94C Starfire. Built to a 1948 USAF specification for a radar-equipped interceptor to replace the aging F-61 Black Widow and North American F-82 Twin Mustang, the F-94 was specifically designed to counter the threat of the USSR's new Tupolev Tu-4 bombers (reverse-engineered Boeing B-29s). The Curtiss-Wright XF-87 Blackhawk had been designated to be the USAF's first jet night fighter, but its performance was subpar and Lockheed was asked to design a jet night fighter on a crash program basis. The F-94 was derived from the TF-80C (later T-33A Shooting Star) which was a two-seat trainer version of the F-80 Shooting Star. A lengthened nose area with guns, radar and automatic fire control system was added. Power was provided by an afterburning Allison J48 turbojet engine. Since the conversion seemed so simple, a contract was awarded to Lockheed in early 1949, with the first flight on April 16, 1949. The early test YF-94s used seventy-five percent of the parts used in the earlier F-80s and T-33As.

The original fire control system was the Hughes E-1, which incorporated an AN/APG-33 radar (derived from the AN/APG-3 which directed the Convair B-36's tail guns) and a Sperry A-1C computing gun sight.

The F-94C Starfire was extensively modified from the early F-94 variants. In fact, it was initially designated F-97, but it was ultimately decided to treat it as a new version of the F-94. USAF interest was lukewarm, so Lockheed funded development themselves, converting two F-94B airframes to YF-94C prototypes for evaluation. To improve performance, a completely new, much thinner wing was designed, along with a swept tail surface. The original J33 engine was replaced with a more powerful Pratt & Whitney J48, a license-built version of the afterburning Rolls-Royce Tay, which dramatically increased power, producing a dry thrust of 6,350 pounds-force and with afterburning, approximately 8,750 pounds-force. With a fully-loaded weight of 18,300 pounds, the F-94C had a thrust to weight of 0.48 to 1.00. The fire control system in the F-94C model was upgraded to the new Hughes E-5 with an AN/APG-40 radar in a much larger nose. The guns were removed and replaced with all-rocket armament, consisting of four flip-up panels in a ring around the nose, each containing six rockets. According to test pilot Tony LeVier, the F-94C was capable of supersonic flight.

Since there were no dual-control F-94C airplanes, soloing this front-line interceptor consisted of 10 hours of ground school, then you were strapped in and told to go fly. By June 1956, Sid was ready to solo in the F94. He climbed aboard the F-94 for a solo flight with the following instructions: "Lift off at 160-170 knots, hold it on the deck to 475 knots, then start your climb." Wow, that's a big jump from flying a Cub!

Once soloed, the focus was on building skills for the job of intercepting Soviet bombers during the Cold War, when both the U.S. and Russia expected to be attacked and were on a hair-trigger alert. Sid recalls, "First, we practiced intercepts. The F-94C was designed as an interceptor. Its job was to go from takeoff to 40,000 feet altitude as quickly as possible. It took us just over 9 minutes to do this from sea level."

"Ground radar would get us set up about 20 miles from the target on a 90-degree collision course. The radar observer in the back seat would achieve 'lock on' with our on-board radar as soon as possible. He would then give the pilot steering correction information to maintain the 90-degree intercept course. The pilot had a smaller scope. The target appeared as a dot on my scope. At 20 seconds to rocket launch, the small circle on the pilot scope would shrink down to approximately 3/8" diameter, then the pilot would make corrections to keep the target dot inside the smaller circle. Once the pilot had his stick trigger pulled, the rockets launched automatically, and a 'hit' was very likely if the dot was in the small circle. In a live fire against an enemy bomber, we were instructed to launch all 48 rockets at once. In practice, we usually fired 24. In training we had to have two successful hits on a rag towed by a B-29 over the Gulf of Mexico to qualify for front-line duty."



The Lockheed F-94C, as flown by the 27th Fighter Interceptor Squadron.



The Men of the 27th Fighter Interceptor Squadron.



(Left) Formation takeoff in the T-33; (Right) Formation flying in the F-94C.

After a successful training program in the F-94C, Sid was assigned to the 27th Fighter Interceptor Squadron based in Rome, New York from October 1956 to December 1958. “The F-94C was my favorite military airplane. Our mission was to intercept and destroy Russian bombers that came from the north. There were eight airplanes in the alert hangar, with a mini control tower in the middle of the hanger. On the second floor of the tower were cots for sleeping and a small kitchen. In order to be ready to scramble at any time, the 16 crew members were dressed for flight, with the airplanes pre-flighted and ready to start down below, 24 hours a day. If a Red Alert was sounded, there was a ‘fire pole’ we used to drop down to the first floor. From there, you ran to your airplane and the crew chief buckled your parachute while you started the engine. The flight leader was required to be out the hangar door within one minute from alert, and the rest of the flight at one minute intervals. The taxi way from the Alert Hangar to the runway was at a 45-degree angle to the runway. We found we could make the turn onto the runway at about 50 knots, then go 100% power and light the afterburner as soon as we were lined up down the runway.”

Sid says of the F-94C, “it was the highest performance plane I flew and was very reliable. I did have three malfunctions during flight; fortunately none turned out to be dangerous. I had total electrical failure in my night check out after I reported to the squadron at Rome. My flight leader was my chase/checkout pilot. He said ‘no sweat, just get on my wing and I will take you right down to the runway. When I tell you to do so, cut the power and switch to the runway lights to land. Meanwhile, I will go around.’ I had never made a formation landing up to that point, but it worked out perfectly.”

“Later, on a hot scramble, I entered an overcast cloud layer at about 1000 feet, and shortly after that my fire warning light started flashing. We were trained that if this happened, to make a hard turn and look for smoke. That isn't possible in clouds. I was working on what to do next when I broke out on top of the clouds, made the hard turn, and saw no smoke. Turns out what I had was just a warning malfunction.”

“My third malfunction was at 40,000 feet when the engine gradually went below normal idle RPM, even though the throttle lever was at 100%. I immediately turned toward home base while gradually losing altitude. I was pretty sure I could make the base, but it was overcast at about 2000 feet when we left, and ‘High Key’ was approximately 6000 feet in the F-94C. ‘High Key’ was the altitude needed to make a 360 degree turn, while lowering the gear and flaps, in preparation for landing. As we got closer to base, the RPM increased enough so that I thought I had enough power to maintain level flight. When we got to base, the clouds had broken up enough that I could see the runway from 6000 feet, so I had no trouble making a normal approach and landing. As it turns out, a spring in the fuel control module had broken, causing my engine control problems.”

Teaching Brian to Fly

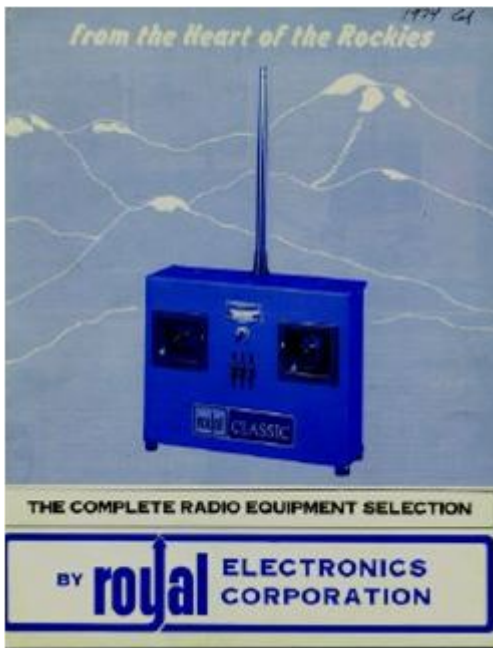
In 1966 to 1967, Sid had access to a Cessna 172, and in 1968, he purchased a one-third interest in a Cherokee 180. Sid remembers that “a lot of the time, my son Brian would be with me when I was flying. He would get stick time, but I didn't have an instructor rating, so I could not solo

him.” Sid eventually had some help training Brian to fly from an old Air Force buddy. “In 1973, a good friend of mine, Bob Westhoff, from the 27th F.I.S. Squadron, moved to Denver. When we were in the squadron, Bob decided to go to work for the FAA and needed an instrument rating. I had an instrument instructor’s rating, and gave Bob instruction in a Piper Tripacer. When Bob came to Denver in 1973 with the FAA, he was a check pilot on 747 airliners. Bob checked Brian out in the Cherokee, and worked with him to get his private license. Brian got his instructor’s rating and taught flying at Centennial for a couple of years, then worked with Pioneer Airlines for five years. Later, Brian was hired by American Airlines, and this year completed his 28th year at American. Brian learned to fly RC at the Belleview field, and still flies RC models today.”

Involvement in the RC Business

After his service with the U.S. Air Force, Sid built subminiature servos for reed systems and later for proportional radios for sale on a part-time basis in the early 1960s. In 1966, he met Ed Thompson, who was stationed at Lowry AFB at that time. Ed had designed the Digitrio radio and had presented it in a series of construction “how to” articles in *RC Modeler* magazine. World Engines produced and sold the kit radio.

A turning point in Sid’s life came with the formation of a new company producing RC transmitters and components. Sid knew something big was happening in his life, he didn’t realize how big.



Cover of the Royal Product Catalog displaying the Royal Classic.



The Royal Classic.



Sid showing the Royal Line at the Toledo Show.



Preparing a cross-country model for flight.

“Ron Murray, who owned Royal Products Corp., and I came to an agreement to form a radio company, Royal Electronics Corp., which I would manage. We then made an agreement with Ed Thompson to design a new radio, which would be first offered as a kit and later we would produce the radio in finished form. We soon decided I needed to spend full-time on the radio business, and we purchased the production rights to the F&M single-channel radios and the F&M reed systems. This gave Royal Electronics immediate income, producing and selling the F&M line.”

Sid named Ed Thompson's new design the "Royal Classic". Ed was responsible for the circuit design and Sid did component sourcing, PC board layouts, kit building instructions, and test flying. *RC Modeler* published a series of eleven articles on how to build the Classic, starting with the April 1968 issue. Royal Electronics was listed as the source for parts or complete kits.

Late in 1969, Bob Boyce called Sid and said he and Chris Pederson had a new digital radio design. He wanted to know if Sid would like to look at it and test fly it. The design featured an IC decoder and FET front-end on the receiver. The transmitter ran on six volts and had an exceptional clean RF signal. This design became Royal's production radio design in 1970. Bob and Chris were design engineers at Martin Marietta.

Others who contributed to production designs for Royal Electronics in the 1970s were Alan Scott (IBM engineer), Elster Kimmel (tech in the oil industry), Sid Kaufman (engineer), Al Irwin (grad student instructor at the University of Illinois), Mike Dorffler (Estes Rocket engineer), and Dennis Loder (engineer). Field testing and design consultants included Jack Albrecht, Bill Hershberger, Bob Baechler, Jerry Smith, George Steiner, Bob Green, Ed Means and Mike Ross. Notable technicians and competition class fliers were Brian Gates, Lloyd Nickelson, and Jim Eide.

Royal Electronics had a good reputation, part of which was being on the cutting edge of RC electronics technology. Royal Products that were considered to be ahead of their time included the ProTach designed by Sid Kaufman, the Omega transmitter also designed by Sid Kaufman, and the Tactron Helicopter Governor designed by Al Irwin. In 1980, Al Irwin designed a

computer-based transmitter encoder that was too expensive to produce at that time; according to Sid, “it had some features that have not been duplicated until recently.”

Royal Electronics was in business from 1967 to 1983. Sid recalls the glory days at Royal, and the swift descent that followed. “At our peak in 1980, we had 36 employees. Unfortunately, Royal and six other of the eight U.S. companies that produced radio control sets closed their doors in 1983. The lone survivor, Ace, kept going a few more years, and then shut down as well.”

Sid did enjoy some memorable and funny episodes during his time with Royal Electronics. Ted White was a top class competition flier who worked for F&M Electronics as a technician and demo flier. F&M was owned by Frank Hoover, and Frank's son was a good pilot. At a competition, someone handed Ted a transmitter when it was his turn to fly. Sid recalls what happened next. “Ted started to taxi and the plane went to full power and took off. At this point, Ted was frantically yelling, ‘I don’t have it!’ Meanwhile, Frank’s son had the actual transmitter, and was secretly flying the model.”

Sid went on to say, “if you know Ted, you also know he would stutter when he was excited. Ted had moved from Denver to Oklahoma City. One day, he called and said in a voice charged with emotion, ‘Do you you you know wha- what hap- happened to me? I was flying to a mod- model meet and ran out of f- fuel at night. I- I was going to land on the Interstate, and just as I was ready to tou- tou- touch down... the road turned!’ Thank goodness no one was hurt.

Current Activities

As an avid modeler and a successful businessman with the benefit of a military discipline, Sid carries an incredible set of skills and experience into his Golden Years. For Sid, the throttle setting for life is always “Military Power”. He continues his role as loving husband and devoted father, while maintaining a very active involvement in the RC hobby.

An avid builder, Sid has created a builder’s paradise in his southeast Denver suburban home. From an office adjoining the house at the ground level and a well-organized basement that features multiple workshop areas, plus a highly organized storage area, Sid tackles his various RC project with incredible energy and efficiency. With the air of a Fortune 500 CEO, Sid remarks, “My ground level shop is 20 x 21 feet. I do radio installs and minor maintenance there and store about eight airplanes. It also contains my desk top computer, my video editing computer, and my gaming computer. I have a three-car garage, and one stall stores a mill, drill press, and a couple of airplanes.”



Sid in his workshop with friend, Bob, and Sid's scratch-built F-94C.



Sid holds the original plans for the F-94C.



Sid's T-33.



Sid's Cosmic Wind and transmitter.



Sid's T-6.



Sid's turbine-powered Boomerang.



Some of Sid's current projects: (above) Sid's F86D model under construction and (below) scratch-built F-94C.

Continuing the tour of his facilities, Sid remarks, "In the basement is a 12 x 20 foot room with two building tables. One has an adjustable surface for wing building, with or without dihedral. The other table (30" wide x 96" long) is a stand-up bench that has a plate at each end to hold a rotatable 1" square aluminum bar. I slide templates on the bar for cutting foam blocks for fuselage plugs, and other plugs for molding. In the main room of the basement I have an electronics work bench at one end with needed test equipment. The third room in the basement is for model and materials storage."

Fellow modelers who have the opportunity to visit Sid's workshop are impressed by his energy and ambition. At an age when most guys are content to sit on the couch and watch television, Sid squints his eyes and announces, "My current projects are a scratch-built F-94C that is waiting for the engine install and test flying. I have an F-86D that I am in the process of installing the wiring and plumbing. It is painted. My F-16 Top Gun model is ready for test flight with the RAM 500

turbine engine. I just purchased a new "old" style pattern airplane, and will replace the obsolete radio with 2.4 GHz radio." Better not get in this man's way!

As all accomplished modelers do, Sid maintains a fleet of planes that are ready to fly for whatever occasion may arise. Sid long ago realized the essential wisdom of this hobby: the key to a happy life is getting together with your friends and doing something together that you all love, flying great planes!

So what are the "great planes" that Sid chooses to keep ready to fly with his friends? That information is **top secret!** But I will tell you, as long as you promise to share it with everyone you know!!!

Here's the list:

1. 1/4Scale PA-18, OS 160 Twin
2. 1/5 scale T-28, OS 160 Twin
3. P-47 Foamy, 53" span, 46 electric-powered
4. Cosmic Wind, Fox Eagle 60 engine
5. Boomerang Intro, 80" span, WREN Super Sport engine
6. Eagle 63 trainer, 56 4-stroke
7. T6, 101" span, 1/4-scale, G-62 engine



Sid Gates.

Favorite Models

The Aeromodeling Community is full of amazing guys who have applied their skills, imagination and intellect to carve out a legacy of creating and flying incredible model aircraft. Every pilot has his favorite planes that he remembers after decades have passed, and he has owned many other models. Here, in his own words, is Sid's list of his favorite models:

- Berkley Brigadier (1958-1959): My first successful radio controlled model; would do touch and goes with single-channel radio. Control was rudder and 3-speed throttle.
- Taurus by Top Flight (1962): First "full house," radio Bonner 8-channel, easy to fly, no bad characteristics.
- T-33 by BVM (1992): Scale model powered by ducted fan.
- Boomerang Jet (2005): First turbine-powered model.
- F-94C (2014): Scratch-built from plans from Lockheed provided by Bob Elliott.

Final Thoughts

Sid Gates has lived a long and productive life during which he has impacted the world in a positive way. From his days as a high school athlete, where he showed his friends and family he was a winner, to the life-long commitment he made through marriage to his high school sweetheart, to the years in the air, defending our country against the threat of total destruction, to his years as an inventor and businessman, pushing the limits of radio control technology forward, and to the years invested as a prolific aeromodeler, Sid has shown us how to live in the words of Horace, the philosopher, who said:

“Carpe diem! Rejoice while you are alive; enjoy the day; live life to the fullest; make the most of what you have. It is later than you think.”

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