

Our Steen Skybolt

My Forty-Year Fascination

Prelude

In 1974, I, Michael Huffman of Tulsa, OK, had designed and built my first homebuilt airplane, an original design—“Jeanie’s Teeny” wings, a welded steel tube forward fuselage, sheet metal tail boom, all-composite tail, fiberglass MLG, a Yazoo lawn mower front wheel, and a 36-hp Volkswagen engine. Some called it a “flying lawn chair.”



Prelude

Problem was, it wouldn't fly with the little VW engine, so I borrowed a McCulloch 72-hp WWII target drone engine, doubling the horsepower and shaving about 40 lb off the empty weight.

The drone engines had a habit of getting too hot and freezing up, but gyrocopter builders had worked out ways to hopefully avoid the problem.



Prelude

With the new engine, it flew well—plenty of power, good response to the controls, and a good climb rate.

I had fun flying it for about 5 hours or so, enjoying the fruits of several years of designing and building, during which time I encountered and solved multiple design problems.

However,...



Prelude

...at about the 5-hour mark, the engine did what McCulloch's do: it got hot & froze up, resulting in a hard landing that I walked away from.

However, the airplane was destroyed. I was disappointed and out of money. But an EAA buddy introduced me to an attorney with a Steen Skybolt project —he agreed to pay for it if I finished it!



The Building Process

My new partner, Mallie Norton's project included a good welded fuselage & a crashed Skybolt with a Lycoming O-540 engine. I dragged the fuselage to my garage and began diligently working on it.

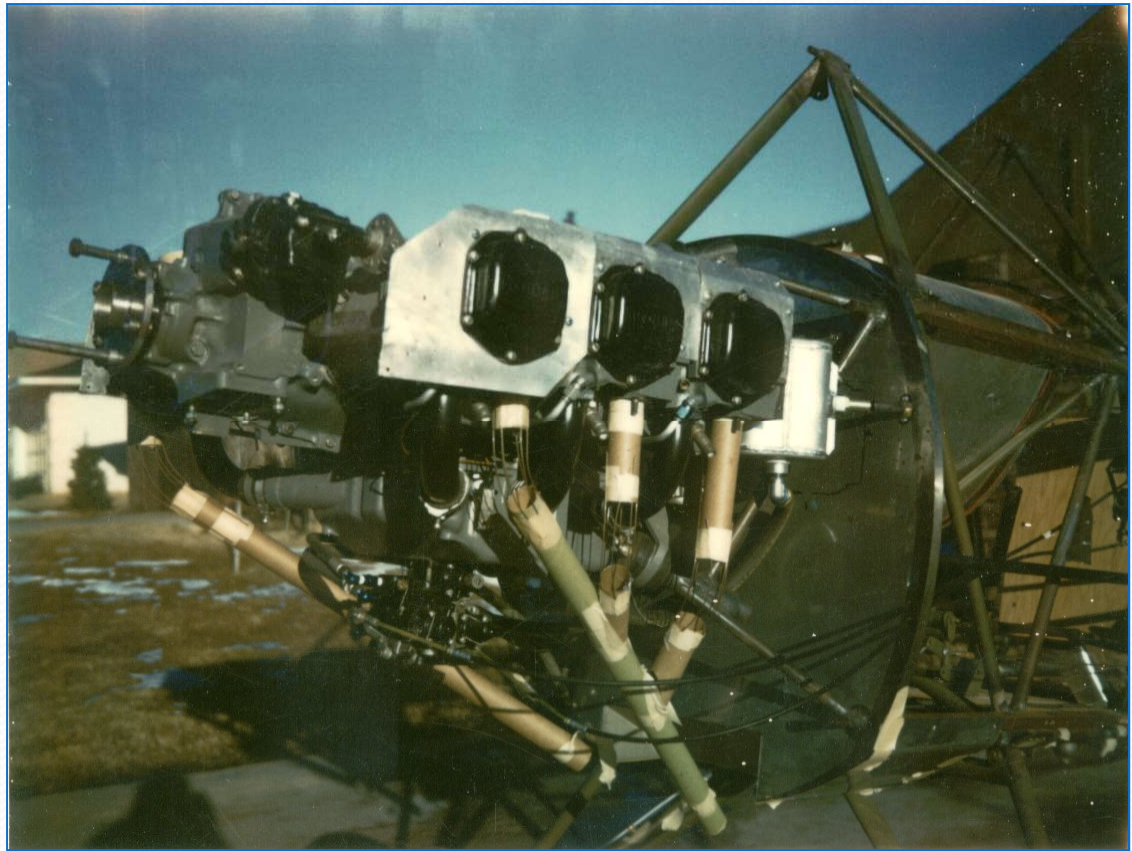
At this point, I've fitted the by-then-overhauled O-540.



The Building Process

Here, I'm mocking up the exhaust headers using cardboard tubes, welding rod around the curves, and plenty of tape.

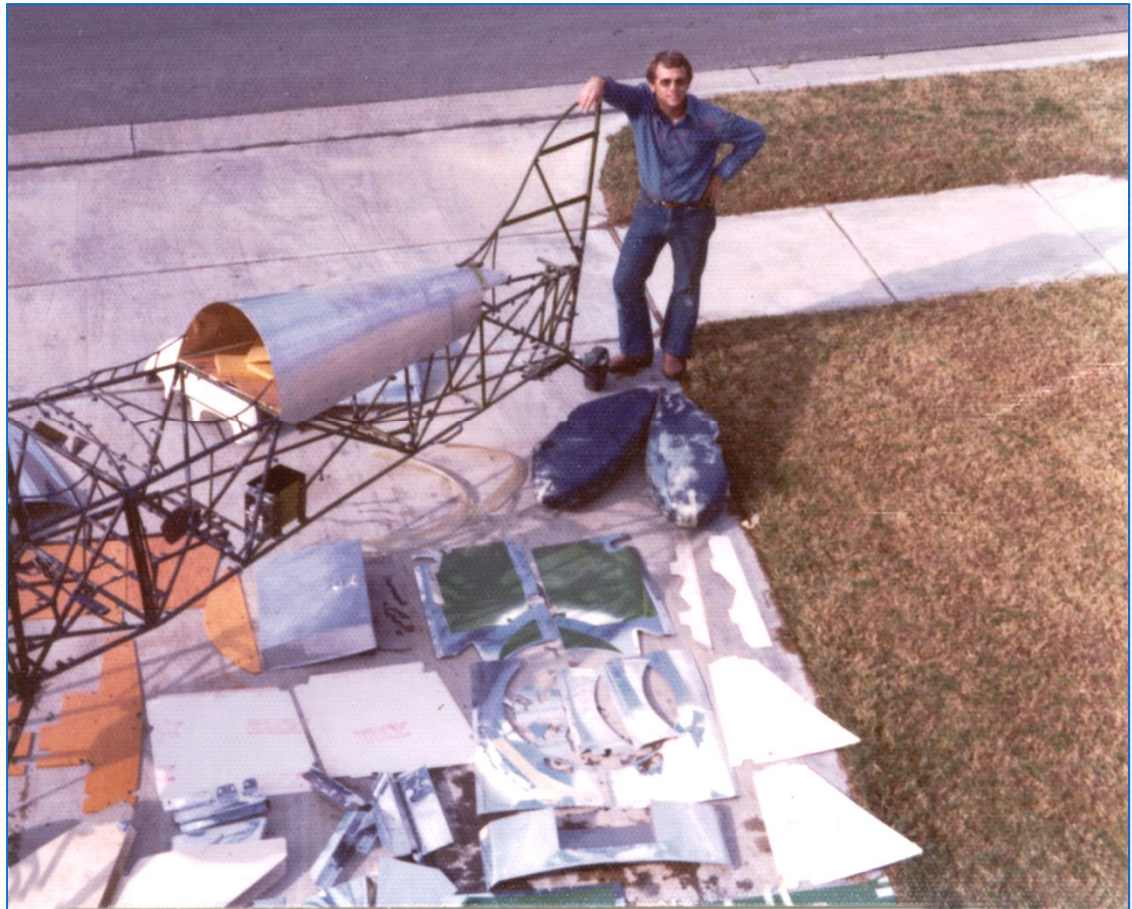
Mallie was often around, always joking that I did the building while he drank the beer! But, in reality, he had a very useful way of looking at little problems, coming up with solutions I had not thought of.



The Building Process

In fairly short order, I had built and fitted a bunch of parts for it—aluminum side panels, floorboards, etc.

Mallie got up on my roof and took this photo.



The Building Process

After about a year, I began building the wings at our local grass strip, Harvey Young Airport in Tulsa, OK. We bought a spar-and-rib kit and I salvaged some of the metal fittings from the crashed Skybolt.

To make the leading edges and tip area strong and smooth, I filled them with foam and covered them with epoxy/fiberglass.



The Building Process

Next came covering the wings and fuselage with Stits fabric (now known as Poly-Fiber).

By that time, I had installed the fuel, electrical, inverted oil, brake, pitot/static, and engine control systems and it was time to begin final assembly.

I had built the wings to use flush flying wire fittings for a better appearance.



The Building Process

It is now definitely getting to look more like an airplane and, as I mounted the prop, things were getting exciting!



The Building Process

So, in July 1976, after about 2000 hours of my labor and a goodly number of Mallie's dollars, we were finished with the building process.

Here we are at Harvey Young Airport doing final checkout before first engine start.

That's my son Steve on this side and Mallie on the other side.



The Building Process

My wife Sharron,
outwardly all smiles,
but inwardly nervous
as the time for first
flight drew nigh.



The Building Process

And, to complete the family, this is our daughter Suzannah posing –her natural inclination! She liked to fly, but didn't like me to do any unusual maneuvers.

In this photo, one of the flush flying wire covers can be on bottom of the top wing



First Flight

I'm now sitting in the cockpit running the big O-540 for the first time—almost ready for flight!

We opted for leaving the aluminum panels bare and the fabric covered only up through silver, planning on applying the final paint colors after all the anticipated flight testing bugs had been worked out.



First Flight

Here, I'm taxiing out for first flight. I had never flown an open-cockpit biplane, I had never flown an airplane with that much horsepower, and I had only about ten hours taildragger time in Mallie's 85-hp Aeronca Champ. It was definitely a sober moment!



First Flight

First takeoff- July 10, 1976! Lots of power, bring the tail up, keep it straight with right rudder, and rotate at about 65 mph!

Fantastic climb! Lower the nose a little for visibility and climb, circle the airport at up to about 5000 feet, check things out. It all was working great—engine running perfectly, airplane in trim, and controls very effective.



First Flight

First approach! Round out the turn from downwind to final to keep the runway in sight. Raise the nose and the airport disappears under the long cowling.

Maintain airspeed while looking for the runway edges in my peripheral vision.

Begin the flare, power to idle, hold it off, hold it off, then, kiss, the wheels touch and it rolls straight!



First Flight

The conquering hero pilot returns from his death-defying feat!



First Flight

Post-flight debrief with the onlookers. A little shaky, but very happy.

That's Mallie's girlfriend Janice behind the wing.



Flying Fun

A little later, an article about my first flight, including this photo, appeared in the Rockwell International employee newspaper, where I worked.

During the Phase I flight test, I bought Duane Cole's book, "Roll Around a Point" and with fear and trepidation, taught myself basic loops, rolls, hammerheads, and snap rolls.



Flying Fun

By then a true “flying machine,” the Skybolt sits outside our hangar next to the 1948 Willys Panel Delivery hot rod I restored.

I’ve always mused on how, during the building process, it changes in my mind from a collection of separate, individual parts to a integral whole—a functional thing with (dare I say) its own soul.



Flying Fun

Over the next several years, we had a great time flying the Skybolt. In 1977, I was president of our local EAA Chapter and had the opportunity, with son Steve, to fly in formation with the EAA “Spirit of St. Louis” replica during the Tulsa stop on its U.S. tour to commemorate Charles Lindbergh’s 1927 transatlantic flight.



Flying Fun

Harvey Young was a hotbed of aviation fun. The hangars and tiedown areas were full and on weekends we often had to wait ten minutes or so for a break in the landing traffic in order to take off.

One year, the Goodyear Blimp was moored there on its Tulsa tour.



Flying Fun

On weekends, families would come out for the whole day. The kids would play on the airport playground and the women would visit, while (mostly) the men would fly or work on airplanes.

There was a small wooded lake that was often used for parties.

That's a late-30s Fleet biplane owned by a friend of mine.



Flying Fun

During that time, there were no less than thirteen open-cockpit biplanes based at Harvey Young, ranging from Stearmans to small single-place biplanes. This was a Pitts Special owned by a man named Chuck Welch.



Flying Fun

Chuck and I decided to fly with the Goodyear Blimp, trading cameras so each of us would have his own photos of the event. Chuck took this photo of me as we were preparing to take off for our “blimp-chasing” flight.

By then, I had installed the wheel pants and prop spinner.



Flying Fun

Here is a shot of the blimp I took during the flight. The blimp crew didn't mind us flying "in formation" with them (their airspeed was about 30 mph, while ours was about 100 mph)—basically, that means we circled round and round them, keeping a reasonable separation.



John Denver

In 1977, through a friend, Mallie found out that John Denver was having a Skybolt built and brashly invited him to fly in ours during his Tulsa concert tour. To our surprise, he accepted. On the appointed day, John, his Dad, "Dutch" Deutschendorf and a couple of their pilots flew into Tulsa International in their Lear 35.



John Denver

Dutch informed me that they didn't let John fly with just anybody, so he and the pilots showed up at Harvey Young without John for their Skybolt rides. I didn't know Dutch from Adam, so as I flew him around, I patiently explained each simple aerobatic maneuver we were about to perform, getting his OK. At the end of the flight, he was convinced that I could take John for a ride.



John Denver

The next day, we all piled in their Lear and flew to western Oklahoma where John's uncle was building their Skybolt. That's Mallie on the left, me on the right, John, and one of the pilots in the middle.



John Denver

John came back, casually introduced himself, and sat down with his adopted son Zach in the seat facing me. He said simply, “Hi, I’m John.”

He seemed to be a down-to-earth guy and we had a good conversation on the way.



John Denver

Here we are at John's uncle's house looking over their Skybolt project. That's Dutch holding onto Zach, while John talks to his elderly uncle. It was fairly obvious to me that, even with all the best intentions, the uncle probably would never finish the project.



John Denver

John posing with his aunt and cousins—just simple Oklahoma country folk that I could easily relate to.

Back at the airport, we got back in the Lear to head to Tulsa. One of the copilots came back and pointedly said, “Be sure your seat belts are fastened.” I noticed that Dutch was in the left pilot seat—maybe he was a pilot after all, I thought.



John Denver

When the Lear broke ground, Dutch held it at about 100 ft AGL and, roaring over the uncle's house, pulled the nose up, and performed the nicest four-point roll there was! I had been snookered by assuming he was probably not a flyer! He was apparently just testing me. Turned out, Dutch had been a longtime Air Force test pilot at Edwards AFB, holding world low-altitude speed records that still stood in the supersonic B-58 Hustler. Here's Dutch, his wife Erma, and young John Denver. After retirement, Dutch was a Lear factory demo pilot, demonstrating deep stall recovery.



John Denver

Back in Tulsa, the entourage hurried to Harvey Young for John's ride.

After fitting John with my leather flying helmet and goggles, in the background I'm walking up after borrowing another one from a nearby hangar.

Meanwhile, Zach is sitting in the Skybolt cockpit with Dutch hanging onto him.



John Denver

Here John and I prepare to taxi out, with Dutch acting as “mother hen.” The Skybolt had a temperamental battery and I was praying the engine would start, which it did!

My flight with John was great, doing my basic aerobatic maneuvers—he kept saying, “Far out!” After that, they hustled off for his concert that night, which we got free tickets for.



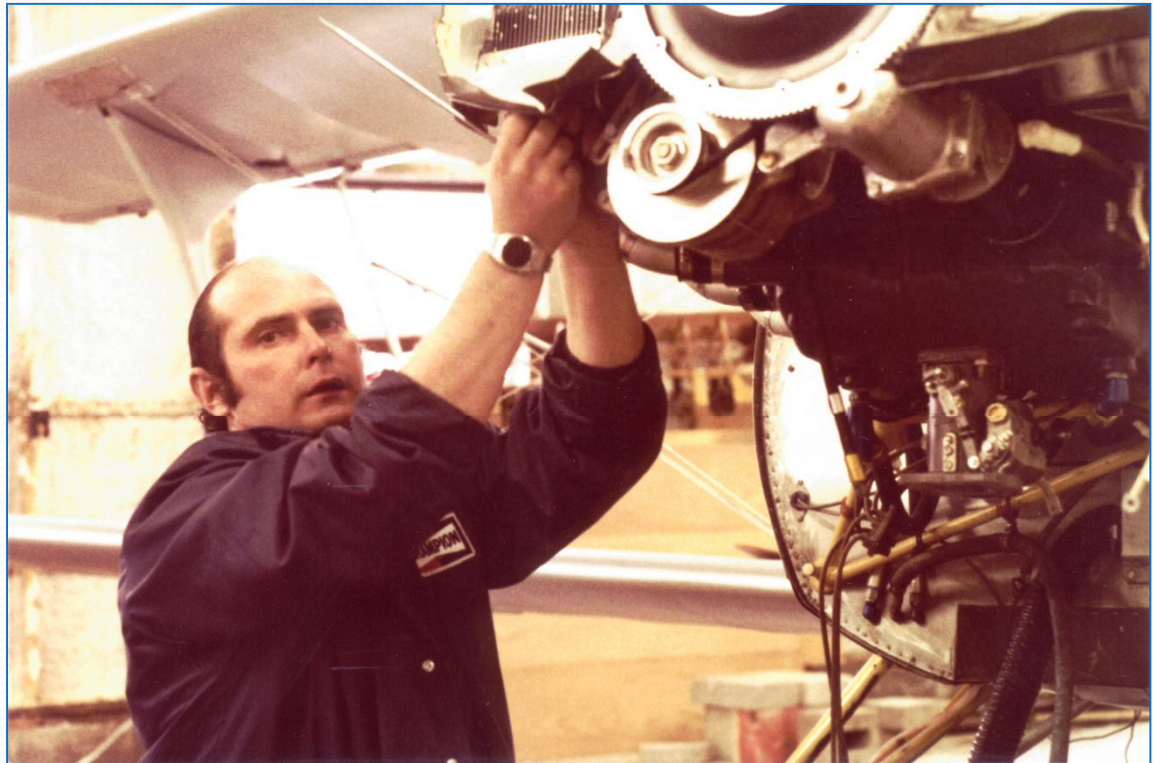
John Denver

In late 1978, I quit my safe engineering job at Rockwell International to follow my dream of building airplanes, renting a large hangar at another airport. I knew I would need cash, so Mollie and I agreed to sell the Skybolt. Knowing that John's project was not progressing, I called Dutch and suggested they buy ours. And, to my delight, they agreed!



John Denver

Mallie and I took their project in trade and they bought a brand new Lycoming IO-540 and a Hartzell constant speed aerobatic prop. Their chief Lear 35 mechanic, Jack Muldoon, came to Tulsa to help me do the engine swap. I heard him on the phone with Dutch one day, exclaiming, “if Mike needs a new part, he just builds it!” –a unique situation for a Lear mechanic!



John Denver

Here are Dutch and I at my hangar after the engine swap had been done. Dutch is getting ready to fly the airplane home to Denver, CO and I'm preparing to say goodbye to the airplane; I didn't expect to see it again.

With John, I was an acquaintance, but with Dutch, I made a friendship. I think he sort of saw me as another son.



John Denver

A few months later, Dutch asked me if I would paint the airplane for them. John hired an artist from Aspen, CO to design the paint scheme and the artist spent two or three days in Tulsa with me, helping to mask the stripes and stars—about 30 stars in all!



John Denver

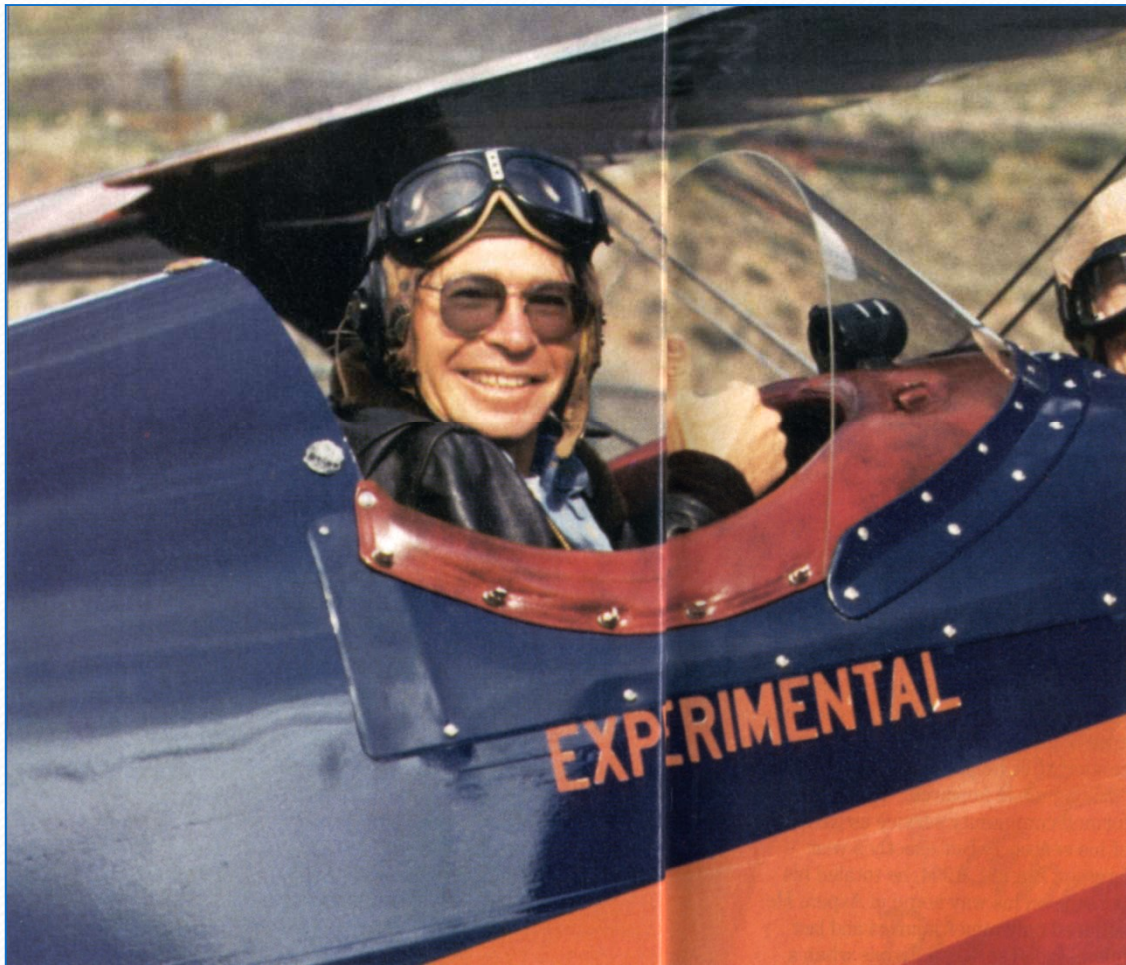
When we finished, the entourage flew back to Tulsa in the Lear and John, looking dapper in his white silk scarf, flew the Skybolt back home to Aspen, CO.

I didn't expect to see the airplane again.



John Denver

A few years went by and John had a lot of fun flying the Skybolt in his beloved Rocky Mountains around Aspen, CO. He apparently became fairly good at aerobatics; he once asked me how I entered a tail slide, because his were not turning out right. He got very involved with EAA and he and the Skybolt were featured in an EAA video and in a network TV special.



John Denver

In the years that followed, I would sometimes have occasion to see Dutch and John. In 1979, they rented a house for the EAA Convention in Oshkosh and invited Steve and I to stay with them.

And, anytime John was in concert near Tulsa, I could always count on Dutch to provide free front-row seats.



John Denver

One memorable visit was in April 1981 at the first Space Shuttle launch in Florida and the landing at Edwards AFB near Mojave, California, both of which I was fortunate to attend. Here, on the Edwards AFB lakebed, Bob Hoover and Dutch relive their test pilot adventures, with John and a NASA contractor looking on.

In March 1982, I heard that Dutch had died.



John Denver

The years went by and then in the mid-80s, I heard that John had reluctantly agreed with his accountants to sell the Skybolt. I had recently met a Tulsa man named Tom Quinn who was looking for an open-cockpit biplane. So, I brokered a deal between him and John. Here we are showing up in Denver to pick it up, with John just having returned from a flight.



John Denver

He was not happy to see us—he didn't really want to sell the airplane. But everything worked out.

That night John had a concert at Red Rocks west of Denver and Tom and I got the usual good seats and backstage passes. About 1:00 am, we all went to a Malibu racetrack that John had rented and raced the cars all night. Here we are departing for Tulsa the morning after.



Tom Quinn

With the Skybolt back in Tulsa, Tom Quinn and I became good friends and we both enjoyed flying the airplane. Tom owned the Skybolt a few years and then sold it.

I didn't expect to see it again.

From there it went through five different owners, one of whom groundlooped it and damaged the landing gear and lower wings.



Tom Quinn

During the time Tom owned it, I had some tense moments during an aerobatics flight with a new girlfriend. Halfway through recovery from a snap roll, the left rudder cable broke. With only toe brakes to keep it straight, the landing was very interesting!

Needless to say, my relationship with the new girlfriend was short-lived!

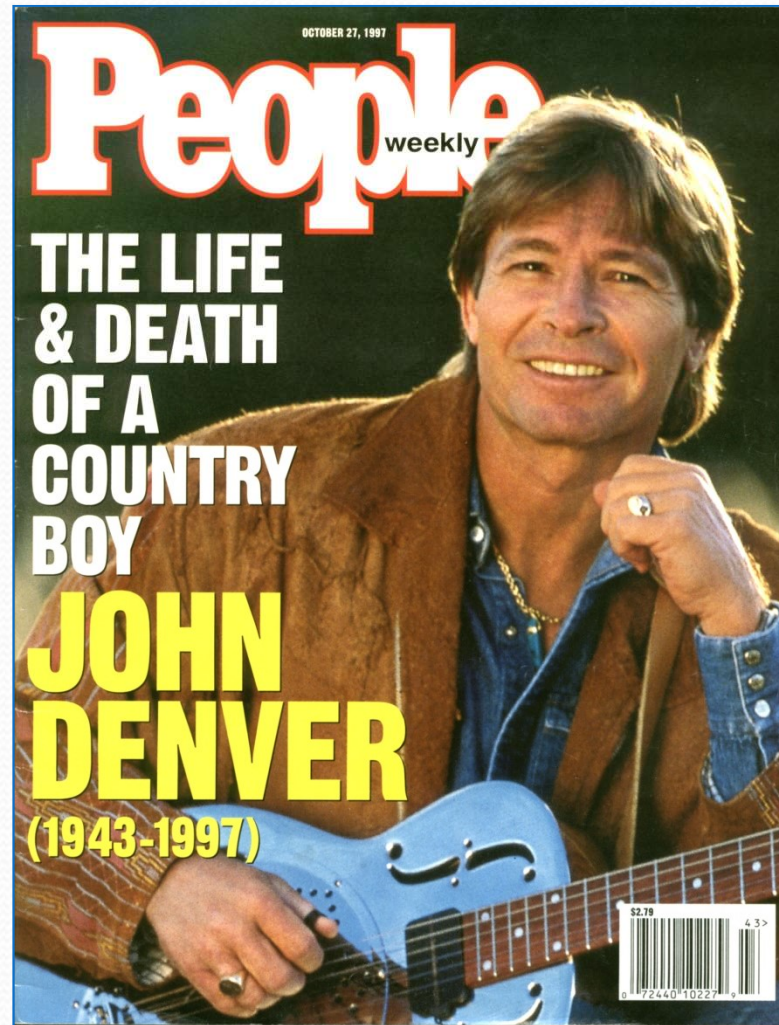


John Denver

After Tom sold the Skybolt, I lost track of it for several years.

Then, on October 12, 1997, we all got the news that John had been killed in the unfortunate and avoidable crash of a Rutan Long-Eze he had just purchased.

In some ways, he was a strange person, but I liked him and always enjoyed his company.



Dick Keil

Of course, I did not expect to see the Skybolt again.

However, in about 2014, I saw an eBay ad advertising it for sale by a man named Dick Keil from Naples, FL. I contacted him and learned that he had bought the damaged project and restored it back to flying condition.



Dick Keil

Dick sent me photos. He had installed the newer-design longer main gear legs, which was an improvement.

The original gear legs were shorter, which meant that a full-stall landing would leave the mains at least six inches off the ground when the tailwheel touched down.



Dick Keil

Dick had retained the John Denver paint scheme on the new lower wings he installed.



Dick Keil

Looking through Dick's photos, I was gratified to have my memory refreshed on design details I had forgotten.

Dick tried to sell the airplane several times through eBay, but unfortunately, he died in 2015 before doing so.

His wife wound up selling it to the next owner, Charlie Dignan of Telluride, CO.



Charlie Dignan

Here is a great photo Charlie Dignan sent me. It was taken in September 2015, as he approached Telluride Regional Airport, its new home.

Better not be too low on this approach!

No doubt the airplane is glad to be back in the Rockies.



Our Steen Skybolt

When I titled this presentation, the word “Our” meant Mallie Norton and me. But I now see that its meaning has broadened to include everybody who has enjoyed building or flying in it over the last 40-plus years.

No matter who owns it, this Skybolt is really always my airplane, probably the favorite of all I’ve ever owned. I’m still fascinated by it!



Our Steen Skybolt

The End?—Who Knows?