



Sky Artist

Can you hold your altitude within 10 feet and keep an exact heading?

BY ALTON K. MARSH
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How can a skywriting story also cover mutt dogs, airplanes of no known model, spy planes, the Red Baron, and movies? Just watch.

First, the skywriting story. When you took your private pilot checkride you had to hold altitude within 100 to 200 feet, depending on the task you were demonstrating, and maintain a heading within 15 degrees. That isn't nearly good enough to do Suzanne Asbury-Oliver's job. She's the nation's only pilot whose income is derived wholly from skywriting: Husband Steve Oliver also does skywriting but in addition performs aerobatic and night airshow acts, and offers barnstorming rides in perfectly restored New Standard aircraft. Together they form the Pepsi Aerial Entertainers team, the longest-sponsored airshow act in history.

Pepsi wasn't the first to use skywriting for advertisement, but it was one of the pioneers. The craft was invented in 1910 by John

Clifford Savage and first performed for the public in England in 1922 to advertise the newspaper, *Daily Mail*. It came to America that same year when American pilot Capt. Allen J. Cameron wrote HELLO USA over New York. The following year the American Tobacco Company sponsored the printing of LSMFT (Lucky Strike means fine tobacco) over several cities. Sales of Lucky Strike in Philadelphia jumped 60 percent in a month.

Pepsi began its historic involvement with skywriting in the early 1930s using a 1929 Travel Air D4D but shifted its advertising budget in the 1950s in favor of television. When the Travel Air later was destined for the Pepsi museum, former Pepsi skywriter "Smilin' Jack" Strayer flew it to Purchase, New York, landing on the company grounds. Later he talked Pepsi officials into restarting the Pepsi Skywriting program. The plane has since retired to the Aviation Museum of Kentucky in Lexington, where it awaits a spot in the Smithsonian National Air and Space Museum. Pepsi celebrated its 100th anniversary in 1998 at a big bash in Hawaii that required a super skywriting airplane, and so Sky Magic was developed. Today, the Pepsi team continues to use that specially designed tandem-seat 260-horsepower aircraft — the one of no particular model.

Like the Olivers' dog, Pax, the airplane is a mutt. Skip Collins of Laurel, Delaware, built its fuselage frame on a Piper Super Cub jig; the tail came from Oregon, and the wings came from Colorado. Bill Hammond, the team's maintenance chief, put it all together in Kentucky. (The Olivers live in Colorado partly because they want to ski and partly because they want to forget about their airplanes in the off-season.) For want of a better name it is called a Hammond 1. The ailerons were moved outward by 18 inches because the tip bow was not used. That allowed the flaps to be 18 inches longer; and they

have 5 inches greater chord. The airplane stalls at 22 mph and takes off in less than 100 feet. The squared-off wing tips are used to carry fireworks for night aerobatic flights. The right fuel tanks can carry smoke oil or gasoline.

As for Pax, so-named because she attended her first airshow at Patuxent River Naval Air Station, Maryland, no one knows where her parts came from — and Pax isn't talking. Steve Oliver calls her a DPD, or dog-pound dog, because that is the only genealogy that can be proven. Pax proudly performs her role as official greeter and is small enough to not scare the toddlers who meet her after airshows. Often children who haven't had the advantage of considering men and women as equals come up to Steve after a skywriting performance to get his autograph. "I say, 'Tell the pilot,' and point to her," Oliver said.



There are few secrets to skywriting — it takes talent and hard work. No GPS can be programmed to fly letters, thus no autopilot can do the work for Suzanne Asbury-Oliver. In the 1920s and 1930s it was widely assumed that secret potions were used to create the smoke. One skywriter even piled bags of powder in his hangar to make others think it was the secret ingredient of smoke oil. Another added coloring to half his oil

supply and meticulously mixed the colored oil with clear oil in full view of his competition, just to convince them that they lacked the secret of success.

It's just light oil, and it doesn't burn to create smoke. If it did, the airplane would be on fire and Asbury-Oliver would use her parachute. What you see from the ground is more like oil vapor. Each droplet of light oil vaporizes and expands 50,000 times after it is introduced into the 1,400-degree exhaust gas.

The letters are written in mirror image. Asbury-Oliver happens to be slightly dyslexic, but that doesn't necessarily help her to skywrite backward. The letters are written high, 8,000 to 10,000 feet where the air is calm, and they are written flat but appear vertical from the ground. Asbury-Oliver does have a few secrets, however, like how she put a 5 inside a circle for a television client. So far she's refused to reveal the difficult technique. A happy face is her signature and her favorite design.

Yes, skywriters do make mistakes. Many years ago a pilot who badly wanted an account from a watchmaker spelled ROLEX backward, forgetting to fly a mirror image as seen from above. No word on his success. Another wrote AIR SOW over New York. Still another hapless wannabe misspelled a word, crossed it out with smoke, and then spelled it correctly. Those are the mistakes skywriters dread. The successes they crave are days when a message hangs together for 30 minutes or an hour, and moves 40, 50, even 80 miles, attracting attention from thousands more people than expected.

"Pepsi has looked at it as a warm fuzzy — a feel-good thing. It makes people happy. People call one another and talk about it for a long time afterward. This year we started in El Salvador. I thought, 'These people have never seen anything like this. Is it going to be disturbing to them?' Other performers trying to get to the airport said later that traffic just stopped. People got out of their cars and watched," Asbury-Oliver said.

"If you can't hold an altitude and heading you cannot skywrite. It's all going to be a mess."

—Suzanne Asbury-Oliver

Asbury-Oliver let me fly along on a mission over the Upward Air Show in Eau Claire, Wisconsin, last August. The exhaust pipe roared like a discharging carbon dioxide fire extinguisher each time she flipped a switch on the aircraft's throttle. I

basically had no idea what she was writing, except for the letter i, which involved a short burst and a long one. Turns began slowly like standard-rate instrument turns, but often the bank angle increased to 60 degrees or more, creating at least two Gs of force, possibly more. Perhaps she was rounding an R, curving an S, or polishing a J. The compass was bouncing too wildly to be of any help in holding headings — she used sectional lines and highways on the ground. Bank angle was determined by the location of a screw on the cowling — she would bank until the screw was on the horizon.



How did this Oregon native get a job as gypsy skywriter, touring the country in a comfortable motor home and rarely seeing her house in Colorado? Right place, right time, and right father. Her dad had an interest in flying since

he was a little boy but became a doctor instead. Then one year he got a Father's Day gift of a ride in a sailplane. Suzanne and her father did everything together, so naturally she went with him. "He fell madly in love with it, and asked the guy at the strip, 'When could she start taking lessons?'" She discovered she could take lessons anytime, solo at 15 (at that time), and get the certificate at 16.) So she started taking lessons as a 14-year-old. Her father soloed and got his certificate that first summer, and it was aggravating for her. She soloed on her fifteenth birthday: Her mother was a wreck.

Asbury-Oliver got her certificate at 16 and spent her summers around sailplanes. The whole time she was trying to figure out how to make a living at it, but it didn't look to her like her instructors were getting rich. So she got her power rating to be more versatile in the work she could do. By age 18 she had her powered-aircraft instrument rating, commercial certificate, flight instructor- and instrument-flight instructor certificates, as well as a multiengine rating.

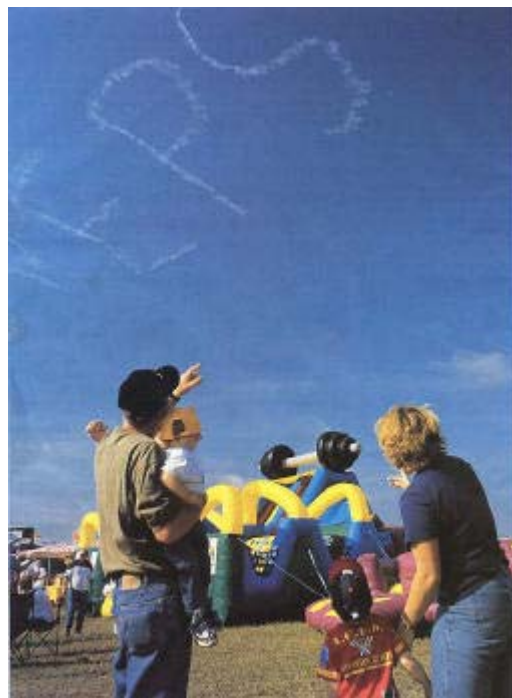
Her dad hadn't gotten his power rating, so he became one of her first students. At debriefing sessions, the two would critique each other. He would provide feedback on how she was doing as an instructor. She also flew charter flights, taking fishermen to favorite destinations, and gave more than 1,200 hours of instruction, but there was something lacking.

"To be a good flight instructor you first have to be a teacher at heart. I just wasn't." It was 1980, the airlines were in trouble, and the pilot job market was flooded with experienced people. Pepsi ran an ad in *Trade-A-Plane* and *The Wall Street Journal* for a skywriter. She had seen Strayer — then the Pepsi skywriter — two years earlier during the Rose Festival in Portland, Oregon. When he came to Portland-Hillsboro Airport where she was instructing, she looked on in awe. "That is so cool!" she remembers thinking. But she had no serious tailwheel qualifications. She had flown a Stearman once and was flight instructing in a Taylorcraft — and had flown a Great Lakes a couple of times — but had no time in big biplanes like the Pepsi Travel Air.

"I looked around and I didn't see anybody else who was more qualified. They've got to be looking for somebody that they can train, I decided." Her interview included a flight in a Champ.

"He put me in the back and asked, 'What can you see?' I said, 'I can't see anything.' He said, 'Good, let's go.'" She flew 20 minutes, did three takeoffs and landings, and Strayer gave her headings and altitudes. He would say, "Hold that for two minutes."

"He was seeing if I could hold an altitude and heading exactly, not 10 feet off or 5 degrees off. If you can't hold an altitude and heading you cannot skywrite. It's all going to be a mess," she recalls.



On her first trip skywriting, he wrote PEPSI and talked to her on the intercom while he did it. Before the next flight he said, "OK, your turn."

"I didn't think I had a clue," she recalls. "That first one I wrote was one of the better ones I wrote for a while. I was remembering all the things he had said. So much of skywriting is feel, the amount of G to pull to get the turn just right." She worked with him for a year until he retired, and then she was chief Pepsi skywriter. That led to meeting Steve, and to marriage after "love at first flight."



So here we are at the end of the story and you are wondering where the spy plane is, not to mention the Red Baron. At this writing, the Olivers own a 1936 Lockheed 12 Electra Junior — the third one built and oldest model 12 still in existence — that, as it turns out, was perhaps one of the world's first spy planes. (Amelia Earhart was lost in a Lockheed 10 Electra.) This was unknown until someone who knew its history discovered the aircraft in California. At the time, movie stunt pilot Art Scholl, a legend who lost his life in 1985 while filming the movie *Top Gun*, owned it. Like the Olivers' Travel Air, one of Scholl's Chipmunk aircraft will be displayed in the National Air and Space Museum's Udvar-Hazy Center at Washington Dulles International Airport near Washington, D.C. While in Scholl's possession, the Lockheed 12 appeared in films about Amelia Earhart and Howard Hughes, and on television series such as *Moonlighting*, *Spencer's Pilots*, and *The A-Team*. It also appeared in the Warner Brothers film *Doc Savage*, which was based on a comic book hero of the 1930s and 1940s; Scholl purchased the plane for that movie.

But then the rest of the story came out. Sidney Cotton, an Australian film manufacturer and aviation enthusiast living in England, made business flights in the Electra Junior prior to World War II to Germany and Italy. He owned Dufaycolor, a color movie film sold in Europe prior to World War II. For travels to Germany he equipped the aircraft with two hidden wing panels opened by car windshield wiper motors. Behind the panels were two Leica cameras — and they would click away, once photographing a military buildup near the Rhine River while a German officer rode in the copilot's seat. When overflying Germany, Cotton removed a secret panel in the belly and used a large camera in the cabin to photograph German military sites. An inventor, Cotton designed aviator clothing in his early days — the Red Baron, Manfred von Richtofen, was wearing a Sidcot flying suit the day he was shot down. It was made of waterproof cloth to retain body heat. A movie was made for television in Australia a few years ago about the aircraft's history. The spy plane probably belongs in a museum, but for now it is on the market for \$425,000. The Olivers found they were just too busy to use the aircraft in their business. Perhaps the International Spy Museum in Washington, D.C., should be interested. Hint, hint.

